

zEvent Mobile Application

User's Guide

Version 1.0



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1. Introduction

IBM zEvent is a notification and monitoring app for the management of IBM z/OS systems enabling to quickly react to critical system messages, process failures, or resource shortages.

zEvent receives and displays system events and snapshots sent via push messages and aims to provide system administrators with sufficient information to assess important situations on the mobile device. Based on this information, the administrator can decide whether the system event requires immediate attention.

The notification can be enriched with context information. This information coupled with zEvent's integrated interfaces to z/OS tools, such as IBM Resource Measurement Facility (RMF) and IBM z/OS Management Facility (z/OSMF), allows to drill down and pinpoint the system message source. Using these monitoring facilities, the administrator can then decide whether a direct reaction at his workspace is required.

The app is focused on z/OS systems and is tailored to functionality provided by z/OS, which is a prerequisite to exploit the full capabilities of this app.

For more information refer to the zEvent website

[http:// www.ibm.com/systems/z/os/zos/features/zevent/zevent.html](http://www.ibm.com/systems/z/os/zos/features/zevent/zevent.html)

2. Quick Start

2.1 Prerequisites

- Supported versions:
 - iOS version 7.1 or higher.
 - Android version 4.1.2 or higher
- Internet connection
- Email setup on the mobile device

2.2 Enable Push Notifications to receive Events and Snapshots

To receive events, the app needs to be enabled to receive push notifications. Furthermore, the required information which identifies the mobile device needs to be propagated to the z/OS system that is responsible to send the notifications. More specifically, the push token of the device (“device token” in iOS terminology, “registration id” in Android terminology) is required to identify the device when sending a push notification and the device owner information is required to configure the appropriate receiver for the events.

To realize this, first navigate to *Settings* → *Push* as shown in Figure 1 and enter the information provided by your administrator. Then, tap *Connect* and accept any prompts should they appear. If you have already tapped *Connect*, a notification might appear to indicate that the internal settings have not changed since the last connection. After, an email draft will appear as shown in Figure 2. The email contains the information to setup the delivery of the push messages on the z/OS system. You do not need to modify the email. Finally, send the email to the administrator.

Important: Perform this step if it is the first time the app is installed or repeat this step if you have uninstalled the app before.

Important for iOS only: To process the events if the app is inactive, *do not* terminate the app. This allows to collect the incoming events in the background. If the app is terminated, the incoming events, which are displayed in the notification center, need to be *manually transmitted* to the app by tapping on them.



Figure 1: Push Settings



Figure 2: Email of the Push Settings to Administrator

2.3 Connect to Monitors (RMF and z/OSMF)

To exploit the monitoring facilities, the required information for a web connection needs to be specified, such as URLs and credentials. Furthermore, the connection should not be blocked by firewalls.

To establish a monitor connection, navigate to *Settings* → *Connections* as shown in Figure 3. Use an existing connection definition (if possible) or create a new connection definition with the add button (+).

Type in a new label as well as the URL(s) in the host fields, see Figure 4. The *RMF host* requires the form

```
http://[host]:[port]/gpm/root.xml,
```

Whereas the *z/OSMF host* needs to be of the form

```
https://[host]:[port]/zosmf or
https://[host]:[port]/zosmf/izur
```

The former navigates to the starting page of z/OSMF, the latter displays a list of defined dashboards to display one of them without having to navigate through z/OSMF. Finally, enter the user credentials and save the connection definition.

Important: The label should be the name of the system as it will appear in the notifications. This allows to associate the right connection definition when connecting and navigating to a specific host from the event's context menu (illustrated in Figure 11).

In the list of connections (Figure 3), tap on one of the connections and choose *Connect*. If the connection was successful, the symbol of the connection turns green, otherwise an error message

appears. Leave the settings and choose the monitor tab(s) for which a URL was specified to retrieve the provided information. Examples of the RMF and the z/OSMF monitor are shown in Figure 5 and Figure 6.

Important: Connecting to a system may take a moment. An error message will appear after a connection has failed even if in the meantime another attempt for a connection was initiated. Further, the connection attempt will appear successful (green icon) if at least one of the connections was successful. An error message will still indicate connection errors.



Figure 3: Connection Settings



Figure 4: Definition of a New Connection



Figure 5: Example RMF View



Figure 6: Example z/OSMF Dashboard View

3. User Interface (UI)

The User Interface (UI) consist mainly of the following elements shown in Figure 7:

1. **Back Button:** The back button has multiple tasks. It is primarily used to go back within the settings menu. It further navigates to the main tab *Events* when tapped within other tabs. It also closes certain popup menus, e.g., the connection menu. It can also navigate from a z/OSMF dashboard to the dashboard list.
2. **Title:** The title indicates the content of the app. It switches to “Settings” when the settings button is tapped.
3. **Settings Button:** The settings button displays the settings menu. Use the back button to close the settings menu.
4. **Tab Bar:** The tab bar can be customized in the settings to show only the required tabs. It can be used to quickly switch the view.
5. **Tab Content:** The largest part of the display shows the content of a given tab. The content can resize if the mobile device is rotated.

