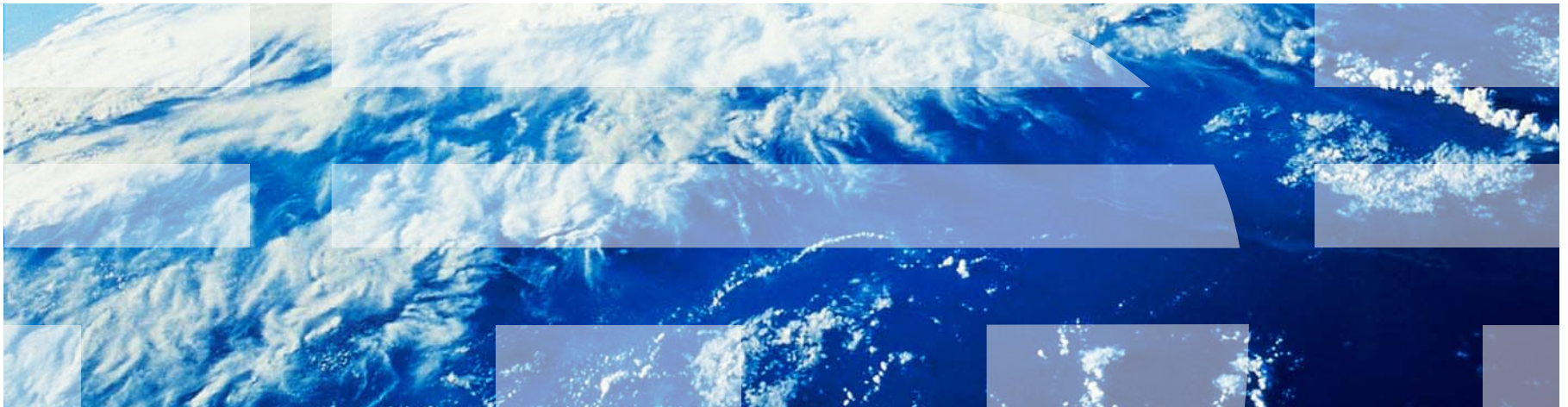


IBM Worklight V6.1.0 Getting Started

**Moving from development environment to stand-alone QA
and production servers**



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- See <http://www.ibm.com/ibm/us/en/>

Using this module

- IBM Worklight® development is performed using *Worklight Studio*. Worklight Studio contains an internal *Worklight Server*.
- To go to production, you are required to have an external Worklight Server
- This module is intended for use in conjunction with a Worklight Server, which is available for purchase from IBM.

Agenda

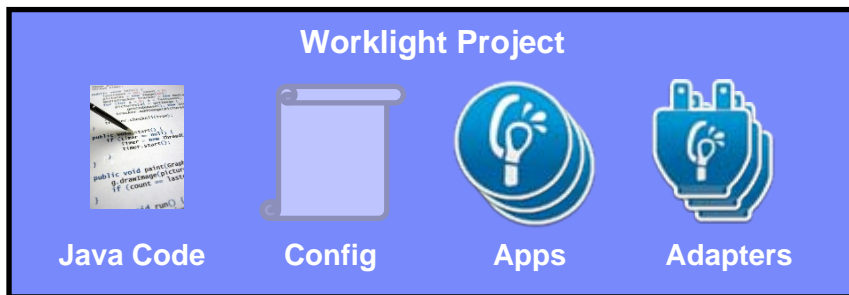
- Overview
- Preparing the application for deployment
- IBM Worklight in a cluster environment

Overview

- A Worklight project contains various components, such as applications, adapters, configuration files, custom Java™ code, and libraries.
- During the development stages, all of these components are deployed to a local development server bundled within Worklight Studio.
- Deploying the components to a local development server is automated by Worklight Studio.
- Each customer environment (for example: development, QA, pre-production, production) has its own unique Worklight-specific settings; for example, the locations of back-end services, public URLs, database connectivity parameters, and logging settings.
- Eventually, you will need to transfer these settings and components to the remote server.
- This module explains to the **developer** how to package the IBM Worklight components and deploy them to a remote server.

