Using Analytics API in client applications

Overview

MobileFirst Operational Analytics provides client-side APIs to help a user get started with collecting Analytics data about the application. This tutorial provides information on how to setup analytics support on the client application and lists available APIs.

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Configuring Analytics on the Client Side

Before you can start collecting the out-of-the-box data that Operational Analytics provides, you first need to import the corresponding libraries to initialize the analytics support.

Cordova

No setup required. Initialized out-of-the-box.

iOS

Import Library

```
import "WLAnalytics.h"
```

Initialize Analytics

No setup required. Initialized out-of-the-box.

Android

Import Library

```
import com.worklight.common.WLAnalytics;
```

Initialize Analytics

Inside the `onCreate` method of your main activity include:

```
WLAnalytics.init(this.getApplication());
```

Sending Analytics

Sending Analytics is a crucial step to see client-side analytics on the Analytics Server. When collecting Analytics, the analytics logs are stored in a log file on the client device which is sent to the analytics server after using the `send` method of the Analytics API.

Cordova

In a Cordova application, use the following JavaScript API method:

```
WL.Analytics.send();
```

Android

In an Android application, use the following Java API method:

```
WLAnalytics.send();
```

iOS

In an iOS application, use the following Objective-C API method:

```
[[WLAnalytics sharedInstance] send];
```

Enabling/Disabling Client Event Types

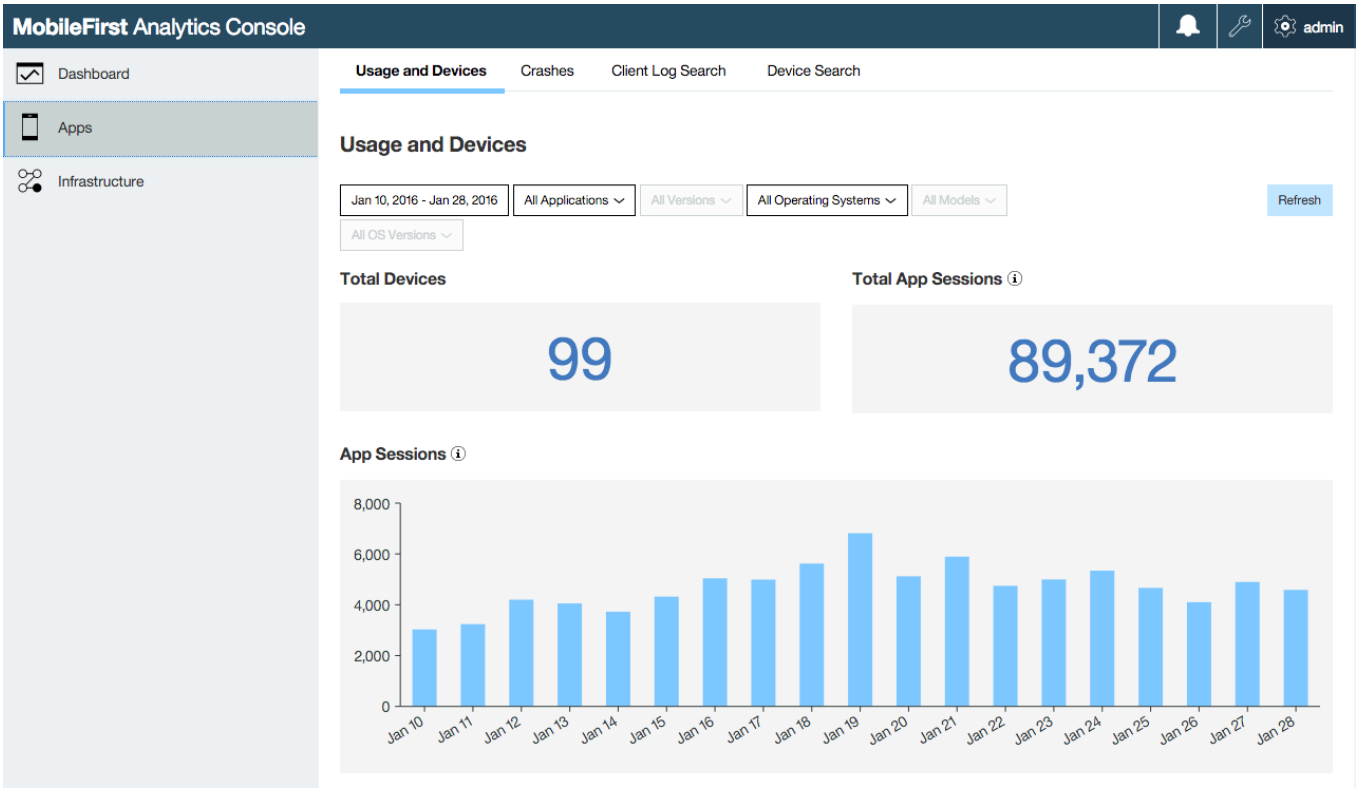
The Analytics API gives the developer the freedom to enable and disable collecting Analytics on the event they want to visualize on their Analytics Console.

