

Blaise



Blaise Apps

Exploring the Blaise Apps



Overview

- Introduction to Blaise apps
- Required server and device configurations
- Features available in apps
- Case Management possibilities
- Download- and Write Interceptors
- Installing a newer version of an survey
- Manipula Dialogs applications (can be used to replace the default UI of the app)
- Interaction with other apps
- Support available in Control Centre when developing surveys
- App distribution and upgrading; device requirements



Blaise Apps

- Available apps
 - Dep App (Windows)
 - Android App
 - iOS App
- Native apps; they don't use a browser
- Support for multiple run modes, but main purpose is to run surveys offline in a distributed environment
 - CAPI
 - Download and upload of items if a connection is available
 - No connection needed to conduct interviews once a survey has been installed



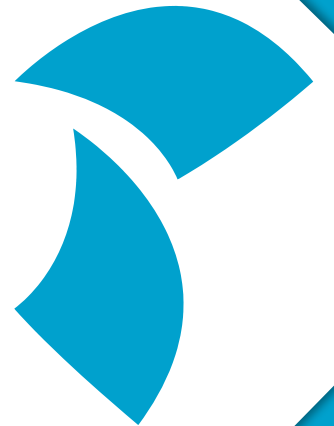
App features

- Data Entry Client
 - Can run any Blaise 5 survey and Manipula Dialogs setup, online and offline
- Administrative tasks
 - Login to server
 - Get list of available surveys
 - Download and install surveys
 - Download of cases
 - Upload of cases
 - Browse data that is stored on device
 - Removal of cases
 - Removal of surveys
 - Alter settings



Configuration

Preparing for App usage



Server Setup: Required Settings

- Server park
 - Run Mode
 - Data Entry Server
 - Should be publicly accessible
 - Port 8033 (by default)
 - Binding http or https (requires certificate)
- Users
 - Grant access to server park(s)
 - Grant required privileges
 - Grant out of the box AppInterviewer role to user, or
 - Grant 'Apps' and 'Survey Data Access' privileges directly to user
 - Optional: grand access to individual app features (applies to App User Interface only)
- surveys
 - Set App Support to 'On' in project settings



Server Setup: Run Mode

- Determines how a survey is executed by the apps
 - Client/Server
 - Rules execution and data storage is done at server
 - ThickClient
 - ThickClient with fallback
 - Survey runs on device, but data access is done at the server
 - Fallback stores the data on device if no connection is available
 - Disconnected
 - Survey runs completely offline and data is stored on device



Server Setup: App related Server Park Settings

The screenshot displays the Blaise Server Manager application window. The title bar reads "LAPTOP-ARNO (Root) - Blaise Server Manager". The interface includes a top navigation bar with "File" and "Home" tabs, and a "Help" dropdown. Below this is a toolbar with icons for "Connect", "Local Server", "Disconnect Server", "Dashboard", "Change Password", and "Error Window". A left-hand navigation pane shows a tree view with "Server Management" expanded to "Settings". The main content area is titled "Server Park Settings" and features an "Edit" button in the top right corner. The settings are organized as follows:

- Load balancer:** A dropdown menu set to "http://LAPTOP-ARNO:8033".
- Blaise App related settings:**
 - Run mode:** A dropdown menu set to "Disconnected". Description: "Disconnected mode requires a connection for downloading and installing the survey. During the run of the survey all data is stored on the device. No connection is needed to complete the survey."
 - Session mode:** A dropdown menu set to "Local". Description: "Session data will be stored on the device."
 - Audit trail mode:** A dropdown menu set to "Local". Description: "Audit trail data will be stored on the device."
 - Delete data after upload:** A dropdown menu set to "False". Description: "Data must be deleted manually from the device. This can be done from within the app."
 - Sync data when connected:** A dropdown menu set to "False". Description: "Manual upload of data is required. This can be done from within the app."
 - Sync surveys when connected:** A dropdown menu set to "False". Description: "Manual installation and deletion of surveys is required. This can be done from within the app."
 - Download surveys setting:** A dropdown menu set to "False". Description: "Download of surveys is always enabled, regardless whether cases are available to the interviewer or not (default)".

