



IP-FP6-015964

AEOLUS

Algorithmic Principles for Building Efficient Overlay Computers

AEOFORGE Wiki

How-to setup and run AEOFORGE on the AEOLUS testbed

Responsible Partner: Radiolabs (I)
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Project Co-ordinator: University of Patras (EL)

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1 Setup of a testbed partition

In this section we describe all the mandatory steps a user must follow to properly setup an AEOLUS testbed partition running AEOFORGE application.

All files this document refers to are located within the 2 zip archives:

AEOFORGE-Services.zip

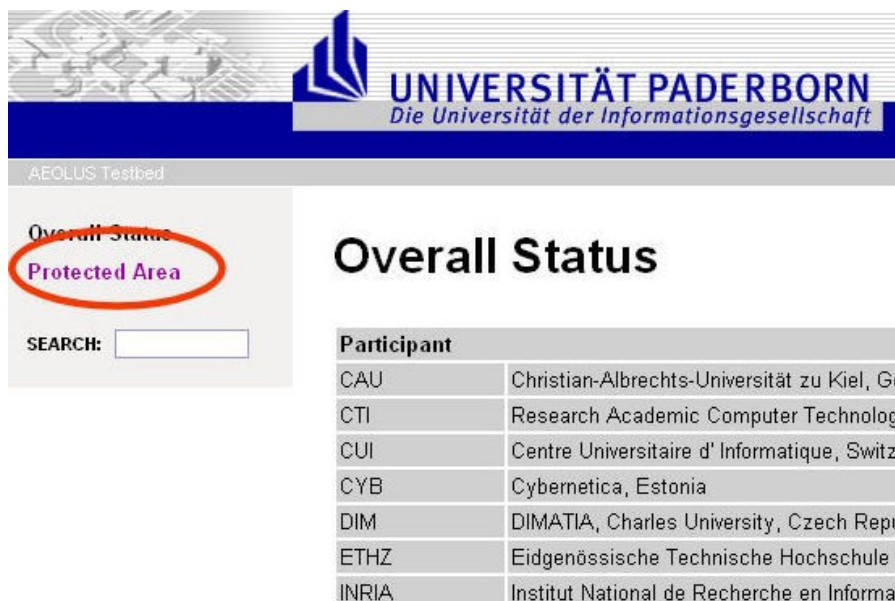
AEOFORGE-Client.zip

1.1 Connect to the AEOLUS testbed

Connect via browser to the AEOLUS testbed following the link

<http://aeolus.cs.upb.de>

On the left side menu follow the „**Protected Area**“ link providing the user credentials (username, password)



UNIVERSITÄT PADERBORN
Die Universität der Informationsgesellschaft

AEOLUS Testbed

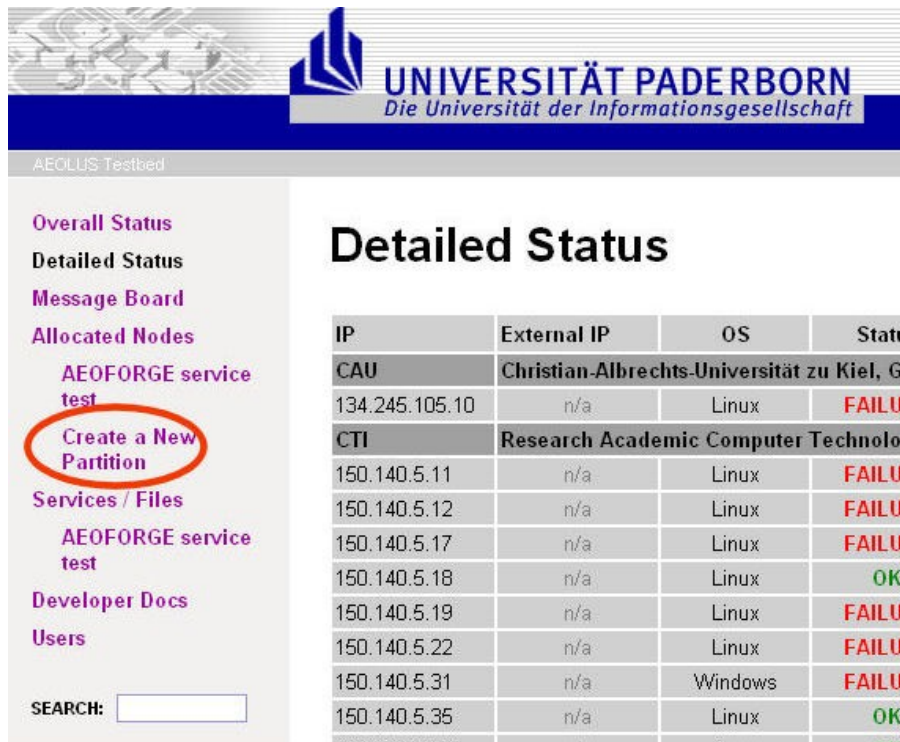
Overall Status
Protected Area

SEARCH:

Participant	
CAU	Christian-Albrechts-Universität zu Kiel, G
CTI	Research Academic Computer Technolog
CUI	Centre Universitaire d' Informatique, Switz
CYB	Cybernetica, Estonia
DIM	DIMATIA, Charles University, Czech Rept
ETHZ	Eidgenössische Technische Hochschule
INRIA	Institut National de Recherche en Informa

1.2 Create a new Partition

Click on the “Create a New Partition” on the left side menu of the testbed protected area



The screenshot shows the AEOLUS Testbed interface. The header includes the University of Paderborn logo and name. The left sidebar contains a menu with the following items: Overall Status, Detailed Status, Message Board, Allocated Nodes, AEOFORGE service test, **Create a New Partition** (circled in red), Services / Files, AEOFORGE service test, Developer Docs, Users, and a SEARCH: input field. The main content area is titled 'Detailed Status' and contains a table with the following data:

IP	External IP	OS	Status
CAU	Christian-Albrechts-Universität zu Kiel, G		
134.245.105.10	n/a	Linux	FAILU
CTI	Research Academic Computer Technolo		
150.140.5.11	n/a	Linux	FAILU
150.140.5.12	n/a	Linux	FAILU
150.140.5.17	n/a	Linux	FAILU
150.140.5.18	n/a	Linux	OK
150.140.5.19	n/a	Linux	FAILU
150.140.5.22	n/a	Linux	FAILU
150.140.5.31	n/a	Windows	FAILU
150.140.5.35	n/a	Linux	OK

Now you need to allocate physical nodes where AEOFORGE services must run.

