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Dan pametnijih rješenja

Pametnim podacima do pametnih odluka

IBM Worklight 6.0

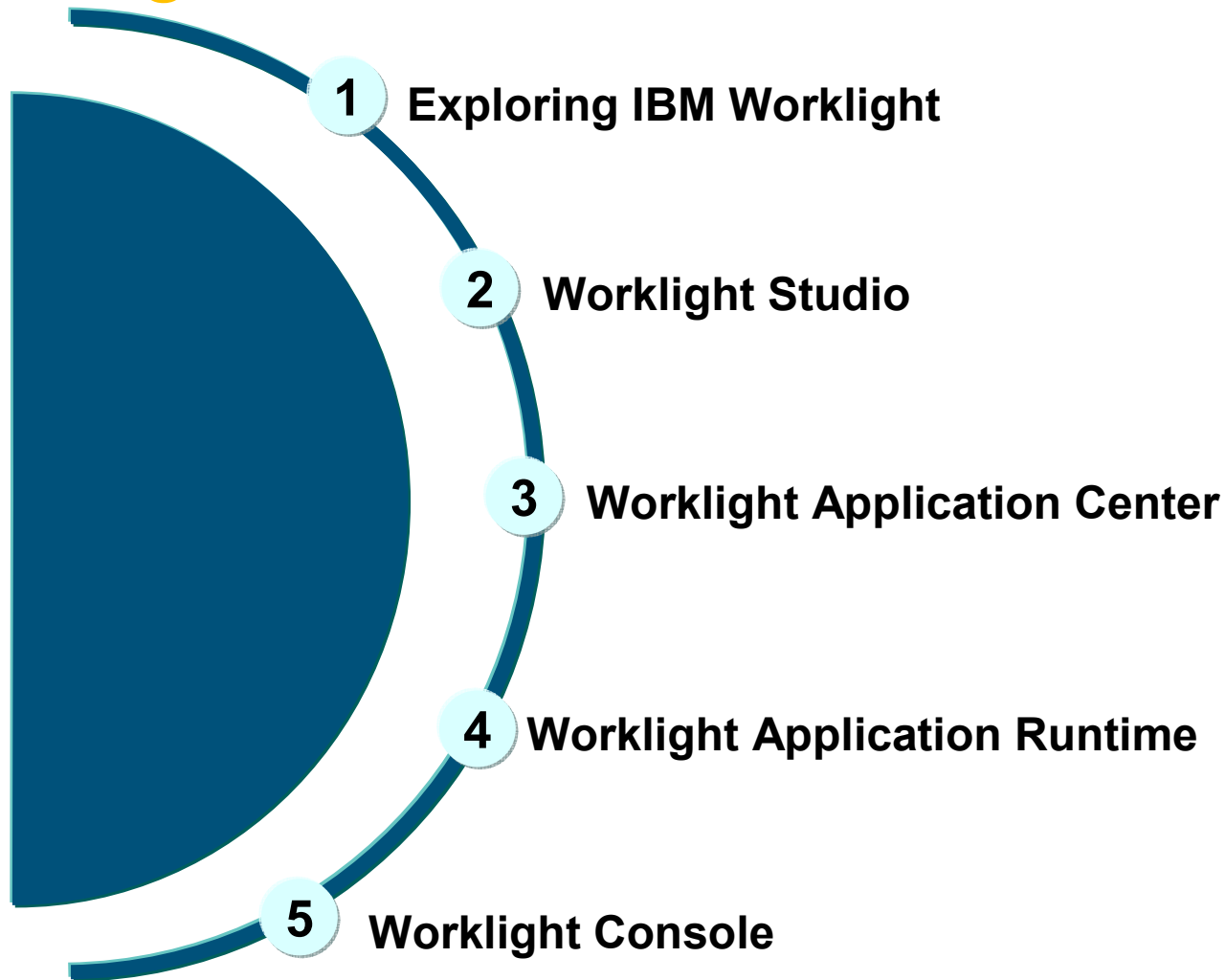
Bogdan Tomanović

WebSphere sales specialist - Adriatics

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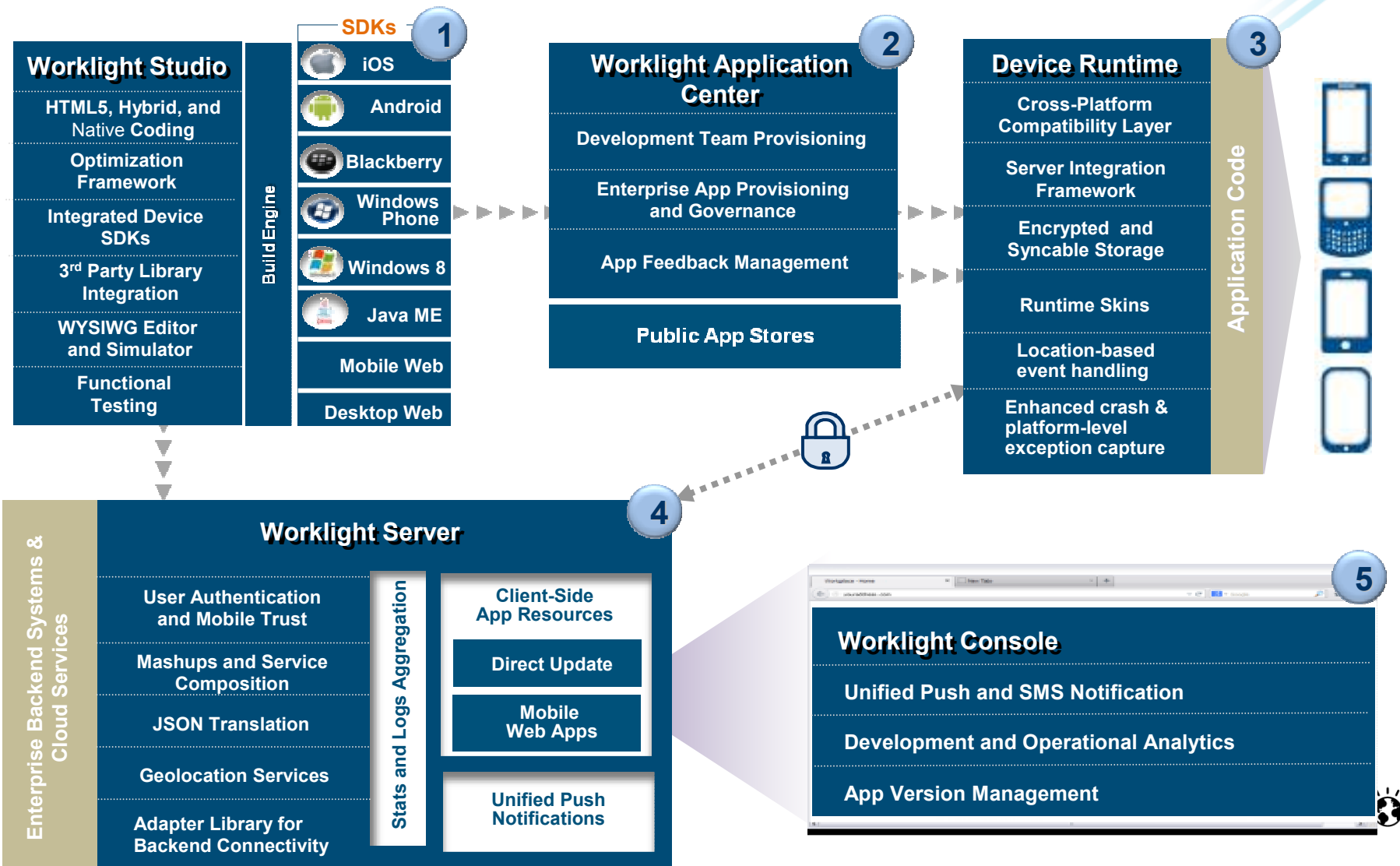
Pametnim podacima do pametnih odluka



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Worklight Components



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Platform Support

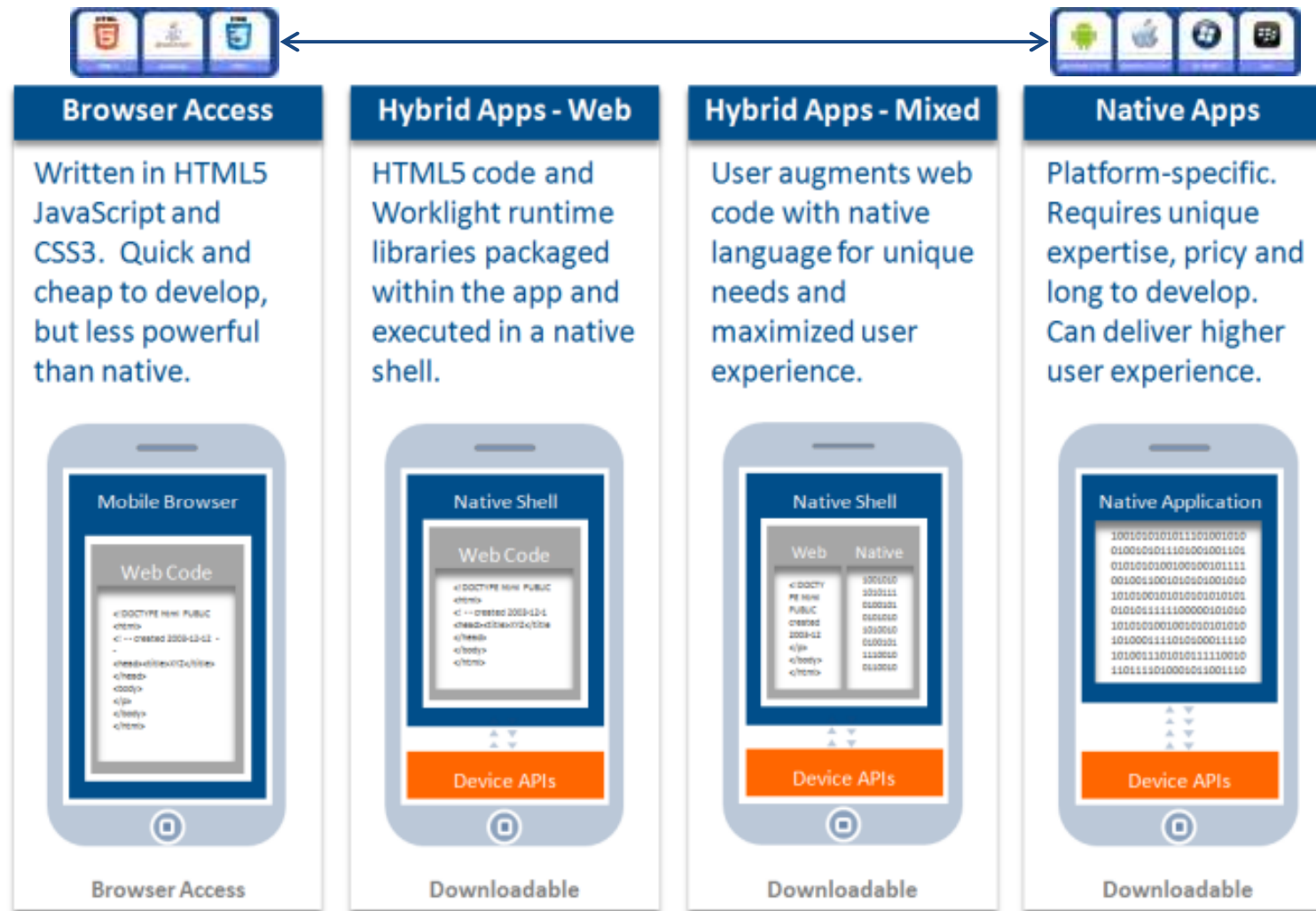
- **Supported Eclipse Versions**
 - Juno 4.2, Indigo 3.7.2, and Helios 3.6.2
 - Supported distributions: Eclipse Classic and Eclipse IDE for Java [EE] developers
- **Supported Mobile OS**
 - Android 2.2, 2.3, 4.0, 4.1, 4.2
 - iOS 5, iOS 6, iOS 6.1
 - Windows 8, Windows RT, Windows Phone 7.5, 8
 - BlackBerry 6, 7, 7.1, 10
 - Java ME MIDP 2.0
- **Third-party Library Support**
 - Apache Cordova (previously PhoneGap)
 - Dojo Mobile
 - jQuery
 - Sencha
- **Supported Application Servers**
 - WebSphere 7 & 8 (Distributed | zLinux)
 - WebSphere 8.5, 8.55 Liberty Profile (included), ND/Base (not included) (Distributed | zLinux | Mac OS X [development])
 - Apache Tomcat 7 (Linux | Windows | Mac OS X [development])
- **Supported Databases**
 - DB2 Enterprise Server Edition v9.7, v10.1
 - Apache Derby, SDK 10.8 (included), or later
 - Oracle 11g Database server, Standard or Enterprise Editions, release 1 or later
 - MySQL 5.1

