



## Architecture des Systèmes d'Information

**JBOSS** 







### Jboss open source.





- Marc Fleury a démarré le projet <u>JBoss</u> en 1999
- Puis a créé la société Jboss en 2001.
- JBoss a été rachetée (\$350M) par Red Hat en avril 2006.







### JBoss Enterprise Middleware Suite (JEMS)



- Application Server (JBoss AS, Tomcat)
- O/R Mapping and Persistence (Hibernate)
- Portal Platform (JBoss Portal)
- Business Process Management and Rules (JBoss jBPM, JBoss Rules)
- Object/Data Cache (JBoss Cache)
- Distributed Transaction Management (JBoss Transactions)
- Development Tools (JBoss Tools plugin for Eclipse)

### JBoss architecture





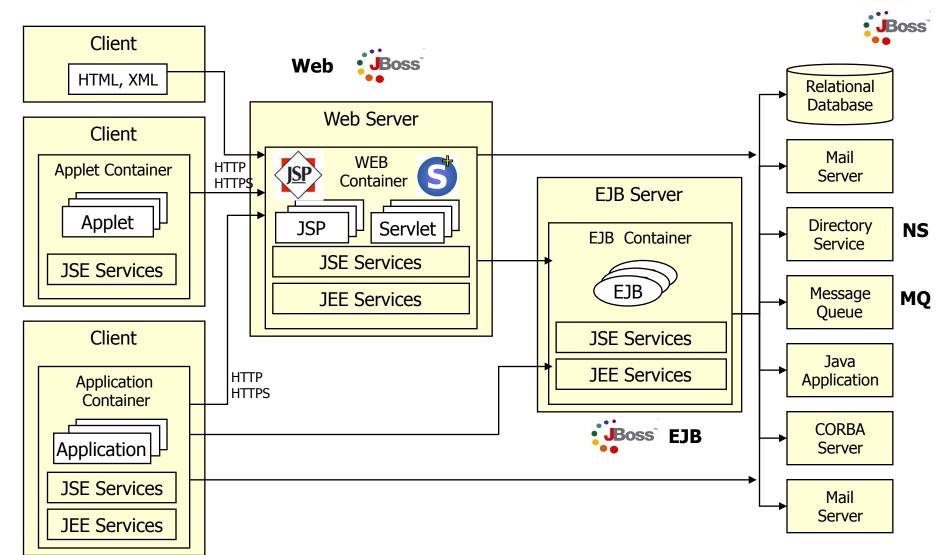
 the JBoss architecture consists of the JMX MBean server, the microkernel, and a set of pluggable component services, the Mbeans.



