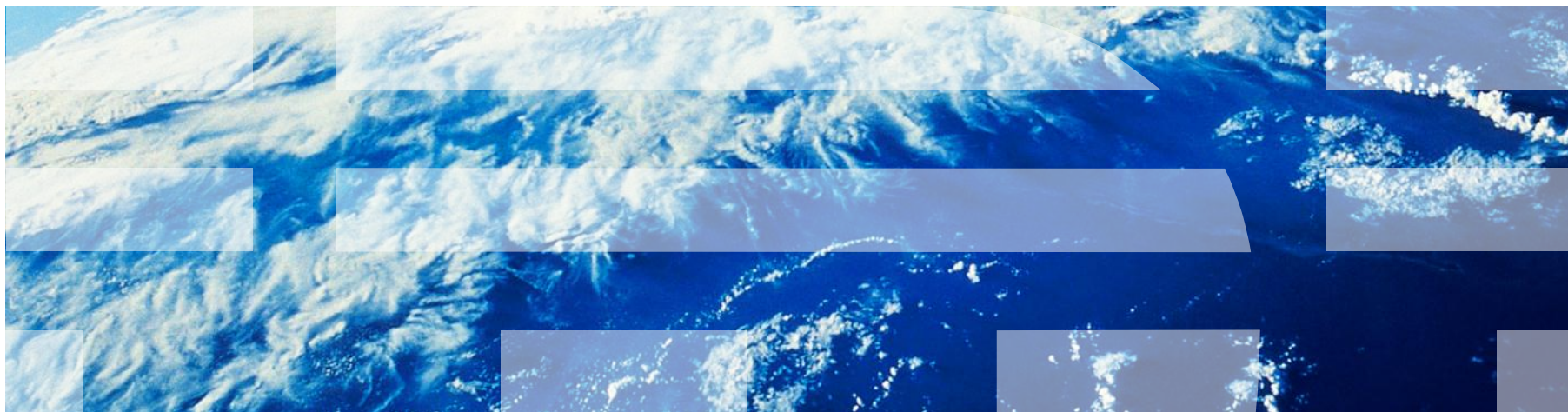


IBM Worklight Foundation V6.2.0 Getting Started

Operational Analytics



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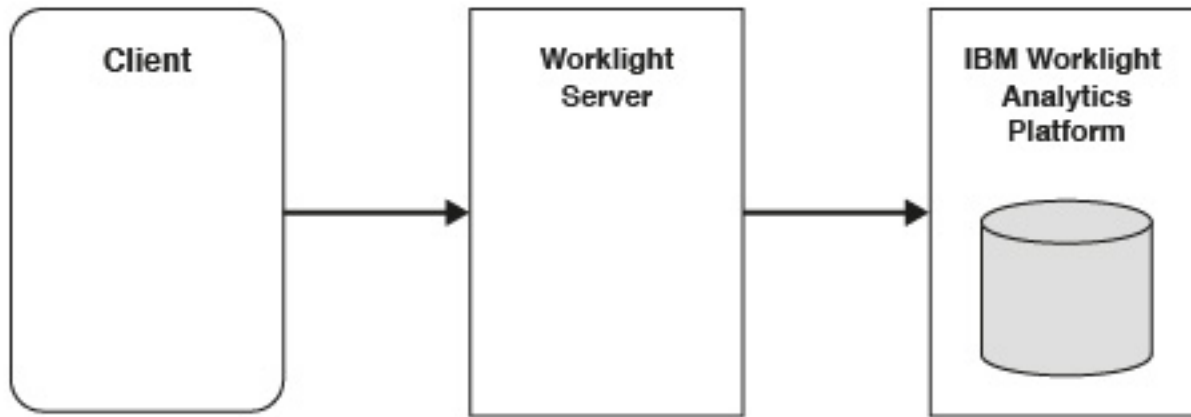
- See <http://www.ibm.com/ibm/us/en/>

Agenda

- **Introducing IBM Worklight Analytics Platform**
- Viewing the Analytics Dashboard
- Capturing data
- Sending data

Introducing IBM Worklight Analytics Platform (1 of 2)

- The operational analytics platform collects data about applications, adapters, devices, and logs to give a high-level view of the client interaction with the Worklight® Server, and to enable problem detection.



