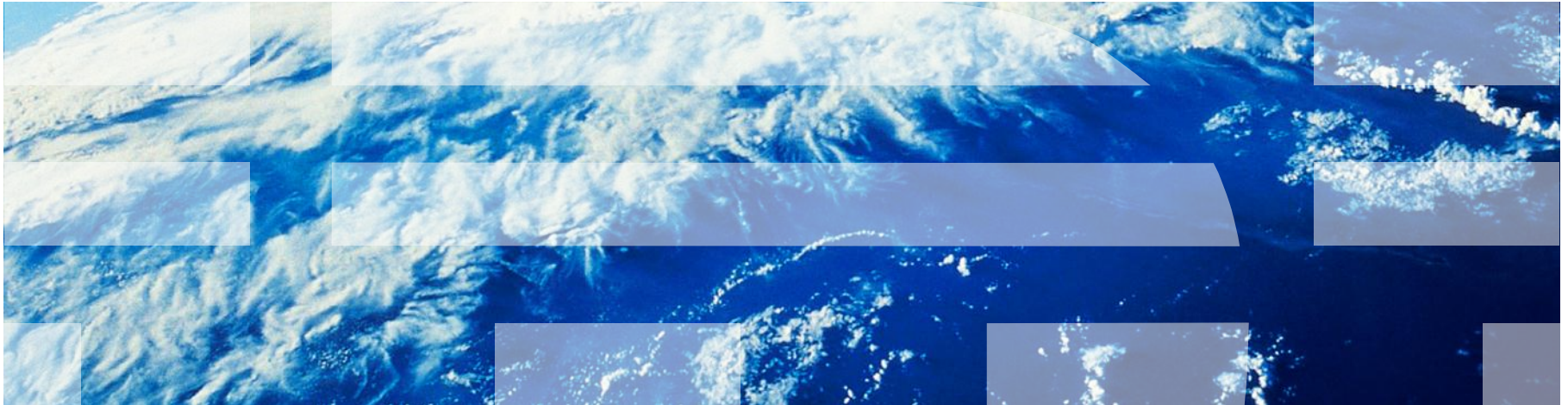


IBM Worklight Foundation V6.2.0 Getting Started

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



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Using this module

- To develop with IBM Worklight® Foundation, you use *Worklight Studio*. *Worklight Studio* contains an internal *Worklight Server*.
- When you move to production, you must have an external *Worklight Server*.
- This module is intended for use with a *Worklight Server*, which is available for purchase from IBM.

Agenda

- Overview
- Preparing the application for deployment
- IBM Worklight Foundation 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 these components are deployed to a local development server that is bundled within Worklight Studio.
- The deployment of 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 need to transfer these settings and components to the remote Worklight Server.
- This module explains to the **developer** how to package Worklight components and deploy them to a remote server.

Overview – Worklight project

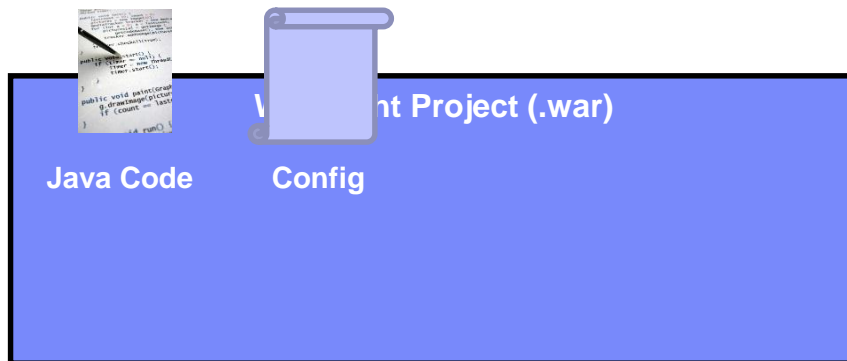
- The following diagram shows a Worklight project. A Worklight project can contain applications, adapters, custom Java code, and server- or client-related configuration files.