Overview – Worklight Project

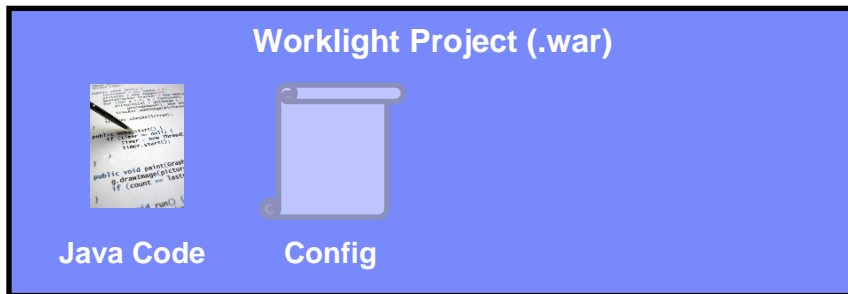
- The following diagram depicts a Worklight project. A Worklight project may contain: applications, adapters, custom Java code, and server- or client-related configuration files.



- The custom Java code and libraries are added to the `\server\java` and `\server\lib` folders respectively.
- The server configuration files reside in the `server\conf` folder.
- The client configuration files reside in the `apps\your-app` folder.

Overview – Worklight Project

- During a build operation in Worklight Studio, the Worklight project is packaged into what is referred to as a WAR file.
- All of the files mentioned in the previous slide are automatically compiled to the *project-name*.war file under the `\bin` folder of the project.
- The only exceptions are apps and adapters, which are not part of the WAR file. These are separate entities generated by Worklight Studio.



- The code for the Worklight Console website is also bundled within the Worklight project WAR file.

Overview – Installing Worklight Server

- IBM Worklight is compatible with the following application servers:
 - WebSphere® Application Server Full Profile
 - WebSphere Application Server Liberty Profile
 - Apache Tomcat

Overview – Installing Worklight Server

- Worklight Server installation is comprised of three steps:
 - Using the IBM Installation Manager to extract Worklight Server files into your file system.

File system

- Worklight Platform files
- Sample Ant task scripts

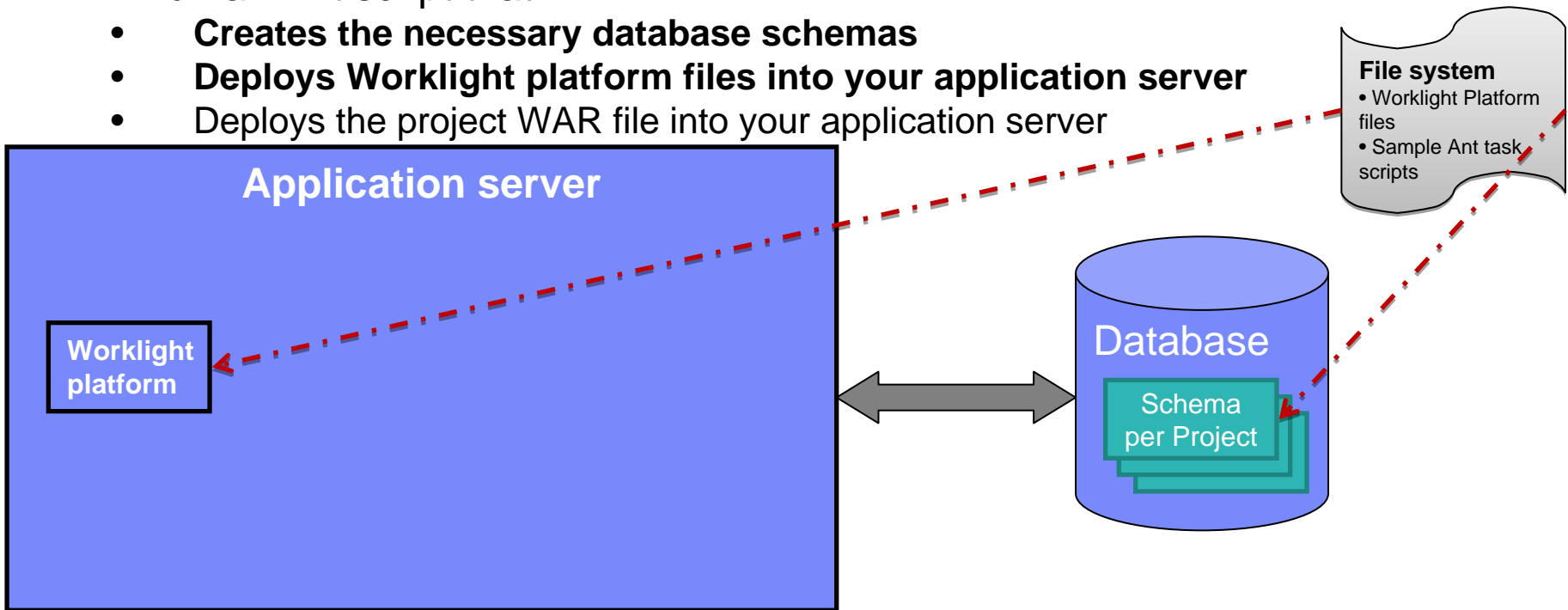
Application server

- For more information, see http://pic.dhe.ibm.com/infocenter/wrklight/v6r1m0/topic/com.ibm.worklight.ins tallconfig.doc/admin/c_installation.html

