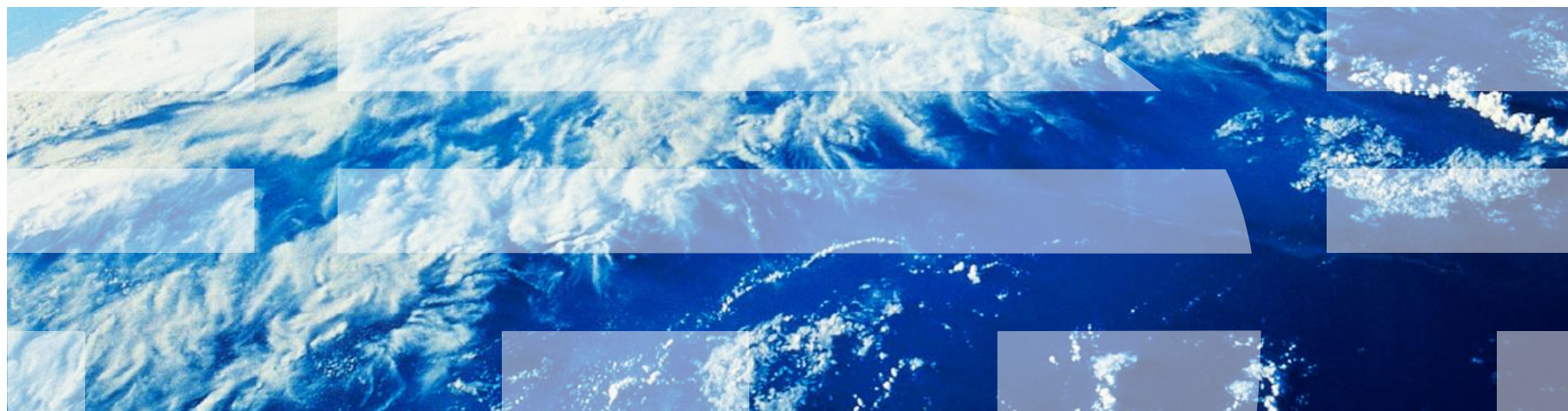


IBM Worklight Foundation V6.2.0 Getting Started

Remote controlled client-side log collection



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Agenda

- What is logging?
- What is log capture, and how can you use it?
- Server preparation
- Admin control of client log capture
- What is crash capture, and how does it work?

What is logging? (1 of 4)

- Instrumentation of source code with API calls to record messages to facilitate diagnostics and debugging
 - Example: `java.util.logging` in Java
- Logging libraries typically have verbosity controls, that are frequently called levels
 - Example, from least to most verbose: ERROR, WARN, INFO, LOG, DEBUG
 - Developers can filter by level in their log viewer
 - Capture tools can filter by level in their configurations

Logging in Worklight, Android native (Java) (2 of 4)

- Instrument your Android Java native code similar to this example:

```
import com.worklight.common.Logger;

public class MathUtils {

    private static final Logger logger = Logger.getInstance(MathUtils.class.getName());

    public int sum(final int a, final int b) {
        int sum = a + b;

        logger.debug("sum called with args " + a + " and " + b + ". Returning " + sum);

        return sum;
    }
}
```

- Outputs to LogCat
- Android Worklight® SDK cannot persistently capture log data until the `com.worklight.common.Logger.setContext(Context)` method is called

Logging in Worklight, iOS native (Objective-C) (3 of 4)

- Instrument your iOS Objective-C native code similar to this example:

```
#import "OCLoggerMacros.h"
#import "OCLogger+Constants.h"

+ (int) sum:(int)a with:(int) b {
    int sum = a + b;

    OCLoggerDebugWithPackage(@"MathUtils", @"sum called with args %d and %d. Returning %d",
        a, b, sum);

    return sum;
}
```

- Outputs to Xcode console

Logging in Worklight, JavaScript (4 of 4)

- Instrument your JavaScript code similar to this example:

```
var MathUtils = function() {  
    var logger = WL.Logger.create({pkg: 'MathUtils'});  
    var sum = function(a, b) {  
        var sum = a + b;  
        logger.debug('sum called with args ' + a + ' and ' + b + '. Returning ' + sum);  
        return sum;  
    };  
}();
```

- Outputs to browser's JavaScript console, LogCat, or Xcode console

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What is log capture, and how can you use it?