### Web Server Enterprise Components







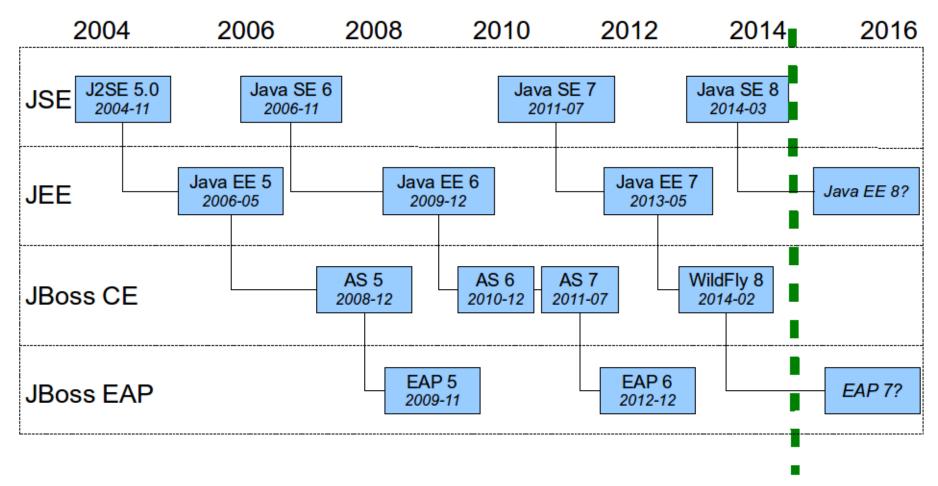
### **JBoss Revision History**



- 1999 open-source EJB container
- Version 2.x : a full J2EE application server
- Version 3.x: based on JMX microkernel and serviceoriented architecture (May 2002)
- Version 4.x : AOP aspect-oriented middleware services,
   EJB 3 (September 2004)
- Version 5.x: JBoss Microcontainer (also a stand-alone project) and replaces JMX Microkernel of the 3.x and 4.x JBoss series (December 2008)
- Version 6.x: Java EE 6 APIs and Profiles. Replaces JBoss Messaging with HornetQ (6.0.0.M3 released in April 2010)
- WildFly 8.0 : JEE 7 compliant application server

### Time Line (since JEE)



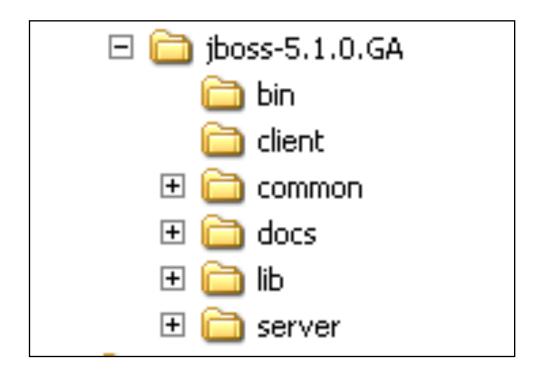


http://redpill-linpro.com/blogpost/debunking-myths-about-naming-and-version-numbering-jboss

CE: Community Edition
EAP: Enterprise Application Platform

### JBoss 5 Main Directories





### JBoss 6 Main Directories



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### Main Directories





Traduction en cours

#### bin:

contains startup and shutdown and other system-specific scripts.
 We've already seen the run script which starts JBoss.

#### client:

- stores configuration and JAR files which may be needed by a Java client application or an external web container.
- You can select archives as required or use jbossall-client.jar.

#### docs:

- contains the XML DTDs used in JBoss for reference (these are also a useful source of documentation on JBoss configuration specifics).
- There are also example JCA (Java Connector Architecture) configuration files for setting up datasources for different databases (such as MySQL, Oracle, Postgres).

### **Main Directories**





### Lib:

JAR files which are needed to run the JBoss microkernel.
 You should never add any of your own JAR files here.

#### server:

- each of the subdirectories in here is a different server configuration.
- The configuration is selected by passing -c <configname> to the run script.







#### minimal:

- The minimal configuration contains the bare minimum services required to start JBoss.
- It starts the logging service, a JNDI server and a URL deployment scanner to find new deployments.
- This is what you would use if you want to use JMX/JBoss to start your own services without any other J2EE technologies.
- This is just the bare server.
- There is no web container, no EJB or JMS support.





⊡ 🛅 jboss-5.1.0.GA
e bin
client
⊕ 🛅 lib
⊟ 🚞 server
⊞ 🛅 all
🕀 🧰 default
🛨 🧀 minimal
🕀 🧰 standard
⊕ 🛅 web





### default:

- The default configuration consists of the standard services needed by most J2EE applications.
- It does not include the JAXR service, the IIOP service, or any of the clustering services.

#### all:

 The all configuration starts all the available services. This includes the RMI/IIOP and clustering services, which aren't loaded in the default configuration.







- Within the server directory, there are three example server configurations: all, default and minimal, each of which provides a different set of services.
- the default configuration is the one used if you don't specify another one when starting up the server, so that's the one we were running in the previous chapter.



## JBoss directory server configuration





- The directory server configuration you're using, is effectively the server root while JBoss is running.
- It contains all the code and configuration information for the services provided by the particular configuration.
- It's where the log output goes, and it's where you deploy your applications.



