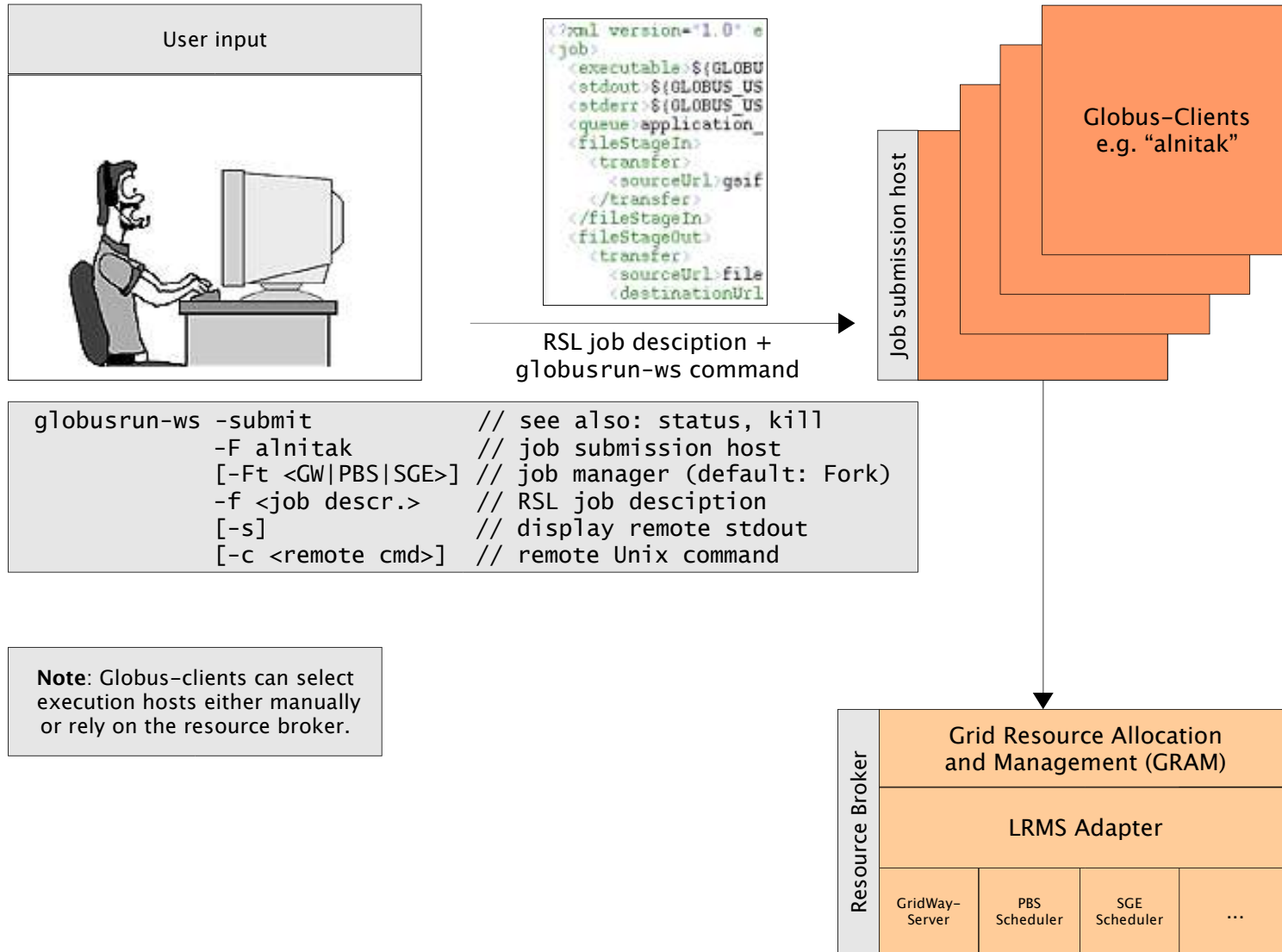
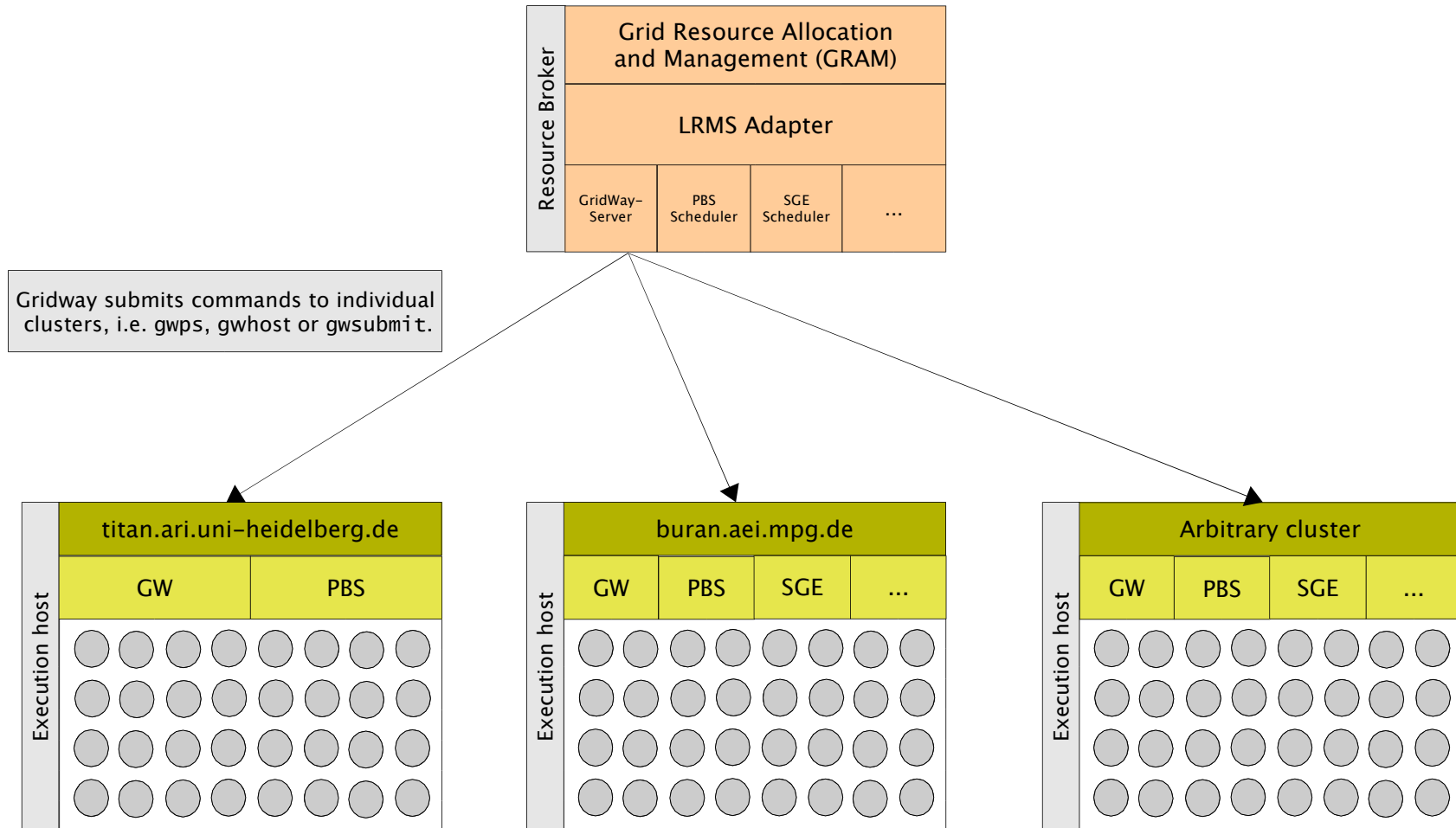


