

Deploying and undeploying applications

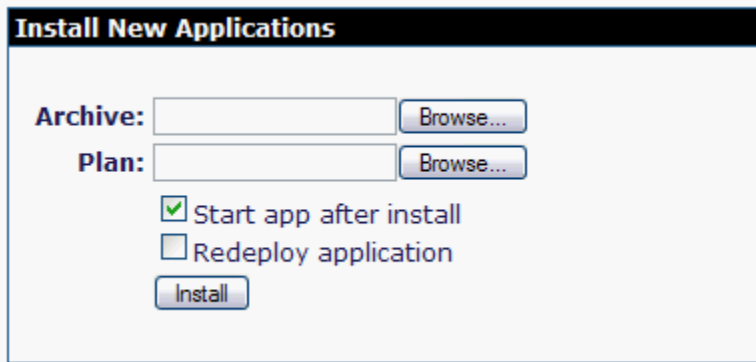
There are several alternatives available for Deploying and undeploying applications:

- [Via Geronimo Administration Console](#)
- [Via hot deployment](#)
- [Via Deployer tool](#)
- [Via GShell](#)
- [Via GEP](#)
- [Via Clustering](#)

When you package your application you may include the deployment plan within the package or not. At deployment time, Geronimo will look for the deployment plan `geronimo-web.xml` and deployment descriptor `web.xml` (or `geronimo-application.xml` or `geronimo-application-client.xml` depending the type of application) in the `WEB-INF` directory within your packaged application. If Geronimo can not find those information it will attempt to deploy the application using defaults. If using defaults fails you will have to either provide a deployment plan repackaged in the application or provide an external deployment plan, in the following sections we will discuss further these alternatives.

Via Geronimo Administration Console

To install a new application via the Geronimo Administration Console the **Install Applications** portlet is available by selecting **Deployer** on the **Console Navigation** menu on the left hand side. This portlet also allows you to start automatically the application right after it was deployed.



For this example we will be using the simple JSP HelloWorld sample created in the [Quick start - Apache Geronimo for the impatient](#) section. In that section however we used the `--inPlace` deployment option, in other words we did not need to package the application into a **WAR** file. To create the WAR file type the following command from the `<app_home>` directory

```
jar -cvf HelloWorld.war *
```

This WAR already has included in the package the deployment plans.

Back in the Geronimo Administration Console, from the **Install Applications** portlet click on **Browse** to specify the path to the `HelloWorld.war` in the **Archive:** section. Make sure the **Start app after install** checkbox is selected (by default is checked) and then click on **Install**.

You should see the "The application was successfully deployed." and "The application was successfully started." confirmation messages on the top of the portlet.

Another way to verify that the application has been successfully installed and started is by checking the **Installed Web Applications** portlet which is available by selecting **Web App WARs** on the **Console Navigation** menu on the left hand side. You should see the application listed as **hello** and with the status **running**.

Since the application we installed is `HelloWorld.war`, we use this **Installed Web Applications** portlet. When you install an EAR, you would check the status using the **Installed Application EARs** portlet available by selecting **Application EARs** on the **Console Navigation** menu on the left hand side. The installation procedure is the same for both WAR and EAR applications.

To remove the applications through the Geronimo Administration Console you would use these two portlets, either the **Installed Web Applications** or the **Installed Application EARs** portlets depending on the application to uninstall.

Component Name	URL	State	Commands	Parent Component
org.apache.geronimo.plugins/sysdb-console-tomcat/2.1-SNAPSHOT/car	/system-database	running	Stop Restart Uninstall	org.apache.geroni org.apache.geroni org.apache.geroni org.apache.geroni org.apache.geroni org.apache.geroni org.apache.geroni org.apache.geroni org.apache.geroni org.apache.geroni
sample.applications/HelloWorldApp/2.0/war	/hello	running	Stop Restart Uninstall	org.apache.geroni org.apache.geroni org.apache.geroni org.apache.geroni org.apache.geroni org.apache.geroni org.apache.geroni org.apache.geroni org.apache.geroni org.apache.geroni

For our example, access the **Installed Applications** portlet and click on **Uninstall** for the **Component Name** listing **sample.applications/HelloWorldApp/2.0/war**. This will stop the application first and then uninstall it. The confirmation message "Uninstalled application" should be listed at the bottom of the portlet.

These are the basic steps for installing and uninstalling applications via the Geronimo Administration Console, the following two sections will focus on the command line options.

Via hot deployment

Apache Geronimo has support for *Hot Deployment*, which means that you can copy an application JAR file into the `<geronimo_home>/deploy` directory and the application will be deployed automatically. This will also work for uninstalling or refreshing applications previously deployed via this method. Alternatively, you may also copy the *directory* (unpacked) for the application module instead of copying a single JAR file.

Note that with this deployment method you have to include the deployment plan in the application package, this method does not support external deployment plans. Also note that applications deployed via the [Deployer tool](#) or the Geronimo Administration Console will not be listed in the `<geronimo_home>/deploy` directory.

