



EVA  
(Embedded Vocalizer Automator)  
ADMIN AND INSTALLATION  
GUIDE

## Table of Contents

1. General Description and Architecture.....	4
2. EVA Logger.....	6
2.1. EVA Logger Architecture .....	6
2.2. Installation procedure .....	7
2.3. Files and Directory Structure.....	11
2.4. EVA Database .....	12

Rev. 1.0 19/01/18	EVA Logger
Rev. 1.1 22/01/18	EVA Player EVA Logger pre-installation actions and changes in installation procedure
Rev. 1.2 23/01/18	EVA Player & Selector
Rev. 1.3 23/01/18	Minimum version of Android added
Rev. 1.4 28/02/18	_eva_config.jcf changed to _eva_services.jcf New parameters in _eva_services.jcf Tables info and ocr added in eva.db
Rev. 1.5 02/03/18	Minor modifications in DB schema and files and directories structures
Rev. 1.6 05/03/18	New folder structure for Eva Logger. Folders 00001 – 0000n added for saving eva.db and captures every time Eva Logger is activated/deactivated
Rev. 1.7 12/03/18	Eva Player log files
Rev. 1.8 23/08/18	Notes section added
Rev. 1.9 14/03/19	“ocr_log” folder changed to “logsOCR”. All eva_history_XXX.log are now saved in a folder named “logs”
Rev. 2.0 09/05/19	New organization about EVA documentation. Segmentatios EVA Logger / EVA Player
Rev. 2.1 20/05/19	Disable Google Play Protector before install

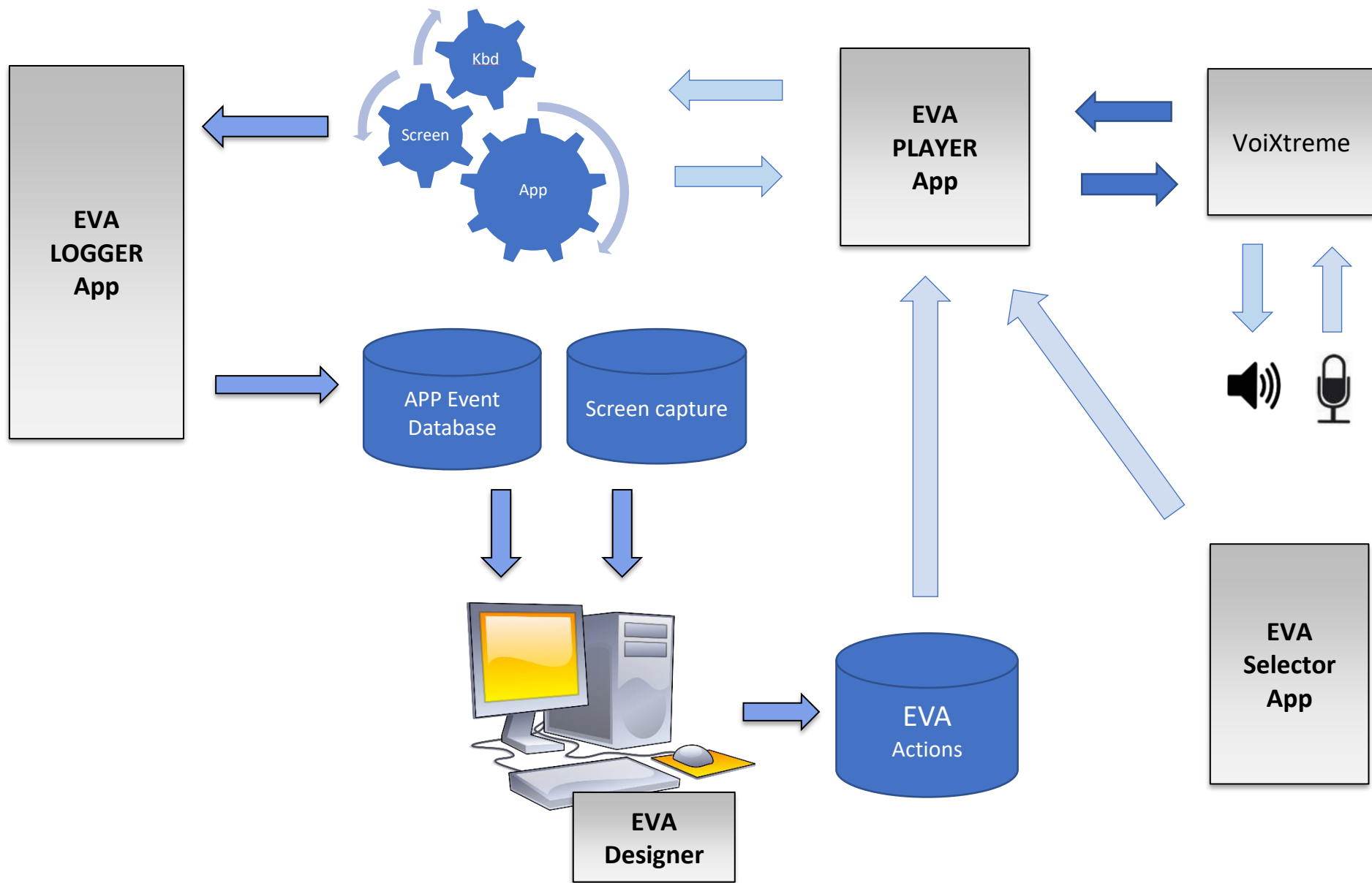
## 1. General Description and Architecture