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

Overview – Worklight project

- During a build operation in Worklight Studio, the Worklight project is packaged into a web archive (WAR) file.
- All the files that are 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 separate entities are generated by Worklight Studio.

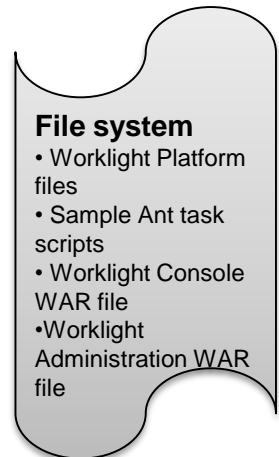


Overview – Installing Worklight Server

- IBM Worklight Foundation is compatible with the following application servers:
 - WebSphere® Application Server full profile
 - WebSphere Application Server Liberty profile
 - Apache Tomcat

Overview – Installing Worklight Server

- You install Worklight Server in three steps:
 1. Use IBM Installation Manager to extract Worklight Server files to the file system.



- For more information, see [Installing Worklight Server](#) in the product documentation.

Overview – Installing Worklight Server

- From IBM Installation Manager, use the Server Configuration Tool to create and run an Ant script that:
 - Creates the necessary Worklight Administration database schema
 - Deploys the Worklight Administration web applications to the application server.

Application server

File system

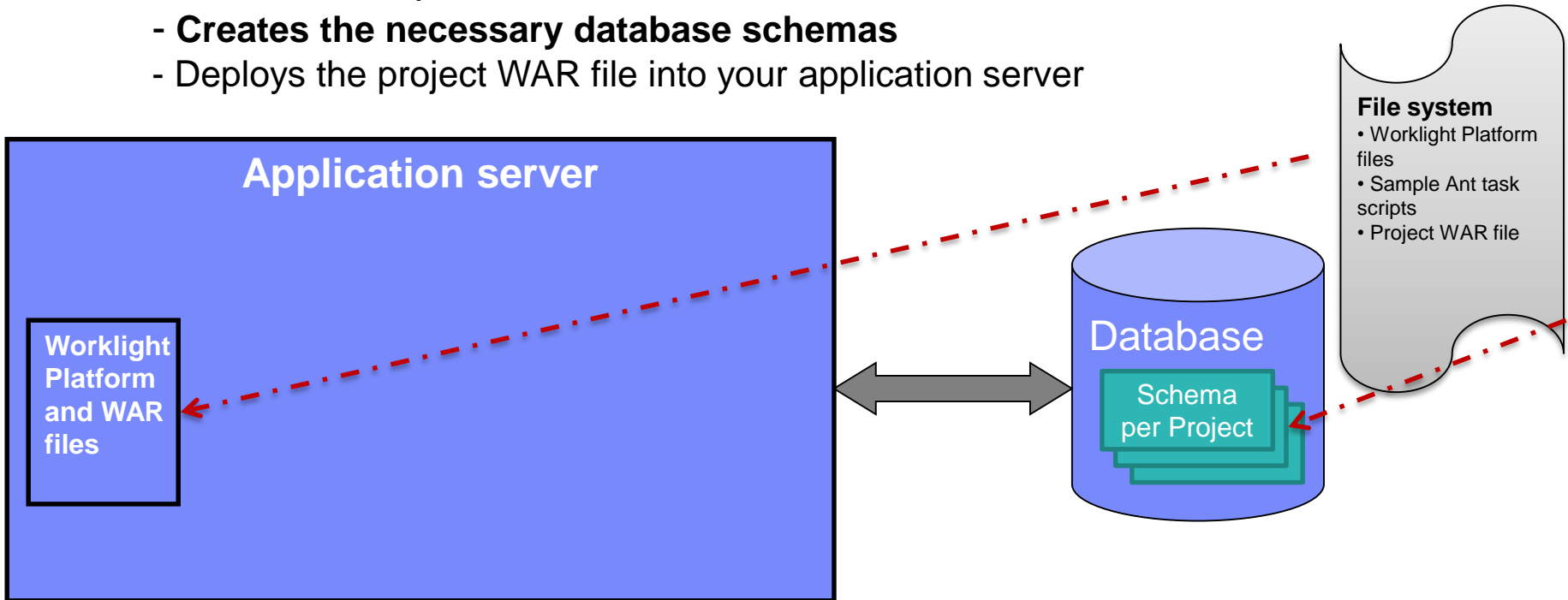
- Worklight Platform files
- Sample Ant task scripts
- Worklight Console WAR file
- Worklight Administration WAR file

- For more information, see [Tutorial for a basic installation of Worklight Server](#) in the product documentation.