## Directory server configuration





#### conf:

- This directory contains the jboss-service.xml file which specifies the core services.
- Also used for additional configuration files for these services.

### data:

- This directory holds persistent data for services intended to survive a server restart.
  - Ex : Map Background
- Serveral JBoss services, such as the embedded Hypersonic database instance, store data there.



## Directory server configuration





### deploy:

- The deploy directory contains the hot-deployable services (those which can be added to or removed from the running server) and applications for the current server configuration.
- You deploy your application code by placing application packages (JAR, WAR and EAR files) in the deploy directory.
- The directory is constantly scanned for updates, and any modified components will be re-deployed automatically.

Traduction en cours

# Directory server configuration





#### lib:

This directory contains JAR files needed by this server configuration.
 You can add required library files here for JDBC drivers etc.

### log:

- This is where the log files are written.
- JBoss uses the Jakarta log4j package for logging and you can also use it directly in your own applications from within the server.

### tmp:

- The tmp directory is used for temporary storage by JBoss services.
- The deployer, for example, expands application archives in this directory.

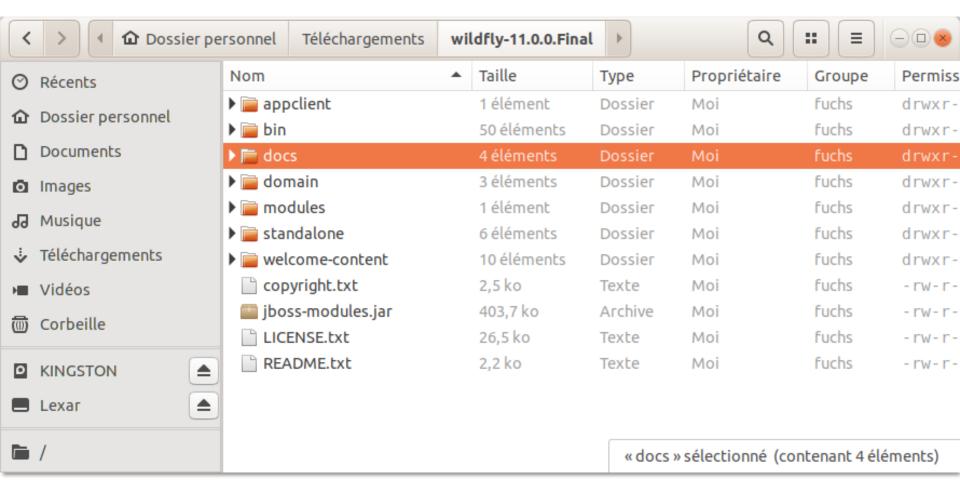
#### work:

This directory is used by Tomcat for compilation of JSPs.