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Multiple mobile application development models



Pametnim podacima do pametnih odluka

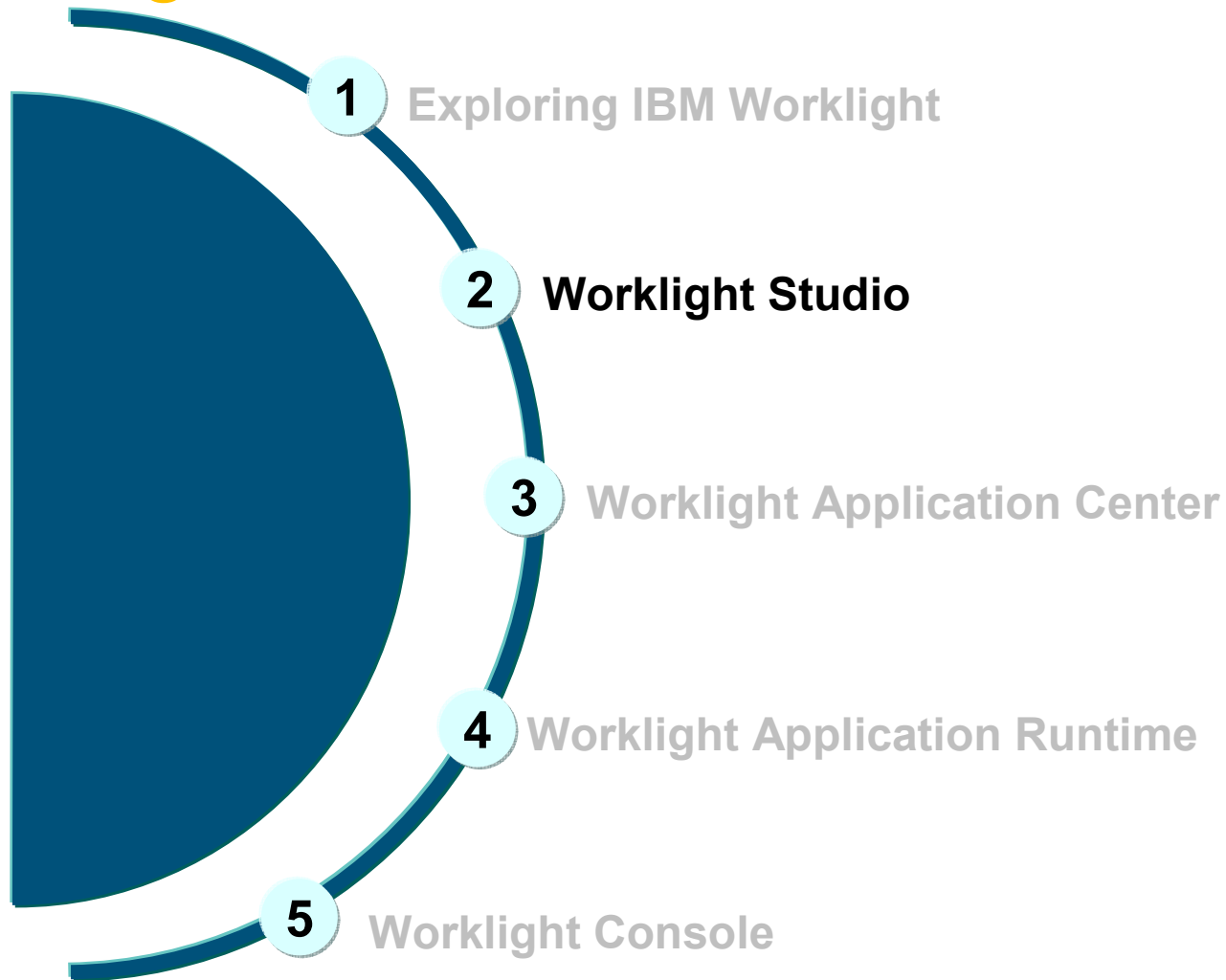


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Pametnim podacima do pametnih odluka



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Worklight Studio

Eclipse Based IDE



- Native, hybrid and standard web development
- Environment-specific optimization
- Native development options
- Runtime skins
- 3rd-party library integration



- Device SDK integration
- Access to emulators and debugging tools
- Supports auto-complete and validation



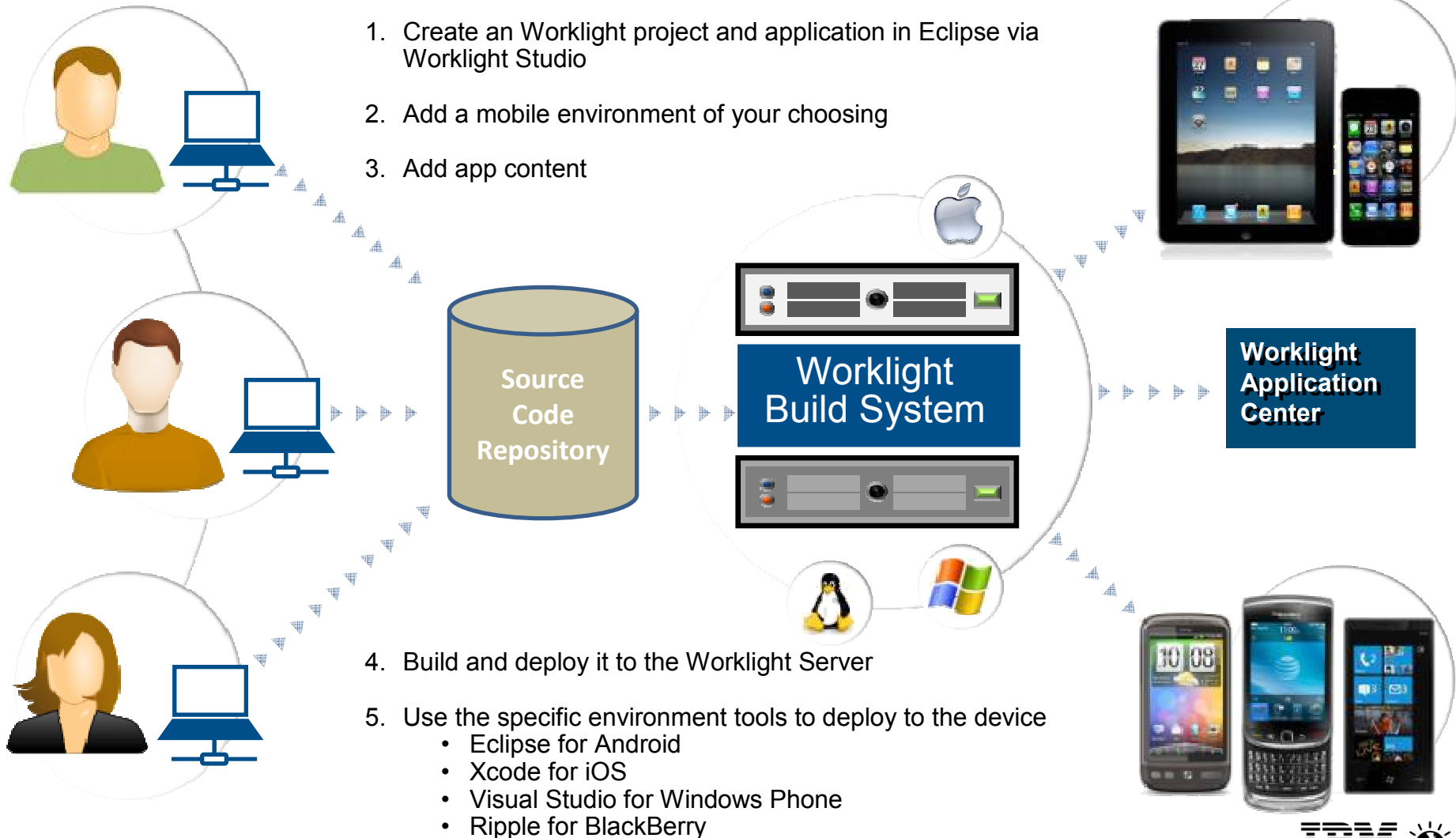
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Centralized Build