At the bottom right of the window, the version number "Version: 5.14.0.3613" is displayed.



Server Setup: Install survey

- Install survey in appropriate server park
 - Make sure App Support is set to ' On' for the project
- App package
 - Package which will be downloaded by the apps
 - Will be created if survey is installed in Disconnected or ThickClient server park
 - Stripped down version of regular package (*.bpkg)
 - Contains no case data
 - Data file is replaced by empty SQLite database
 - Contains only app related files
 - <survey name>.app.bpkg



Device Setup

- Android: two ways to install Blaise app on devices
 - Download Blaise Data Entry app from Google Play Store
 - App will be updated whenever Blaise uploads a new version to the Play Store
 - Use and install the APK that is shipped with each Blaise release
 - APK based Blaise App has another identifier (com.blaise.dep)
 - Won't be updated on devices unless you decide to this yourself
 - Gives you full control on over which version will be installed on devices
- iOS
 - Download Blaise Data Entry app from Apple App Store



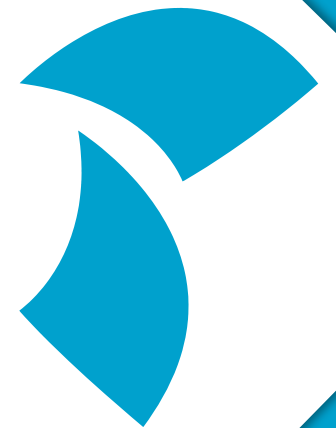
Device Setup

- DepApp (Windows)
 - Install Blaise; run DepApp.exe from Blaise installation folder
 - No need to install Blaise; copy the following files to a folder on your device; run depapp.exe from there
 - DepApp.exe
 - DepApp.exe.config
 - System.Data.Sqlite.dll
 - Msvcrt100.dll



App Features

Overview of App functions



App features: Settings screen

- Apps require logon
- Log on to a data entry server
 - Specify user credentials
 - Data entry server
 - Port
 - Binding (http / https)
 - Security Protocol
 - Deploy location (Dep App only)
 - Location where survey files and settings will be stored



App features: List of surveys

- Get and view the list of surveys that are available to the user
 - Divided into:
 - Available on server
 - Surveys installed in a client/server Server Park
 - Available for download
 - If installed in a Server Park with run mode set to Thick-Client and Disconnected
 - Installed on device
 - Surveys that have already been installed on the device



App features: Downloading and installing surveys

- App package is downloaded and survey is installed at deploy location (Windows) or in isolated storage app
- Has an empty (SQLite) database
- Cases must be downloaded



App features: Browse case data

- Enabled whenever case data is stored on the device
 - Run mode is Disconnected or Thick Client with fallback
- Can be used to view locally stored data
 - Fields to be displayed can be set in a bdvx. Bdvx can be deployed via Custom Package
- From the Browse Data screen you can:
 - Start a case
 - Download cases
 - Upload cases
 - Delete selected case



Grant access to individual features

- Possibility to control which features are activated in the app
 - Some organizations do not want that interviewers can do administrative tasks in the apps, like installing surveys, deleting surveys, uploading, downloading and deleting cases
 - Tasks should be performed automatically
- Grant access to individual app functions in Server Manager
 - Allowed features will be read and activated whenever an user/interviewer logs on
- Surveys and cases can be installed and removed automatically by activating the sync functions in server park



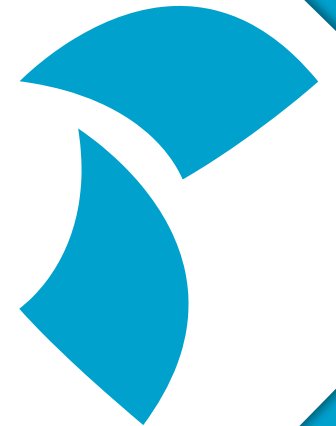
Grant access to app functions

| Action | User permission | Role permission | Effective permission |
|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Deployment | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Apps | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| App usage | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Enabled features in apps | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Login to server | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Get list of surveys | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Install survey | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Remove survey | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Start survey | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Browse data | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Delete data | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Upload cases | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Download cases | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Update settings | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| View settings | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| View survey details | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Survey Data Access | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| User Management | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| CATI Management | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |