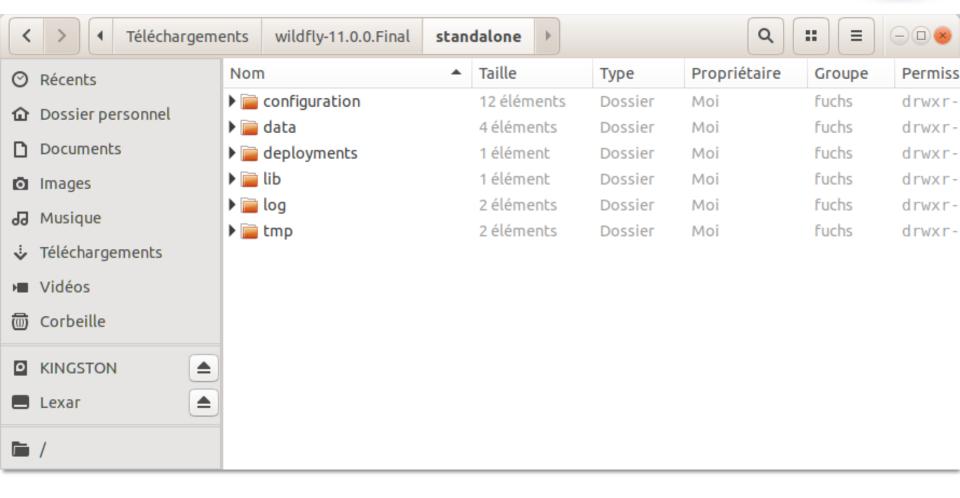


















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## WildFly Start





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### WildFly Start





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e/deployments

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fuchs@fuchs-Latitude-E6530:~/Téléchargements/wildfly-11.0.0.Final/bin$ sudo ./standalone.sh
______
 JBoss Bootstrap Environment
 JBOSS_HOME: /home/fuchs/Téléchargements/wildfly-11.0.0.Final
 JAVA: java
 JAVA_OPTS: -server -Xms64m -Xmx512m -XX:MetaspaceSize=96M -XX:MaxMetaspaceSize=256m -Djava.net.preferIPv4Stack=true -Djboss.modules.system.pkgs=org.jboss.byteman -Djava.awt.headless=true
 21:30:26,961 INFO [org.jboss.modules] (main) JBoss Modules version 1.6.1.Final
21:30:27,769 INFO
                  [org.jboss.msc] (main) JBoss MSC version 1.2.7.SP1
21:30:28,054 INFO
                  [org.jboss.as] (MSC service thread 1-8) WFLYSRV0049: WildFly Full 11.0.0.Final (WildFly Core 3.0.8.Final) starting
21:30:32,062 INFO [org.jboss.as.controller.management-deprecated] (Controller Boot Thread) WFLYCTL0028: Attribute 'security-realm' in the resource at address '/core-service=management/management-interface
=http-interface' is deprecated, and may be removed in future version. See the attribute description in the output of the read-resource-description operation to learn more about the deprecation. 21:30:32,137 INFO [org.wildfly.security] (ServerService Thread Pool -- 19) ELY00001: WildFly Elytron version 1.1.6.Final
21:30:32,184 INFO [org.jboss.as.controller.management-deprecated] (ServerService Thread Pool -- 29) WFLYCTL0028: Attribute 'security-realm' in the resource at address '/subsystem=undertow/server=default-s
erver/https-listener=https' is deprecated, and may be removed in future version. See the attribute description in the output of the read-resource-description operation to learn more about the deprecation.
21:30:32,507 INFO [org.jboss.as.server] (Controller Boot Thread) WFLYSRV0039: Creating http management service using socket-binding (management-http)
21:30:32,562 INFO
                   [org.xnio] (MSC service thread 1-3) XNIO version 3.5.4.Final
21:30:32,588 INFO
                   [org.xnio.nio] (MSC service thread 1-3) XNIO NIO Implementation Version 3.5.4.Final
21:30:32,734 INFO
                  [org.jboss.remoting] (MSC service thread 1-6) JBoss Remoting version 5.0.5.Final
21:30:32,759 INFO
                  [org.jboss.as.clustering.infinispan] (ServerService Thread Pool -- 42) WFLYCLINF0001: Activating Infinispan subsystem.
21:30:32,787 INFO
                  [org.jboss.as.naming] (ServerService Thread Pool -- 50) WFLYNAM0001: Activating Naming Subsystem
21:30:32.835 INFO
                  [org.jboss.as.security] (ServerService Thread Pool -- 57) WFLYSEC0002: Activating Security Subsystem
21:30:32,781 INFO
                  [org.jboss.as.jsf] (ServerService Thread Pool -- 48) WFLYJSF0007: Activated the following JSF Implementations: [main]
                  [org.jboss.as.txn] (ServerService Thread Pool -- 58) WFLYTX0013: The node-identifier attribute on the /subsystem=transactions is set to the default value. This is a danger for environment
21:30:32,814 WARN
ts running multiple servers. Please make sure the attribute value is uniqu
21:30:32,867 INFO [org.jboss.as.jaxrs] (ServerService Thread Pool -- 43) WFLYRS0016: RESTEasy version 3.0.24.Final
