

# Tag and Broadcast Notifications in Hybrid Applications

## Overview

**Prerequisite:** Make sure to read the Push Notifications in Hybrid Applications (../) tutorial first.

Tag notifications are notification messages that are targeted to all the devices that are subscribed to a particular tag.

Tags represent topics of interest to the user and provide the ability to receive notifications according to the chosen interest.

Broadcast notifications are a form of tag push notifications that are targeted to all subscribed devices. Broadcast notifications are enabled by default for any push-enabled MobileFirst application by a subscription to a reserved `Push.all` tag (auto-created for every device). Broadcast notifications can be disabled by by unsubscribing from the reserved `Push.all` tag.

## Agenda

- Notifications configuration
- Notifications API
- Sample application

## Notifications configuration

### Tag Notifications configuration

#### Setting up tags

Tags are defined in the `application-descriptor.xml` file:

```
<application xmlns="http://www.worklight.com/application-descriptor" id="HybridTagNotifications" platformVersion="7.0.0.00.20150312-0731">
...
...
...
<tags>
  <tag>
    <name>my tag 1</name>
    <description>About my tag 1</description>
  </tag>
  <tag>
    <name>my tag 2</name>
    <description>About my tag 2</description>
  </tag>
</tags>
```

## Notifications API

## API methods for tag notifications

### Client-side API

- `WL.Client.Push.subscribeTag(tagName, options)` - Subscribes the device to the specified tag name.
- `WL.Client.Push.unsubscribeTag(tagName, options)` - Unsubscribes the device from the specified tag name.
- `WL.Client.Push.isPushSupported()` - Returns `true` if push notifications are supported by the platform, or `false` otherwise.
- `WL.Client.Push.isTagSubscribed(tagName)` - Returns whether the device is subscribed to a specified tag name.

## Common API methods for tag and broadcast notifications

### Client-side API

`WL.Client.Push.onMessage (props, payload)`

This method is called when a push notification is received by the device.

```
WL.Client.Push.onMessage = function (props, payload) {  
  alert("Provider notification data: " + Object.toJSON(props));  
  alert("Application notification data: " + Object.toJSON(payload));  
}
```

- **props** - A JSON block that contains the notification properties of the platform.
- **payload** - A JSON block that contains other data that is sent from MobileFirst Server. The JSON block also contains the tag name for tag-based or broadcast notification. The tag name appears in the "tag" element. For broadcast notification, the default tag name is `Push.ALL`.

### Server-side API

`WL.Server.sendMessage(applicationId, notificationOptions)`

This method submits a notification based on the specified target parameters.

**applicationId** - (mandatory) The name of the MobileFirst application.

**notificationOptions** - (mandatory) A JSON block containing message properties.

For more information about tag and broadcast notifications, see the "tag-based notification" and "broadcast notification" topics in the user documentation.

## Sample application

Click to download (<https://github.com/MobileFirst-Platform-Developer-Center/TagNotifications/tree/release71>) the MobileFirst project.

The provided sample application demonstrates how to send a broadcast notification to the default auto-subscribed `push.ALL` tag.

The sample also demonstrates how to send notifications to two predefined tags, `sample-tag1` and `sample-tag2`, to which the user can subscribe in the application.



## Sending a notification

To test the application is able to receive a push notification you can perform one of the following:

1. From MobileFirst Studio, right-click the adapter folder, select **Call MobileFirst Adapter** and:
  - If selecting the "sendBroadcastNotification" procedure, provide the application ID and notification text in quotation marks.
  - If selecting the "sendTagNotification" procedure, provide the application ID, notification text and tag name in quotation marks.
  - The application ID can be determined from the `id` attribute in `application-descriptor.xml`:

```
<application ... id="HybridTagNotifications" ...>
```

2. If using the CLI:

```
$ mfp adapter call  
[?] Which endpoint do you want to use? PushAdapter/sendBroadcastNotification  
[?] Enter the comma-separated parameters: "HybridTagNotifications","hello"  
[?] How should the procedure be called? GET
```

Or:

\$ mfp adapter call

[?] Which endpoint **do** you want to use? PushAdapter/sendTagNotification

[?] Enter the comma-separated parameters: "HybridTagNotifications","hello","sample-tag1,sample-tag2"

[?] How should the procedure be called? GET