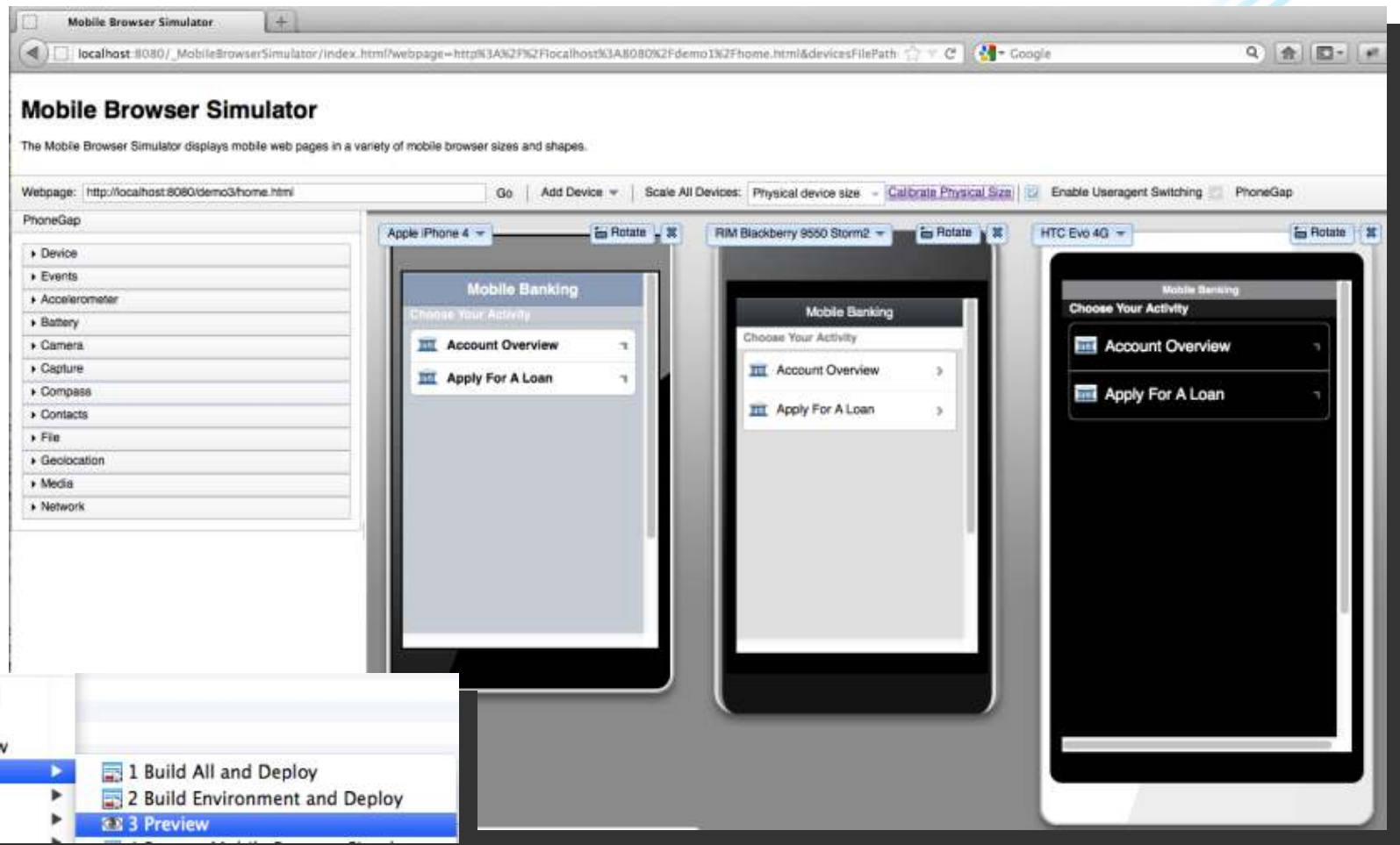
Pametnim podacima do pametnih odluka



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Preview in Browser

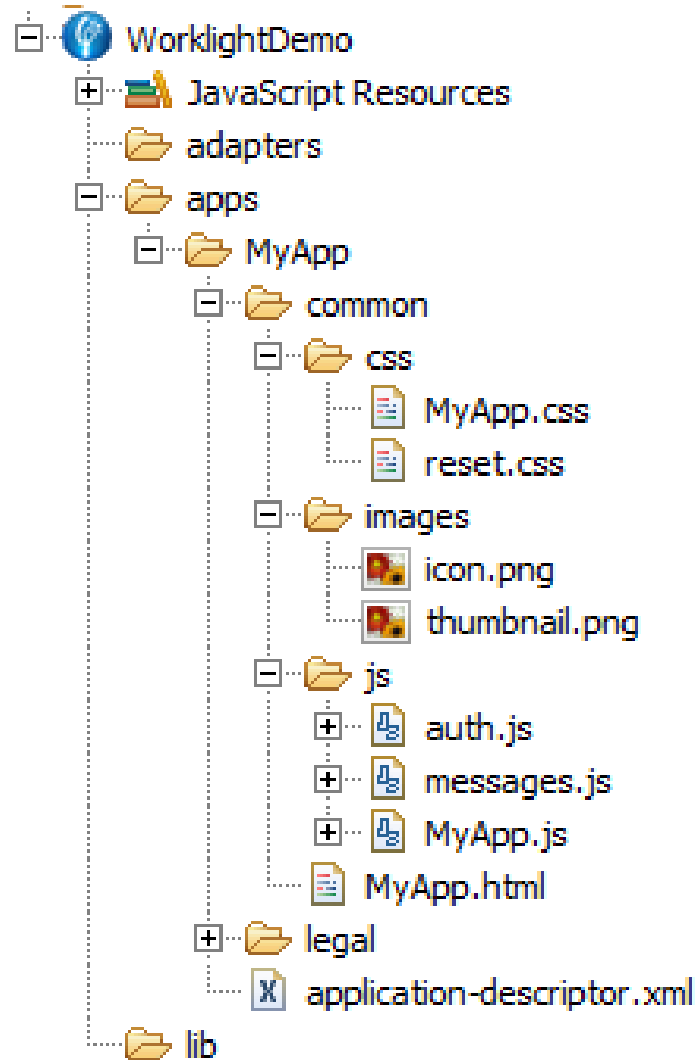


Pametnim podacima do pametnih odluka





Worklight Studio – Common Code Structure



common resources serve as the basis for the optimized environments that may be added later.

- hold resources that are shared by all environments.

lib directory stores 3rd party library files for the project
js (JavaScript files)

- **auth.js** – authentication
- **messages.js** – internationalization
- **myApp.js** – application code

MyApp.html file is initially configured as main file
application-descriptor.xml

- contains reference to "mainfile"
- enable authentication (onDemand, onStartup)
- worklightRootURL (application URL)
- environment specific references

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Worklight Studio - Environment Optimization



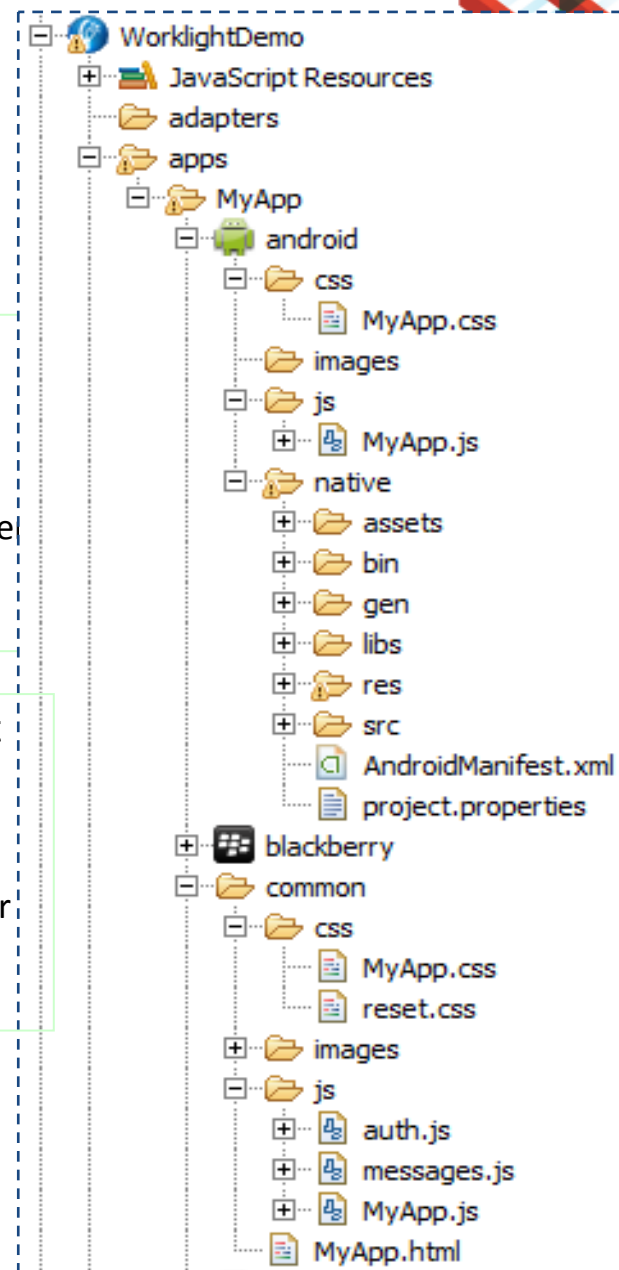
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JavaScript from an environment folder is appended to the same file in the common folder

CSS files from an environment folder will be appended to the CSS files in the common folder

HTML files from an environment folder will override files in the common folder

images from an environment folder will override files in the common folder



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Integrated Device SDKs

The image displays a development environment with an IDE. The Package Explorer on the left shows a project structure for 'WorkLightStarter' with folders for 'adapters', 'apps', and various device-specific folders like 'air', 'android', 'blackberry', 'common', 'css', 'images', 'js', 'messages.js', 'worklightStarter.js', and 'worklightStarter.html'. The main editor shows the 'worklightStarter.js' file with the following code:

```
var invocationData = {  
    //ADAPTER TO INVOKE  
    adapter: worklightStarter.FEEDS_ADAPTER,  
  
    //PROCEDURE TO INVOKE  
    procedure: worklightStarter.GET_FEEDS,  
  
    parameters: []  
};  
  
//INVOKE PROCEDURE  
WL.Client.invokeProcedure(invocationData, {
```

Two mobile device simulators are shown. The one in the foreground is a BlackBerry 9550 Simulator displaying the 'WorkLight Starter' application. The app interface includes a title bar, a navigation bar with 'Engadget Feeds' and 'About WorkLight', and a list of news items with right-pointing arrows. The items are:

- Is "Remarkable Indonesia" the New "Incredible India" for Investors? (Monday, June 07, 2010 8:59 AM)
- Yahoo Goes All In With Facebook: Here Are The Screenshots (Sunday, June 06, 2010 11:13 PM)
- Attack Of The Tweets: MTV's Movie Awards Twitter Visualization Graph (Sunday, June 06, 2010 8:14 PM)
- Google Does The Hard Sell On Security For Its Enterprise Apps (Sunday, June 06, 2010 6:08 PM)
- Hands-on With the Ulysse Nardin Chairman Android Phone (Sunday, June 06, 2010 10:48 AM/About)

The simulator also shows a physical keyboard and navigation buttons.

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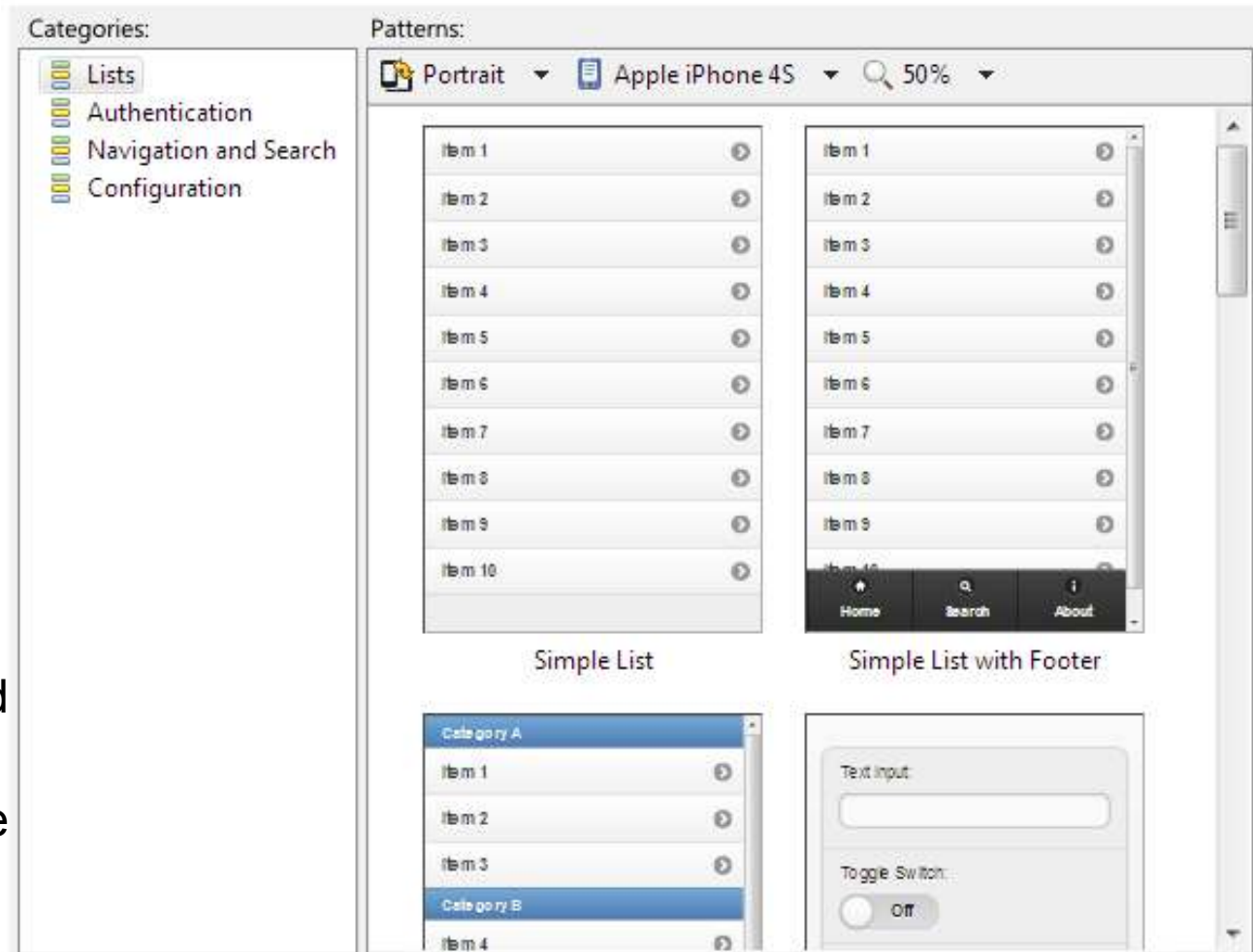