AEOFORGE V2 needs the following services to run properly:

- AEOFORGE Service
- FS Coordinator
- STA Verifier
- STA Registry
- SSOD Service
- SCHEDULER Service

All these services need one physical node each, while the following

- AEOFORGE Compiler
- AEOFORGE Executor
- FS Storage
- STA Authority

all need one virtual/physical node **at least**. So you will need ten nodes, at least, to run AEOFORGE:

Create a New Partition

You can create a new testbed partition here. Once it is created, you can access it via the menu on the left (a submenu of "Allocated Nodes" will be created).

IP	External IP	OS	Status	Load ¹	CPU / Mem.	Allocate
CTI Research Academic Computer Technology Institute, Greece (ichatz@cti.gr, chita@cti.gr)						
150.140.5.11	n/a	Linux	FAILURE	n/a	667 MHz / 768 MB	don't allocate
150.140.5.18	n/a	Linux	OK	36.49 (13:32)	2.6 GHz / 256 MB	4 virtual instances
150.140.5.22	n/a	Linux	FAILURE	n/a	733 MHz / 1 GB	don't allocate
150.140.5.37	n/a	Windows	FAILURE	n/a	2x 1 GHz / 1.75 GB	don't allocate
ETHZ Eidgenössische Technische Hochschule Zürich, Switzerland (spyros@inf.ethz.ch, pautasso@inf.ethz.ch)						
129.132.43.177	n/a	Linux	FAILURE	n/a	2x 1.4 GHz / 1 GB	don't allocate
129.132.43.178	n/a	Linux	FAILURE	n/a	2x 1.4 GHz / 1 GB	don't allocate
129.132.43.179	n/a	Linux	FAILURE	n/a	2x 1.4 GHz / 1 GB	don't allocate
RAL Radio Labs, Italy (marco.leo@uniroma2.it, daniela.paiella@nexse.com)						
160.80.85.71	n/a	Linux	FAILURE	n/a	1.8 GHz / 1 GB	don't allocate
160.80.85.72	n/a	Linux	FAILURE	n/a	n/a	don't allocate
UDRTV Università degli Studi di Roma "Tor Vergata", Italy (rossig@mat.uniroma2.it)						
160.80.11.142	n/a	Windows	OK	1 % (13:15)	1.7 GHz / 768 MB	just 1 physical instance
UNIPD Università degli Studi di Padova, Italy (dantoni@dei.unipd.it)						

After having assigned a name to the newly created partition, confirm your choices clicking on „Create the Partition“ button.

1.3 Resources upload and configuration

Manage the partition services with the left side menu uploading all libraries and resources needed following the “upload a new file” link:

Overall Status
Detailed Status
Message Board
Allocated Nodes
 AEOFORGE service test
MyPartition
 Create a New Partition
Services / Files
 AEOFORGE service test
 MyPartition
 Developer Docs
Users

SEARCH:

Services / Files

Services implementing the testbed API are automatically loaded if the fully qualified classname is checked below and the jar file containing the relevant classes is uploaded below. Optionally, you may upload configuration files (plain text) which will be stored under the `configs` subdirectory of the working directory of the edge peers. In these files, the following special variables are automatically replaced:

<code>__IP__</code>	IP address of the edge peer
<code>__EXTERNAL_IP__</code>	external IP address of the edge peer (or the same as <code>__IP__</code> if this is already a public address)
<code>__JXTA_PORT__</code>	the port used for JXTA
<code>__PUBWEB_PORT__</code>	the port used for PUB-Web
<code>__ABSOLUTE_PATH__</code>	absolute path name (may contain spaces) of the working directory (with trailing (back-)slash)
<code>__ABSOLUTE_PATH_ESC__</code>	the same as <code>__ABSOLUTE_PATH__</code> but with double backslashes on Windows Systems
<code>__JAVA__</code>	path (may contain spaces) of the java executable
<code>__JAVA_ESC__</code>	the same as <code>__JAVA__</code> but with double backslashes on Windows Systems
<code>__L1_CACHE__</code>	L1 cache size in kB
<code>__L2_CACHE__</code>	L2 cache size in kB

Finally, you may upload arbitrary other files, such as, e.g., JNI native libraries. These files will not be modified and are stored in the `libs` subdirectory. Beside the `configs` and the `libs` subdirectories, the subdirectories `.jxta`, `tmp`, and `var` are the only subdirectories where you can read / modify / delete files.

Note: Once you've completed your service configuration and file uploads, it's necessary to restart your testbed partition.

Libraries and Configuration Files:

To view the configuration files or download the library files, please follow the corresponding links. Please note that some browsers cache these downloads, i.e. if you see old contents when viewing a configuration file, please press your browser's reload button.

