

IMD0409 - Desenvolvimento de Sistemas Web II

#05 Development Environment

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- 1 Introduction to Enterprise Applications
- 2 Introduction to Java EE (Enterprise Edition)

Today...

- 1 Development Environment
 - Application Server - JBoss WildFly
 - Configuring Eclipse
- 2 Exercises

Development Environment

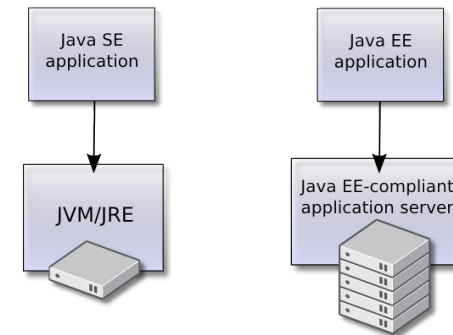
- Application server: JBoss Wildfly 15.0.1.Final
- IDE Eclipse JEE
- Jbosstools

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Application Server

WildFly 15.0.1



- Official Web page: <http://www.wildfly.org/>

JBoss WildFly

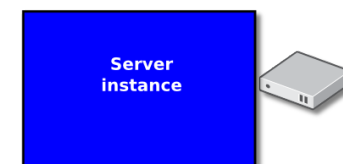
Characteristics

- Modular structure
- Simplified Configuration Files
- Management Interfaces/Tools
 - CLI, Web, API, REST
- Support to several APIs and frameworks
 - Spring, Struts, GWT, OSGi
- Two modes of operation
 - *Standalone server*
 - *Managed domain*

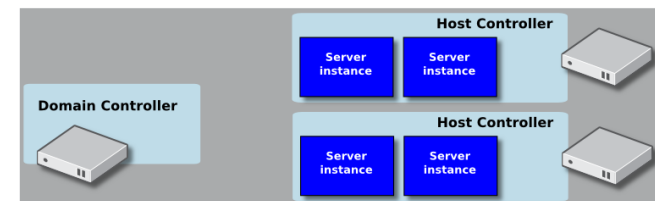
JBoss WildFly

Standalone Mode vs. Domain Mode

Standalone Mode

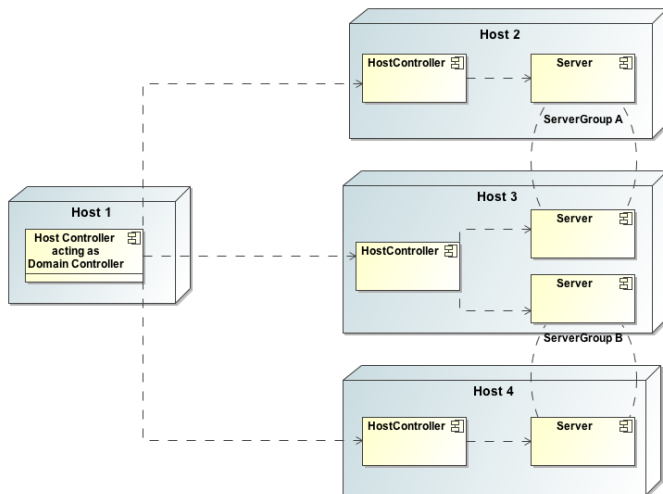


Domain Mode



JBoss WildFly

Managed Domain



JBoss WildFly

- Download from module server
 - ▶ <http://10.7.52.18:8080/web2>
 - ▶ Baixar o wildfly
- Docker file:
 - ▶ <https://projetos.imd.ufrn.br/web2/infra>
 - ▶ `git clone https://projetos.imd.ufrn.br/web2/infra.git`

JBoss WildFly

Directories

- wildfly-15.0.1.Final
 - ▶ **appclient** - Client container configuration
 - ▶ **bin** - Scripts ([standalone|domain|jboss-cli].[bat|sh])
 - ▶ **docs** - Examples, licenses, e xml schemas
 - ▶ **domain** - Work area used by domain mode
 - ▶ **modules** - Dynamically loaded modules
 - ▶ **standalone** - Work are used in standalone mode
 - ▶ **welcome-content** - JBoss/WildFly standard stating page
- standalone
 - ▶ **configuration** - Configuration files
 - ★ MUST NOT BE MANUALLY ALTERED
 - ★ Management Console
 - ▶ **data** - Persistent information maintained by the server
 - ▶ **deployments** - Deployed services (auto-deploy)
 - ▶ **lib** - jar files
 - ▶ **log** - Log files
 - ▶ **tmp** - Temporary files

JBoss WildFly

Start/Stop

- Starting the server
 - ▶ Using command prompt
 - ▶ `wildfly-15.0.1.Final/bin/standalone.[sh|bat]`
- Access: <http://localhost:8080>
- Stop server
 - ▶ Ctrl-C
- Command Line management Interface
 - ▶ CLI: shutdown