Screen Patterns Based on Re-usable Mobile Patterns

New in
Worklight 6.0

- 40+ out-of-the-box common screen patterns
- Navigation, search, lists and tables, authentication, configuration panels
- For jQuery Mobile and Dojo Mobile
- Live preview using the underlying widget library





Worklight Studio - Runtime Skins

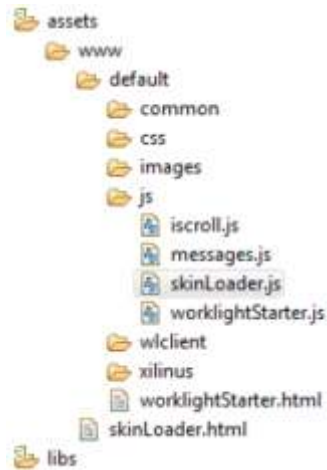


Skins provide support for multiple form factors in a single executable file for devices of the same OS family.

- Different screen sizes
- Different screen densities
- Different input methods

Skins are a sub-variant of an environment packaged in a single app

Decision on which skin to use is done by app at runtime



Developer-controlled JavaScript file run at app startup determines which skin to load

```
function getSkinName() {  
    var skinName = "default";  
    if (getVersion () == "2.2" ||  
        getVersion () == "2.1") {  
        skinName = "android.HTML5";  
    }  
    return skinName;  
}
```

```
<android>  
  <skins>  
    <skin name="default">  
      <folder name="common"/>  
      <folder name="android"/>  
    </skin>  
    <skin name="android.phone">  
      <folder name="common"/>  
      <folder name="android"/>  
      <folder name="android.phone"/>  
    </skin>  
    <skin name="android.tablet">  
      <folder name="common"/>  
      <folder name="android"/>  
      <folder name="android.tablet"/>  
    </skin>  
  </skins>  
</android>
```

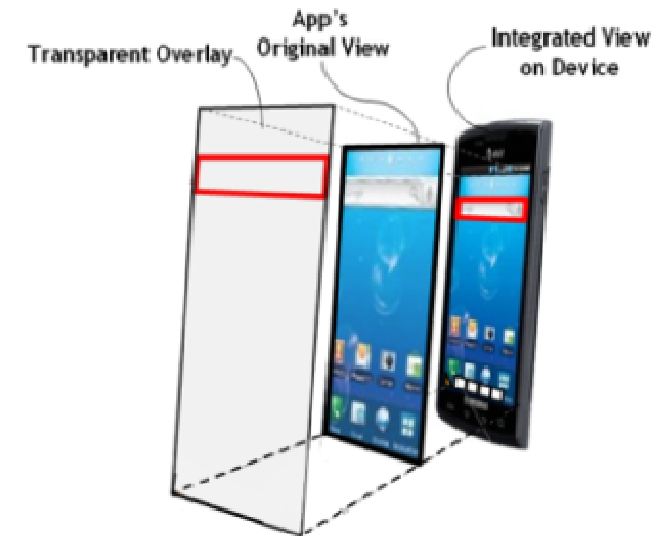
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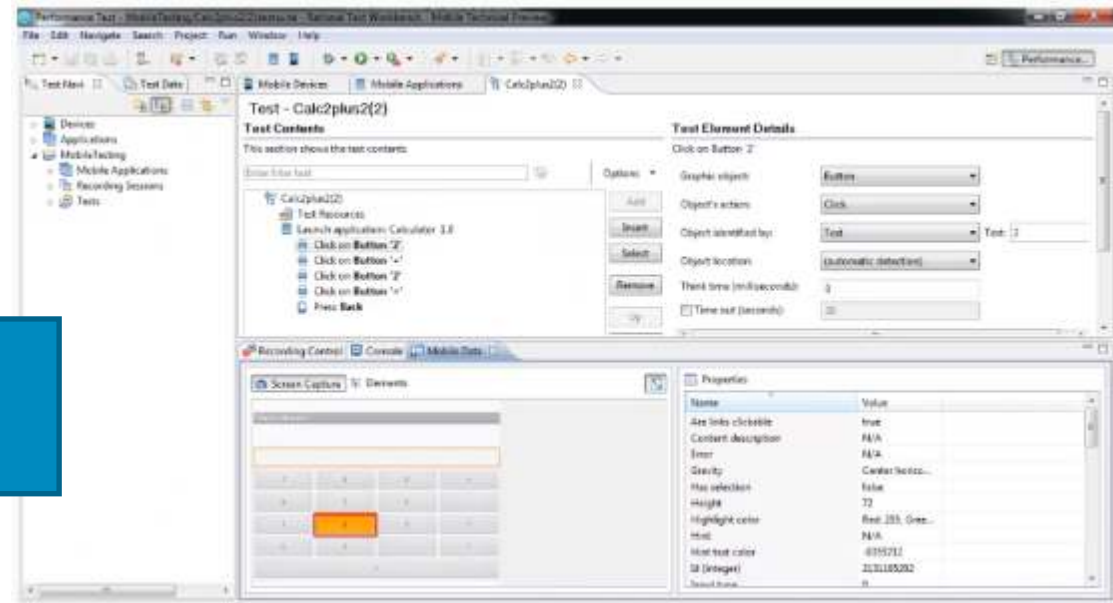
New to 6.0: Mobile Functional Test Tools

- Create, run, and automate tests on mobile applications
- Improve quality and time-to-value with industry-first app testing
- Create resilient and code-less test cases
- Record once, play back on multiple devices
- Standardized, eclipse based
- Comprehensive – Android and iOS, Native and hybrid
- Complete – Recording, editing, and running on mobile devices
- Resilient – Same test runs across multiple devices
- Also for non-developers – Scripts in natural language description



Deliver consistently high quality across your mobile app portfolio.

Pametnim podacima do pametnih odluka



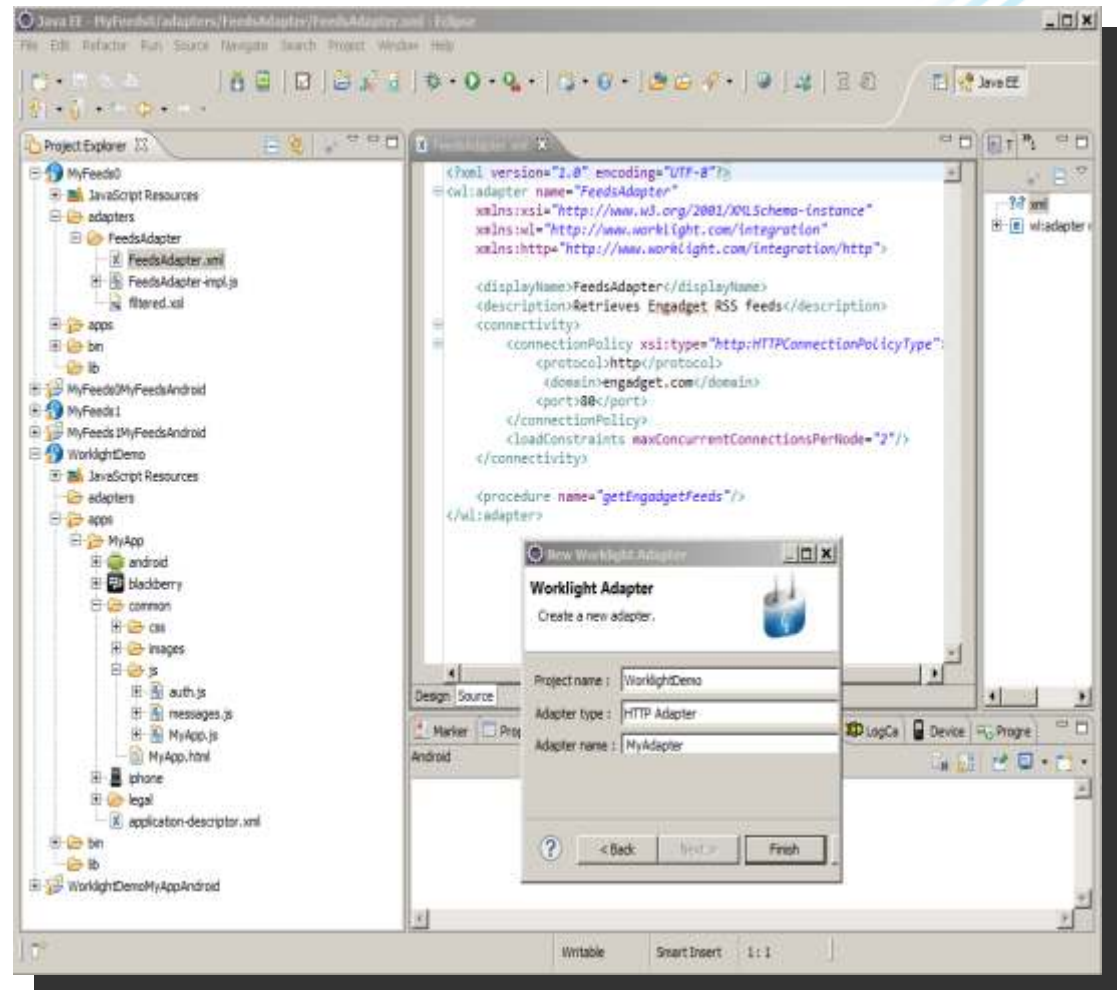
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Worklight Studio: Back-end Integration

- Secure back-end integration with Worklight Adapters
- Out of the box support for SQL, HTTP (REST and SOAP), Cast Iron, and JMS Adapters
- XML-based declarative specification and JavaScript programming
- Multi-source data mashups and back-end service composition
- Simplified adapter testing
- Access to session data and user properties
- Server-side debugging