Case Management

Implementing Case Management



Case Management

- Out of the box
 - By using record filters
 - OfflineCAPI block
 - CMA
- Your own Manipula Dialogs Application
- InstrumentManager in Data Entry API
- Multi-mode Launcher (5.14)
 - Event driven
 - Can work together with CMA Launcher



Case Management

- First few versions of apps had very rough methods for downloading and uploading cases
 - Record filter had to be entered in app to download cases
 - Error prone: need to use the exact syntax, for example InterviewerName = 'peter'
 - No recommended: you really do not want that interviewers have do this!
 - Uploads all records
- Needed a way to control this better
 - OfflineCAPI block
 - Gives you more control over the download and upload process
 - Recommended if you don't want to use CMA or API for Case Management



OfflineCAPI block

- Special block recognized and used by the apps
- Provides very basic case management functions
- Most important fields:
 - ToWhom
 - Can be used to assign cases to interviewers
 - Login name should match name in ToWhom field
 - CaseStatus
 - The following statuses are used
 - Downloaded; downloaded but not started
 - Incomplete; started but not completed
 - Completed; reached the end of the questionnaire
 - Uploaded; data was uploaded to the server
 - Resend; case will be resend to the user
 - Suspended; case will not be downloaded anymore
 - Runtime parameters per case
 - Can be used to set specific parameters for interviewers, for example Language



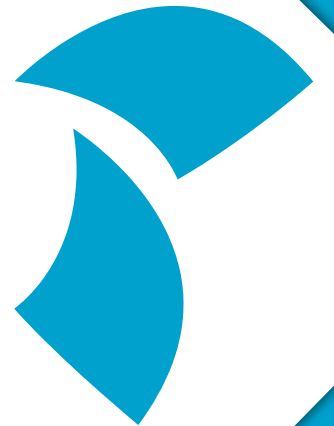
CMA

- CMA Client Application that will be installed on devices
 - Manipula Dialogs application which replaces the default UI of the Blaise Apps
 - Sync function
 - Download and install of required surveys only
 - Surveys will only be installed if cases are assigned to the interviewer
 - Download and upload of cases
 - Extended logging and backup features
- CMA Admin Tool
 - Can be used for managing the cases and the work of interviewers



Interceptors

Download and Write Interceptors



Download and Write Interceptors

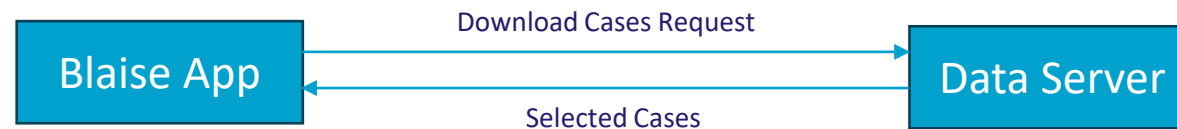
- Special Manipula setups that are installed and executed on a Data Server
 - Can be added to your project; will be added to the survey package
- Provide a way to decide what to do whenever a case is going to be downloaded or uploaded/written
- Especially useful in multi-mode environments
 - Write Interceptor
 - Check case status on server before writing to the database
 - Update your CMS with status information
 - Download Interceptor
 - Check whether a case should really be downloaded to a interviewer device
 - Update your CMS with status information