Introducing IBM Worklight Analytics Platform (2 of 2)

- In Worklight V6.2.0, operational analytics is delivered as a WAR file that can be deployed to the following supported application servers:
 - Liberty
 - WebSphere® Application Server
 - Tomcat

- In Worklight Studio, the WAR file is installed and available by default in the embedded Liberty server.

Agenda

- Introducing IBM Worklight Analytics Platform
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Viewing the Analytics Dashboard – Configurations (1 of 2)

- The `wl.analytics.url` property must be set to access the analytics dashboard. In Worklight Studio, this property is automatically set.
- After the property is set, the **Analytics Dashboard** link appears in the Worklight Console.

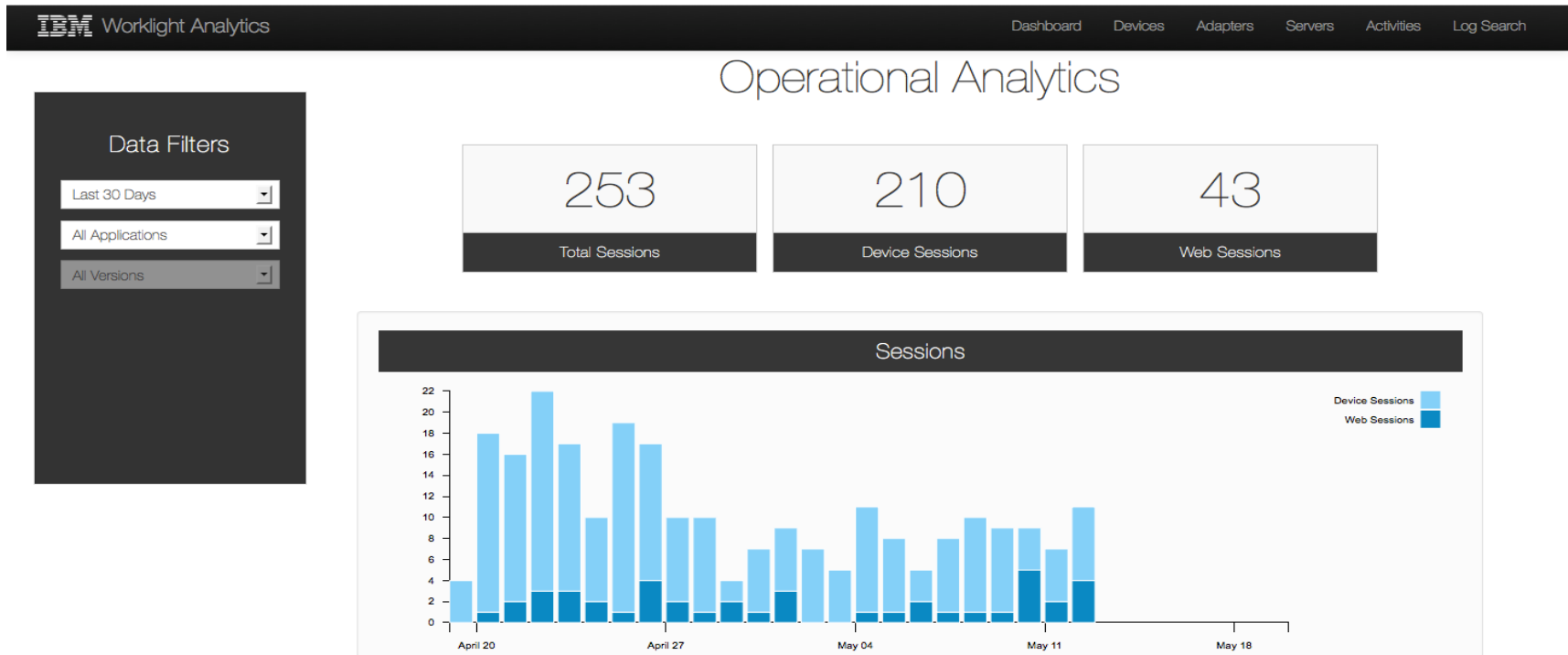
The screenshot shows the IBM Worklight Console interface. At the top left, it says "IBM Worklight Console" and "Home > DemoApp". At the top right, it says "Welcome, admin | Logout | About". Below this is a navigation bar with tabs for "Catalog", "Devices", "Push Notifications", "Configuration Profiles", and "Analytics Dashboard >". The "Analytics Dashboard >" tab is highlighted with a red box. Below the navigation bar is a blue bar with the text "Deploy application or adapter:" followed by a "Choose File" button, "No file chosen", and a "Submit" button. Below this is a section for "demo demo" with a "Delete" button. The main content area shows a lightbulb icon, "Last deployed at: 5/7/2014 8:55 AM", and a table of application details:

	iPhone	Version 1.0	● Active	Security Test: None
	<input type="checkbox"/> Lock this version			App Authentication: ● Access Disabled
				Device Authentication: Default
				User Authentication: Default
				Build time: 5/7/2014 8:54 AM

At the bottom, there is a link "Preview as Common Resources".

Viewing the Analytics Dashboard (2 of 2)

- Click the **Analytics Dashboard** link to open up the dashboard in a new window.



Agenda

- Introducing IBM Worklight Analytics Platform
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Capturing data (1 of 6)

- Four different types of analytics events are captured by the Analytics Platform. The next slides describe how these events are captured.

- **Application Activities**
 - Client initializations with the server
 - Adapter calls

- **Notification Activities**
 - Push notifications

- **Client Logs**
 - Debug logs
 - Crashes
 - Custom Events
 - Network latency information

- **Server Logs**
 - Server Events
 - Server stack traces

Capturing data – Application Activities (2 of 6)

When an application activity occurs, the event is captured automatically and forwarded to the Analytics Platform.

The following API call results in a session hit that is visualized on the Analytics Platform.

```
// a 'session hit' will be recorded upon a successful connection  
WL.Client.connect();
```

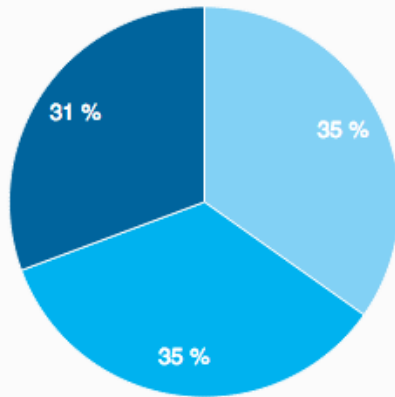
The following API call results in an adapter hit that is visualized on the Analytics Platform.

```
// an 'adapter hit' will be recorded upon a successful adapter invocation  
WL.Client.invokeProcedure({ ... });
```

Capturing data – Notification Activities (3 of 6)

- When a push notification occurs, the event is captured automatically and forwarded to the Analytics Platform.