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 the project WAR file into your application server

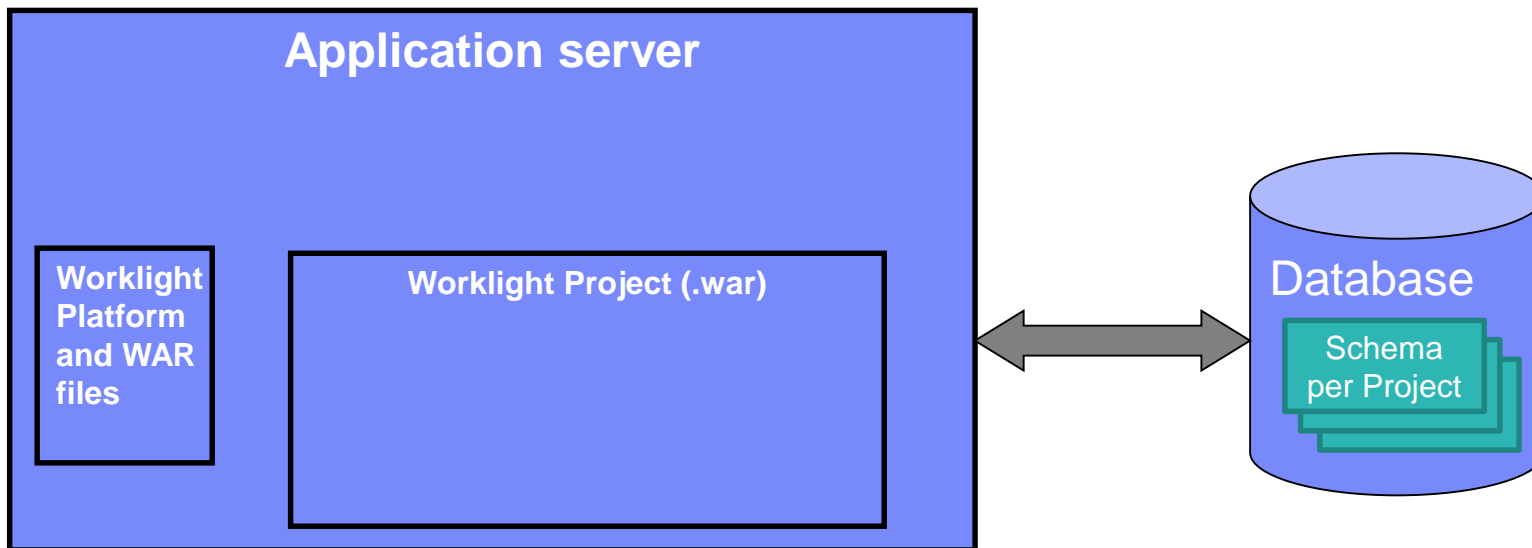


- For more information, see [Tutorial for a basic installation of Worklight Server](#) in the product documentation.