Download Interceptor

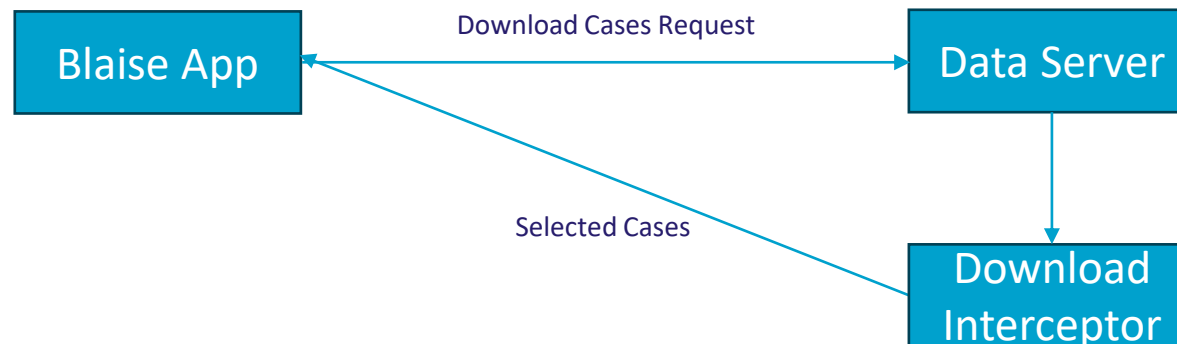
- Executes only on download of cases by the apps

Without Download Interceptor



Data Service queries database in order to provide the requested cases

With Download Interceptor



Data Service queries database in order to provide the requested records

Data Service Query Results

Manipula Service on Data Server runs Download Interceptor setup



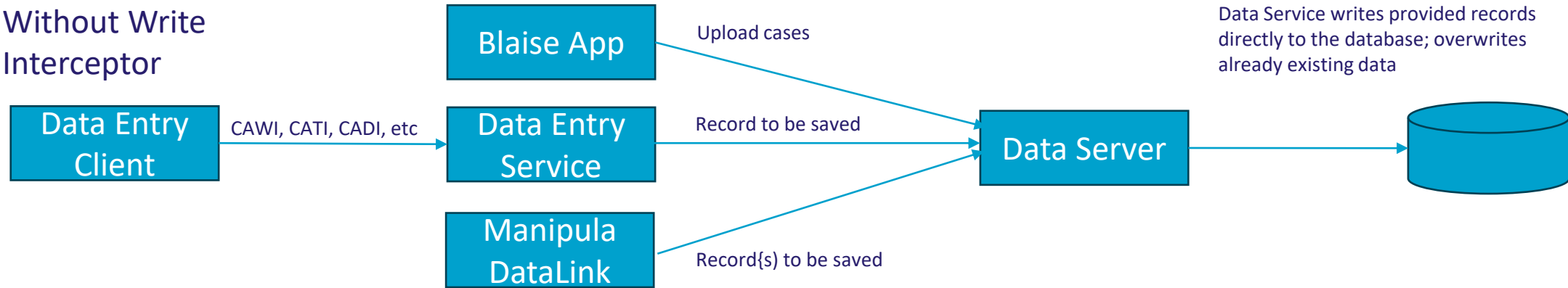
Write Interceptor

- Executes on every Save Action executed by Data Service
 - Not only executed on upload by the apps, but also when:
 - A save occurs during a data entry session (CAWI, CATI, CADI, etc)
 - Manipula does a
 - WriteRecord in combination with relative bdix files
 - WriteRecord in combination with SurveyDataFiles
 - A WriteRecord/WriteDataSet is executed via a DataLink that is obtained via IRemoteDataServer in the DataLink API
 - Does not execute when bdix files are opened directly, i.e. when data service is not involved