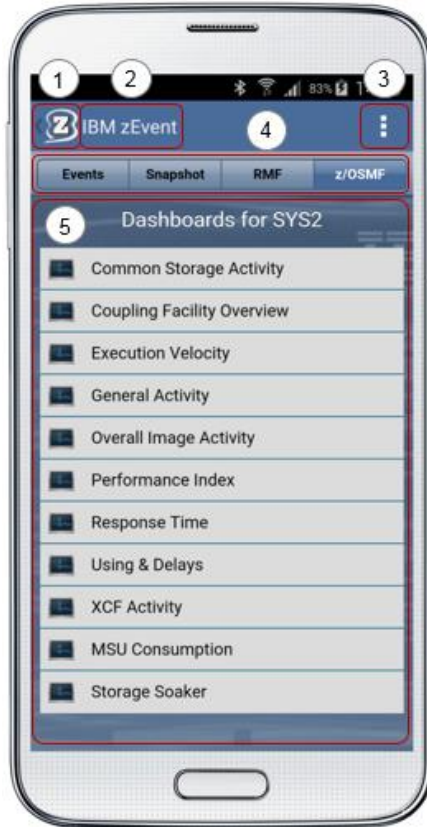


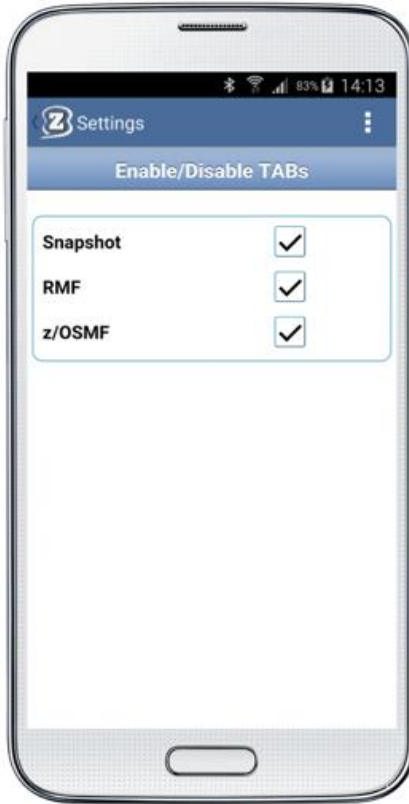
Figure 7: Elements of the User Interface

4. App Settings

Use the settings button in the upper right corner to customize and to configure the app. The following sections describe the settings pages in more detail.

4.1 TABs

As displayed in Figure 8, the *TABs* settings allow to check and uncheck the tabs that should be displayed in the app. Previously hidden tabs can also be displayed again. The events tab cannot be hidden, because it is the main tab of the app.

Figure 8: Settings for *TABs*

4.2 Connections

The connections settings can be used to define the URLs and the credentials of the system monitoring facilities (cf. Section 2.3). After using the add button (+), a new connection definition can be specified as illustrated in Figure 9. The connection can be labeled with a name and with location URLs. Currently supported monitoring facilities are RMF and z/OSMF. The *RMF host* requires the URL form

```
http://[host]:[port]/gpm/root.xml,
```

Whereas the *z/OSMF host* needs to be of the form

```
https://[host]:[port]/zosmf to connect to the starting page of z/OSMF or
```

```
https://[host]:[port]/zosmf/izur to retrieve a list of defined dashboards and  
navigate to them.
```

Finally, the credentials are required for authentication.

Important: The label should be the name of the system as it will appear in the notifications. This allows to associate the right connection definition when connecting and navigating to a specific host from the event's context menu (illustrated in Figure 11).

Figure 9: Settings for *Connections*

4.3 Push

The push settings need to be used to connect the app to the push services. If the app is installed the first time, enter the information provided by your administrator in the fields. Some of the information can also be passed by displaying and scanning QR codes using the respective buttons. After the information is entered, tap *Connect* to establish the push setup.

After connecting to the push service (i.e., accepting all prompts), a popup appears to send the information to administrator per email. This is to setup the sending of the push messages from the z/OS system to the device. This step requires an email setup on the mobile device.

Important: Perform this step if it is the first time the app is installed or repeat this step if you have uninstalled the app before.

4.4 About zEvent

This page contains legal information and version information of the app.