Filename	Actions	Upload to these hosts
upload a new file		

You need to upload both libraries and configuration files (see the provided zip files) to your partition:

- libraries
 - aeoforge.jar
 - aeolus.jar
 - aeolusShellExtension.jar
 - bcprov-jdk14.jar
 - cia.jar
 - Cia_fat.jar
 - ClientApi.jar
 - commons-cli-1.1.jar
 - commons-net-1.4.1.jar
 - derby.jar
 - derbytools.jar
 - javax.servlet.jar
 - jsch-0.1.41.jar
 - junit-4.5.jar

- jxta.jar
- jxtashell.jar
- log4j-1.2.14.jar
- org.mortbay.jetty.jar
- ssod-aeolus-1.0.0.jar
- sta.jar
- TBAeolusScheduler.jar
- configuration files
 - a_603_181.properties
 - compiler_config.txt
 - cramerShoup.parameters
 - executor_config.txt
 - log4j.xml
 - mystorage_config.txt
 - ssod.key
 - sta0.staconfig
 - staKeyStore.p12
 - v0.stavconfig

Files

Upload a library (.jar) file:

Upload a configuration file (plain text):

Upload another type of file (e.g. a JNI shared library):

Note: The maximum filesize is 20 MB. Files greater than this will be ignored.

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Start registering the services following the “**Services/File**” menu

AEOLUS Testbed

Services

Add your services implementing the `aeolus.edge.Service` interface (either by extending the classes `aeolus.edge.BasicService` or `aeolus.edge.AdvancedService` together with the `aeolus.edge.ServiceImpl` interface, or using a custom implementation -- see [developer documentation](#) for further information) to the global list of services below and activate them in the sub-webpage for your testbed partition.

Global list of services:

Classname	User	Actions
<code>aeolus.unipd.acg.testbed.BenchService</code>	Paolo Bertasi	
<code>helloWorld.HelloWorldServer</code>	Stefan Schiffner	
<code>it.unisa.aeolus.service.sfe.yao.SFEMultipartyMediatorImpl</code>	Aniello del Sorbo	
<code>it.unisa.aeolus.service.sta.STARegistryServiceImpl</code>	Aniello del Sorbo	
<code>it.unisa.aeolus.service.sta.STAServiceImpl</code>	Aniello del Sorbo	
<code>it.unisa.aeolus.service.sta.STAVerifierServiceImpl</code>	Aniello del Sorbo	
<code>it.unisa.cia.jxta.CertifiedDBOwner</code>	Aniello del Sorbo	

SEARCH:

Skipping the services that have been already registered follow the link “**Add a new service**”

<code>sybilGuard.EmptyService</code>	Stefan Schiffner	
<code>sybilGuard.management.SgMmService</code>	Joachim Gehweiler	
<code>sybilGuard.management.SgMmSupernodeService</code>	Joachim Gehweiler	
<code>sybilGuard.SgService</code>	Joachim Gehweiler	
<code>udrtv.jxtachtest</code>	Carlo Nocentini	
<code>webdust.net.aeolus.discovery.DiscoveryListenerService</code>	Ioannis Chatzigiannakis	
<code>webdust.net.aeolus.discovery.DiscoveryService</code>	Ioannis Chatzigiannakis	

[Add a new service](#)

and start adding the following services:

- `it.unisa.aeolus.service.sta.STARegistryServiceImpl`
- `it.unisa.aeolus.service.sta.STAServiceImpl`
- `it.unisa.aeolus.service.sta.STAVerifierServiceImpl`
- `it.unisa.dia.gas.ssod.aeolus.service.SearchableStoreServiceImpl`
- `net.jxta.impl.shell.bin.aeoforge.compiler`
- `net.jxta.impl.shell.bin.aeoforge.executor`
- `net.jxta.impl.shell.bin.aeoforge.service`
- `net.jxta.impl.shell.bin.fs.coordinator`
- `net.jxta.impl.shell.bin.fs.my_storage`
- `net.jxta.impl.shell.bin.sched.TBAeolusScheduler`

Services

Create a New Service:

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Assign the services added to the nodes previously defined.

- AEOFORGE Service
- FS Coordinator
- STA Verifier
- STA Registry
- SSOD Service
- SCHEDULER Service

must be assigned to one physical node each while

- AEOFORGE Compiler
- AEOFORGE Executor
- FS Storage
- STA Authority

must be assigned to, at least, one physical or virtual node.

For the proper configuration of non-AEOFORGE services please refer to the related documentation.