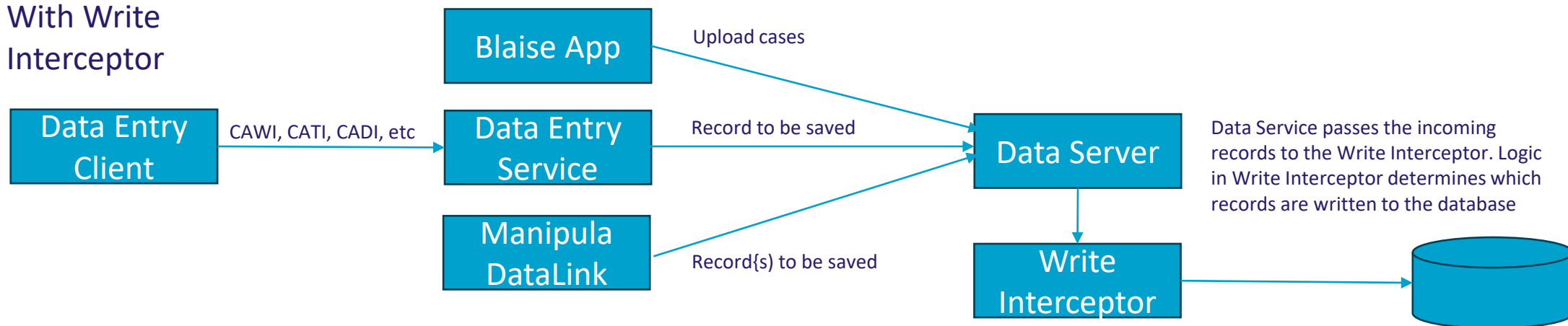


Write Interceptor

Without Write Interceptor

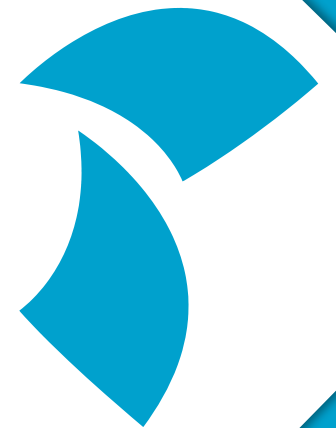


With Write Interceptor



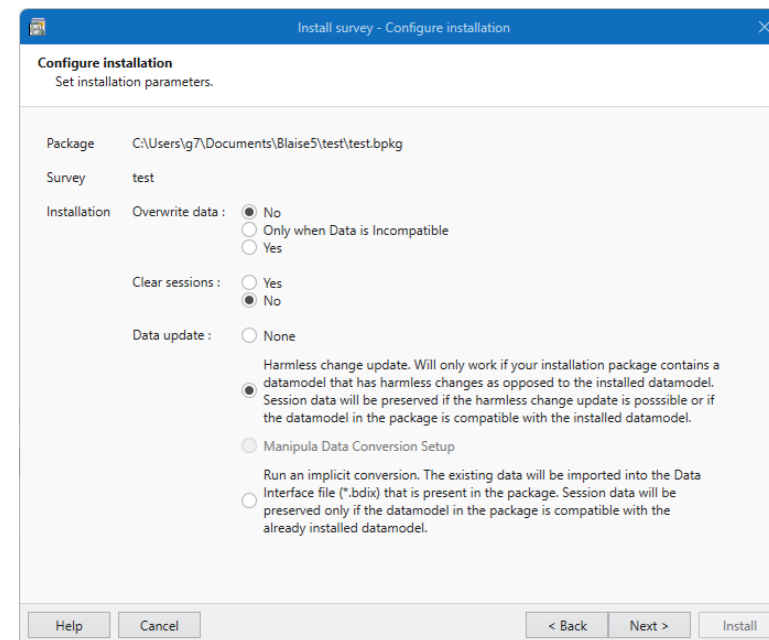
Updating Surveys

Installing a newer version of your survey



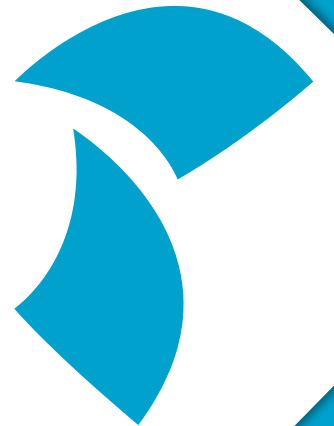
Updating an existing survey

- Survey meta files will always be installed
- Data install settings on server will also be used on device
 - Overwrite Data
 - Clear sessions
 - Data Update (when Overwrite Data is set to no)
 - Harmless change update
 - Manipula Data Conversion Setup
 - Implicit conversion