Pametnim podacima do pametnih odluka

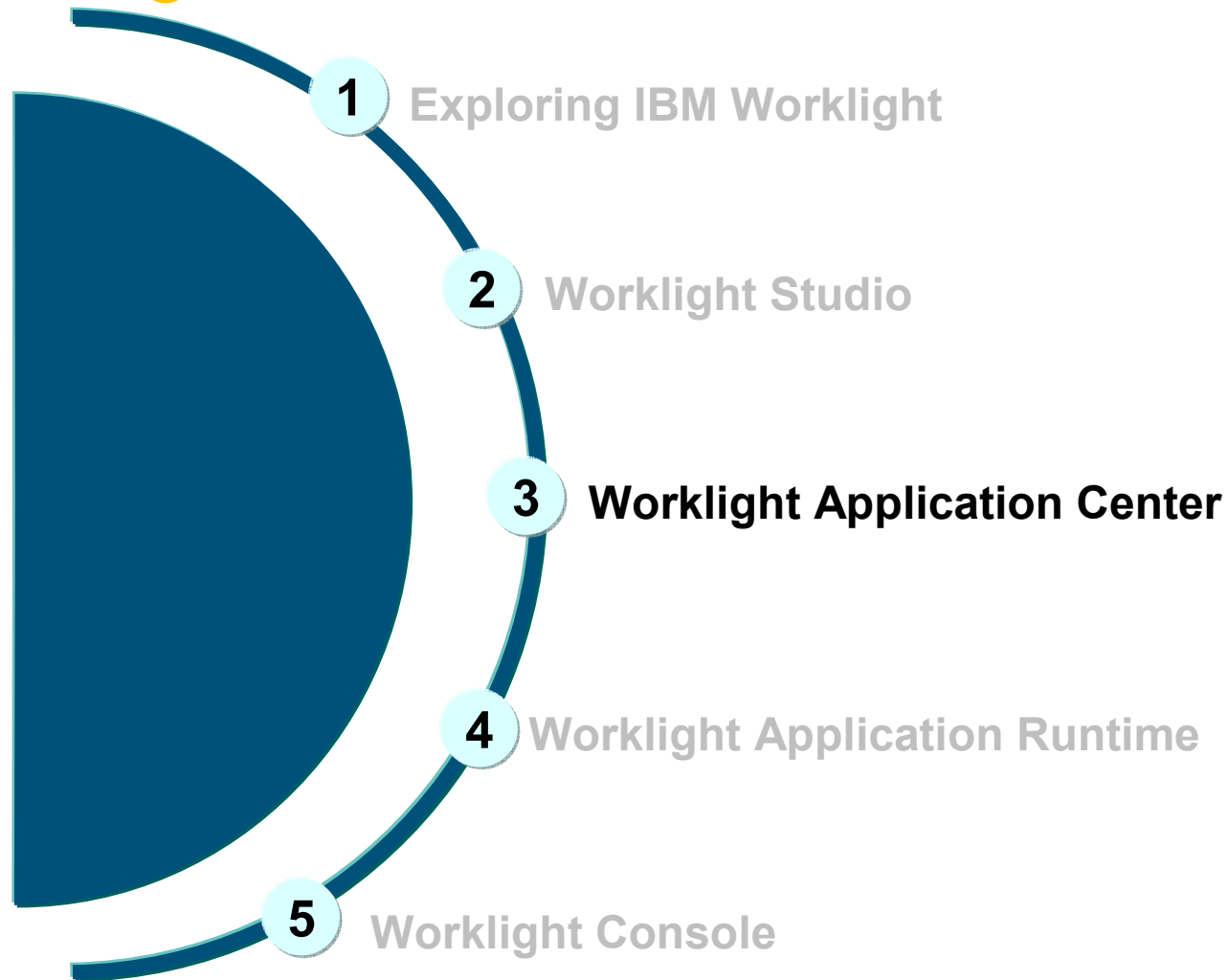


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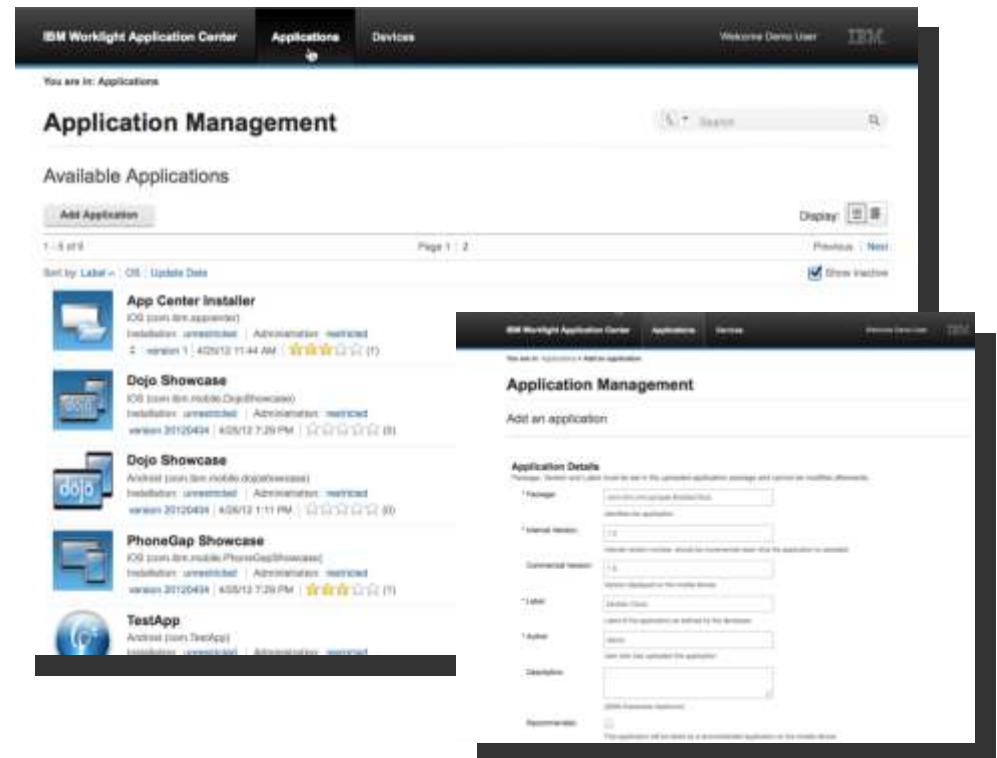
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Application Center

The Worklight Application Center enables companies to easily set up an enterprise app store for their enterprise and development teams.

- The Application Center provides:
 - **Administrators** with fine-grained control over the distribution of mobile apps across the enterprise, including ACL and LDAP support;
 - **Employees** with a central location for the latest apps needed by their department and optimized for their device;
 - **Developers** with an easy way to distribute mobile builds and elicit feedback from development and test team members.



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Add an Application



The screenshot illustrates the 'Add an application' workflow in the IBM Worklight Application Center. It is divided into three main visual components:

- Browser Window:** Shows the URL `localhost:9080/applicationcenter/applications/AddApplication.html` and the application's navigation menu.
- File Upload Dialog:** A file explorer window titled 'File Upload' showing a list of files. The file `MobileClivc3.ipa` is selected. A blue arrow points from this dialog towards the application details form.
- Application Details Form:** A form titled 'Application Management' with the following fields:
 - * Package:** `com.ibm.watson.sample.MobileClivc` (Identifies the application)
 - * Internal Version:** `1.0` (Internal version number, should be incremented each time the application is uploaded)
 - Commercial Version:** `1.0` (Version displayed on the mobile device)
 - * Label:** `Mobile Clivc` (Label of the application as defined by the developer)
 - * Author:** `ibm` (User who has uploaded this application)
 - Description:** (255 characters maximum)
 - Recommended:** (This application will be listed as a recommended application on the mobile device)

Pametnim podacima do pametnih odluka



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Role Based Administration

The screenshot shows the IBM Worklight Application Center interface in Mozilla Firefox. The browser address bar shows `http://localhost:9080/applicationcenter/applications/Applications.html`. The navigation menu includes 'IBM Worklight Application Center', 'Applications', 'Devices', and 'Users / Groups' (highlighted with a red box). The main content area is titled 'Application Management' and shows 'Available Applications'. One application, 'Mobile Clinic (iOS)', is highlighted with a blue circle. Below it, the 'Installation Access Control' section is visible, showing 'Access control enabled' and a search box for users or groups. The 'Mobile Clinic' application card also has 'Access control: unrestricted' highlighted with a red box.

The 'User Groups' management interface shows a 'Create group...' button, pagination '1 of 1', and a 'Sort by: Name' dropdown. A table lists a 'Test Group' with an 'Edit members' link. The bottom of the interface shows 'Show: 10 | 20 | 50 | 100 | All items'.

The 'Registered Users' management interface shows a 'Register user...' button, pagination '1 - 3 of 3', and a 'Sort by: Name' dropdown. A table lists users: 'appcenteradmin', 'demo', and 'guest'. The bottom of the interface shows 'Show: 10 | 20 | 50 | 100 | All items'.

Pametnim podacima i pametnih odluka



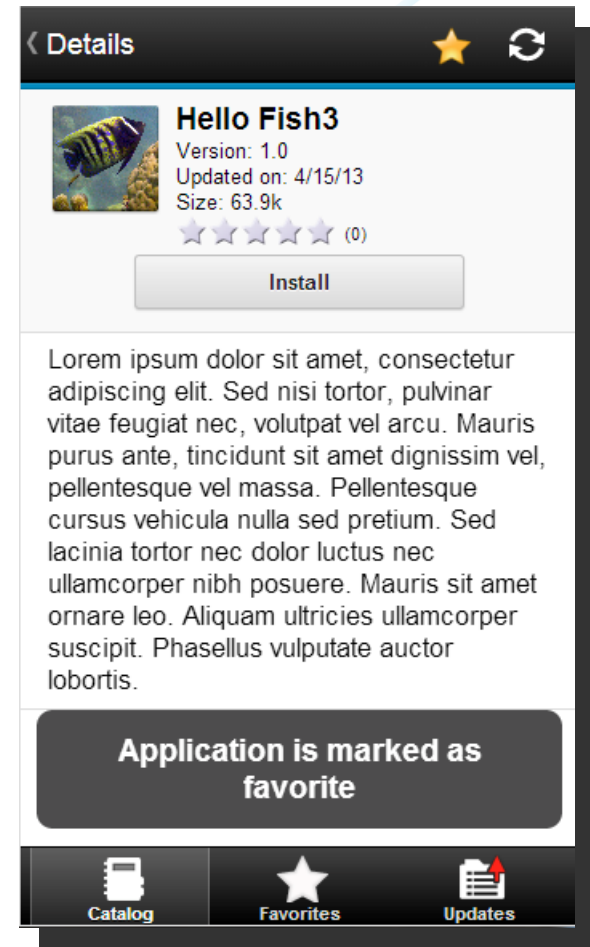
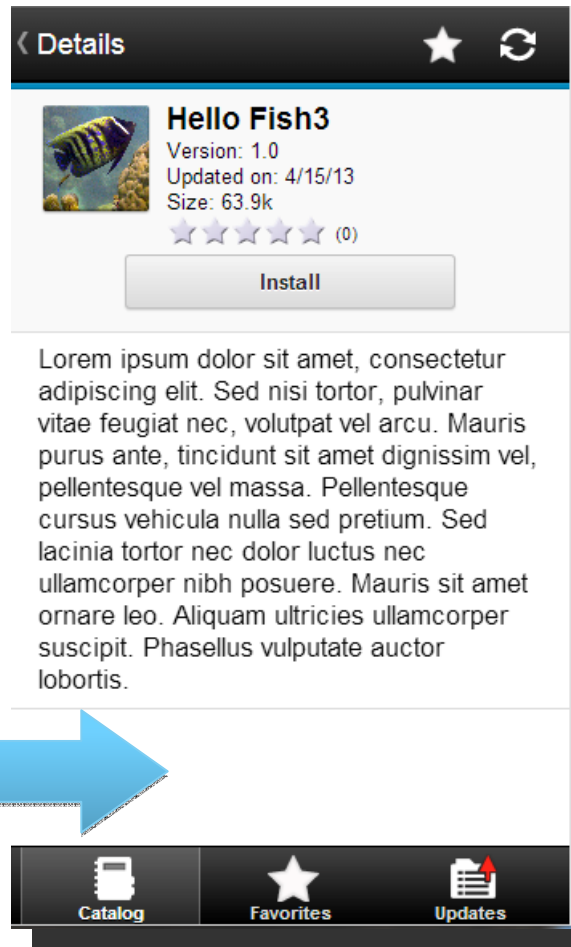
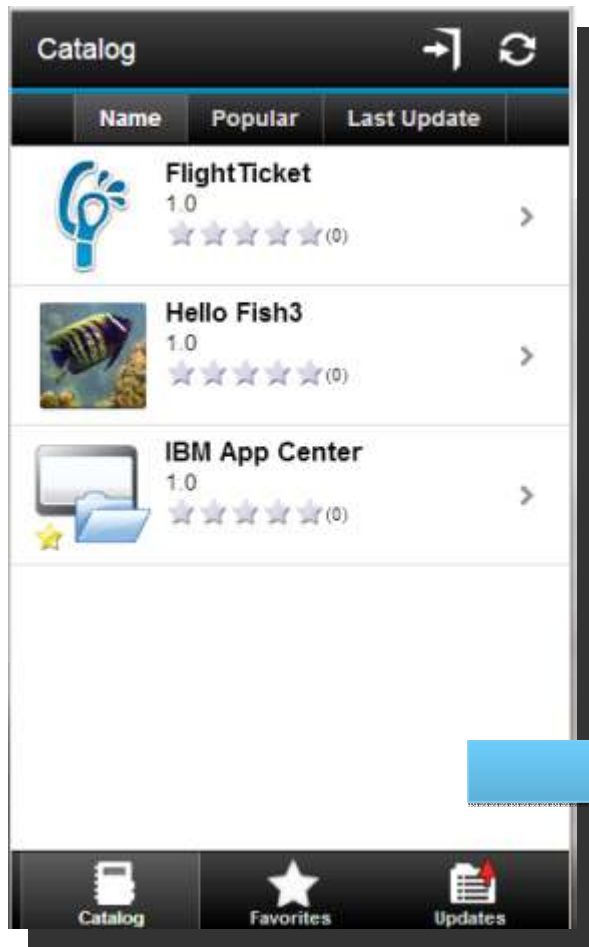
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New in
Worklight 6.0



