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WildFly

Introduction

WildFly, formerly known as JBoss AS, or simply JBoss.

It is an Application Server, written in Java and implements the Java Platform, Enterprise Edition (Java EE) specification. It runs on multiple platforms.

WildFly is free and open-source software.

On 20 November 2014, JBoss Application Server was renamed to WildFly.

Installation

WildFly software will be available as a zip file. So, we can unzip it and use it as follows.

Step 1: Download and Unzip WildFly software (wildfly-10.0.0.Final.zip).

Step 2: Open the command prompt and execute the below commands.

>cd WildFlyHome/bin (/opt/WildFly/wildfly-10.0.0.Final/bin)

> standalone.bat ---> Starting the WildFly server in Windows machine.

#sh standalone.sh ---> Starting the WildFly server in MAC/Linux server.

```
sh-3.2# sh standalone.sh
=================================================================

  JBoss Bootstrap Environment

  JBOSS_HOME: /opt/WildFly/wildfly-10.0.0.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

=================================================================
08:13:50,516 INFO  [org.jboss.modules] (main) JBoss Modules version 1.5.1.Final
08:13:51,233 INFO  [org.jboss.msc] (main) JBoss MSC version 1.2.6.Final
08:13:51,376 INFO  [org.jboss.as] (MSC service thread 1-6) WFLYSRV0049: WildFly Full 10.0.0.Final (WildFly Core 2.0.10.Final) starting
08:13:53,172 INFO  [org.jboss.as.server] (Controller Boot Thread) WFLYSRV0039: Creating http management service using socket-binding (management-http)
08:13:53,202 INFO  [org.xnio] (MSC service thread 1-7) XNIO version 3.3.4.Final
08:13:53,216 INFO  [org.xnio.nio] (MSC service thread 1-7) XNIO NIO Implementation Version 3.3.4.Final
08:13:53,279 INFO  [org.jboss.as.clustering.infinispan] (ServerService Thread Pool -- 38) WFLYCLINF0001: Activating Infinispan subsystem.
08:13:53,283 INFO  [org.wildfly.extension.io] (ServerService Thread Pool -- 37) WFLYIO001: Worker 'default' has auto-configured to 8 core threads with 64 task threads based on your 4 available processors
08:13:53,328 INFO  [org.jboss.as.connector.subsystems.datasources] (ServerService Thread Pool -- 33) WFLYJCA0004: Deploying JDBC-compliant driver class org.h2.Driver (version 1.3)
08:13:53,333 INFO  [org.jboss.as.jsf] (ServerService Thread Pool -- 44) WFLYJSF0007: Activated the following JSF Implementations: [main]
08:13:53,336 INFO  [org.jboss.as.connector] (MSC service thread 1-4) WFLYJCA0009: Starting JCA Subsystem (WildFly/IronJacamar 1.3.2.Final)
08:13:53,356 INFO  [org.jboss.as.connector.deployers.jdbc] (MSC service thread 1-4) WFLYJCA0018: Started Driver service with driver-name = h2
08:13:53,374 INFO  [org.jboss.as.naming] (ServerService Thread Pool -- 46) WFLYNAM0001: Activating Naming Subsystem
08:13:53,424 INFO  [org.jboss.as.security] (ServerService Thread Pool -- 53) WFLYSEC0002: Activating Security Subsystem
08:13:53,427 WARN  [org.jboss.as.txn] (ServerService Thread Pool -- 54) WFLYTX0013: Node identifier property is set to the default value. Please make sure it is unique.
08:13:53,435 INFO  [org.jboss.as.webservices] (ServerService Thread Pool -- 56) WFLYWS0002: Activating WebServices Extension
08:13:53,482 INFO  [org.wildfly.extension.undertow] (ServerService Thread Pool -- 55) WFLYUT0003: Undertow 1.3.15.Final starting
08:13:53,488 INFO  [org.wildfly.extension.undertow] (MSC service thread 1-2) WFLYUT0003: Undertow 1.3.15.Final starting
08:13:53,490 INFO  [org.jboss.as.security] (MSC service thread 1-3) WFLYSEC0001: Current PicketBox version=4.9.4.Final
08:13:53,548 INFO  [org.jboss.as.naming] (MSC service thread 1-2) WFLYNAM0003: Starting Naming Service
08:13:53,552 INFO  [org.jboss.as.mail.extension] (MSC service thread 1-6) WFLYMAIL0001: Bound mail session [java:jboss/mail/Default]
08:13:53,647 INFO  [org.jboss.remoting] (MSC service thread 1-5) JBoss Remoting version 4.0.18.Final
08:13:53,865 INFO  [org.wildfly.extension.undertow] (ServerService Thread Pool -- 55) WFLYUT0014: Creating file handler for path '/opt/WildFly/wildfly-10.0.0.Final/welcome-content' with options [directory-listing: 'false', follow-symlink: 'false', case-sensitive: 'true', safe-symlink-paths: '[]']
08:13:53,913 INFO  [org.wildfly.extension.undertow] (MSC service thread 1-2) WFLYUT0012: Started server default-server.
08:13:53,914 INFO  [org.wildfly.extension.undertow] (MSC service thread 1-4) WFLYUT0018: Host default-host starting
08:13:54,012 INFO  [org.jboss.as.ejb3] (MSC service thread 1-1) 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.
08:13:54,012 INFO  [org.jboss.as.ejb3] (MSC service thread 1-3) 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.
08:13:54,088 INFO  [org.wildfly.extension.undertow] (MSC service thread 1-2) WFLYUT0006: Undertow HTTP listener default listening on 127.0.0.1:8082
08:13:54,172 INFO  [org.jboss.as.connector.subsystems.datasources] (MSC service thread 1-2) WFLYJCA0001: Bound data source [java:jboss/datasources/ExampleDS]
08:13:54,371 INFO  [org.jboss.as.server.deployment.scanner] (MSC service thread 1-4) WFLYDS0013: Started FileSystemDeploymentService for directory /opt/WildFly/wildfly-10.0.0.Final/standalone/deployments
08:13:54,714 INFO  [org.infinispan.factories.GlobalComponentRegistry] (MSC service thread 1-6) ISPN000128: Infinispan version: Infinispan 'Mahou' 8.1.0.Final
08:13:54,726 INFO  [org.jboss.ws.common.management] (MSC service thread 1-7) JBWS022052: Starting JBossWS 5.1.3.Final (Apache CXF 3.1.4)
08:13:55,084 INFO  [org.jboss.as] (Controller Boot Thread) WFLYSRV0060: Http management interface listening on http://127.0.0.1:9990/management
08:13:55,085 INFO  [org.jboss.as] (Controller Boot Thread) WFLYSRV0051: Admin console listening on http://127.0.0.1:9990
08:13:55,086 INFO  [org.jboss.as] (Controller Boot Thread) WFLYSRV0025: WildFly Full 10.0.0.Final (WildFly Core 2.0.10.Final) started in 5085ms - Started 267 of 553 services (371 services are lazy, passive or on-demand)
```