5. Events Tab

The events tab is the main tab of the app and illustrated in Figure 10. New events are displayed here with a timestamp, the affected system, a short description, and a given severity indicated by the color of the event. To obtain more information, the event can be expanded by tapping on it.

If certain keys are specified (e.g., *rmfdds* in Figure 10), the event can be linked with specific performance metrics or z/OSMF dashboards. This information can be retrieved by tapping on the expanded event that triggers a popup menu, see Figure 11. Apart from cleaning up events, this menu allows to directly connect to a monitor of the affected system – given this label exists in the connections settings – and further investigate the source of the event. The monitors are opened in their respective tabs as further detailed in Sections 7 and 8.

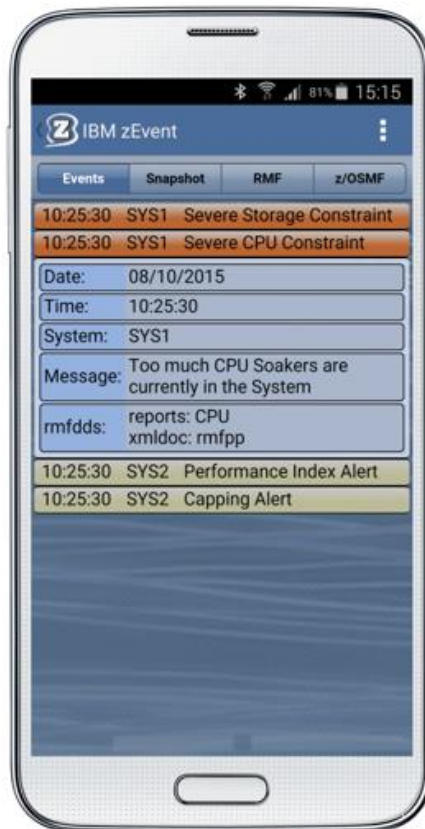


Figure 10: Events Tab



Figure 11: Events Tab – Context Menu

6. Snapshots Tab

Similar to the events, the host can provide snapshot information of the system to the app. These snapshots are static, graphical information and are provided with a timestamp, the affected system, and a brief description. Tapping on this element expands the snapshot and displays its information (see Figure 12). Tapping on the snapshot displays a context menu as shown in Figure 13.



Figure 12: Snapshots Tab



Figure 13: Snapshots Tab – Context Menu

7. RMF Tab

After the connection to an RMF host has been established successfully, the monitor information can be retrieved in the RMF tab and its content can be browsed interactively, see Figure 14. This view is the embedded web interface of RMF, however, some functionality may be not available (e.g., printing the document).

For a comprehensive overview of RMF, refer to

<http://www.ibm.com/systems/z/os/zos/features/rmf>



Figure 14: RMF Tab

8. z/OSMF Tab

The z/OSMF tab has similar functions as the RMF tab. It provides monitor information using the z/OSMF web interface. Depending on the configuration as indicated in Section 4.2, the tab loads the starting page of z/OSMF or displays a list of defined dashboards from which the user can choose. Shown in Figure 15, tapping on one of the items in the list loads the dashboard information. Using the back button closes the dashboard and displays the list again, where the last accessed dashboard is hold in cache.

For a comprehensive overview of z/OSMF, refer to

<http://www.ibm.com/systems/z/os/zos/features/zosmf>



Figure 15: z/OSMF Tab

9. FAQ and Known Issues

9.1 Events

- *iOS only: App does not contain new notifications if it was terminated.*

On iOS, the app is not able to detect new notifications if it is terminated. Thus to process the notifications if the app is inactive, *do not* terminate the app. This allows to collect the incoming events in the background. If the app is terminated, the incoming events, which are displayed in the notification center, need to be *manually transmitted* to the app by tapping on them.

- *I received a notification that an event arrived, but the app does not show a new event.*

The app filters duplicate events, i.e., if an event with the same attributes already exists, identical new events will be discarded.

- *I cannot connect to a host from the context menu of an event even though the system is defined in the connection settings*

Make sure the connection definition is labeled as the system name. This allows to associate the right connection definition when connecting and navigating to a specific host from the event’s context menu.

9.2 z/OSMF Dashboards

- *iOS only: When opening z/OSMF using the context menu of an event, the dashboard is not loading or is not shown properly.*

Earlier versions of z/OSMF cannot be displayed properly and may appear as unavailable.

9.3 Miscellaneous

- *Are there any limits when sending push notifications?*

The limits are specific to the device OS. Currently, there is no known limit for Android. For iOS as per Apple documentation, there is a 256 bytes limit for iOS 7 and a 2 KB limit for iOS 8 and above for the payload of the notification.