21:30:32,959 INFO
                  [org.jboss.as.webservices] (ServerService Thread Pool -- 60) WFLYWS0002: Activating WebServices Extension
21:30:33,046 INFO
                  [org.jboss.as.security] (MSC service thread 1-2) WFLYSEC0001: Current PicketBox version=5.0.2.Final
21:30:33,219 INFO
                   [org.wildfly.extension.io] (ServerService Thread Pool -- 41) WFLYI0001: Worker 'default' has auto-configured to 8 core threads with 64 task threads based on your 4 available processors
21:30:33,220 INFO
                   [org.jboss.as.connector] (MSC service thread 1-4) WFLYJCA0009: Starting JCA Subsystem (WildFly/IronJacamar 1.4.6.Final)
21:30:33,314 INFO
                   org.jboss.as.naming] (MSC service thread 1-5) WFLYNAM0003: Starting Naming Service
21:30:33,318 INFO
                   [org.jboss.as.connector.subsystems.datasources] (ServerService Thread Pool -- 36) WFLYJCA0004: Deploying JDBC-compliant driver class org.h2.Driver (version 1.4)
21:30:33,320 INFO
                   [org.wildfly.extension.undertow] (MSC service thread 1-8) WFLYUT0003: Undertow 1.4.18.Final starting
21:30:33,383 INFO
                  [org.jboss.as.mail.extension] (MSC service thread 1-6) WFLYMAIL0001: Bound mail session [java:jboss/mail/Default]
21:30:33,478 INFO
                  [org.jboss.as.connector.deployers.jdbc] (MSC service thread 1-8) WFLYJCA0018: Started Driver service with driver-name = h2
21:30:34,660 INFO
                  [org.wildfly.extension.undertow] (ServerService Thread Pool -- 59) WFLYUT0014: Creating file handler for path '/home/fuchs/Téléchargements/wildfly-11.0.0.Final/welcome-content' with opti
ons [directory-listing: 'false', follow-symlink: 'false', case-sensitive: 'true', safe-symlink-paths: '[]']
21:30:34,683 INFO [org.jboss.as.ejb3] (MSC service thread 1-7) WFLYEJB0482: Strict pool mdb-strict-max-pool is using a max instance size of 16 (per class), which is derived from the number of CPUs on this
host.
21:30:34,683 INFO [org.jboss.as.ejb3] (MSC service thread 1-4) WFLYEJB0481: Strict pool slsb-strict-max-pool is using a max instance size of 64 (per class), which is derived from thread worker pool sizing
21:30:34,704 INFO
                  [org.wildfly.extension.undertow] (MSC service thread 1-1) WFLYUT0012: Started server default-server.
21:30:34,716 INFO
                  [org.wildfly.extension.undertow] (MSC service thread 1-1) WFLYUT0018: Host default-host starting
21:30:35,075 INFO
                  [org.wildfly.extension.undertow] (MSC service thread 1-8) WFLYUT0006: Undertow HTTP listener default listening on 127.0.0.1:8080
21:30:35,146 INFO
                   [org.jboss.as.ejb3] (MSC service thread 1-4) WFLYEJB0493: EJB subsystem suspension complete
21:30:35,569 INFO
                   [org.jboss.as.connector.subsystems.datasources] (MSC service thread 1-2) WFLYJCA0001: Bound data source [java:jboss/datasources/ExampleDS]
21:30:36,051 INFO
                  [org.jboss.as.patching] (MSC service thread 1-5) WFLYPAT0050: WildFly Full cumulative patch ID is: base, one-off patches include: none
21:30:36,277 INFO
```

[org.jboss.as.server.deployment.scanner] (MSC service thread 1-2) WFLYDS0013: Started FileSystemDeploymentService for directory /home/fuchs/Téléchargements/wildfly-11.0.0.Final/standalon

21:30:36,832 INFO [org.wildfly.extension.undertow] (MSC service thread 1-7) WFLYUT0006: Undertow HTTPS listener https listening on 127.0.0.1:8443