- The ability to persistently record messages that are passed to the logging API
- Capture is on by default
 - Turn capture on or off with API calls:
 - `Logger.setCapture(boolean)`
 - `OCLogger.setCapture(boolean)`
 - `WL.Logger.config({capture: boolean})`
- Defaults to DEBUG level in development, and FATAL in production
 - Control levels, and therefore verbosity, with API calls:
 - `Logger.setLevel(LEVEL)`
 - `OCLogger.setLevel(NSString)`
 - `WL.Logger.config({level: string})`

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- **Server preparation**
- Admin control of client log capture
- What is crash capture, and how does it work?

Server preparation (1 of 2)

- Persistently captured log output in browsers and devices in production is useless unless that captured data can be sent for diagnostic inspection
- Client sends accumulated captured log messages automatically
 - At Worklight client connect success
 - At Worklight adapter call success
 - Turn on or off automatic behavior by
 - `Logger.setAutoSendLogs(boolean)`
 - `OCLogger.setAutoSendLogs(boolean)`
 - `WL.Logger.config({autoSendLogs: boolean})`
 - **Calling the `send` method explicitly in your application**

Server preparation (in production) (2 of 2)

- How to receive and process received logs at the server?
 - The Analytics Platform, and therefore the Analytics Dashboard link in the Worklight Console, is installed and available by default in the embedded Liberty server (in Worklight Studio development environment)

- How to receive and process received logs at the server (in Worklight production environment)?
 - Two options:
 - Install the Analytics Platform WAR file, and/or
 - Develop and deploy an adapter that is named `WLClientLogReceiver` with a function (procedure) that is named `log`

Note: Installation and configuration of Analytics Platform and development of adapters is beyond the scope of this getting started guide. For more information, see the related getting started modules or the IBM Worklight Foundation user documentation.

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Admin control of client log capture (1 of 2)

- Use the Worklight Console to configure log capture preferences for applications in production

IBM Worklight Console Welcome, admin | Logout | About

Home > wlproj Analytics Dashboard >

Catalog
Devices
Push Notifications
Log Profiles

Application	Version	Environment	Device Model	Device OS Version
All ▾	All ▾	All ▾	All ▾	All ▾

Package Name	Level
All Packages	FATAL ▾

Select specific packages

	Application	Version	Environment	Device Model	Device OS Version	Priority	Edit	Delete
No Profiles currently exist								

Admin control of client log capture (2 of 2)

- Administrators can control the Worklight client SDK log capture and levels from the Worklight Console
- Client retrieves the configuration automatically:
 - At Worklight client connect success
 - At Worklight adapter call success
 - Turn on or off automatic behavior by
 - `Logger.setAutoUpdateConfig(boolean)`
 - `OCLogger.setAutoUpdateConfig(boolean)`
 - `WL.Logger.config({autoUpdateConfig: boolean})`
 - **Calling the `updateConfigFromServer` method explicitly in your application**

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What is crash capture, and how does it work?

- What is crash capture?
 - Worklight client SDK, on Android and iOS, captures a stack trace upon application crash and logs it at FATAL level
 - This type of crash is a true crash where the UI disappears from the user
 - Worklight client SDK, in JavaScript, captures JavaScript global errors and if possible, a JavaScript call stack, and logs it at FATAL level
 - This type of crash is not a crash event, and might or might not have any adverse consequences to the user experience at run time
- How does it work?
 - Crash, uncaught exceptions, and global errors are caught and logged automatically

For more information

- For more information about Logging and Log Capture, see the IBM Worklight Foundation user documentation at:
 - http://ibm.biz/knowctr#SSZH4A_6.2.0/com.ibm.worklight.dev.doc/evref/c_client-side_log_capture.html

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