

# Configure Apache HTTPd with Jakarta Tomcat Connector (mod\_jk)

← [Configure Apache HTTPd as a reverse proxy \(mod\\_proxy\)](#)

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The communication between the HTTP server and Geronimo can also be done via AJP connectors. By default, both Apache Geronimo distributions (Jetty and Tomcat) have already predefined one AJP13 connector listening on port 8009.

The Jakarta Tomcat Connector **mod\_jk** module is provided as a connector from Apache Tomcat source. Both Jetty and Tomcat are fully compatible with this connector. This module is available when you download the Tomcat source, but you can also download it separately. See <http://tomcat.apache.org/download-connectors.cgi> for the proper version for your system.

In addition to **mod\_jk**, you will require a `workers.properties` file, also available with the Apache Tomcat source distribution. This properties file tells the **mod\_jk** plugin how to connect to the Geronimo server. For a detailed explanation on all the available options for configuring the Jakarta Tomcat Connector, visit <http://tomcat.apache.org/connectors-doc/config/workers.html>.



For practical purposes, the module [mod\\_jk-apache-2.2.3.so](#) for Windows and the [workers.properties](#) are included in the **Attachments** section in this article.

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## Configure Apache HTTPd

Download the appropriate **mod\_jk** for your platform from the [Tomcat](#) web site. For this particular example, rename it to **mod\_jk.so** and copy it into the `<httpd_home>\modules` directory. Download and extract the **workers.properties** file from the Apache Tomcat source (alternatively, download it from the **Attachments** section) to the `<httpd_home>\conf` directory.

Edit the `httpd.conf` file located in the `<httpd_home>\conf` directory to load the Jakarta Tomcat Connector **mod\_jk** module. Add the following lines at the end of the `httpd.conf` file.

### Excerpt from httpd.conf

```
LoadModule jk_module modules/mod_jk.so
# Loads the Jakarta Tomcat Connector module

JkWorkersFile <httpd_home>\conf\workers.properties
# Tells the module the location of the workers.properties file

JkLogFile      <httpd_home>\logs\mod_jk.log
# Specifies the location for this module's specific log file

JkLogLevel     info
# Sets the module's log level to info

JkMount /console/* ajp13
# Sets a mount point from a context to a Tomcat worker. In this case will allow access (forward the request) to the console.
```

**JkMount** will map anything behind `/console/` to the worker **ajp13**. The name **ajp13** is defined in the `workers.properties` file, which is described in the following section. You might need to add more **JkMount** directives depending on the applications you want to be accessed via the remote HTTPd.



In this example, the **console** has been enabled just for demonstration purposes. In a production environment, you do not want to have the **console** accessible from the other network (normally the Internet). Having the **console** accessible represents a big security exposure.

The rule is that everything should have restricted access. Normally, a firewall would be placed in between the HTTP and the application server (depending on the topology) and you should map just the minimum resources necessary to have your application working from the other side.

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## Configure workers.properties

The `workers.properties` file, among other things, tells the HTTPd where the Geronimo server is, what version of AJP to use and the port where Geronimo is listening.

Edit the `workers.properties` file located in the `<httpd_home>\conf` directory to match your environment. The following example is an excerpt from the `workers.properties` file with just the variables you should focus on.

#### Minimum requirements for the `workers.properties`

```
worker.ajp13.type=ajp13
# Sets the version of AJP used. The AJP listeners defined in Geronimo are AJP v13.

worker.ajp13.host=localhost
# Specifies the location of the Geronimo server. Use default localhost for single-tier scenarios. Specify the
# hostname of the Geronimo server for multi-tier environments.

worker.ajp13.port=8009
# Both Tomcat and Jetty come with a predefined AJP13 listener on port 8009
```

From this example, note how the name of the worker is defined. Look at the variables definition `worker.ajp13`, where `ajp13` is the worker name you specified earlier in the `httpd.conf` file.

As the last step, stop and restart the Apache HTTPd to ensure these changes are loaded.

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## Testing

For testing this configuration, make sure both Geronimo and HTTPd are up and running.

1. Check Geronimo connectivity by accessing <http://localhost:8080/console>, you should see the Geronimo Administration Console.
2. Check HTTPd connectivity by accessing <http://localhost>, you should see the Apache HTTPd welcome page.
3. Check the HTTPd - Geronimo request forwarding by accessing <http://localhost/console/>, you should be redirected to the Geronimo Administration Console. Note that at the end of the URL, there is a `/`, failing to include this `/` will result in a **Not Found** error triggered by the Jakarta Tomcat Connector module.

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