Manipula Dialogs Applications

Designing your own UI



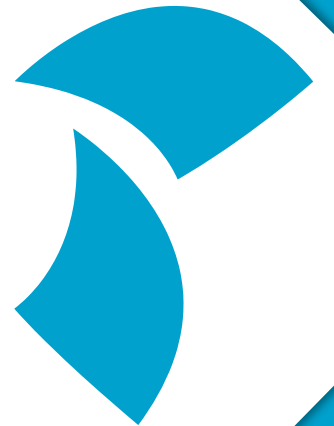
Manipula Dialogs Applications

- Design and use your own dialogs in combination with Manipula functions
 - App functions like list of surveys, install of surveys, download and upload of cases, are also available in Manipula
- Can also be packaged and deployed to server and devices
 - Can be installed on Windows, Android and iOS
- Is App User Interface setting
 - Replaces the default user interface of the app
 - CMA
 - Can be used to make the Blaise App a survey based app



Interaction with other Apps

Using other apps with Android App



Using other apps

- Call other apps by means of Manipula Runscript function
 - Can be used directly in a Manipula Dialogs setup
 - Can be called from the Data Entry Clients by using an ActionSetup
- Implemented Features:
 - Open files, like PDF's and Excel sheets
 - Call and return data from another app
 - For example:
 - Start the camera and return picture
 - Scan barcodes (including QR codes)

Demo Start Camera App and return picture



Calling the Android App from code

- For example from your CMS app
- By using intents and extras
 1. Pass action and required parameters via extras
 2. Pass an URL/Query string containing the action and its parameters via an extra
- Use `StartActivityForResult` to invoke the Blaise app
 - `ReturnToCallingApp=true` gives control back to the calling app when action is finished
- Sample java code is available in the Blaise Help



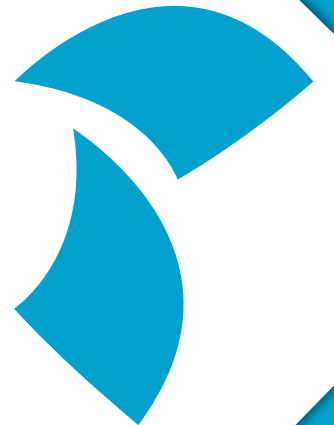
Calling the Android app

- All common app functions are available
 - Update settings
 - Install and remove surveys
 - Upload / download cases, delete cases
 - Start surveys (including command line parameters)
 - GetListOfSurveys
 - GetRecordData
 - GetRecordCount



Android support in Control Centre

Support in Control Centre while developing
surveys



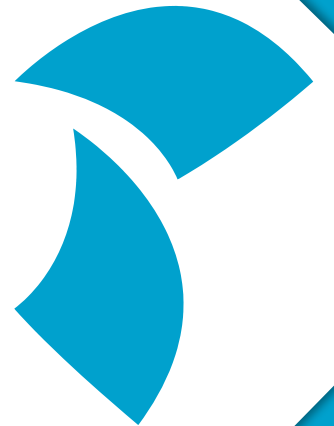
Android support in Control Centre

- Android devices can be used during development
 - Download and Install ADB (Android Debug Bridge)
 - Home -> Options -> Use ADB
- Install Blaise Android App on your device
- Configure Android device
 - Enable developer options
 - Enable USB debugging
- Available Android devices will be listed in Run menu
 - Uses run mode that has been set in LocalDevelopment server park
 - Specify runtime parameters