Overview – Installing Worklight Server

2. For each Worklight project, use the Server Configuration Tool to create and run an Ant script that:

- **Creates the necessary database schemas**
- **Deploys Worklight platform files into your application server**
- **Deploys the project WAR file into your application server**

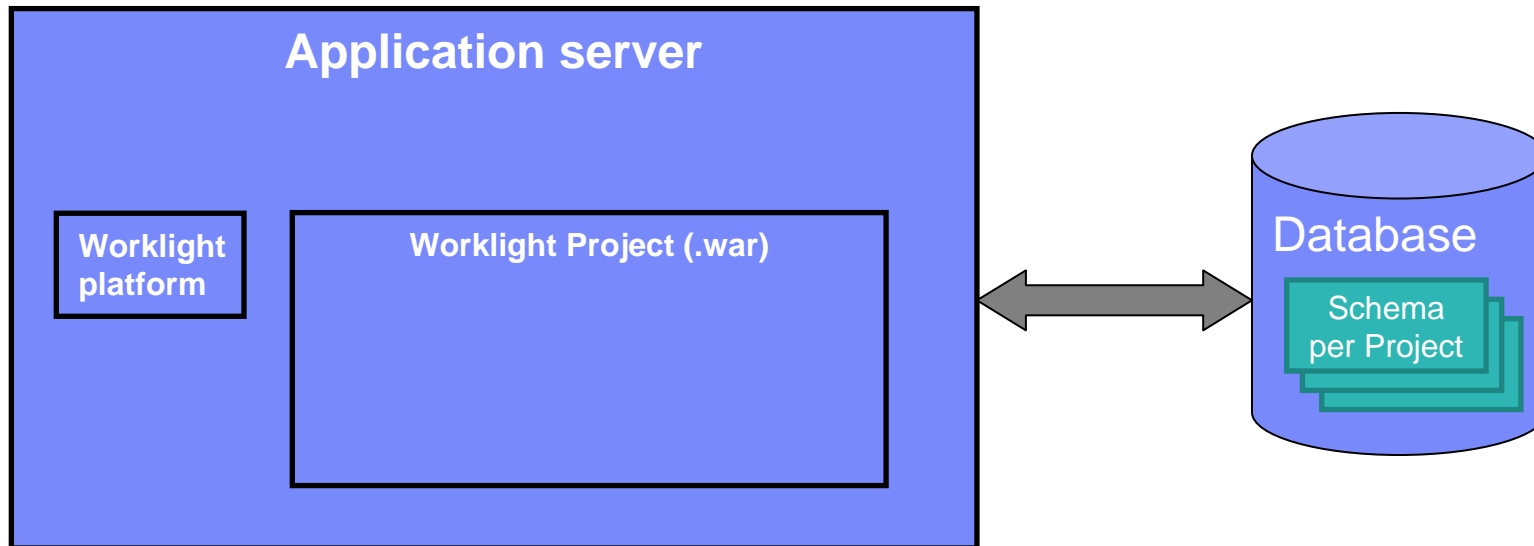


- For more information, see http://pic.dhe.ibm.com/infocenter/wrklght/v6r1m0/topic/com.ibm.worklight.deploy.doc/deploy/c_deploy_wl_project.html

Overview – Installing Worklight Server

2 (continued). The Ant script also:

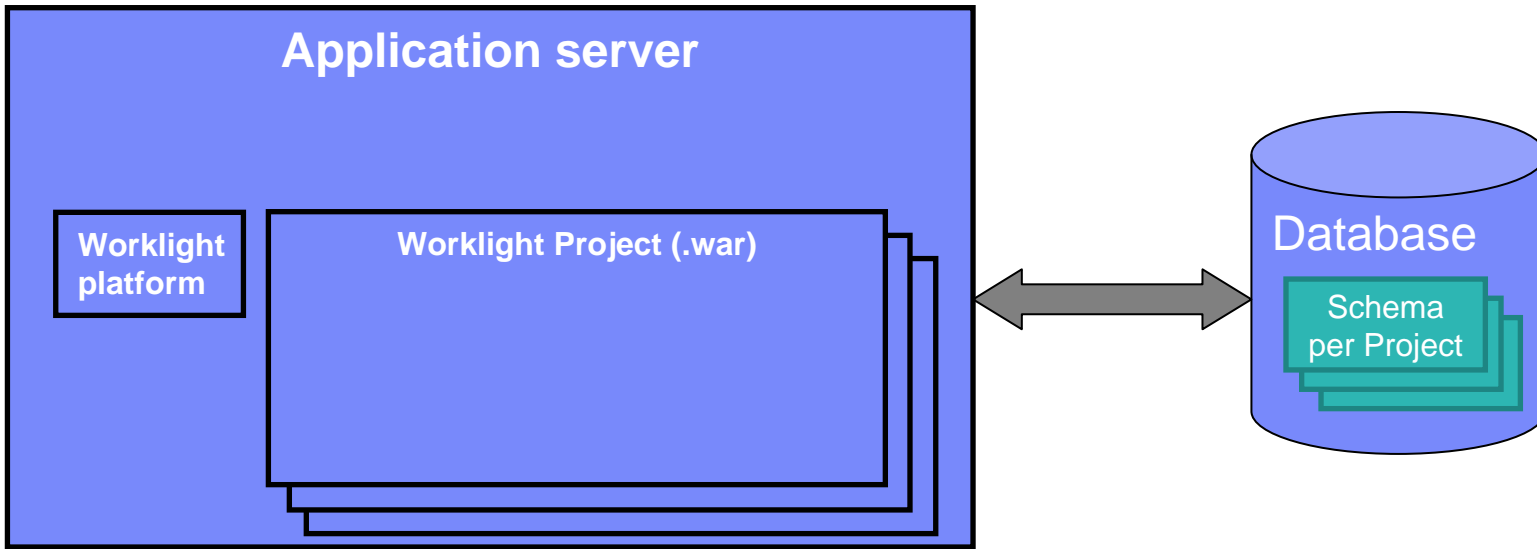
- Creates the necessary database schemas
- Deploys Worklight platform files into your application server
- **Deploys the project .war file into your application server**



- For more information, see http://pic.dhe.ibm.com/infocenter/wrklight/v6r1m0/topic/com.ibm.worklight.deploy.doc/deploy/c_deploy_wl_project.html

Overview – Installing Worklight Server

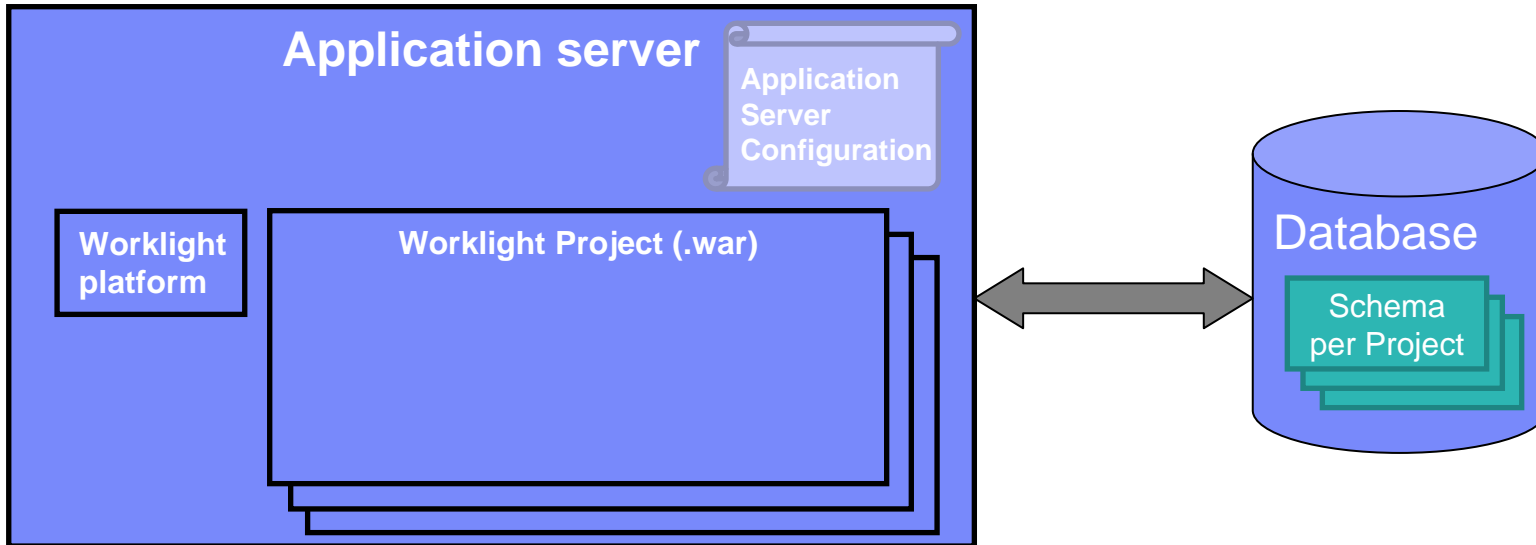
- Multiple Worklight project files can co-exist on an application server. Each is deployed as a WAR file. Each is configured to communicate with a different schema in the database.