it.unisa.dia.gas.ssod.aeolus.service.SearchableStoreServiceImpl	<input type="checkbox"/> 131.234.63.111 <input type="checkbox"/> 147.162.96.123	<input type="checkbox"/> 131.234.63.24 <input type="checkbox"/> 147.162.96.48	<input type="checkbox"/> 138.96.254.42 <input type="checkbox"/> 150.140.139.173	<input type="checkbox"/> 138.96.254.45 <input type="checkbox"/> 150.140.5.8	<input checked="" type="checkbox"/> 147.162.96.109 <input type="checkbox"/> 172.16.14.5	<input type="checkbox"/> 147.162.96.113 check all / none
it.unisa.aeolus.service.sta.STARegistryServiceImpl	<input type="checkbox"/> 131.234.63.111 <input type="checkbox"/> 147.162.96.123	<input type="checkbox"/> 131.234.63.24 <input type="checkbox"/> 147.162.96.48	<input type="checkbox"/> 138.96.254.42 <input type="checkbox"/> 150.140.139.173	<input type="checkbox"/> 138.96.254.45 <input checked="" type="checkbox"/> 150.140.5.8	<input type="checkbox"/> 147.162.96.109 <input type="checkbox"/> 172.16.14.5	<input type="checkbox"/> 147.162.96.113 check all / none
it.unisa.aeolus.service.sta.STAServiceImpl	<input type="checkbox"/> 131.234.63.111 <input type="checkbox"/> 147.162.96.123	<input type="checkbox"/> 131.234.63.24 <input checked="" type="checkbox"/> 147.162.96.48	<input type="checkbox"/> 138.96.254.42 <input type="checkbox"/> 150.140.139.173	<input type="checkbox"/> 138.96.254.45 <input type="checkbox"/> 150.140.5.8	<input type="checkbox"/> 147.162.96.109 <input type="checkbox"/> 172.16.14.5	<input checked="" type="checkbox"/> 147.162.96.113 check all / none
it.unisa.aeolus.service.sta.STAVerifierServiceImpl	<input type="checkbox"/> 131.234.63.111 <input type="checkbox"/> 147.162.96.123	<input type="checkbox"/> 131.234.63.24 <input type="checkbox"/> 147.162.96.48	<input checked="" type="checkbox"/> 138.96.254.42 <input type="checkbox"/> 150.140.139.173	<input type="checkbox"/> 138.96.254.45 <input type="checkbox"/> 150.140.5.8	<input type="checkbox"/> 147.162.96.109 <input type="checkbox"/> 172.16.14.5	<input type="checkbox"/> 147.162.96.113 check all / none
net.jxta.impl.shell.bin.aeoforge.compiler	<input type="checkbox"/> 131.234.63.111 <input type="checkbox"/> 147.162.96.123	<input checked="" type="checkbox"/> 131.234.63.24 <input type="checkbox"/> 147.162.96.48	<input type="checkbox"/> 138.96.254.42 <input type="checkbox"/> 150.140.139.173	<input type="checkbox"/> 138.96.254.45 <input type="checkbox"/> 150.140.5.8	<input type="checkbox"/> 147.162.96.109 <input type="checkbox"/> 172.16.14.5	<input type="checkbox"/> 147.162.96.113 check all / none
net.jxta.impl.shell.bin.aeoforge.executor	<input checked="" type="checkbox"/> 131.234.63.111 <input type="checkbox"/> 147.162.96.123	<input type="checkbox"/> 131.234.63.24 <input type="checkbox"/> 147.162.96.48	<input type="checkbox"/> 138.96.254.42 <input type="checkbox"/> 150.140.139.173	<input type="checkbox"/> 138.96.254.45 <input type="checkbox"/> 150.140.5.8	<input type="checkbox"/> 147.162.96.109 <input type="checkbox"/> 172.16.14.5	<input type="checkbox"/> 147.162.96.113 check all / none
net.jxta.impl.shell.bin.aeoforge.service	<input type="checkbox"/> 131.234.63.111 <input type="checkbox"/> 147.162.96.123	<input type="checkbox"/> 131.234.63.24 <input type="checkbox"/> 147.162.96.48	<input checked="" type="checkbox"/> 138.96.254.42 <input type="checkbox"/> 150.140.139.173	<input type="checkbox"/> 138.96.254.45 <input type="checkbox"/> 150.140.5.8	<input type="checkbox"/> 147.162.96.109 <input type="checkbox"/> 172.16.14.5	<input type="checkbox"/> 147.162.96.113 check all / none
net.jxta.impl.shell.bin.fs.coordinator	<input type="checkbox"/> 131.234.63.111 <input type="checkbox"/> 147.162.96.123	<input type="checkbox"/> 131.234.63.24 <input type="checkbox"/> 147.162.96.48	<input type="checkbox"/> 138.96.254.42 <input type="checkbox"/> 150.140.139.173	<input checked="" type="checkbox"/> 138.96.254.45 <input type="checkbox"/> 150.140.5.8	<input type="checkbox"/> 147.162.96.109 <input type="checkbox"/> 172.16.14.5	<input type="checkbox"/> 147.162.96.113 check all / none
net.jxta.impl.shell.bin.fs.my_storage	<input type="checkbox"/> 131.234.63.111 <input type="checkbox"/> 147.162.96.123	<input type="checkbox"/> 131.234.63.24 <input type="checkbox"/> 147.162.96.48	<input type="checkbox"/> 138.96.254.42 <input type="checkbox"/> 150.140.139.173	<input type="checkbox"/> 138.96.254.45 <input type="checkbox"/> 150.140.5.8	<input checked="" type="checkbox"/> 172.16.14.5	<input type="checkbox"/> 147.162.96.109 check all / none
net.jxta.impl.shell.bin.sched.TBAeolusScheduler	<input type="checkbox"/> 131.234.63.111 <input checked="" type="checkbox"/> 147.162.96.123	<input type="checkbox"/> 131.234.63.24 <input type="checkbox"/> 147.162.96.48	<input type="checkbox"/> 138.96.254.42 <input type="checkbox"/> 150.140.139.173	<input type="checkbox"/> 138.96.254.45 <input type="checkbox"/> 150.140.5.8	<input type="checkbox"/> 147.162.96.109 <input type="checkbox"/> 172.16.14.5	<input type="checkbox"/> 147.162.96.113 check all / none

Assign uploaded libraries and configuration files to nodes:

- all nodes must have
 - aeolus.jar
 - bcprov-jdk14.jar
 - cia.jar
 - Cia_fat.jar
 - commons-cli-1.1.jar
 - commons-net-1.4.1.jar
 - javax.servlet.jar
 - jsch-0.1.41.jar
 - junit-4.5.jar
 - jxta.jar
 - jxtashell.jar
 - log4j-1.2.14.jar
 - org.mortbay.jetty.jar
- aeoforge.jar must be assigned to nodes running
 - AEOFORGE Service
 - Compiler
 - Executor
- aeolusShellExtension.jar must be assigned to nodes running
 - FS Coordinator
 - FS Storage
- ClientApi.jar must be assigned to nodes running
 - AEOFORGE Service
- derby.jar, derbytools.jar must be assigned to nodes running
 - SSOD Service
 - STA Registry
 - STA Authority
 - STA Verifier
- ssod-aeolus-1.0.0.jar must be assigned to nodes running
 - AEOFORGE Service
 - SSOD Service
- sta.jar must be assigned to nodes running
 - AEOFORGE Service
 - STA Registry
 - STA Authority
 - STA Verifier