When building Cordova applications the Analytics API does not have methods to enable or disable collection on `LIFECYCLE` or `NETWORK` events. In other words, Cordova applications come with `LIFECYCLE` and `NETWORK` events enabled out of the box. If you wish to disable these events, follow the Client Lifecycle Events and Client Network Events on disabling events.

Client Lifecycle Events

After configuring the Analytics SDK, app sessions will start to be recorded on the user's device. A session in MobileFirst Operational Analytics is recorded when the app is moved from the foreground then to the background, which creates a session on the analytics console.

As soon as the device is set up to record sessions and you send your data, you will see the analytics console populated with data like below.



You can enable or disable the collecting of app sessions with the API below:

Cordova

- For the iOS platform:
  - Open the **[Cordova appilcation root folder] → platforms → ios → Classes → AppDelegate.m** file
  - Follow the iOS guide below to enable or disable `LIFECYCLE` activities.
  - Build the Cordova project by running the command: `cordova build`
- For the Android platform: navigate to the sub activity of the main activity to disable.
  - Open the **[Cordova appilcation root folder] → platforms → ios → src → com → sample → [app-name] → MainActivity.java**
  - Look for the `onCreate` method and follow the Android guide below to enable or disable `LIFECYCLE` activities.
  - Build the Cordova project by running the command: `cordova build`

Android

To enable client lifecycle event logging:

```
WLAnalytics.addDeviceEventListener(DeviceEvent.LIFECYCLE);
```

To disable client lifecycle event logging:

```
WLAnalytics.removeDeviceEventListener(DeviceEvent.LIFECYCLE);
```

iOS

To enable client lifecycle event logging:

```
[[WLAnalytics sharedInstance] addDeviceEventListener:LIFECYCLE];
```

To disable client lifecycle event logging:

```
[[WLAnalytics sharedInstance] removeDeviceEventListener:LIFECYCLE];
```

Client Network Activities

Collection on adapters and the network occur in two different locations -- on the client and on the server:

- The client is going to collect information such as roundtrip time and payload size when you start collecting on the device event `Network`.
- The server is going to collect backend information such as server processing time, adapter usage, used procedures.

Since the client and the server are each collecting their own information this means that charts will not display data until the client is configured to do so. To configure your client you need to start collecting on the device event `NETWORK`.

Cordova

- For the iOS platform:
  - Open the **[Cordova appilcation root folder] → platforms → ios → Classes → AppDelegate.m** file
  - Follow the iOS guide below to enable or disable `NETWORK` activities.
  - Build the Cordova project by running the command: `cordova build`
- For the Android platform: navigate to the sub activity of the main activity to disable.
  - Open the **[Cordova appilcation root folder] → platforms → ios → src → com → sample → [app-name] → MainActivity.java**
  - Look for the `onCreate` method and follow the Android guide below to enable or disable `NETWORK` activities.
  - Build the Cordova project by running the command: `cordova build`

iOS

To enable client network event logging:

```
[[WLAnalytics sharedInstance] addDeviceEventListener:NETWORK];
```

To disable client network event logging:

```
[[WLAnalytics sharedInstance] removeDeviceEventListener:NETWORK];
```

Android

To enable client network event logging:

```
WLAnalytics.addDeviceEventListener(DeviceEvent.NETWORK);
```

To disable client network event logging:

```
WLAnalytics.removeDeviceEventListener(DeviceEvent.NETWORK);
```

Custom Events

Use the following API methods to create custom events.

Cordova

```
WL.Analytics.log({"key" : 'value'});
WL.Analytics.send();
```

Android

After setting the first two configurations you can start to log data like in the example below.

```
JSONObject json = new JSONObject();
try {
   json.put("key", "value");
} catch (JSONException e) {
   // TODO Auto-generated catch block
   e.printStackTrace();
}

WLAnalytics.log("Message", json);
WLAnalytics.send();
```

Objective-C API

After importing WLAnalytics you can now use the API to collect custom data like below:

```
NSDictionary *inventory = @{
   @"property" : @"value",
};

[[WLAnalytics sharedInstance] log:@"Custom event" withMetadata:inventory];
[[WLAnalytics sharedInstance] send];
```