Overview – Installing Worklight Server

3. Edit the application server configuration file with additional Worklight properties.

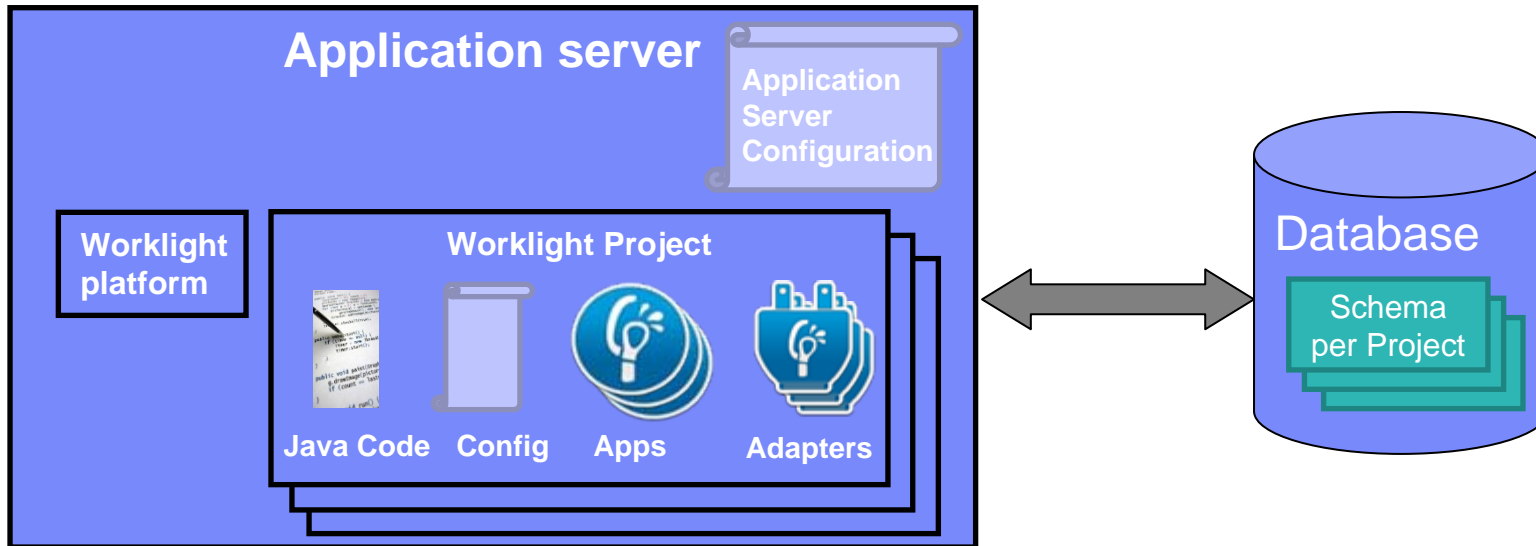
```
<configureapplicationserver shortcutsDir="${shortcuts.dir}">
  <project warfile="${worklight.project.war.file}"/>
  <!-- Specify some JNDI properties. -->
  <property name="publicWorkLightHostname" value="my.company.com"/>
  <property name="publicWorkLightPort" value="80"/>
  <property name="publicWorkLightProtocol" value="http"/>
  <property name="serverSessionTimeout" value="10"/>
</applicationserver>
```



- For more information, see http://pic.dhe.ibm.com/infocenter/wrklght/v6r1m0/com.ibm.worklight.deploy.doc/admin/t_using_JNDI_lookup_to_override_WL_properties.html

Overview – Deploy applications and adapters

- After having deployed a WAR file to your application server, start the application server.
- You can now open the Worklight Console at: <http://host:port/context-root/console>.
- Use the Worklight Console to deploy applications and adapters.