- TBAeolusScheduler.jar must be assigned to nodes running
 - SCHEDULER
- a_603_181.properties must be assigned to nodes running
 - AEOFORGE Service
 - SSOD Service
- compiler_config.txt must be assigned to nodes running
 - Compiler
- cramerShoup.parameters must be assigned to nodes running
 - AEOFORGE Service
 - SSOD Service
- executor_config.txt must be assigned to nodes running
 - AEOFORGE Executor
- log4j.xml must be assigned to nodes running
 - SSOD Service
 - STA Registry
 - STA Authority
 - STA Verifier
- mystorage_config.txt must be assigned to nodes running
 - FS Storage
- ssod.key must be assigned to nodes running
 - AEOFORGE Service
 - SSOD Service
- staKeyStore.p12 must be assigned to nodes running
 - STA Registry
 - STA Authority
 - STA Verifier
- v0.stavconfig must be assigned to nodes running
 - STA Verifier
- sta0.staconfig (sta1.staconfig, 2, 3 etc...) must be assigned to nodes running
 - STA Authority

Libraries and Configuration Files:

To view the configuration files or download the library files, please follow the corresponding links. Please note that some browsers cache these downloads, i.e. if you see old contents when viewing a configuration file, please press your browser's reload button.

Filename	Actions	Upload to these hosts
configs/a_603_181.properties	delete	<input type="checkbox"/> 131.234.63.111 <input type="checkbox"/> 131.234.63.24 <input checked="" type="checkbox"/> 138.96.254.42 <input type="checkbox"/> 138.96.254.45 <input checked="" type="checkbox"/> 147.162.96.109 <input type="checkbox"/> 147.162.96.113 <input type="checkbox"/> 147.162.96.123 <input type="checkbox"/> 147.162.96.48 <input type="checkbox"/> 150.140.139.173 <input type="checkbox"/> 150.140.5.8 <input type="checkbox"/> 172.16.14.5 check all / none
configs/compiler_config.txt	delete	<input type="checkbox"/> 131.234.63.111 <input checked="" type="checkbox"/> 131.234.63.24 <input type="checkbox"/> 138.96.254.42 <input type="checkbox"/> 138.96.254.45 <input type="checkbox"/> 147.162.96.109 <input type="checkbox"/> 147.162.96.113 <input type="checkbox"/> 147.162.96.123 <input type="checkbox"/> 147.162.96.48 <input type="checkbox"/> 150.140.139.173 <input type="checkbox"/> 150.140.5.8 <input type="checkbox"/> 172.16.14.5 check all / none
configs/cramerShoup.parameters	delete	<input type="checkbox"/> 131.234.63.111 <input type="checkbox"/> 131.234.63.24 <input checked="" type="checkbox"/> 138.96.254.42 <input type="checkbox"/> 138.96.254.45 <input checked="" type="checkbox"/> 147.162.96.109 <input type="checkbox"/> 147.162.96.113 <input type="checkbox"/> 147.162.96.123 <input type="checkbox"/> 147.162.96.48 <input type="checkbox"/> 150.140.139.173 <input type="checkbox"/> 150.140.5.8 <input type="checkbox"/> 172.16.14.5 check all / none
configs/executor_config.txt	delete	<input checked="" type="checkbox"/> 131.234.63.111 <input type="checkbox"/> 131.234.63.24 <input type="checkbox"/> 138.96.254.42 <input type="checkbox"/> 138.96.254.45 <input type="checkbox"/> 147.162.96.109 <input type="checkbox"/> 147.162.96.113 <input type="checkbox"/> 147.162.96.123 <input type="checkbox"/> 147.162.96.48 <input type="checkbox"/> 150.140.139.173 <input type="checkbox"/> 150.140.5.8 <input type="checkbox"/> 172.16.14.5 check all / none
configs/log4j.xml	delete	<input type="checkbox"/> 131.234.63.111 <input type="checkbox"/> 131.234.63.24 <input type="checkbox"/> 138.96.254.42 <input type="checkbox"/> 138.96.254.45 <input checked="" type="checkbox"/> 147.162.96.109 <input checked="" type="checkbox"/> 147.162.96.113 <input type="checkbox"/> 147.162.96.123 <input checked="" type="checkbox"/> 147.162.96.48 <input checked="" type="checkbox"/> 150.140.139.173 <input checked="" type="checkbox"/> 150.140.5.8 <input type="checkbox"/> 172.16.14.5 check all / none
configs/myoffer_config.txt	delete	<input type="checkbox"/> 131.234.63.111 <input type="checkbox"/> 131.234.63.24 <input type="checkbox"/> 138.96.254.42 <input type="checkbox"/> 138.96.254.45 <input type="checkbox"/> 147.162.96.109 <input type="checkbox"/> 147.162.96.113 <input type="checkbox"/> 147.162.96.123 <input type="checkbox"/> 147.162.96.48 <input type="checkbox"/> 150.140.139.173 <input type="checkbox"/> 150.140.5.8 <input checked="" type="checkbox"/> 172.16.14.5 check all / none
configs/ssod_key	delete	<input type="checkbox"/> 131.234.63.111 <input type="checkbox"/> 131.234.63.24 <input checked="" type="checkbox"/> 138.96.254.42 <input type="checkbox"/> 138.96.254.45 <input checked="" type="checkbox"/> 147.162.96.109 <input type="checkbox"/> 147.162.96.113 <input type="checkbox"/> 147.162.96.123 <input type="checkbox"/> 147.162.96.48 <input type="checkbox"/> 150.140.139.173 <input type="checkbox"/> 150.140.5.8 <input type="checkbox"/> 172.16.14.5 check all / none
configs/sta0.staconfig	delete	<input type="checkbox"/> 131.234.63.111 <input type="checkbox"/> 131.234.63.24 <input type="checkbox"/> 138.96.254.42 <input type="checkbox"/> 138.96.254.45 <input type="checkbox"/> 147.162.96.109 <input type="checkbox"/> 147.162.96.113 <input type="checkbox"/> 147.162.96.123 <input checked="" type="checkbox"/> 147.162.96.48 <input type="checkbox"/> 150.140.139.173 <input type="checkbox"/> 150.140.5.8 <input type="checkbox"/> 172.16.14.5 check all / none
configs/sta1.staconfig	delete	<input type="checkbox"/> 131.234.63.111 <input type="checkbox"/> 131.234.63.24 <input type="checkbox"/> 138.96.254.42 <input type="checkbox"/> 138.96.254.45 <input type="checkbox"/> 147.162.96.109 <input checked="" type="checkbox"/> 147.162.96.113 <input type="checkbox"/> 147.162.96.123 <input type="checkbox"/> 147.162.96.48 <input type="checkbox"/> 150.140.139.173 <input type="checkbox"/> 150.140.5.8 <input type="checkbox"/> 172.16.14.5 check all / none
configs/staKeyStore.p12	delete	<input type="checkbox"/> 131.234.63.111 <input type="checkbox"/> 131.234.63.24 <input type="checkbox"/> 138.96.254.42 <input type="checkbox"/> 138.96.254.45 <input type="checkbox"/> 147.162.96.109 <input checked="" type="checkbox"/> 147.162.96.113 <input type="checkbox"/> 147.162.96.123 <input checked="" type="checkbox"/> 147.162.96.48 <input checked="" type="checkbox"/> 150.140.139.173 <input checked="" type="checkbox"/> 150.140.5.8 <input type="checkbox"/> 172.16.14.5 check all / none