Overview – Installing Worklight Server

The Ant script also (step 2 continued):

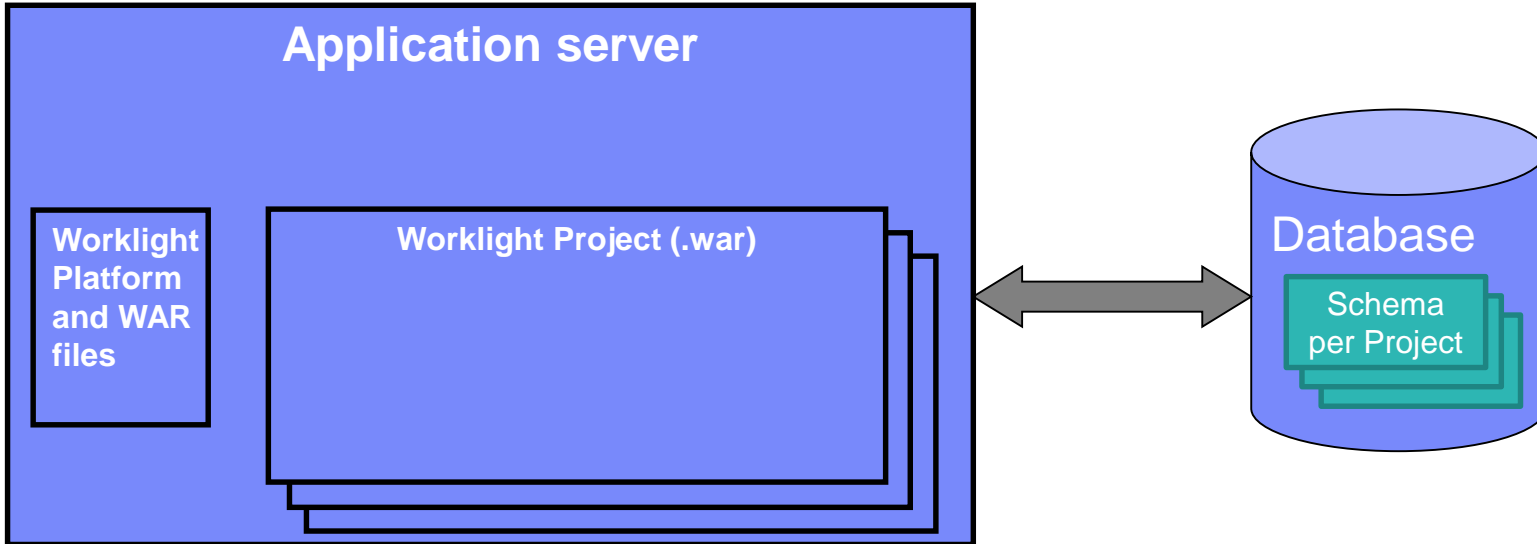
- Creates the necessary database schemas
- **Deploys Worklight platform and WAR files to your application server**
- **Deploys the project .war file to your application server**



- For more information, see [Installing Worklight Server](#) in the product documentation.