Process review

- The previously-described process consists of three main steps:
 - Application server preparation:
 - Using IBM Installation Manager to extract installation files.
 - Use an Ant script created through the Server Configuration Tool to prepare the database, copy Worklight platform files and deploy the Worklight project's `.war` file.
 - Prepare the application for deployment:
 - Build the application.
 - Deploy the application and adapter files:
 - Deploy applications and adapters by using the Worklight Console.

- For more information, consult the IBM Worklight Getting Started and product documentation

Agenda

- Overview
- Preparing the application for deployment
- IBM Worklight in a cluster environment

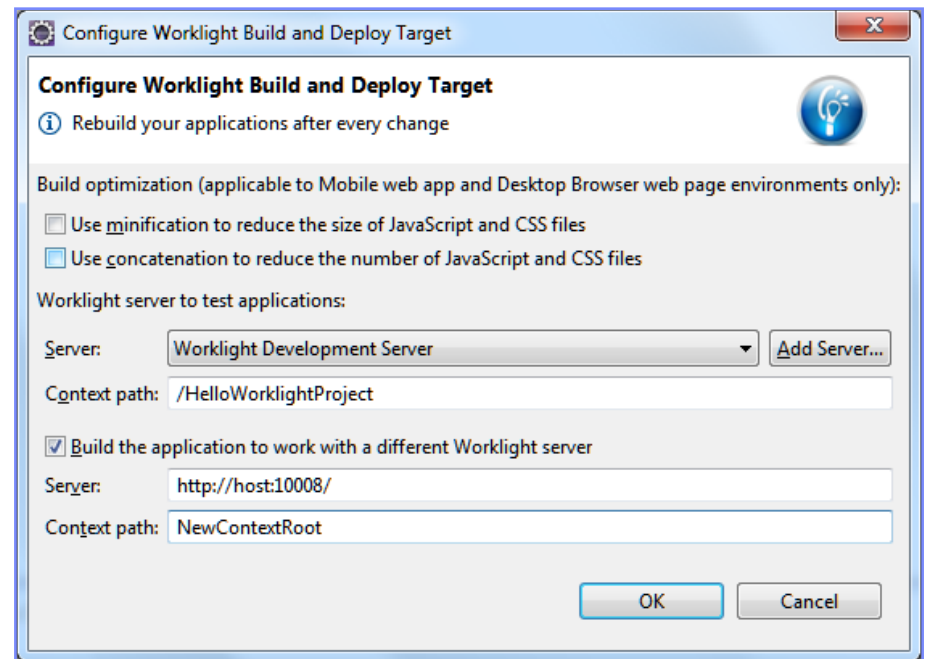
Preparing the application for deployment

- The `application-descriptor.xml` file contains all the application-specific information and settings. These include:
 - Worklight settings
 - Push notifications
 - Security (app authenticity, web resources encryption, web resources checksum)
- The `build-settings.xml` file contains Mobile Web-specific information and settings. These include:
 - Minification
 - Concatenation

- For more information, consult the IBM Worklight Getting Started and product documentation

Prepare your application for deployment

- An important part of preparing an application for deployment is to make sure it will point to the QA/pre-production/production server, so that the application will be able to connect to the Worklight Server.
- This is accomplished by completing the following steps:
 - In Worklight Studio, right-click the application folder.
 - Click **Run As > Build Settings and Deploy Target**.
 - Select the **Build the application to work with a different Worklight Server** check box.
 - Enter the **Server** and **Context path** values.



Agenda

- Overview
- Prepare your application for deployment
- **IBM Worklight in a cluster environment**

IBM Worklight in a cluster environment

- Several Worklight Servers can be set up in a cluster environment that shares a database.
- When a `.wlappr` or `.adapter` file is deployed on one of the servers in a cluster, it is automatically synchronized to other servers.
- When an application or an adapter is deleted from one of the servers in a cluster, it is automatically deleted from the other servers as well.
- A WAR file, however, is a part of the application server customization. It must therefore be deployed to each server in the cluster. With WebSphere Application Server Full Profile, you can specify the cluster when invoking the Ant task; otherwise, invoke the Ant task once for each server in the cluster.
- By default, cluster synchronization is performed with a 4-second interval. You can change this interval by adding to and adjusting the `cluster.data.synchronization.taskFrequencyInSeconds` property in the `worklight.properties` file. This can also be controlled via the JNDI configuration.

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