EVA Suite makes possible to add a vocal component (both speaking and listening using Voixtreme® engine) to almost any professional applications running on Android platform (minimum version: Android Nougat). EVA allows to make a kind of “hands-free” application.

EVA reads the displayed screens, allows to read their contents and, listening to the operator, allows to perform specific actions on the application.

EVA Suite is composed by different elements:

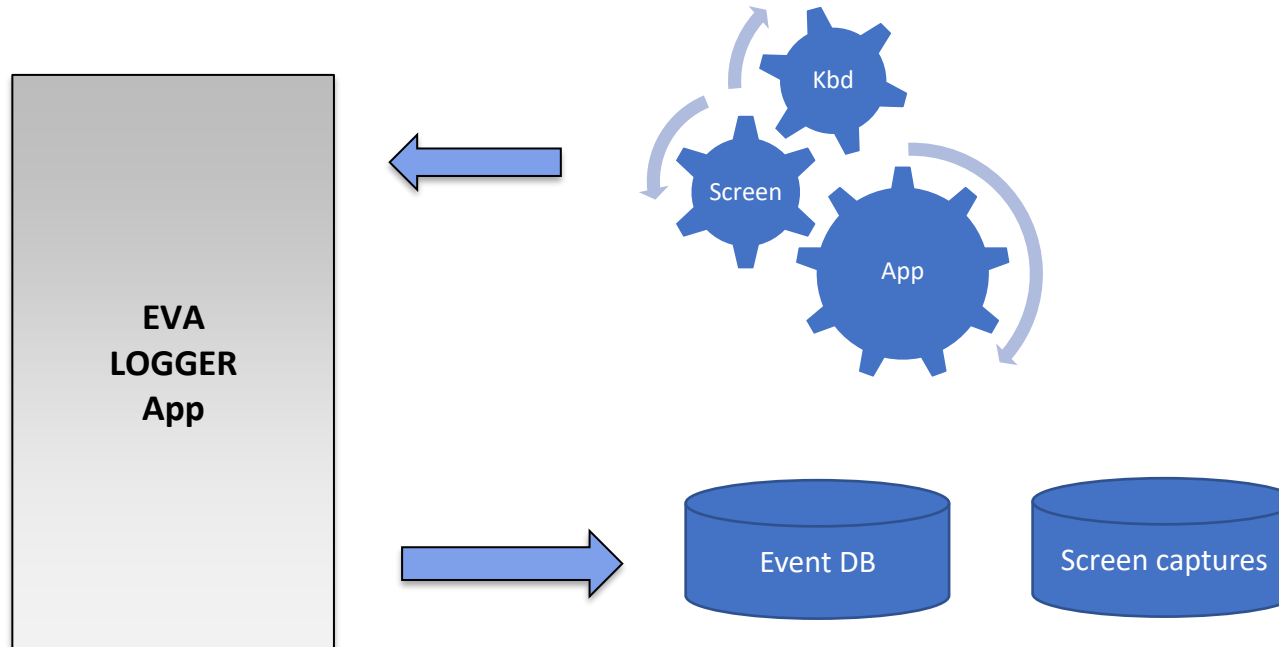
- EVA Logger
  - Capture tool running on Android terminal
  - Captures actions and images of a graphic application
- EVA Designer
  - Development tool running on PC
  - Displays the dynamics of an application
  - Allows to determine the conditions and actions to be performed at the captured screens
- EVA Player
  - Background application running on Android terminal
  - Reacts to the actions of the application
- EVA Selector
  - Launcher tool running on Android terminal
  - Allows the communication between user and application



## 2. EVA Logger

### 2.1. EVA Logger Architecture

EVA Logger records all the actions performed on the Android terminal and generates a database with the history of the captured screens and the actions performed.