Apply the changes

User management:

Partition owner	Stefano Caliano		
Admitted users	<input type="checkbox"/> Andrea Pietracaprina	<input type="checkbox"/> Angelo De Caro	<input type="checkbox"/> Aniello del Sorbo
	<input type="checkbox"/> Benjamin Potyka	<input type="checkbox"/> Carlo Nocentini	<input type="checkbox"/> Christos Kaklamaris
	<input type="checkbox"/> Christos Koninis	<input checked="" type="checkbox"/> Daniele Paiella	<input type="checkbox"/> Dmitri Akatov
	<input type="checkbox"/> Domenico Gambelli	<input type="checkbox"/> Efi Chita	<input type="checkbox"/> Emiliano Casalicchio
	<input type="checkbox"/> Florian Diedrich	<input type="checkbox"/> Geppino Pucci	<input type="checkbox"/> Giovanni Cortese
	<input type="checkbox"/> Gunnar Schomaker	<input type="checkbox"/> Ioannis Caragiannis	<input type="checkbox"/> Ioannis Chatzigiannakis
	<input type="checkbox"/> Joachim Gehweiler	<input type="checkbox"/> Luis Javier de la Garza Trevino	<input type="checkbox"/> Marina Drosou
	<input type="checkbox"/> Mauro Sozio	<input type="checkbox"/> Michel Syska	<input type="checkbox"/> Nikos Karanikolas
	<input type="checkbox"/> Panagiotis Kanellopoulos	<input type="checkbox"/> Paolo Bertasi	<input type="checkbox"/> Remi Vannier
	<input type="checkbox"/> Silvano Riz	<input type="checkbox"/> Stefan Schiffner	<input type="checkbox"/> Stefano Braghin
	<input type="checkbox"/> Tomas Chudlarsky	<input type="checkbox"/> Ugo Colesanti	<input type="checkbox"/> Ulf-Peter Schröder
	<input type="checkbox"/> Ulrich Ahlers		check all / none
	<input type="checkbox"/> Provide to all testbed users (read only)		

Apply Changes

and finally restart the partition in the node management section

Rendezvous Peer:

IP	Port	Actions
131.234.65.73	9710	logfile

In case you are using additional peers outside the testbed, please remember to delete your local `.jxta` folder when restarting.

(Re-)start this Partition! using original JXTA JXTACH

[Stop this Partition!](#) [Delete this Partition!](#)

[latest logfile](#)

2 Setup of the AEOFORGE client

The **AEOFORGE-Client.zip** file contains all libraries needed to run an extended JXTA Shell that acts as a Command Line Interface towards the AEOFORGE application.

The shell is started executing a *.bat* file in Windows based machines or a *.sh* file in unix-like machines.

2.1 Client configuration

To configure the client:

- set the environment defining the variable **JAVA_HOME** or editing the *.bat* (or *.sh*) file setting the corresponding script variable
- set in the *rdvs.txt* file the testbed **Rendezvous Peer TCP address** (e.g.: tcp://ipaddress:aport)