* More information on documentation: *Administration and Configuration Guide*

JBoss WildFly

Start/Stop



JBoss WildFly

Docker

- Dockerfile no repositório local
- `https://projetos.imd.ufrn.br/web2/infra`
- `git clone https://kaduaro@projetos.imd.ufrn.br/web2/infra.git`

JBoss WildFly

Define Administrator Credentials

- Add management user - `add-user.sh`

```
instructor@instructor:/home/student/JB248/opt/jboss-eap-6.
File Edit View Search Terminal Help
What type of user do you wish to add?
a) Management User (mgmt-users.properties)
b) Application User (application-users.properties)
(a): a

Enter the details of the new user to add.
Realm (ManagementRealm) :
Username : admin
Password :
Re-enter Password :
The username 'admin' is easy to guess
Are you sure you want to add user 'admin' yes/no? yes
About to add user 'admin' for realm 'ManagementRealm'
Is this correct yes/no? yes
Added user 'admin' to file '/home/student/JB248/opt/jboss-eap-6.
0/standalone/configuration/mgmt-users.properties'
Added user 'admin' to file '/home/student/JB248/opt/jboss-eap-6.
0/domain/configuration/mgmt-users.properties'
[instructor@instructor bin]$
```

- Test at `http://localhost:8080/console`

JBoss WildFly

Management Console

- From the Configuration page, what is the Code Name of your running EAP server?
- What is the release version?
- What is the maximum heap size of the JVM running your standalone server?
- How much of that heap is currently being used?
- View the Profile Page and find the Logging subsystem configuration page.
- How many logging handlers are configured out-of-the-box for a standalone server?

Configuring Eclipse

Eclipse + JBoss tools

1 Development Environment

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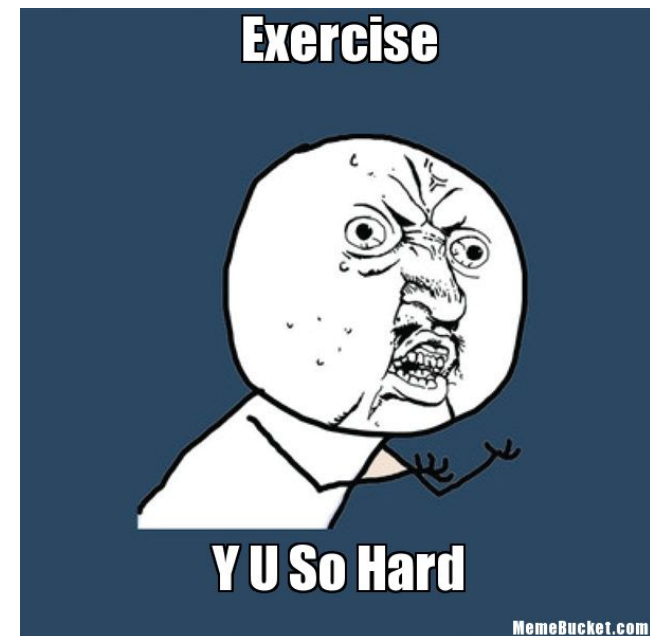
2 Exercices

- JBoss Tools - <https://www.jboss.org/tools>
 - *Offline Update site zips*
 - Copy to eclipse/plugins directory
- Documentation:
 - <http://tools.jboss.org/documentation/>
- Connect eclipse to WildFly server

1 Development Environment

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2 Exercices



- ❶ Install and configure o JBoss WildFly + eclipse + JBoss Tools in your home machine
- ❷ Create a simple application (Hello world) containing only a single html page and deploy in your WildFly instance
 - ▶ Hint: You can create the structure of a war file by hand and package using zip
- ❸ Follow the First Cup of Java EE Tutorial
 - ▶ <https://javaee.github.io/firstcup/>
- ❹ (Challenge) Install a database server (e.g., Postgres) and create a Datasource in your JBoss installation

- Servlets

Bibliography

- WildFly Getting Started Guide e WildFly Admin Guide
 - ▶ <http://docs.wildfly.org/>
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 - ▶ <http://www.jboss.org/tools/docs/reference>
- Maven for building Java applications - Tutorial. Lars Vogel, Hendrik Still, Simon Scholz (c) 2013 - 2016 vogella GmbH. Version 2.2, 11.01.2016
<http://www.vogella.com/tutorials/ApacheMaven/article.html>
- Using Maven within the Eclipse IDE - Tutorial. Lars Vogel, Simon Scholz, (c) 2016 vogella GmbH Version 1.4, 29.05.2016
<http://www.vogella.com/tutorials/EclipseMaven/article.html>

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