When you copy an application in the `deploy` directory, for example `HelloWorld.war`, you will see a confirmation message in the `geronimo.log` which locates in the `<geronimo_home>/var/log` directory.

```
11:45:23,500 INFO [DirectoryHotDeployer] Deploying HelloWorld.war
11:45:23,953 INFO [DirectoryHotDeployer] Deployed sample.applications/HelloWorldApp/2.0/war @ /hello
```

To remove the application, just delete the WAR or EAR file from the `deploy` directory. When the application has been removed you should see a confirmation message in the `geronimo.log` which locates in the `<geronimo_home>/var/log` directory.

```
11:46:17,953 INFO [DirectoryHotDeployer] Undeploying HelloWorld.war
11:46:18,281 INFO [DirectoryMonitor] Hot deployer notified that an artifact was removed: sample.applications/HelloWorldApp/2.0/war
11:46:18,281 INFO [DirectoryHotDeployer] Undeployed sample.applications/HelloWorldApp/2.0/war
```

Via Deployer tool

The deployer tool will allow you, among other things, install and uninstall applications via a command line. In this section we will focus on just these two tasks for the sample application, the remaining functionality is fully covered in the [Deployer tool](#) section.

To deploy the `HelloWorld.war` sample application using the Deployer tool open a command line window and type the following command from the `<geronimo_home>/bin` directory:

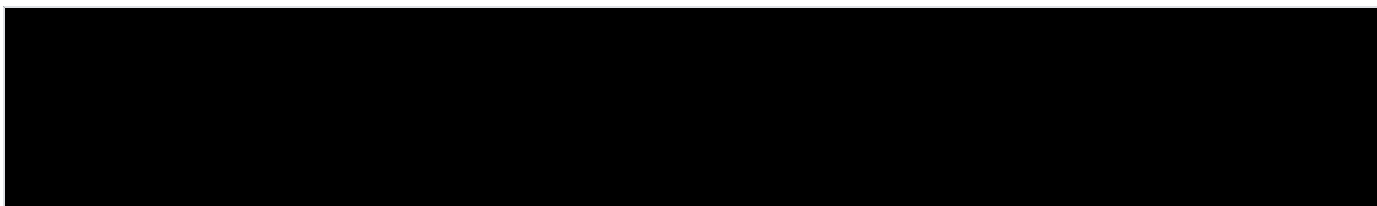
```
deploy --user system --password manager deploy <app_home>\HelloWorld.war
```

If your application does not include the Geronimo specific deployment plan in the `WEB-INF` directory you can still, just like with the Geronimo Administration Console, specify it externally. You just need to add to the previous command the path and file name of the deployment plan.

```
deploy --user system --password manager deploy <app_home>\HelloWorld.war <deployment_plan_home>\plan.xml
```

Note that when specifying the deployment plan externally you can use any file name to identify that plan, there is no need to use the `geronimo-XYZ.xml` form. In our example we do not need to specify any additional deployment plans as we have the Geronimo specific ones already included in the package.

Once deployed you should see a confirmation message similar to this one with moduleID `sample.applications/HelloWorldApp/2.0/war` assigned to this application within your deployment plan:



As a difference from the deployment via the Geronimo Administration Console, using the command line tool you receive instant information in the command line for confirmation. Alternatively, if you have not yet packaged your application you could use the **--inPlace** option for deploying your application directly from the directory you are actually developing the application. This option is used to deploy this sample application in the [Quick start - Apache Geronimo for the impatient](#) section.

In this case you would use this command from the `<geronimo_home>\bin` directory:

```
deploy --user system --password manager deploy --inPlace <app_home>
```

To uninstall an application, run the following command from the `<geronimo_home>\bin` directory using the moduleID specified in the deployment plan.

```
deploy --user system --password manager undeploy sample.applications/HelloWorldApp/2.0/war
```

This command will first stop the running application and then uninstall it. You should see a confirmation message similar to this:



These are other options and commands available for this deployer tool, please visit the [Tools and commands](#) section for additional details.

Via GShell

You can also deploy or undeploy applications in GShell. See [Deploying an Application to a Server Instance in GShell](#) for detailed information about deploying and undeploying GShell commands.

Via GEP

You can also deploy or undeploy application in Eclipse if you have [Geronimo Eclipse Plugin \(GEP\)](#) installed. See [Deploying and debugging applications using GEP](#) for details about deploying and undeploying applications with GEP.

Via Clustering

WADI can now be used to support the replication of HTTP Session state among multiple Geronimo servers. In previous releases of Geronimo, WADI could only be used along with the Jetty configuration of Geronimo. WADI can now be used with Tomcat configurations of Geronimo. In addition to the new session replication support, applications can now be deployed to administratively-defined groups of Geronimo servers. This makes it easier to manage a single application across a number of Geronimo servers. More information and details about clustered deployment can be found at [Farming using Deployment](#).