User Input, Job Submission Host and Gridway-Server



Gridway-Server and Execution Hosts



Jobdescription (RSL)

```
<job>
  <executable>pi-single.#TASK_ID</executable>
  <argument>#TASK_ID</argument>
  ... similar for other arguments
  <stdout>pi-single.out.#TASK_ID</stdout>
  <stderr>pi-single.err.#TASK_ID</stderr>
  <!-- transport a file from submission host to execution host -->
  <fileStageIn>
    <transfer>
      <sourceUrl>gsiftp://alnitak.../pi-example/bin/pi-single</sourceUrl>
      <destinationUrl>file:///${GLOBUS_USER_HOME}/pi-single.#TASK_ID</destinationUrl>
    </transfer>
  </fileStageIn>
  <!-- transport files back from execution host to submission host -->
  <fileStageOut>
    <transfer>
      <sourceUrl>file:///${GLOBUS_USER_HOME}/pi-single.out.#TASK_ID</sourceUrl>
      <destinationUrl>gsiftp://alnitak.../pi-example/tmp/pi-single.out.#TASK_ID</destinationUrl>
    </transfer>
    ... similar for pi-single.err.#TASK_ID
  </fileStageOut>
  <!-- clean up files and directories on the execution host -->
  <fileCleanUp>
    <deletion>
      <file>file:///${GLOBUS_USER_HOME}/pi-single.out.#TASK_ID</file>
    </deletion>
    ... similar for pi-single.out.#TASK_ID
  </fileCleanUp>
</job>
```

