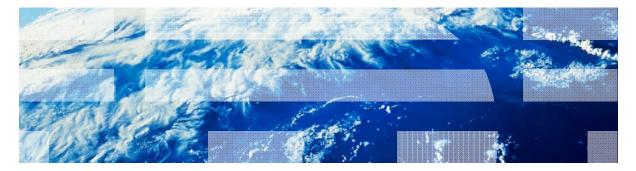


## IBM Worklight V5.0.6 Getting Started

#### Setting up your Android development environment



© Copyright International Business Machines Corporation 2011, 2013. All rights reserved. US Government Users Restricted Rights - Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.



#### Trademarks

- IBM, the IBM logo, and ibm.com are trademarks or registered trademarks of International Business Machines Corporation, registered in many jurisdictions worldwide. Worklight is a trademark or registered trademark of Worklight, an IBM Company. 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 "<u>Copyright and</u> <u>trademark information</u>" at <u>www.ibm.com/legal/copytrade.shtml</u>.
- Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.
- Java and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates.
- 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®

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



- Setup your Android development environment
  - Install the Android SDK
  - Install the Android Development Tools plug-in for Eclipse
- Deploy to an Android device
  - Setting up a device for development
- Publishing your applications
  - Setting up an account in the Google Play
  - Publish your application in the Google Play



## Install the Android SDK

- The Android SDK provides the tools and APIs that are required to develop applications on the Android platform by using the Java<sup>™</sup> programming language.
  - Download the Android SDK package from <u>http://developer.android.com/sdk/</u>
  - Install it on your system
  - Android SDK might have issues when you run it on 64-bit Linux systems.
  - For more information, see <u>http://developer.android.com/sdk/installing.html</u>



- Set up your Android development environment
  - Install the Android SDK
  - Install the Android Development Tools plug-in for Eclipse
- Deploy to an Android device
  - Setting up a device for development
- Publish your applications
  - Set up an account in the Google Play
  - Publish your application in the Google Play



## Install the ADT Plug-in for Eclipse

- The Android Development Tools (ADT) plug-in for Eclipse is an integrated environment in which you can build rich Android apps.
- To install ADT in Eclipse, click
   Help > Install New Software

ow	Help		
-	3	Welcome	
	0	Help Contents	
	22	Search	
		Dynamic Help	
		Key Assist	Ctrl+Shift+L
		Tips and Tricks	10.06.0011
	æ	Report Bug or Enhancement	
		Cheat Sheets	
		Check for Updates	
		Install New Software	
		Eclipse Marketplace	
		About Eclipse	



## Install the ADT Plug-in for Eclipse

Click Add and enter the name and location of the ADT plug-in.

		▼ Add
	Find more software by working with the	"Available Software Sites" preferences.
— 🞑 Ad	d Repository	<b>E</b>
∖ <u>N</u> ame	: ADT Plugin	L <u>o</u> cal
<u>L</u> ocati	on: https://dl-ssl.google.com/android/eclipse/	Archive
?		OK Cancel

- Plug-in location is <u>https://dl-ssl.google.com/android/eclipse/</u>
- If you cannot install the plug-in, use "http" instead of "https".



# Install the ADT Plug-in for Eclipse

- Check Developer Tools and click Next to proceed.
- Proceed with the ADT installation sequence.

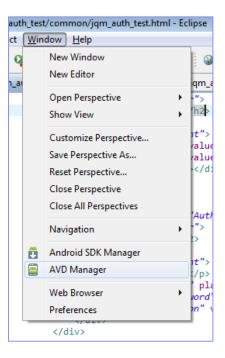
🖲 İnstall		
Available Software Check the items that you wish to install.		
Work with: ADT Plugin - https://dl-ssl.google.co	m/android/eclipse/ Find more software by working with the	<u>Add</u> Available Software Sites" preferences.
type filter text		1
Name p [2] III Developer Tools Select All Deselect All 3 items sel Details	Version	
✓ Show only the letest versions of available softwa ✓ group items by category ✓ contact all update sites during install to find req	What is already installed?	
(?)	< Back Next >	Emish Cancel



#### Add SDK Platform and Virtual Devices to SDK

- After the ADT plug-in installation is complete and Eclipse restarted, click
   Window > Android SDK Manager
- If the Android SDK Manager / AVD Manager is not visible in the Window menu, click Window > Customize
   Perspective > Command Groups
   Availability, and check the Android SDK and AVD Manager.

Fool Bar Visibility Menu Visibil	y Command Groups Availability Shor	tcuts
		rspective (Java). The details field identifies which menu items
and/or toolbar items are added to	o the perspective by the selected comma	ind group.
and/or toolbar items are added to Available command groups:	Menubar details:	Toolbar details:





## Add SDK Platform and Virtual Devices to SDK

 In Available Packages, select the required SDK Platforms and their documentation, and then click Install.