3 Run AEOFORGE

Starting the AEOLUS shell the AEOFORGE cli is prompted to the user. The available are described below:

aeoforge.add	<p>The user adds a file <filepath> to the project <projectname>. When the AEOFORGE server receives this command it obtains the file content from the client issuing the command, retrieves the project descriptor stored on the forge, obtains a secure timestamp from the STA service, stores the file on the forge, updates the file descriptor, sends back an ack message to the client, registers a new task with the SCHEDULER service, asks the SCHEDULER to assign a compiling task to one of the registered COMPILER nodes, asks the chosen COMPILER node to compile the project, on compilation success it removes the task from the SCHEDULER service and quits. If the project doesn't exist or the file is already part of the project a message is sent back to the client. If an error occurs on the server a message describing the cause is sent back to the client.</p> <table border="1" data-bbox="491 1794 1430 1984"> <thead> <tr> <th colspan="2">PARAMETERS</th> </tr> </thead> <tbody> <tr> <td><projectname></td> <td>unique name of the project</td> </tr> <tr> <td><filepath></td> <td>relative path to the file (e.g.: <i>./myDir/MyClass.java</i>)</td> </tr> </tbody> </table>	PARAMETERS		<projectname>	unique name of the project	<filepath>	relative path to the file (e.g.: <i>./myDir/MyClass.java</i>)
PARAMETERS							
<projectname>	unique name of the project						
<filepath>	relative path to the file (e.g.: <i>./myDir/MyClass.java</i>)						
aeoforge.ci	The user commits changes to a file <filepath> modified on the client						

	<p>machine. The file is part of the project <projectname>.</p> <p>When the AEOFORGE server receives this command it obtains from the client the file content and its certificate containing the secure timestamp previously issued by the STA (e.g.: upload/add), retrieves the project descriptor file, verifies the certificate via the STA service, obtains a new secure timestamp to update the file certificate, stores the file on the forge, updates the project descriptor and stores it on the forge, sends back an ack message to the client, registers a new task with the SCHEDULER service, asks the SCHEDULER to assign a compiling task to one of the registered COMPILER nodes, asks the chosen COMPILER node to compile the project, on compilation success it removes the task from the SCHEDULER service and quits.</p> <p>If the project doesn't exist or the file is not part of the project or an old version of the file has been modified (e.g.: concurrent modification) a message is sent back to the client. If an error occurs on the server a message describing the cause is sent back to the client.</p> <table border="1" data-bbox="491 779 1436 974"> <tr> <th colspan="2">PARAMETERS</th> </tr> <tr> <td><projectname></td> <td>unique name of the project</td> </tr> <tr> <td><filepath></td> <td>relative path to the file (e.g.: "./myDir/MyClass.java")</td> </tr> </table>	PARAMETERS		<projectname>	unique name of the project	<filepath>	relative path to the file (e.g.: "./myDir/MyClass.java")
PARAMETERS							
<projectname>	unique name of the project						
<filepath>	relative path to the file (e.g.: "./myDir/MyClass.java")						
<p>aeoforge.co</p>	<p>The user checks-out, for modifications, a file <filepath>. The file is part of the project <projectname>.</p> <p>When the AEOFORGE server receives this command it obtains from the forge the file content and its certificate containing the secure timestamp previously issued by the STA (e.g.: upload/add) and sends both to the client issuing the command.</p> <p>If the project doesn't exist or the file is not part of the project a message is sent back to the client. If an error occurs on the server a message describing the cause is sent back to the client.</p> <table border="1" data-bbox="491 1391 1436 1585"> <tr> <th colspan="2">PARAMETERS</th> </tr> <tr> <td><projectname></td> <td>unique name of the project</td> </tr> <tr> <td><filepath></td> <td>relative path to the file (e.g.: "./myDir/MyClass.java")</td> </tr> </table>	PARAMETERS		<projectname>	unique name of the project	<filepath>	relative path to the file (e.g.: "./myDir/MyClass.java")
PARAMETERS							
<projectname>	unique name of the project						
<filepath>	relative path to the file (e.g.: "./myDir/MyClass.java")						
<p>aeoforge.compile</p>	<p>The user downloads a .jar file containing the compiled java project <projectname>. The file will be downloaded on the [destDir] folder if provided, else it will be stored in the current client folder.</p> <p>When the AEOFORGE server receives this command, it retrieves the project descriptor from the forge, retrieves the jar file and sends it to the client where the file is stored.</p> <p>If the jar file is not available due to errors in the compilation phase a message is sent back to the client describing the error. If the project has not been compiled after the last modification, but an old version of the jar file exists both the jar and a message describing the error are sent back to the client. If the project doesn't exist a message is sent back to the client. If an error occurs on the server a message describing the cause</p>						