Submission Skript

```
#!/bin/sh

ROOT_DIR=$HOME/pi-example
TEMPLATE_RSL=$ROOT_DIR/pi-single.rsl-template
JOB_DESCRIPTION=$ROOT_DIR/pi-single.rsl
TOTAL_TASKS=10
STEPS=100000000

if [ x$1 = 'x-nobatch' ]; then
    SET_NOBATCH='yes'
fi

rm -f $ROOT_DIR/tmp/pi-single.out.* $ROOT_DIR/tmp/pi-single.err.*

for i in $(seq 1 $TOTAL_TASKS); do

    echo "task: $i"
    sed -e "s|#TASK_ID|$i|g" $TEMPLATE_RSL > $JOB_DESCRIPTION.$i
    sed -i -e "s|#TOTAL_TASKS|$TOTAL_TASKS|g" $JOB_DESCRIPTION.$i
    sed -i -e "s|#STEPS|$STEPS|g" $JOB_DESCRIPTION.$i

    if [ x$SET_NOBATCH = 'xyes' ]; then
        globusrun-ws -submit -F hydra.ari.uni-heidelberg.de -S -Ft GW -f $JOB_DESCRIPTION.$i
    else
        globusrun-ws -submit -F hydra.ari.uni-heidelberg.de -S -b -Ft GW -f $JOB_DESCRIPTION.$i
    fi

done

rm $JOB_DESCRIPTION.*
```

Gridway distributes individual jobs to grid resources

```
agrid064@alnitak: ~/pi-example
pi-example>
pi-example>
pi-examp X bin/submit-single.sh X
task: 1
Delegating user credentials...Done.
Submitting job...Done.
Job ID: uuid:4ac16b42-9c35-11dc-82b8-000081ce6ef6
Termination time: 11/27/2007 15:36 GMT
<ns00:EndpointReferenceType xmlns:ns00="http://schemas.xmlsoap.org/ws/2004/03/addressing"><ns00:Address>https://hydra.ari.uni-heidelberg.de:8443/wsrf/services/ManagedExecutableJobService</ns00:Address><ns00:ReferenceProperties><ResourceID xmlns="http://www.globus.org/namespaces/2004/10/gram/job">4ae76270-9c35-11dc-bdd0-901a3e829p://schemas.xmlsoap.org/ws/2
```

```
agrid064@hydra: ~
```

USER	JID	DM	EH	START	END	EXEC	XFER	EXIT	NAME	HOST
agrid002	0	done	----	14:13:39	14:14:04	0:00:15	0:00:10	0	gwt	bladekemper21.informatik
agrid002	1	done	----	14:15:31	14:15:53	0:00:08	0:00:07	127	gwt	bladekemper21.informatik
agrid002	2	done	----	14:36:17	14:36:52	0:00:08	0:00:07	127	gwt	bladekemper21.informatik
agrid002	13	done	----	16:09:07	16:09:45	0:00:06	0:00:10	0	gwt	bladekemper21.informatik
agrid064	22	done	----	16:32:57	16:33:08	0:00:03	0:00:07	126	gwt	hydra.ari.uni-heidelberg
agrid064	23	done	----	16:32:57	16:33:46	0:00:36	0:00:12	0	gwt	mardschana.zib.de/PBS
agrid064	24	done	----	16:32:58	16:33:38	0:00:03	0:00:07	126	gwt	hydra.ari.uni-heidelberg
agrid064	25	done	----	16:34:11	16:34:41	0:00:04	0:00:09	126	gwt	hydra.ari.uni-heidelberg
agrid064	26	pend	----	16:34:15	--:--:--	0:00:00	0:00:01	--	gwt	bladekemper21.informatik
agrid064	27	epil	----	16:34:17	--:--:--	0:00:08	0:00:13	--	gwt	mardschana.zib.de/PBS
agrid064	28	wrap	actv	16:34:18	--:--:--	0:00:11	0:00:10	--	gwt	mardschana.zib.de/PBS
agrid064	29	wrap	actv	16:34:21	--:--:--	0:00:12	0:00:09	--	gwt	mardschana.zib.de/PBS
agrid064	30	wrap	actv	16:34:21	--:--:--	0:00:12	0:00:09	--	gwt	mardschana.zib.de/PBS
agrid064	31	wrap	actv	16:34:21	--:--:--	0:00:12	0:00:09	--	gwt	mardschana.zib.de/PBS
agrid064	32	wrap	actv	16:34:24	--:--:--	0:00:12	0:00:09	--	gwt	mardschana.zib.de/PBS
agrid064	33	wrap	actv	16:34:24	--:--:--	0:00:12	0:00:09	--	gwt	mardschana.zib.de/PBS
agrid064	34	wrap	actv	16:34:25	--:--:--	0:00:11	0:00:10	--	gwt	mardschana.zib.de/PBS

```
essing"><ns00:Address>https://hydra.ari.uni-heidelberg.de:8443/wsrf/services/ManagedExecutableJobService</ns00:Address><ns00:ReferenceProperties><ResourceID xmlns="http://www.globus.org/namespaces/2004/10/gram/job">4ae76270-9c35-11dc-bdd0-901a3e829p://schemas.xmlsoap.org/ws/2
```

