IBM Worklight Foundation V6.2.0
Getting Started

Creating your first Native iOS Worklight application
Trademarks

- IBM, the IBM logo, ibm.com, and Worklight are trademarks or registered trademarks of International Business Machines Corporation, registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the Web at “Copyright and trademark information” at www.ibm.com/legal/copytrade.shtml.
- Adobe, the Adobe logo, PostScript, and the PostScript logo are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States, and/or other countries.
- IT Infrastructure Library is a registered trademark of the Central Computer and Telecommunications Agency which is now part of the Office of Government Commerce.
- Intel, Intel logo, Intel Inside, Intel Inside logo, Intel Centrino, Intel Centrino logo, Celeron, Intel Xeon, Intel SpeedStep, Itanium, and Pentium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.
- Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.
- Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.
- ITIL is a registered trademark, and a registered community trademark of The Minister for the Cabinet Office, and is registered in the U.S. Patent and Trademark Office.
- UNIX is a registered trademark of The Open Group in the United States and other countries.
- Java and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates.
- Cell Broadband Engine is a trademark of Sony Computer Entertainment, Inc. in the United States, other countries, or both and is used under license therefrom.
- Linear Tape-Open, LTO, the LTO Logo, Ultrium, and the Ultrium logo are trademarks of HP, IBM Corp. and Quantum in the U.S. and other countries.
- Other company products or service names may be trademarks or service marks of others.
- This document may not be reproduced in whole or in part without the prior written permission of IBM.

About IBM®

For more information

- For more information about developing native iOS applications, see the Worklight user documentation topic: "Developing native applications for iOS"
Agenda

- Creating a Worklight native API
- Creating and configuring an iOS native application
Creating a Worklight native API (1 of 4)

- IBM Worklight® Foundation provides the ability for native iOS applications to communicate with a Worklight Server by using the Worklight native API library.
- To serve a native iOS application, the Worklight Server must be aware of it.
- You can find the Worklight native API folder in the application folder of your Worklight project.
- The Worklight native API folder contains a native API library and configuration file that you must copy to your native iOS project.
- The native application contains the `application-descriptor.xml` file, where you can configure the application metadata.
- In this module, you learn how to create a Worklight native API.
- In the following modules, you learn how to use its components in your native iOS application.
Creating a Worklight native API (2 of 4)

1. In Worklight Studio, create a Worklight project, and add a Worklight Native API.

2. In the **New Worklight Native API** dialog, enter your application name, and select **iOS** for the **Environment** field.

3. Right-click the **Worklight native app** folder and select **Run As > Deploy Native API**.
   - This action is required in order for the Worklight Server to recognize the application if it attempts to connect to the server, similar to Hybrid applications.
Creating a Worklight native API (3 of 4)

- The Worklight native API contains several components:
  - The WorklightAPI folder is an IBM Worklight API library that you must copy to your native iOS project.
  - You use the application-descriptor.xml file to define application metadata and to configure security settings that the Worklight Server enforces.
  - The worklight.plist file contains connectivity settings that a native iOS application uses. You must copy this file to your native iOS project.
  - Like with any Worklight project, you create the server configuration by modifying the files that are in the server\conf folder.
Creating a Worklight native API (4 of 4)

- Edit the `worklight.plist` file that holds the server configuration:

  - `protocol` – The communication protocol to the Worklight Server, which is either **http** or **https**.
  - `host` – The hostname of the Worklight Server.
  - `port` – The port of the Worklight Server.
  - `wlServerContext` – The context root path of the application on the Worklight Server.
  - `application id` – The application ID as defined in the `application-descriptor.xml` file.
  - `application version` – The application version.
  - `environment` – The target environment of the native application (“iOSnative”).
  - `wlUid` – This property is used by MTWW to identify this as a Worklight application.
Agenda

- Creating a Worklight native API
- Creating and configuring an iOS native application
Creating and configuring an iOS native application

- Create an Xcode project or use an existing one.
- Copy the previous WorklightAPI folder and the worklight.plist file from Eclipse to the root of your native project.
- In Xcode’s Build Phases, link the following libraries in your native iOS application:
  SystemConfiguration.framework, sqlcipher.framework, MobileCoreServices.framework, CoreData.framework, CoreLocation.framework, Security.framework, libz.dylib, sqlcipher.framework, libc++.dylib and libstdc++.6.dylib.
- **Note:** The framework sqlcipher.framework might already be linked.
Creating and configuring an iOS native application

- Add the following in Xcode’s **Build Settings**:
  1. In **Header Search Paths**:
     $(SRCROOT)/WorklightAPI/include
  2. In **Other Linker Flags**:
     -ObjC
  3. In the **Deployment** section, select a value for the iOS **Deployment Target** field that is greater than or equal to 5.0.