Applications Can Be Installed and Favorited



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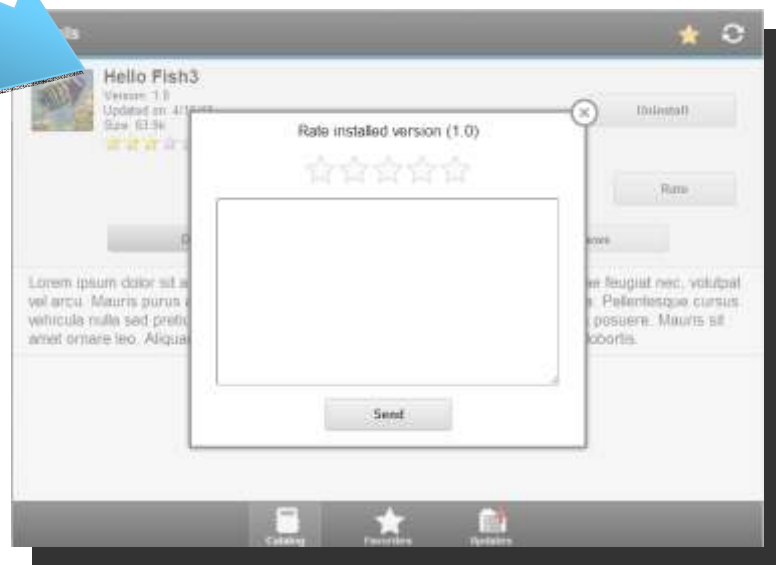
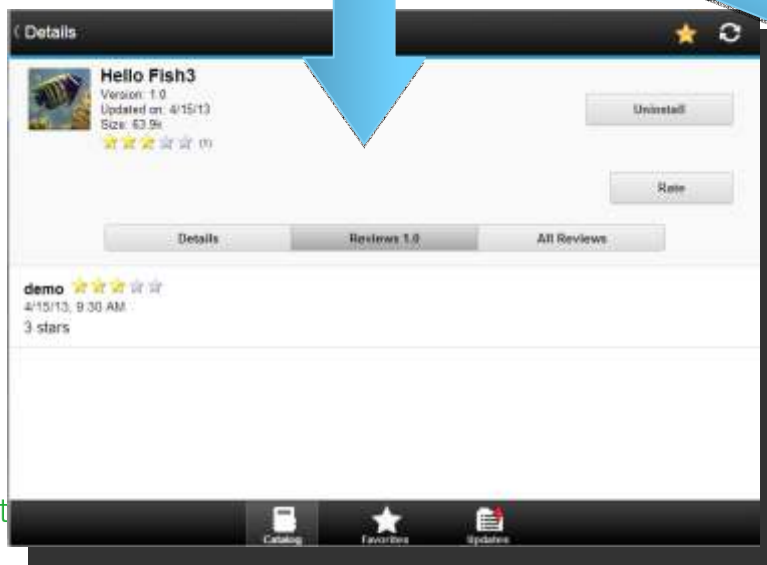
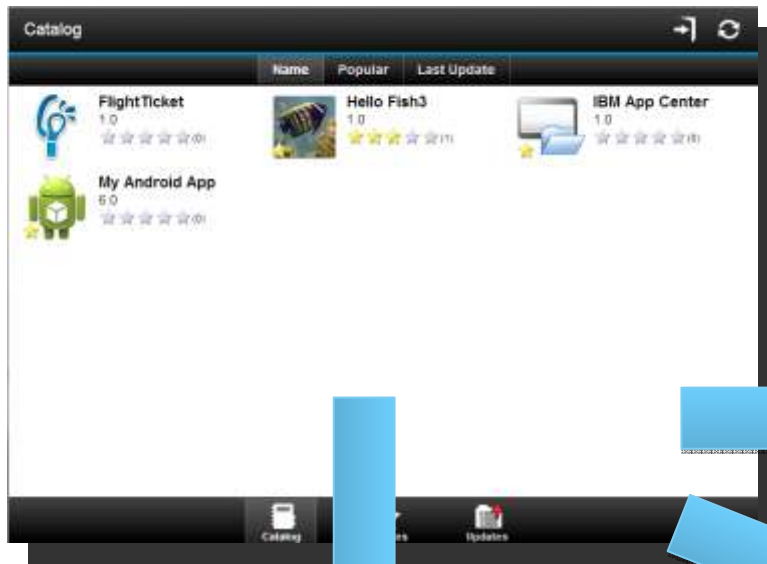
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Enhanced!



Users Can Review and Provide Feedback



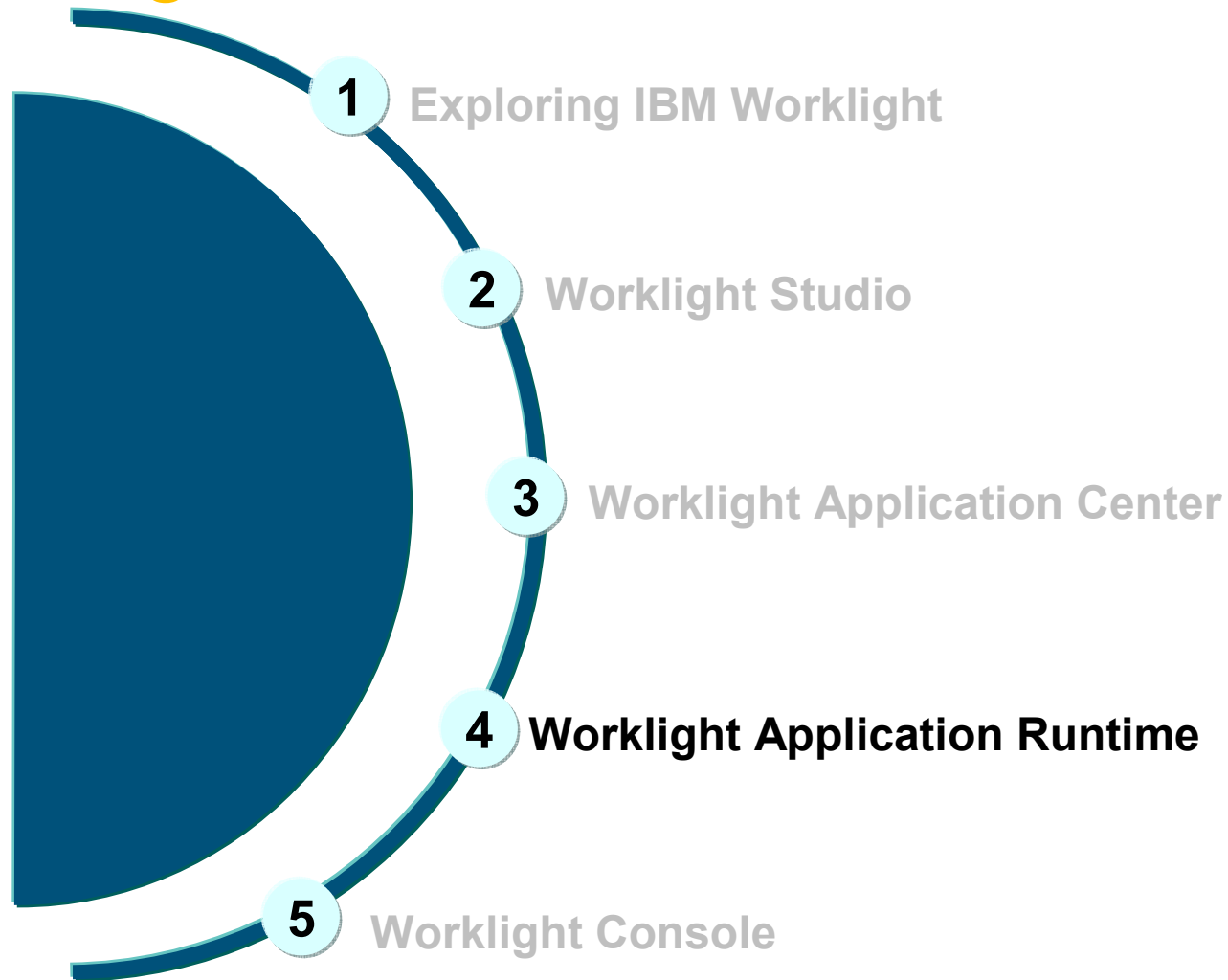
Pamet



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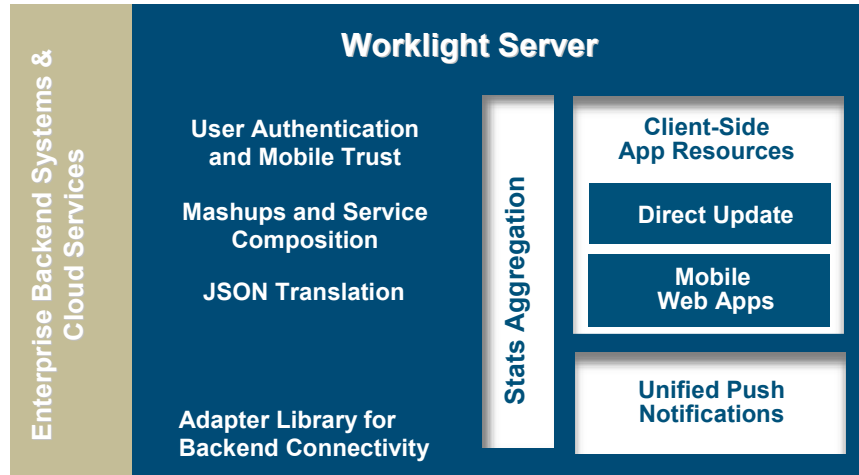


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Worklight Server



- Adapters with support for SOAP, REST, SQL, JMS, IBM Cast Iron, and Node.js (preview in 6.0)
- Performs Data Transformation to streamline back-end data for mobile consumption
- Server and device Security control
- Supports Physical Clustering for high availability
- Controls Application Deployment and Versioning
- Push Notification administration
- Analytics including user adoption, usage data, app crash and exceptions

MyFeeds

Preview as: Last updated at 2012-04-10 13:00

- Android Version 1.1 Active Authenticity Testing: Disabled
- Android Version 1.0 Disabled Authenticity Testing: Disabled