Overview – Installing Worklight Server

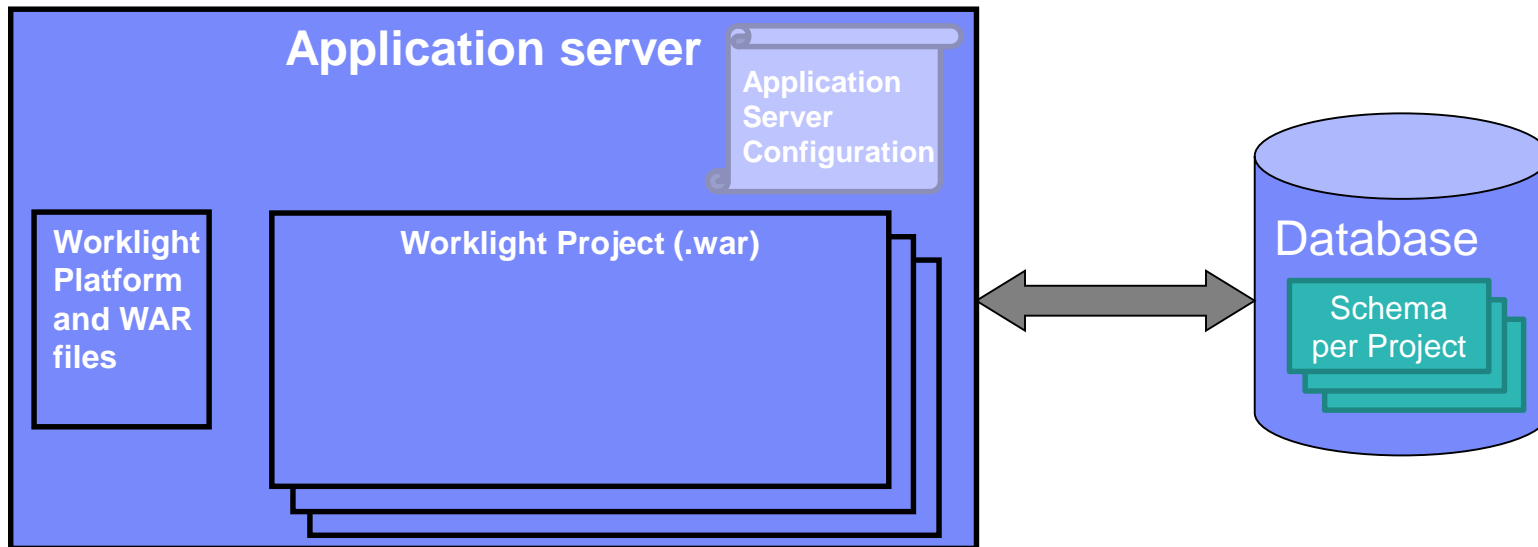
- Multiple Worklight project files can coexist on an application server. Each is deployed as a WAR file. Each is configured to communicate with a different schema in the database.



