

How to integrate an external device with NoviSign app?

This document will explain you how can you integrate an external device, such as a sensor, with NoviSign Android player app.

Our Android app can be configured to check for XMLs every 500ms (milliseconds): which means that every 500ms, the app sends HTTP GET request to a defined URL and port (i.e. `http://10.0.0.17:1212`). If that URL has something to send back to the app, it should send it via HTTP GET response.

In the Android app, you should access the settings (click the gear icon, in the top right corner of the orange entrance screen), then scroll down to the bottom of the settings and access the "External Interfaces", choose the "Custom Event Transmitter". There you should turn it on and set an IP and port of your server.

We call it "server", but it actually can be any device that can send HTTP response to the NoviSign app. That device should be in the same network as the Android device with the NoviSign app, either by WiFi or by Ethernet.

Your server should reply on page `http://<ip>:<port>/events` with such an XML code:

```
<?xml version="1.0" encoding="UTF-8"?>
<events>
  <event code="RFID:TAG1" />
</events>
```

Where **TAG1** represents whatever we usually get from an RFID reader (but can be from any other device type, such as sensors, etc.).

We can use the following events: **TAG1**, **TAG2**, **TAG3**, **TAG4** and **TAG5** and may add some more events if required.

On the online Studio, you should create a proper playlist and add the events which you're going to use, to the relevant slides in a playlist (it's being done in the bottom of the scheduling popup window, which is opened after clicking the little datetime picker icon, in any of your slides in a playlist which is in edit mode). Before that, tell us to which user account shall we add those events and we will add the required events.



Here is an example:

You have an Android based tablet with the NoviSign player app installed on it. The app will connect via HTTP GET request to the external sensor every 0.5 second and will check if there is an event or not.

The app will either receive no event or will receive event 1 or event 2 or event 3.

If we get an event, it will trigger a creative, in case that this event was already set in the playlist to trigger a certain creative.

In the online Studio, you will need to:

- 1) Create a playlist.
- 2) Set some of the creatives in the playlist to play only on events (NoviSign should add these events to your user account, thus send us a username to add the events you like to have within).

In the Android player app, you need to:

In app settings: External Interfaces -> Custom Event Transmitter, set an IP and port of your server (the sensor, in our example).

In your server (the sensor, in our example), you need to:

Your server should reply on *http://<ip>:<port>/events* with the following XML code:

```
<?xml version="1.0" encoding="UTF-8"?>
<events>
  <event code="General:event1" />
</events>
or
<?xml version="1.0" encoding="UTF-8"?>
<events>
  <event code="General:event2" />
</events>
or
<?xml version="1.0" encoding="UTF-8"?>
<events>
  <event code="General:event3" />
</events>
```

Good luck!