Notification text (will appear on the device): Upgrade to version 1.3

URL to app store or market: http://www.ibm.com

Active User Report

For each day, the report displays the number of active users - users who logged in to Worklight at least once in the past 30 days

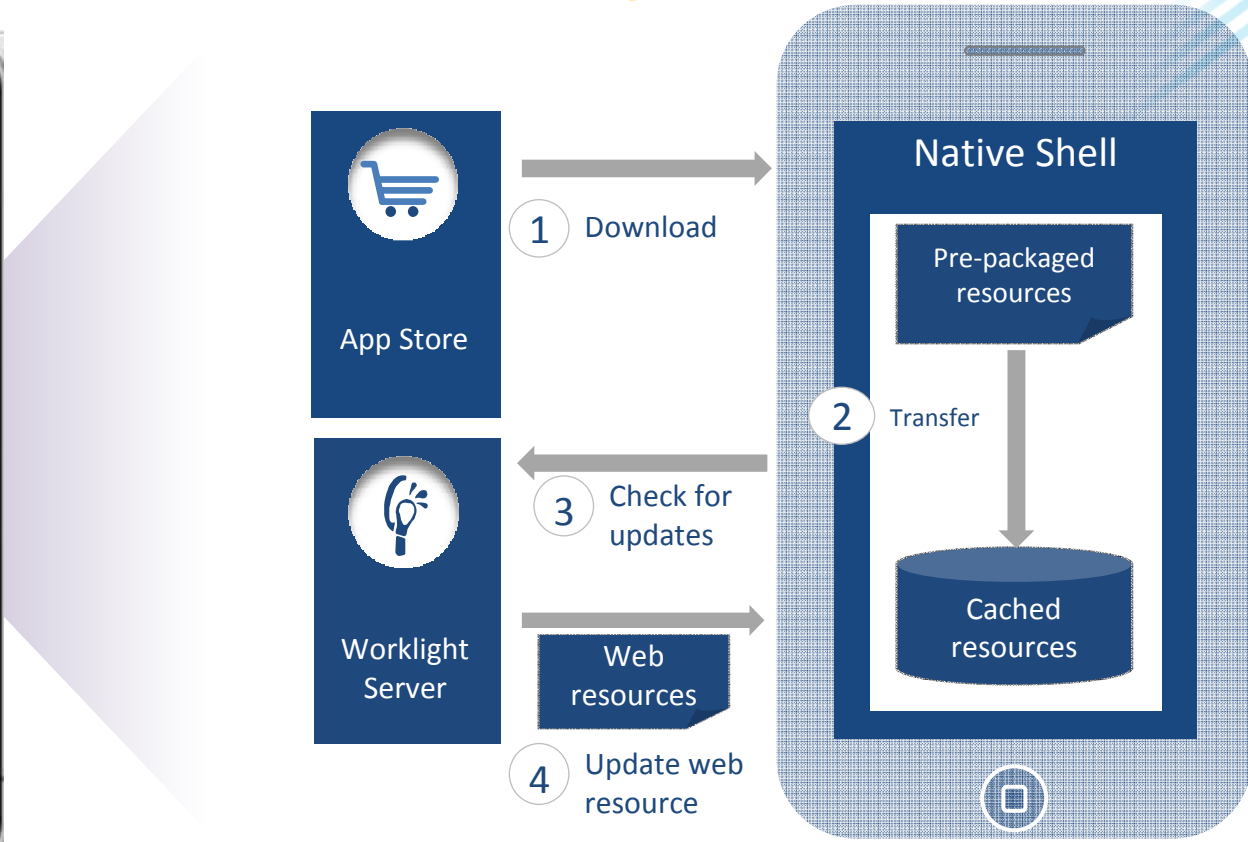
| Date | # of Users |
|-------------|------------|
| 10-Apr-2012 | 50 |
| 9-Apr-2012 | 2 |
| 5-Apr-2012 | 2 |
| 4-Apr-2012 | 3 |
| 3-Apr-2012 | 7 |
| 2-Apr-2012 | 11 |
| 29-Mar-2012 | 3 |
| 28-Mar-2012 | 1 |
| 27-Mar-2012 | 5 |
| 25-Mar-2012 | 1 |
| 22-Mar-2012 | 4 |
| 21-Mar-2012 | 2 |
| 20-Mar-2012 | 1 |
| 19-Mar-2012 | 3 |
| 15-Mar-2012 | 10 |
| 12-Mar-2012 | 11 |
| 9-Mar-2012 | 1 |

Pametnim |





Direct Update On-device Logic



1. Web resources packaged with app to ensure initial offline availability
2. Web resources transferred to app's cache storage
3. App checks for updates on startup and foreground events
4. Updated web resources downloaded when necessary, with confirmation or silently



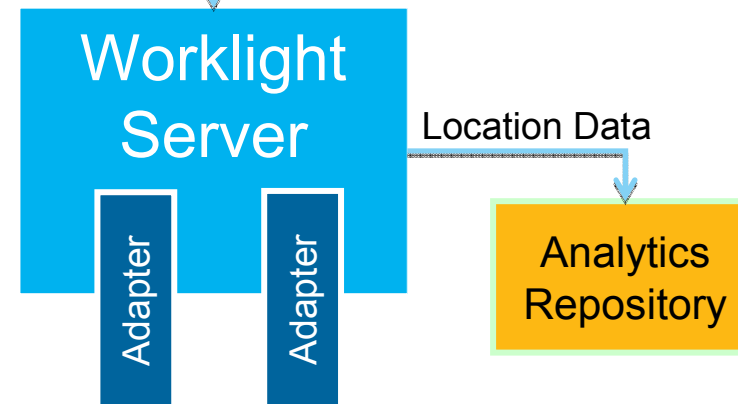
New to 6.0: Geo-Location Sense and Response

- Client-side APIs
 - Efficiently sampling GPS, cell triangulation, and Wifi coordinates
 - Sampling while app in the foreground and in the background
 - Batch collected data and send to server
 - Available also when app is offline
 - Developer in full control
- Events based on
 - Proximity to point of interest
 - Entering, leaving a geo-fence
- Server side – maintain an evolving context that is available for all adapter procedures
 - React to important geo events
 - Enrich with business data
 - Integrate context information with business processes
 - Storage for analytics purposes

Pametnim podacima do pametnih odluka



Collect, compress and stream important information



Feed location data and triggers to business processes decision management systems etc.





Security patches in hours versus months

Situation: App published with HTML-based security breach

From uncertainty...

Week 1

- **Patch and package:**
 - Android app
 - Apple app
 - Windows app
 - Blackberry app

Week 1

- **Submit for review:**
 - Apple Store
 - Google Play
 - Blackberry AppWorld
 - Windows App store

4-6 week publishing cycle

Date Resolved

Never. There is no way to require users to upgrade or prevent them from running a published app.

To governance and control

Hour 1

Patch common code base.

Hour 2

Deploy to all platforms.
Apple, Android, Blackberry, Windows Phone

Direct Update: The next time users launch the app, they are forced to update or quit the app.

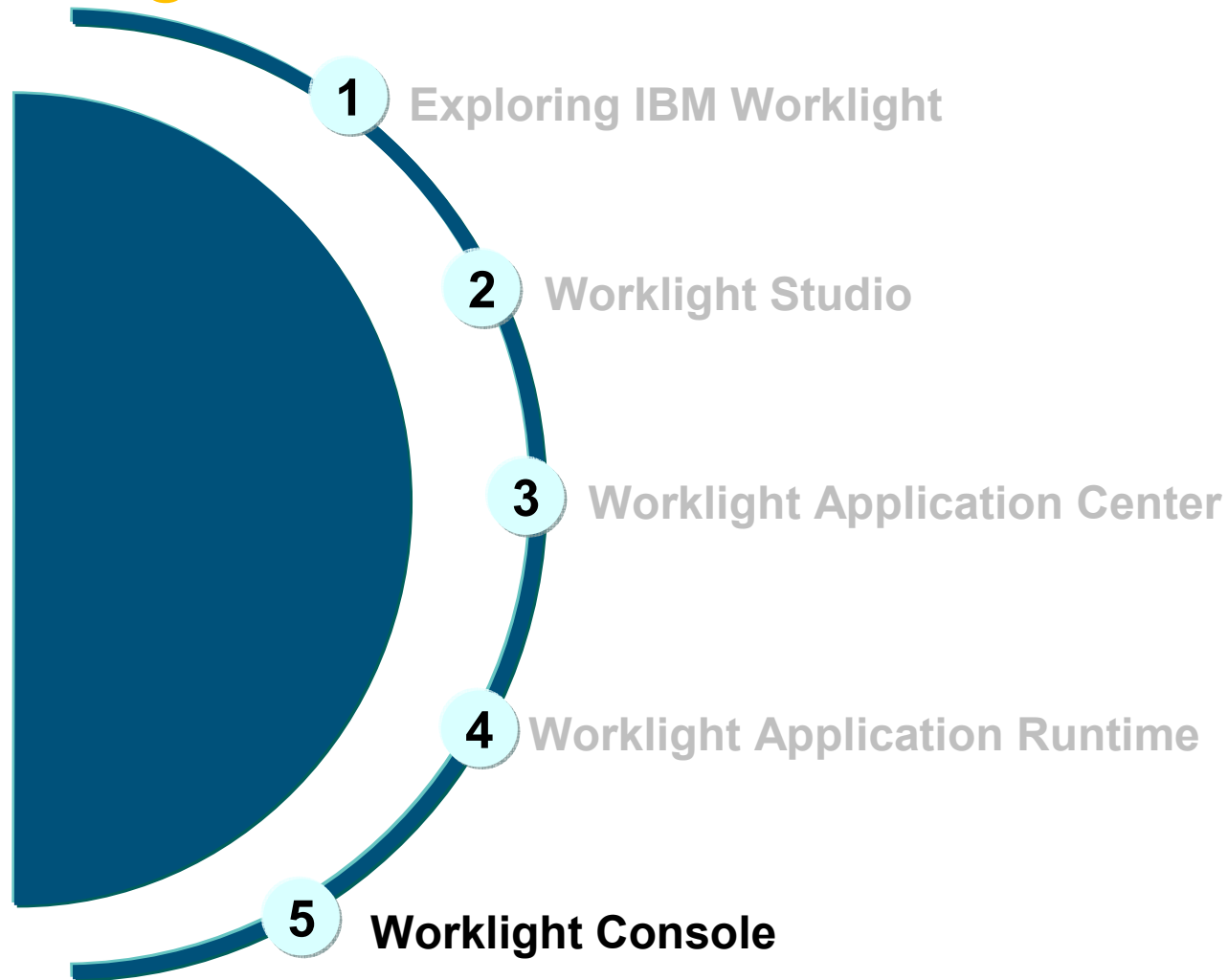
Date Resolved

Same day, guaranteed.