## 2.2. Installation procedure

1. Before proceeding with EVA Logger installation, some actions must be performed manually.
  - a. A new folder named “eva” must be created in the Android device sdcard (/sdcard/eva)
  - b. Create from your PC a new file named “\_eva\_services.jcf” that allows you to specify the observed or ignored specific applications (“package\_name\_1”, “package\_name\_2”) and some other general parameters. The structure of this file is as follows:

```
{
  "observePackages": [
    "package_name_1"
    , "package_name_2"
  ],
  "ignorePackages": [
  ],
  "useOCR": false,
  "logMode": "WARNING",
  "keepLogsHours": 168,
  "autoLock": false,
  "launcherPkg": "com.android.launcher3",
  "systemUIPkg": "",
  "settingsPkg": ""
}
```

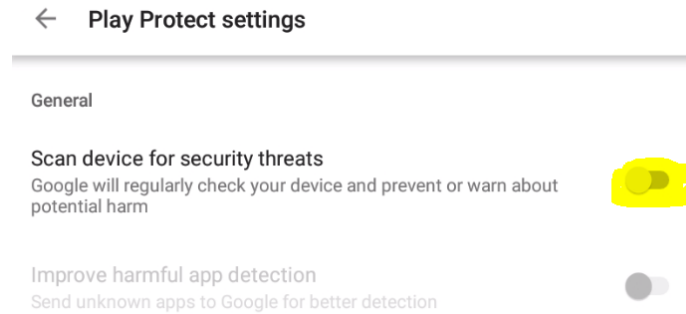
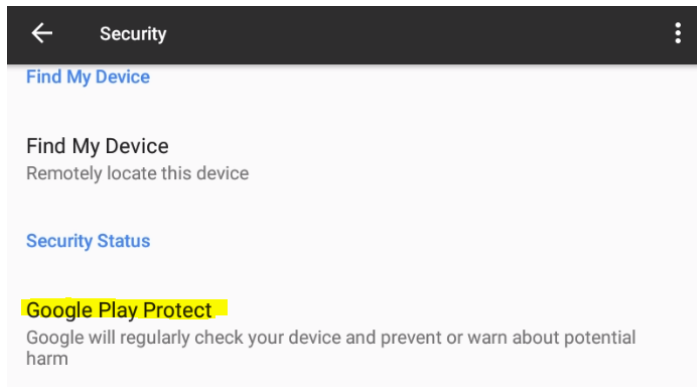
By default, all packages are captured if this file doesn't exist or if any package name is specified in “observePackages” parameter.

*Note: The “ignorePackages” parameter will be only applied if “observePackages” parameter is empty. These packages events from “ignorePackages” will be ignored from captures.*

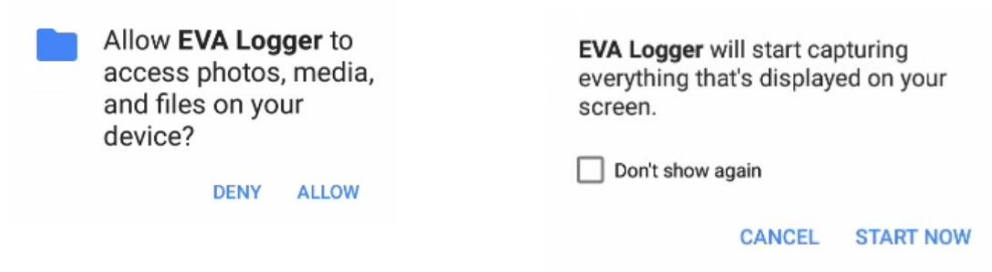
*Refer to **EVA\_configuration\_services** file for further information about each parameter.*

- c. Copy the file “\_eva\_services.jcf” in the following sdcard folder from your Android terminal: /sdcard/eva.