For more information, see the Worklight user documentation topic “Developing native applications for iOS”. 
Creating and configuring an iOS native application

- After you run the application in Xcode, the final result will be a native application that contains the Worklight API library.
- In the next training module, Native Worklight API will be implemented and demonstrated.
- A sample project with pre-defined Worklight API library is supplied for this training module.
Permission for the use of these publications is granted subject to these terms and conditions.

This information was developed for products and services offered in the U.S.A.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user’s responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not grant you any license to these patents. You can send license inquiries, in writing, to:
- IBM Director of Licensing
- IBM Corporation
- North Castle Drive
- Armonk, NY 10504-1785
- U.S.A.

For license inquiries regarding double-byte character set (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:
- Intellectual Property Licensing
- Legal and Intellectual Property Law
- IBM Japan Ltd.
- 1623-14, Shimotsuruma, Yamato-shi
- Kanagawa 242-8502 Japan

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law:

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:
- IBM Corporation
- Dept F6, Bldg 1
- 294 Route 100
- Somers NY 10589-3216
- USA

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this document and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement or any equivalent agreement between us.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

COPYRIGHT LICENSE:

This information contains sample application programs in source language, which illustrate programming techniques on various operating platforms. You may copy, modify, and distribute these sample programs in any form without payment to IBM, for the purposes of developing, using, marketing or distributing application programs conforming to the application programming interface for the operating platform for which the sample programs are written. These examples have not been thoroughly tested under all conditions. IBM, therefore, cannot guarantee or imply reliability, serviceability, or function of these programs.

Each copy or any portion of these sample programs or any derivative work, must include a copyright notice as follows:
- © (your company name) (year). Portions of this code are derived from IBM Corp. Sample Programs.
- © Copyright IBM Corp. _enter the year or years_. All rights reserved.

Privacy Policy Considerations:

IBM Software products, including software as a service solutions, ("Software Offerings") may use cookies or other technologies to collect product usage information, to help improve the end user experience, to tailor interactions with the end user or for other purposes. In many cases no personally identifiable information is collected by the Software Offerings. Some of our Software Offerings can help enable you to collect personally identifiable information. If this Software Offering uses cookies to collect personally identifiable information, specific information about this offering’s use of cookies is set forth below.

Depending upon the configurations deployed, this Software Offering may use session cookies that collect session information (generated by the application server). These cookies contain no personally identifiable information and are required for session management. Additionally, persistent cookies may be randomly generated to recognize and manage anonymous users. These cookies also contain no personally identifiable information and are required.

If the configurations deployed for this Software Offering provide you as customer the ability to collect personally identifiable information from end users via cookies and other technologies, you should seek your own legal advice about any laws applicable to such data collection, including any requirements for notice and consent. For more information about the use of various technologies, including cookies, for these purposes, see IBM’s Privacy Policy at http://www.ibm.com/privacy and IBM’s Online Privacy Statement at http://www.ibm.com/privacy/details. The sections entitled “Cookies, Web Beacons and Other Technologies” and the "IBM Software Products and Software-as-a-Service Privacy Statement" at http://www.ibm.com/privacy/product-privacy.
Support and comments

- For the entire IBM Worklight documentation set, training material and online forums where you can post questions, see the IBM website at:

- **Support**
  - Software Subscription and Support (also referred to as Software Maintenance) is included with licenses purchased through Passport Advantage and Passport Advantage Express. For additional information about the International Passport Advantage Agreement and the IBM International Passport Advantage Express Agreement, visit the Passport Advantage website at:
  - If you have a Software Subscription and Support in effect, IBM provides you assistance for your routine, short duration installation and usage (how-to) questions, and code-related questions. For additional details, consult your IBM Software Support Handbook at:

- **Comments**
  - We appreciate your comments about this publication. Please comment on specific errors or omissions, accuracy, organization, subject matter, or completeness of this document. The comments you send should pertain to only the information in this manual or product and the way in which the information is presented.
  - For technical questions and information about products and prices, please contact your IBM branch office, your IBM business partner, or your authorized remarketer.
  - When you send comments to IBM, you grant IBM a nonexclusive right to use or distribute your comments in any way it believes appropriate without incurring any obligation to you. IBM or any other organizations will only use the personal information that you supply to contact you about the issues that you state.
  - Thank you for your support.
  - Submit your comments in the IBM Worklight Developer Edition support community at:
  - If you would like a response from IBM, please provide the following information:
    - Name
    - Address
    - Company or Organization
    - Phone No.
    - Email address
Thank You