WildFly server is started successfully.

The WildFly management console is served through the default HTTP management endpoint.

Typically that's http://localhost:9990/console

http://localhost:8082

http://mithuntechnologies.com/

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Note: WildFly by default will run in 8080 port number.

How to change the port number?

cd /opt/WildFly/wildfly-10.0.0.Final/standalone/configuration/

#vim standalone.xml

```
    <socket-binding name="management-native" interface="management" port="${jboss.management.native.port:9999}"/>
    <socket-binding name="management-http" interface="management" port="${jboss.management.http.port:9990}"/>
    <socket-binding name="management-https" interface="management" port="${jboss.management.https.port:9443}"/>
    <socket-binding name="ajp" port="8009"/>
    <socket-binding name="http" port="8082"/>
    <socket-binding name="https" port="8443"/>
    <socket-binding name="osgi-http" interface="management" port="8090"/>
    <socket-binding name="remoting" port="4447"/>
    <socket-binding name="txn-recovery-environment" port="4712"/>
    <socket-binding name="txn-status-manager" port="4713"/>
    <outbound-socket-binding name="mail-smtp">
        <remote-destination host="localhost" port="25"/>
    </outbound-socket-binding>
  </socket-binding-group>
```

For auto deployment

Update the below line in standalone.xml

<deployment-scanner scan-interval="5000" relative-to="jboss.server.base.dir"

   path="deployments" **auto-deploy-zipped="true" auto-deploy-exploded="true"**/>

How to create the users in JBoss?

#cd /opt/WildFly/wildfly-10.0.0.Final/bin

#sh add-user.sh

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```
[sh-3.2# cd /opt/WildFly/wildfly-10.0.0.Final/bin
[sh-3.2# sh add-user.sh

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.
Using realm 'ManagementRealm' as discovered from the existing property files.
Username : admin
The username 'admin' is easy to guess
Are you sure you want to add user 'admin' yes/no? yes
Password recommendations are listed below. To modify these restrictions edit the add-user.properties configuration file.
 - The password should be different from the username
 - The password should not be one of the following restricted values {root, admin, administrator}
 - The password should contain at least 8 characters, 1 alphabetic character(s), 1 digit(s), 1 non-alphanumeric symbol(s)
Password :
WFLYDM0102: Password should have at least 1 non-alphanumeric symbol.
Are you sure you want to use the password entered yes/no? yes
Re-enter Password :
What groups do you want this user to belong to? (Please enter a comma separated list, or leave blank for none)[  ]:
About to add user 'admin' for realm 'ManagementRealm'
Is this correct yes/no? yes
Added user 'admin' to file '/opt/WildFly/wildfly-10.0.0.Final/standalone/configuration/mgmt-users.properties'
Added user 'admin' to file '/opt/WildFly/wildfly-10.0.0.Final/domain/configuration/mgmt-users.properties'
Added user 'admin' with groups  to file '/opt/WildFly/wildfly-10.0.0.Final/standalone/configuration/mgmt-groups.properties'
Added user 'admin' with groups  to file '/opt/WildFly/wildfly-10.0.0.Final/domain/configuration/mgmt-groups.properties'
Is this new user going to be used for one AS process to connect to another AS process?
e.g. for a slave host controller connecting to the master or for a Remoting connection for server to server EJB calls.
yes/no? yes
To represent the user add the following to the server-identities definition <secret value="cGFzc3cwcmQ=" />
sh-3.2#
```

Deploy the application in WildFly server

We will deploy the app in 2 ways.

Method 1) Just we can place the .war or .ear file into WildFlyHome/standalone/deployments/ folder.

Method 2) From WildFly admin console we can deploy.

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