Notifications

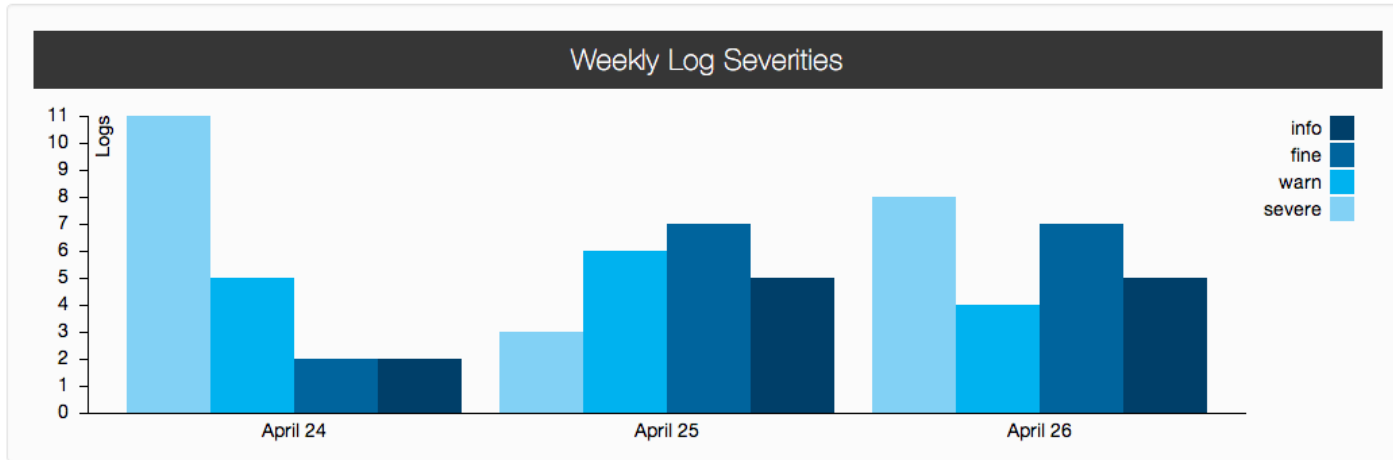


MPNS APNS GCM

Mediator	Hits
MPNS	262
APNS	260
GCM	231

Capturing data – Server Logs (4 of 6)

- The log data that is generated by the Worklight Server is automatically forwarded to the Analytics Platform where the data can be searched and downloaded.



Server Logs					
Date	Severe	Warning	Info	Fine	Download
Saturday, April 26, 2014	8	4	5	7	Download
Friday, April 25, 2014	3	6	5	7	Download
Thursday, April 24, 2014	11	5	2	2	Download

- To disable this behavior, the `wl.analytics.logs.forward` property must be set to `false`.

Capturing data – Client Logs (5 of 6)

- A Worklight application can be instrumented with client logs to record client debugging information and events.
- The following APIs are available to create client logs that are then forwarded to the Analytics Platform where they can be searched and downloaded.

```
// Set the log level to trace so all logs are captured
WL.Logger.config({"level": "TRACE"});

// Create a client side log that is persisted locally until sent to the server
WL.Logger.trace("Create a client log at the TRACE level.");
WL.Logger.debug("Create a client log at the DEBUG level.");
WL.Logger.info("Create a client log at the INFO level.");
WL.Logger.warn("Create a client log at the WARN level.");
WL.Logger.error("Create a client log at the ERROR level.");
WL.Logger.fatal("Create a client log at the FATAL level.");
```

Capturing data – Analytics Logs (6 of 6)

- Client-side logs are captured based on the logging level that is set on the client. If you want to create analytics logs that are always captured regardless of the logging level, you can use the `WL.Analytics` API.

```
// Create an analytics log message  
WL.Analytics.log("Analytics log message");  
  
// Create a custom activity  
WL.Analytics.log({_activity: "customActivity"});
```

Agenda

- Introducing IBM Worklight Analytics Platform
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- **Sending data**

Sending data

- Logs that are captured by the client-side logging APIs and the `WL.Analytics` APIs are sent to the server automatically upon a successful server connection or a successful adapter call.

```
// Logs sent upon successful connection  
WL.Client.connect();  
  
// Logs sent upon successful adapter invocation  
WL.Client.invokeProcedure({ ... });
```

- This automatic behavior can be disabled by using the following call.

```
// Disable automatic sending of client and analytics logs  
WL.Logger.config({autoSendLogs: false});
```

- If you want to send this data more frequently, you can use the following API calls.

```
// Send client debug logs  
WL.Logger.send();  
  
// Send analytics logs  
WL.Analytics.send();
```

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