Demo: Android support in Control Centre



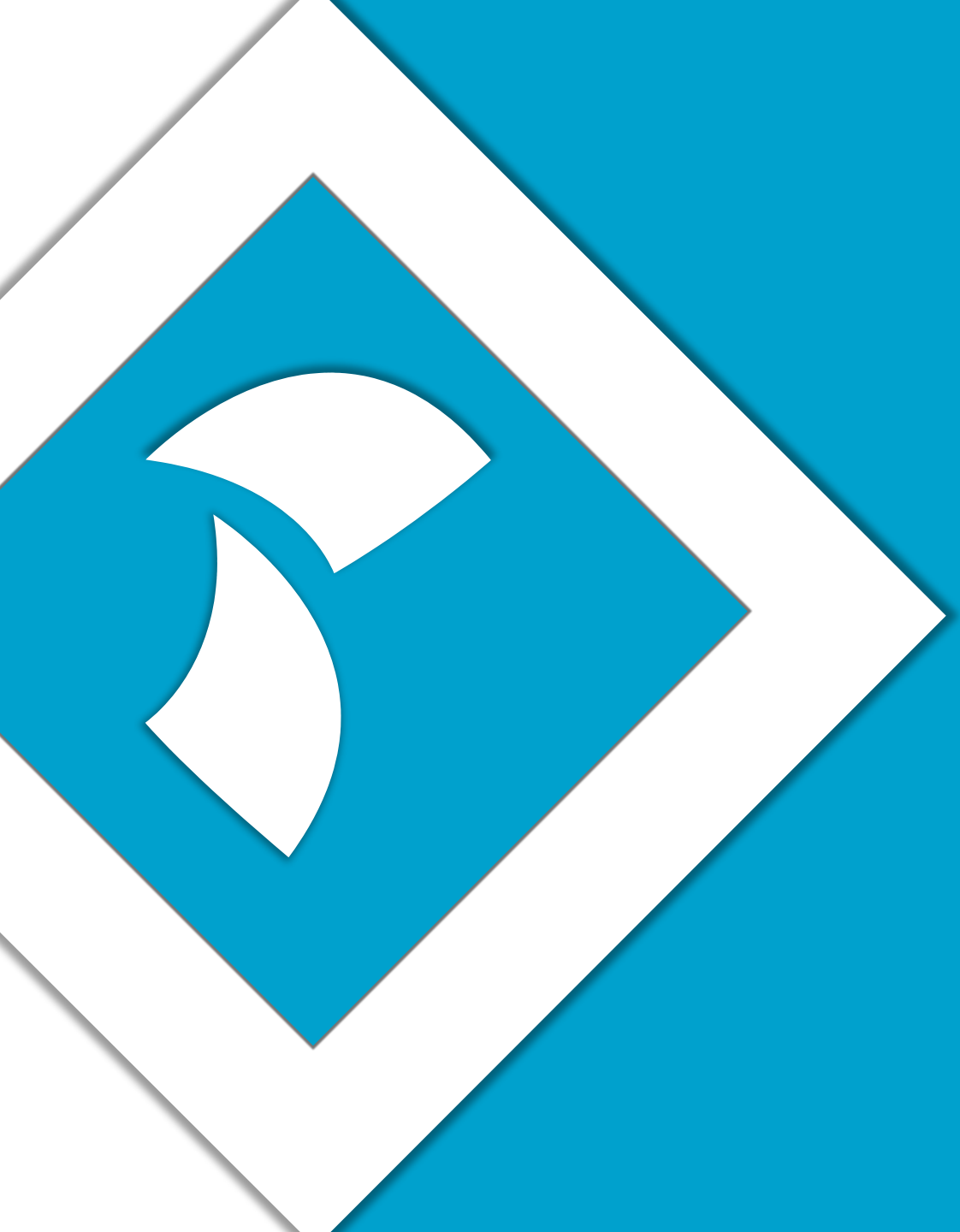
App Distribution and Upgrading



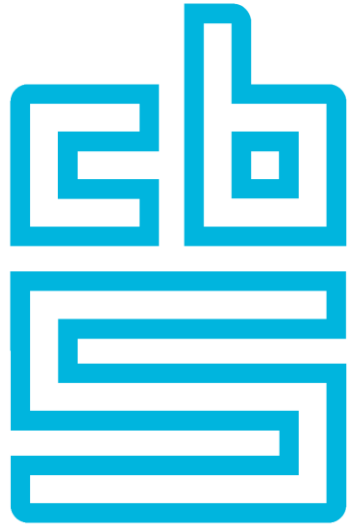
Installing a new version of the App

- Windows DepApp
 - Replace depapp.exe
 - Locally installed surveys and survey data will be preserved
- Android
 - Google Play Store App has package id com.blaise.depandroid; App will update if new version is uploaded to Play Store
 - APK is shipped with every Blaise release
 - Has package id com.blaise.dep; will update only if you decide yourself to install a newer version
 - Locally installed surveys and survey data will be preserved
- iOS
 - Available in Apple App Store only; App will update if new version is uploaded
 - Locally installed surveys and survey data will be preserved





**Thank you
for your time**



Blaise

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