	<p>is sent back to the client.</p> <table border="1" data-bbox="491 232 1431 387"> <tr> <td colspan="2" data-bbox="491 232 1431 282">PARAMETERS</td> </tr> <tr> <td data-bbox="491 282 753 331"><projectname></td> <td data-bbox="753 282 1431 331">unique name of the project</td> </tr> <tr> <td data-bbox="491 331 753 387">[destDir]</td> <td data-bbox="753 331 1431 387">destination folder, optional</td> </tr> </table>	PARAMETERS		<projectname>	unique name of the project	[destDir]	destination folder, optional
PARAMETERS							
<projectname>	unique name of the project						
[destDir]	destination folder, optional						
aeoforge.del	<p>The user deletes the file <filepath> from the project <projectname>. When the AEOFORGE server receives this command it obtains from the forge the project descriptor, deletes the file from the forge, updates the file descriptor, stores it back on the forge, sends back an ack message to the client, registers a new task with the SCHEDULER service, asks the SCHEDULER to assign a compiling task to one of the registered COMPILER nodes, asks the chosen COMPILER node to compile the project, on compilation success it removes the task from the SCHEDULER service and quits</p> <p>If the project doesn't exist or the file is not part of the project a message is sent back to the client. If an error occurs on the server a message describing the cause is sent back to the client.</p> <table border="1" data-bbox="491 913 1431 1106"> <tr> <td colspan="2" data-bbox="491 913 1431 963">PARAMETERS</td> </tr> <tr> <td data-bbox="491 963 753 1012"><projectname></td> <td data-bbox="753 963 1431 1012">unique name of the project</td> </tr> <tr> <td data-bbox="491 1012 753 1106"><filepath></td> <td data-bbox="753 1012 1431 1106">relative path to the file (e.g.: "./myDir/MyClass.java")</td> </tr> </table>	PARAMETERS		<projectname>	unique name of the project	<filepath>	relative path to the file (e.g.: "./myDir/MyClass.java")
PARAMETERS							
<projectname>	unique name of the project						
<filepath>	relative path to the file (e.g.: "./myDir/MyClass.java")						
aeoforge.describe	<p>The user asks the project <projectname> description. When the AEOFORGE server receives this command, it retrieves the project descriptor from the forge and sends back to the client the list of the files together with their current timestamps. If the project doesn't exist a message is sent back to the client. If an error occurs on the server a message describing the cause is sent back to the client.</p> <table border="1" data-bbox="491 1413 1431 1516"> <tr> <td colspan="2" data-bbox="491 1413 1431 1462">PARAMETERS</td> </tr> <tr> <td data-bbox="491 1462 753 1516"><projectname></td> <td data-bbox="753 1462 1431 1516">unique name of the project</td> </tr> </table>	PARAMETERS		<projectname>	unique name of the project		
PARAMETERS							
<projectname>	unique name of the project						
aeoforge.download	<p>The user downloads the whole project <projectname>, as a .zip file in the [destDir] folder, if provided, or in the current client folder. When the AEOFORGE server receives this command, it retrieves the project descriptor from the forge, reads the descriptor retrieving all the project files from the forge, creates the .zip file maintaining the original project structure and sends the archive content to the client. If the project doesn't exist a message is sent back to the client. If an error occurs on the server a message describing the cause is sent back to the client.</p> <table border="1" data-bbox="491 1899 1431 2047"> <tr> <td colspan="2" data-bbox="491 1899 1431 1948">PARAMETERS</td> </tr> <tr> <td data-bbox="491 1948 753 1998"><projectname></td> <td data-bbox="753 1948 1431 1998">unique name of the project</td> </tr> <tr> <td data-bbox="491 1998 753 2047">[destDir]</td> <td data-bbox="753 1998 1431 2047">destination folder, optional</td> </tr> </table>	PARAMETERS		<projectname>	unique name of the project	[destDir]	destination folder, optional
PARAMETERS							
<projectname>	unique name of the project						
[destDir]	destination folder, optional						

<p>aeoforge.execute</p>	<p>The user requests the execution of the Java project <projectname> providing the full name of the Class <mainclass> containing the main() method.</p> <p>The AEOFORGE server retrieves the project descriptor from the forge, registers a new task to the SCHEDULER, asks the SCHEDULER to assign the task to an Executor node, sends the chosen Executor the project descriptor and all the parameters specified by the client. At the end of the execution it removes the task from the scheduler and quits. If the project doesn't exist a message is sent back to the client.</p> <table border="1" data-bbox="491 577 1441 768"> <thead> <tr> <th colspan="2">PARAMETERS</th> </tr> </thead> <tbody> <tr> <td data-bbox="491 629 751 678"><projectname></td> <td data-bbox="751 629 1441 678">unique name of the project</td> </tr> <tr> <td data-bbox="491 678 751 768"><mainclass></td> <td data-bbox="751 678 1441 768">full name of the class containing the main() method (e.g.:"mypackage.mysubpackage.MyClass")</td> </tr> </tbody> </table>	PARAMETERS		<projectname>	unique name of the project	<mainclass>	full name of the class containing the main() method (e.g.:"mypackage.mysubpackage.MyClass")
PARAMETERS							
<projectname>	unique name of the project						
<mainclass>	full name of the class containing the main() method (e.g.:"mypackage.mysubpackage.MyClass")						
<p>aeoforge.find</p>	<p>The user requests the list of all projects loaded on AEOFORGE.</p> <p>When the AEOFORGE server receives this command, searches for all the projects stored on the forge via SSOD service and sends back the client the list of all the project names.</p> <p>If an error occurs on the server a message describing the cause is sent back to the client.</p>						
<p>aeoforge.noop</p>	<p>The user checks whether the AEOFORGE service is running.</p> <p>When the AEOFORGE service receives this message it sends back an ack message.</p>						
<p>aeoforge.quit</p>	<p>The user requests the AEOFORGE service shutdown.</p> <p>When the AEOFORGE service receives this message it sends back an ack message and shuts down.</p>						
<p>aeoforge.upload</p>	<p>The user uploads a new project, named <projectname> on AEOFORGE.</p> <p>When the AEOFORGE service receives this command, it obtains the .zip file content, certifies each file via the STA service, stores each file on the forge, builds a project descriptor file, stores it on the forge, registers the project with the SSOD service, sends back an ack message to the client, registers a new task with the SCHEDULER, asks the SCHEDULER to assign a compilation task to a Compiler node, asks the compilation to the chosen Compiler node, if compilation succeeds removes the task from the SCHEDULER and quits.</p> <p>If an error occurs on the server, all file stored are removed from the forge and an error message is sent back to the client.</p> <table border="1" data-bbox="491 1742 1441 1966"> <thead> <tr> <th colspan="2">PARAMETERS</th> </tr> </thead> <tbody> <tr> <td data-bbox="491 1794 850 1917"><tarballfilename.zip></td> <td data-bbox="850 1794 1441 1917">name of the zip file containing the project files to be uploaded (.zip extension is mandatory)</td> </tr> <tr> <td data-bbox="491 1917 850 1966"><projectname></td> <td data-bbox="850 1917 1441 1966">unique name of the project</td> </tr> </tbody> </table>	PARAMETERS		<tarballfilename.zip>	name of the zip file containing the project files to be uploaded (.zip extension is mandatory)	<projectname>	unique name of the project
PARAMETERS							
<tarballfilename.zip>	name of the zip file containing the project files to be uploaded (.zip extension is mandatory)						
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