2. Make sure Google Play Protector is disabled in your device: **Settings – Google – Security – Google Play Protect**

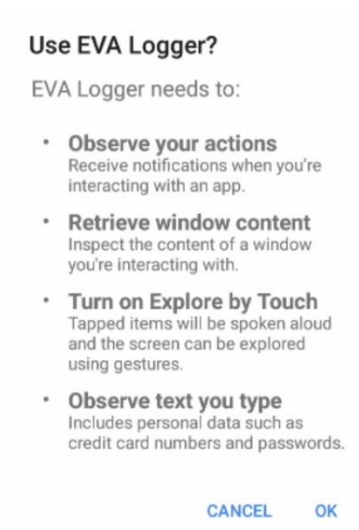
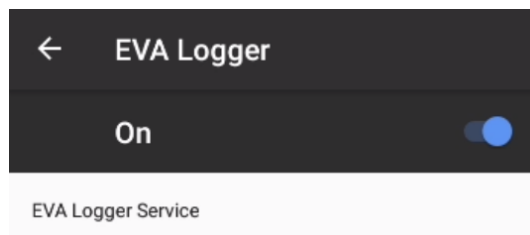
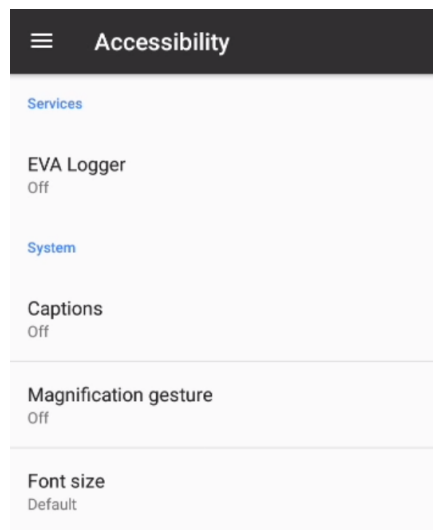


3. Install the eva-logger.apk in your Android device.
4. Allow the required permissions





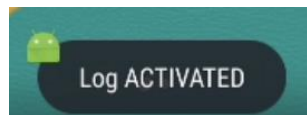
5. Activate Eva Logger in Settings - Accessibility Services screen to initiate the screen captures and create the required folder structure.



- On Android device sdcard, the “eva” folder will have been modified adding a new folder named 0000n (where n is an incremental number) containing eva.db file and images folder where actions and images captured are registered.



- From this point on, every event on your Android device or performed by the applications specified in `_eva_services.jcf` file can be registered by EVA Logger and stored in the eva database (eva.db) with its corresponding screen capture stored in “images” folder.
- Touch Volume Up three times on your device to activate / deactivate screen capture log. Once EVA Logger is installed, touch Volume Up three times to activate log. On this activation / deactivation a message will be shown on your device screen.



Each time you activate/deactivate the log, your screen captures and events will be saved in a new folder named 0000n containing new data.

- To capture a specific screen, touch Volume Down once. A beep will be performed when a capture is done and you will have to wait 3-5 seconds between each capture.

**NOTE: To restart with EVA Logger, you must stop the service and delete eva.db, eva.db-journal and images folder from “eva” folder**

### 2.3. Files and Directory Structure

These are the files used in EVA Logger.









File name	Usage
_eva_services.jcd, _eva_services.jcf	Determine which applications will be captured and some general settings of Eva Logger
00001 – 0000n/	Folders generated by every activation and deactivation of Eva Logger
00001 – 0000n/eva.db	SQLite database where actions and images captured are registered
00001 – 0000n/eva.db-journal	Temporary file used by SQLite
00001 – 0000n/images/screen_x.jpg	Images corresponding to each captured screen

Directory structure:

<b>eva</b>	_eva_services.jcd _eva_services.jcf		
	<b>00001-0000n</b>	eva.db eva.db-journal	
		images	screen_1.jpg screen_2.jpg screen_x.jpg

## 2.4. EVA Database

These are the tables present in eva.db

- >  actions
- >  android\_metadata
- >  event\_log
- >  events
- >  info
- >  node\_actions
- >  node\_info
- >  ocr

The main table is “event\_log” which contains all the events performed by the packages specified in “\_eva\_services.jcf” file, or by default, all Android events, at every moment that EVA Logger has been active. The events can be anything from changing the screen completely to an EditText receiving focus.

This table is related to “node\_info” table. This table contains the elements related to each event from “event\_log”.

And every possible action that can be performed by each element from “node\_info” table are represented in “node\_actions” table.

If “useOcr” parameter is set to true in “\_eva\_services.jcf” file, every text in every captured screen is saved in “ocr” table and related with registers in “event\_log” table identified by the “PhotoId” field.

The table “info” contains data about Eva Logger app used to record all the actions saved.