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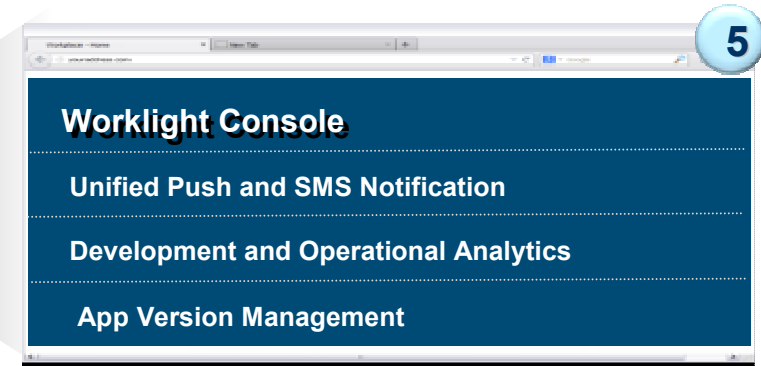
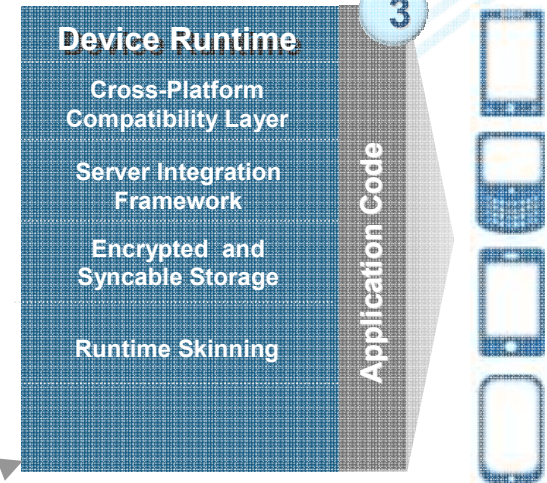
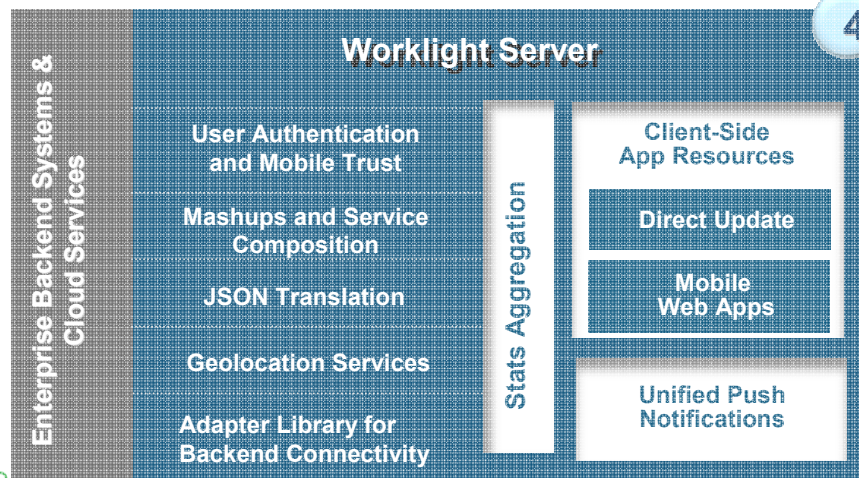


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Worklight Console

- Application Version Management
 - Install, update, disable, enable
- Push management
- Configurable audit log
- Administrative dashboards for:
 - Deployed applications
 - Installed adapters
 - Push notifications
- Development and Operational Analytics



Pametnim podacima do pametnih odluka



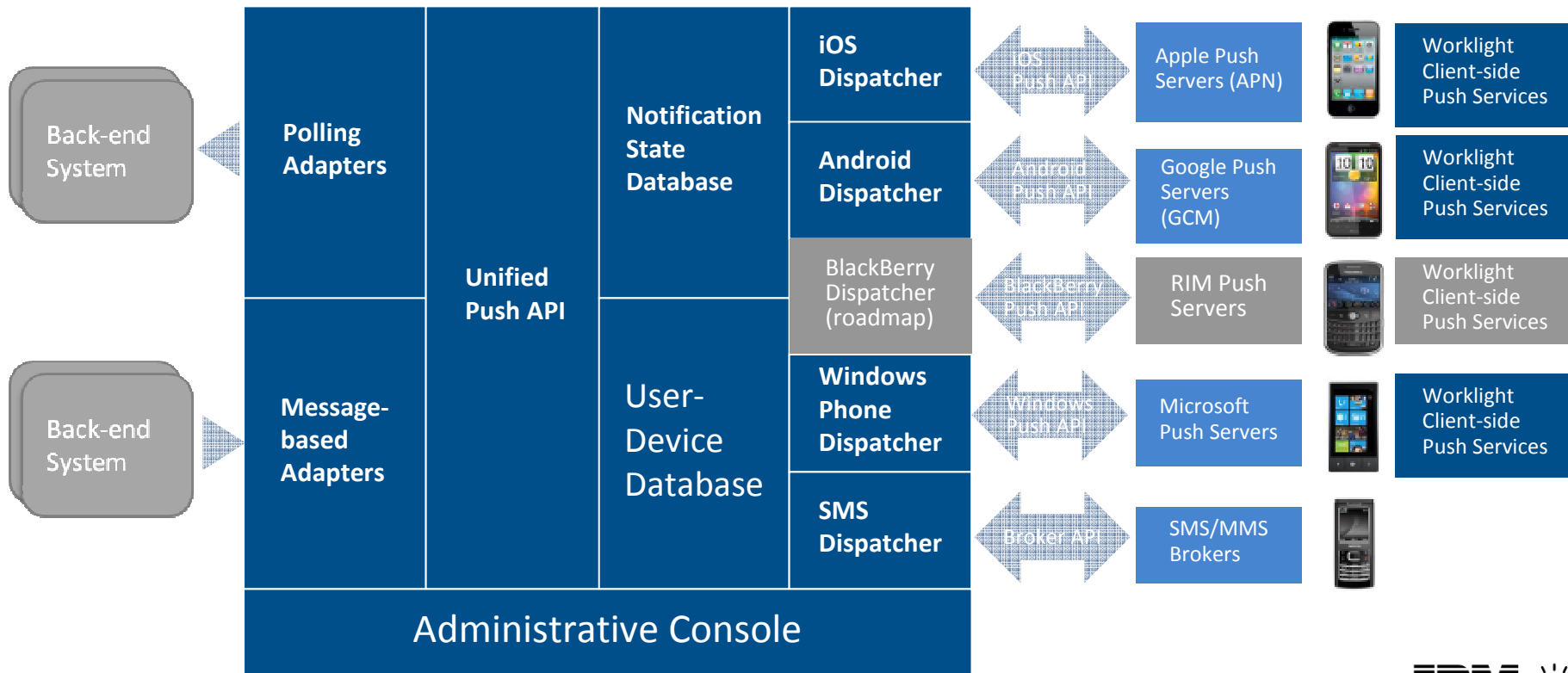
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Unified Push Notifications

- Uniform access to push notifications providers
 - Register for, Notify and Receive a notification
- Register for and Send SMS based notifications
 - E.g., for JME



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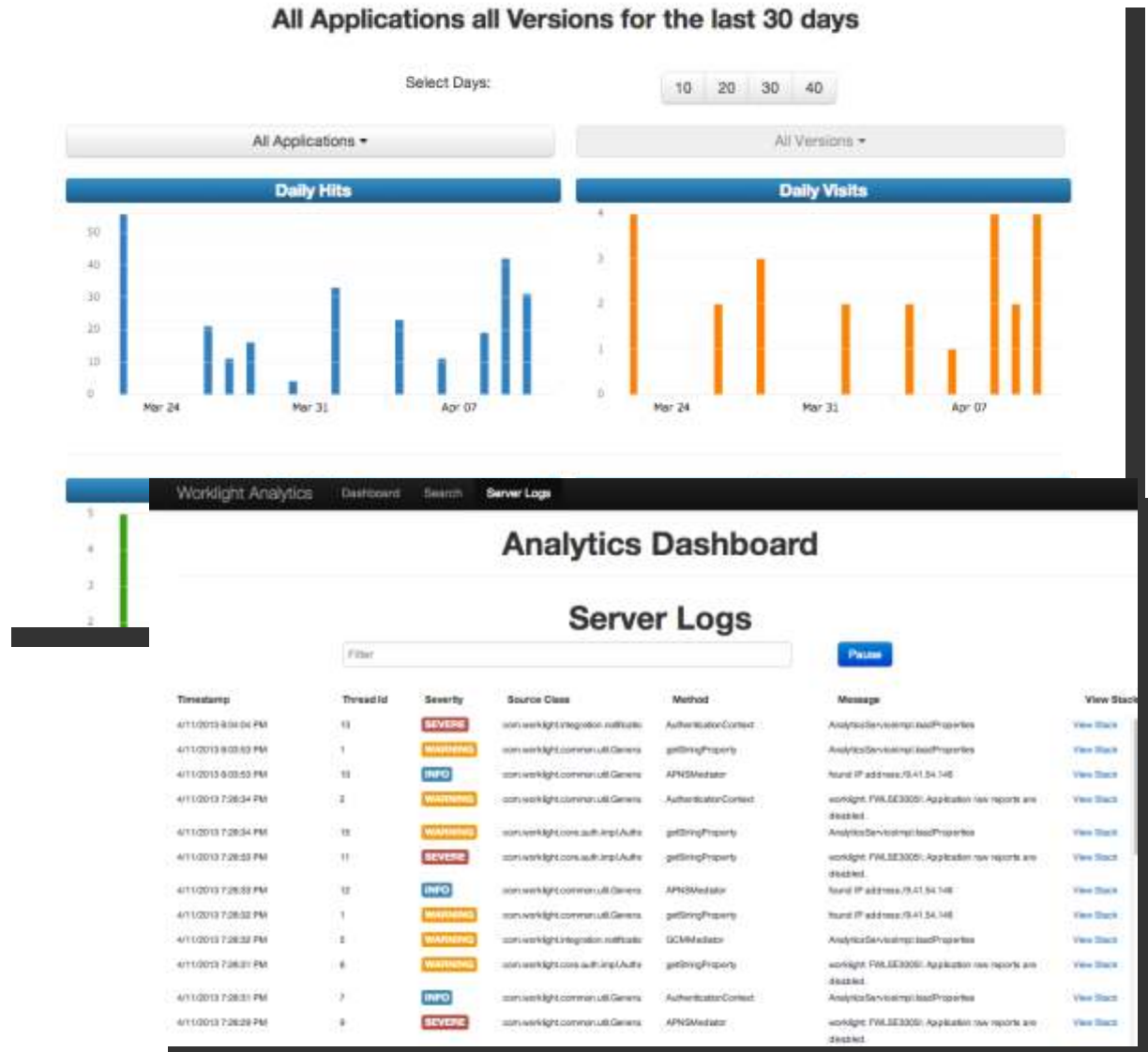
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Unified Client and Server Analytics

- Mobile device
 - Device and app properties
 - User actions and called adapter procedures
 - Exceptions, logs, response time
 - Geo data
- Server
 - Raw analytics data
 - Log: exceptions, security issues, and generic log messages.
- Storage
 - Data is stored in a new analytics repository
 - Keeping BIRT based reports for backward compatibility



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Three Ways to Get Started with IBM

1

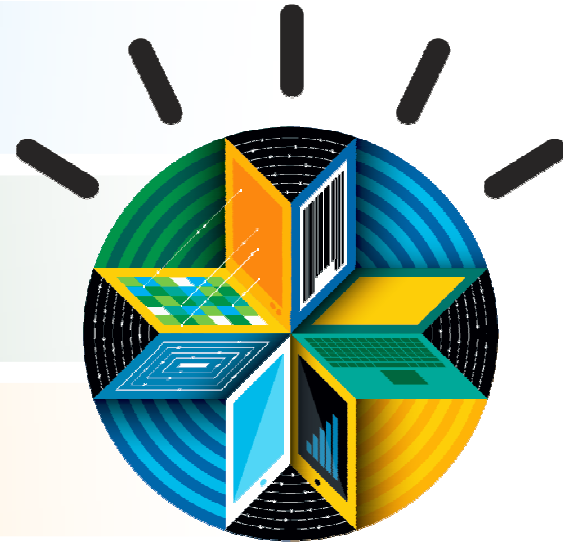
Download the free IBM Worklight Developer Edition:
ibm.com/developerworks/mobile/worklight

2

Download the free IBM Mobile Development Lifecycle Solution (Worklight PLUS ALM):
ibm.com/developerworks/cloud/cloudtrial
Promo code IMDLS

3

Learn more: ibm.com/mobilefirst



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Thank You