Overview – Installing Worklight Server

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

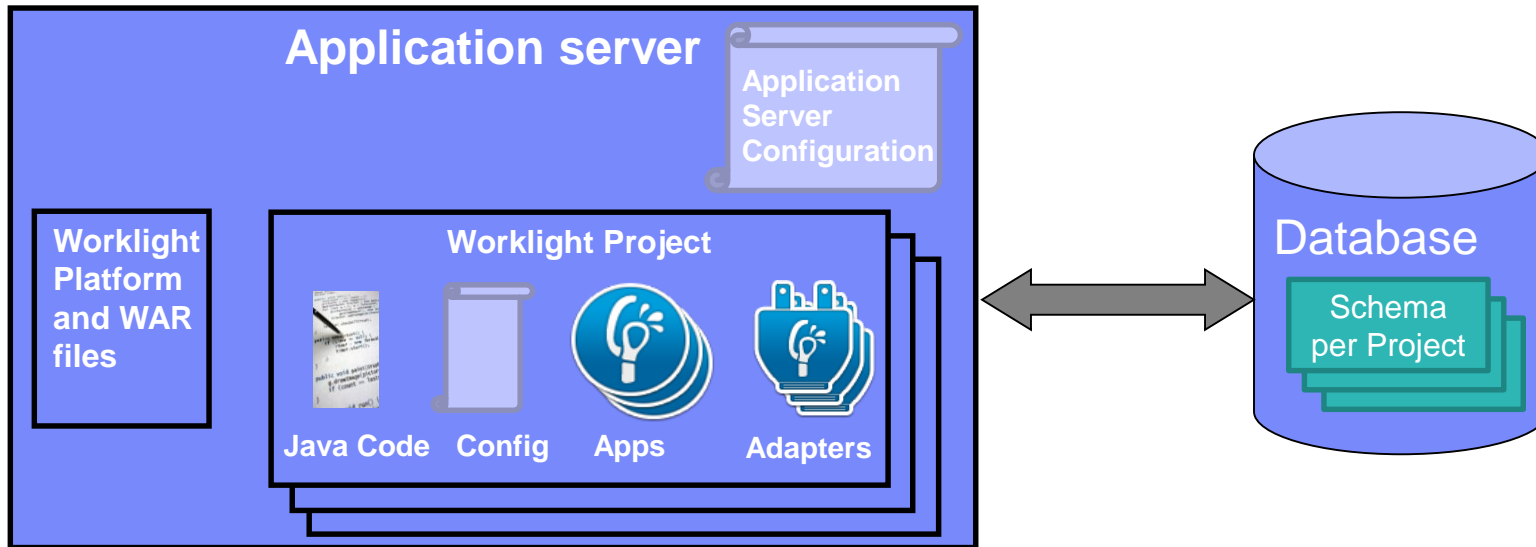
```
<configureapplicationserver shortcutsDir="${shortcuts.dir}">  
  <project warfile="${worklight.project.war.file}"/>  
  <!-- Specify some JNDI properties. -->  
  <property name="publicWorkLightHostname" value="my.company.com"/>  
  <property name="publicWorkLightPort" value="80"/>  
  <property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



- For more information, see [Configuring a Worklight project in production by using JNDI environment entries](#) in the product documentation.

Overview – Deploy applications and adapters

- After the WAR file is deployed to your application server, start the application server.
- You can now open the Worklight Console at: *http://host:port/worklightconsole*.
- Use the Worklight Console to deploy applications and adapters.
- You can also use the Worklight command line interface to administrate these tasks.



- For more information, see the IBM Worklight Getting Started and user documentation.

Process review

- The previously-described process consists of three main steps:
 - Application server preparation:
 - Use IBM Installation Manager to extract installation files.
 - Use an Ant script created through the Server Configuration Tool to create and deploy Worklight Administration web app and database schemas.
 - Use an Ant script created through the Server Configuration Tool to prepare the database, copy Worklight platform files, and deploy the Worklight project `.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, see the IBM Worklight Getting Started and user documentation

Agenda

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

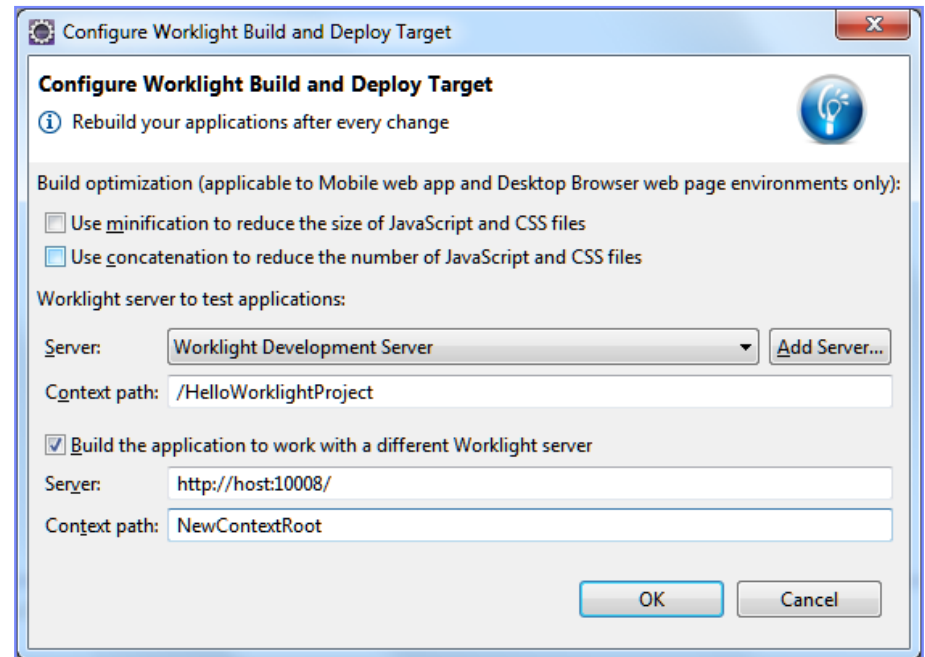
Preparing the application for deployment

- 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, see the IBM Worklight Getting Started and user documentation

Prepare your application for deployment

- An important part of preparing an application for deployment is to make sure that it will point to the QA/preproduction/production server, so that the application can connect to Worklight Server.
- Follow these 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 instances of Worklight Server 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 the Ant task is called. Otherwise, call the Ant task once for each server in the cluster.

- For additional server topologies and more information, see [Installing Worklight Server](#) in the product documentation.

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