DK Path: C:\android-sdk\				
Packages				
🗰 Name	API	Rev.	Status	
🔲 👗 Samples for SDK	14	1	all Installed	
🔲 👾 ARM EABI v7a System Image	14	1	all Installed	
📝 🙀 Google APIs by Google Inc.	14		Not installed	
Image: Marcoid 3.2 (API 13)				
Image: Marcel				=
Image: Provide the second state of the seco				
a 🔄 🔐 Android 2.3.3 (API 10)				
🔲 🏺 SDK Platform	10		🖊 Not installed	
🔲 🍶 Samples for SDK	10		Not installed	
Dual Screen APIs by KYOCERA Corporation	10		Not installed	
🔲 🐞 EDK 1.1 by Sony Ericsson Mobile Communications	10		Not installed	
🔲 🖏 Google APIs by Google Inc.	10		Not installed	
a 📄 🚔 Android 2.2 (API 8)				
🔲 🌞 SDK Platform	8	3	🎒 Installed	
		•	× · · · ·	
how: Vpdates/New VInstalled Obsolete Select Ne	w/Updat	<u>tes</u>		Install 11 packages
ort by:  API level  Repository  Deselect	All		ſ	Delete packages



#### Add SDK Platform and Virtual Devices to SDK

 To create virtual device (emulator), go to Window > AVD Manager, click New, and create an Android Virtual Device (AVD) according to your needs.

Create ne	ew Android Virtual Device (AVD)				
Name:	2.2				
Target:	Android 2.2 - API Level 8				
CPU/ABI:	ARM (armeabi)				
SD Card:					
	● Size: MiB ▼				
	© File: Browse				
Snapshot:					
	Enabled				
Skin:					
	Built-in: Default (WVGA800)				
	© Resolution: x				
Hardware:					
	Property Value New				
	Abstracted LCD density 240 Max VM application hea 24 Delete				
Override the existing AVD with the same name					
	Create AVD Cancel				



#### Develop

- As you later learn in Module 3.2, building a Worklight® application generates a separate Android application that is automatically displayed in Eclipse.
- You are then able to run the Android application on the Android simulator by right-clicking the Android project and selecting Run As > Android Application.

ß	Copy path(s) to clipboard		gress 📮 Console 🛛 🛛 LogCat		
	Run As		a	1 Android Application	
	Debug As	•	JU JU	2 Android JUnit Test	



- Set up your Android development environment
  - Install the Android SDK
  - Install the Android Development Tools plug-in for Eclipse
- Deploy to an Android device
  - Setting up a device for development
- Publishing your applications
  - Setting up an account in the Google Play
  - Publish your application in the Google Play



## Setting Up a Device For Development

- The following resource describes how to set up your development environment and Android-powered device for on-device testing and debugging.
  - For information about installation and usage on different platforms, see <a href="http://developer.android.com/guide/developing/device.html">http://developer.android.com/guide/developing/device.html</a>.



- Set up your Android development environment
  - Install the Android SDK
  - Install the Android Development Tools plug-in for Eclipse
- Deploy to an Android device
  - Setting up a device for development
- Publishing your applications
  - Setting up an account in the Google Play
  - Publish your application in the Google Play



## Setting Up an Account in the Google Play

- Google Play is a hosted service that simplifies the download and installation process of applications to Android-powered devices, and makes it easy for developers to publish their applications for Android users.
- To create an account, go to <u>https://play.google.com/</u>.



- Set up your Android development environment
  - Install the Android SDK
  - Install the Android Development Tools plug-in for Eclipse
- Deploy to an Android device
  - Set up a device for development
- Publishing your applications
  - Set up an account in the Google Play
  - Publish your application in the Google Play



## Publish Your Application in the Google Play

For more information, see

http://developer.android.com/guide/publishing/publishing.html.



#### Notices

- 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 use'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 Kanaqawa 242-8502 Japan
- The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local laws. INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION 'AS IS' WITHOUT WARRANTY OF ANY KIND, ETHER EXPRESS OR IMPLED, INCLUDINS, BUT NOT LIMITED TO, THE IMPLED WARRANTES 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. BM 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 programs normal to the application programs are written. These examples have not been throoughly 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:

#### **Privacy Policy Considerations**

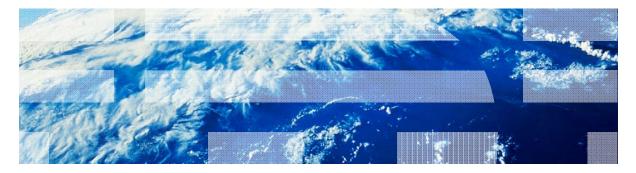
- IBM Software products, including software as a service solutions, ("Software Offerings") may use cookies or other technologies to collect product usage information, to help improve the end user experience, to tailor interactions with the end user or for other purposes. In many cases no personally identifiable informations, Software Offering uses cookies to collect personally identifiable information. If this Software Offering uses of cookies to collect personally identifiable information. If this Software Offering uses cookies to collect personally identifiable informations, sector this offering uses of cookies to 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 personality 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 IBMS Privacy Policy at http://www.bmc.compring.and IBMS Online Privacy Statement at <a href="http://www.bmc.compring-wide">http://www.bmc.compring-wide</a> Software see. Service".

## 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:
  - http://www.ibm.com/mobile-docs
- 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:
    - <u>http://www.ibm.com/software/passportadvantage</u>
  - 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:
    - http://www.ibm.com/support/handbook
- 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 forums at:
    - https://www.ibm.com/developerworks/mobile/mobileforum.html
  - If you would like a response from IBM, please provide the following information:
    - Name
    - Address
    - Company or Organization
    - Phone No.
    - Email address



## Thank You



© Copyright International Business Machines Corporation 2011, 2013. All rights reserved. US Government Users Restricted Rights - Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.