

JADE: Java Agent DEvelopment Framework

Getting Started

Stefano Mariani
`s.mariani@unibo.it`

Dipartimento di Informatica – Scienza e Ingegneria (DISI)
ALMA MATER STUDIORUM – Università di Bologna a Cesena

Academic Year 2014/2015



- 1 Getting JADE
- 2 Run JADE



Disclaimer

All the material presented in these slides is rearranged by the author from a collection of documents kindly made available by the JADE team.

Credits for all the stuff (text & images) go to the JADE team, in particular to Giovanni Caire.

Credits for all the mistakes go to the author.



Outline

1 Getting JADE

2 Run JADE



JADE: Where & What

JADE web page

Go to <http://jade.tilab.com>:

- 1 hover over “Download” in the upper navigation bar, then click “Jade”
- 2 click “Continue”
- 3 scroll down and “yes, you agree” :)
- 4 download (at least) **jadeBin** (or jadeAll if you wish)



Outline

1 Getting JADE

2 Run JADE



Run from Binaries I

N.B.: The only software requirement to execute JADE is the **JRE version 5 or later**.

Classpath yes

- Add the `jade.jar` archive in “`jade/lib/`” to your JVM classpath (don't ask me how, please...)
- Open up your command prompt (anywhere you can run `java`) and type:
 - `$> java jade.Boot -gui &` to launch JADE main container with RMA attached
 - `$> java jade.Boot -container &` to launch a *peripheral* (non-main) container connected to the same JADE platform (previous main container)

Run from Binaries II

Classpath no

- Open up your command prompt and navigate to “jade/” folder
- Then type:
 - `$> java -cp lib/jade.jar jade.Boot -gui &` to launch JADE main container with RMA attached
 - `$> java -cp lib/jade.jar jade.Boot -container &` to launch a *peripheral* (non-main) container connected to the same JADE platform (previous main container)

N.B.: Port 1099 is the default main container listening TCP port for intra-platform (remote) communications.

N.B.: Port 7778 is the default main container listening port for inter-platform communications (default MTP is HTTP).

Run from Binaries III

What to expect I

If you launched the main container, the RMA GUI should show up and something like this should appear on the command prompt:

```
jade — bash — 107x32
panzutoidiota:jade ste$ java -cp lib/jade.jar jade.Boot -gui &
[1] 815
panzutoidiota:jade ste$ ott 03, 2012 2:14:32 PM jade.core.Runtime beginContainer
Informazioni: -----
This is JADE 4.2.0 - revision 6574 of 2012/06/20 15:38:00
downloaded in Open Source, under LGPL restrictions,
at http://jade.tilab.com/
-----
Retrieving CommandDispatcher for platform null
ott 03, 2012 2:14:32 PM jade.imtp.leap.LEAPIMTPManager initialize
Informazioni: Listening for intra-platform commands on address:
- jicp://137.204.75.74:1099

ott 03, 2012 2:14:34 PM jade.core.BaseService init
Informazioni: Service jade.core.management.AgentManagement initialized
ott 03, 2012 2:14:34 PM jade.core.BaseService init
Informazioni: Service jade.core.messaging.Messaging initialized
ott 03, 2012 2:14:34 PM jade.core.BaseService init
Informazioni: Service jade.core.resource.ResourceManagement initialized
ott 03, 2012 2:14:34 PM jade.core.BaseService init
Informazioni: Service jade.core.mobility.AgentMobility initialized
ott 03, 2012 2:14:34 PM jade.core.BaseService init
Informazioni: Service jade.core.event.Notification initialized
ott 03, 2012 2:14:34 PM jade.mtp.http.HTTPServer <init>
Informazioni: HTTP-MTP Using XML parser com.sun.org.apache.xerces.internal.jaxp.SAXParserImpl$JAXPSAXParser
ott 03, 2012 2:14:34 PM jade.core.messaging.MessagingService boot
Informazioni: MTP addresses:
http://137.204.75.74:7778/acc
ott 03, 2012 2:14:34 PM jade.core.AgentContainerImpl joinPlatform
Informazioni: -----
Agent container Main-Container@137.204.75.74 is ready.
-----
```

Run from Binaries IV

What to expect II

If you launched a peripheral container, the RMA GUI should self-update and something like this should appear on the command prompt:

```
jade — bash — 107x32
panzutoidiota:jade ste$ java -cp lib/jade.jar jade.Boot -container &
[2] 1229
panzutoidiota:jade ste$ ott 03, 2012 2:38:55 PM jade.core.Runtime beginContainer
Informazioni: -----
This is JADE 4.2.0 - revision 6574 of 2012/06/20 15:38:00
downloaded in Open Source, under LGPL restrictions,
at http://jade.tilab.com/
-----
Retrieving CommandDispatcher for platform null
ott 03, 2012 2:38:55 PM jade.imtp.leap.LEAPIMTPManager initialize
Informazioni: Listening for intra-platform commands on address:
- jicp://137.204.75.74:49830

ott 03, 2012 2:38:56 PM jade.core.BaseService init
Informazioni: Service jade.core.management.AgentManagement initialized
ott 03, 2012 2:38:56 PM jade.core.BaseService init
Informazioni: Service jade.core.messaging.Messaging initialized
ott 03, 2012 2:38:56 PM jade.core.BaseService init
Informazioni: Service jade.core.resource.ResourceManagement initialized
ott 03, 2012 2:38:56 PM jade.core.BaseService init
Informazioni: Service jade.core.mobility.AgentMobility initialized
ott 03, 2012 2:38:56 PM jade.core.BaseService init
Informazioni: Service jade.core.event.Notification initialized
ott 03, 2012 2:38:56 PM jade.core.PlatformManagerImpl localAddNode
Informazioni: Adding node <Container-1> to the platform
ott 03, 2012 2:38:56 PM jade.core.PlatformManagerImpl$1 nodeAdded
Informazioni: --- Node <Container-1> ALIVE ---
ott 03, 2012 2:38:56 PM jade.core.AgentContainerImpl joinPlatform
Informazioni: -----
Agent container Container-1@137.204.75.74 is ready.
```

Run from Binaries V

Some notes

- option `-name` when launching the main container lets you give a name to the JADE platform
- option `-container-name` when launching a peripheral container lets you choose a name for that container
- options `-local-host` / `-local-port` when launching the main container lets you choose a custom host / listening port for the JADE platform
- options `-host` / `-port` when launching a peripheral container lets you specify where to find the remote main container to register to
- for other options, refer to the JADE documentation (administrator's guide)

JADE: Java Agent DEvelopment Framework Getting Started

Stefano Mariani
`s.mariani@unibo.it`

Dipartimento di Informatica – Scienza e Ingegneria (DISI)
ALMA MATER STUDIORUM – Università di Bologna a Cesena

Academic Year 2014/2015

