

Pega Government Platform

MOBILE STRATEGY

8.7



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About this document

Intended audience

This guide is intended for Pega Government Platform (PGP) developers designing mobile and mobile offline applications in Pega 8.7 using Pega Government Platform 8.7.

Guide organization

This guide contains the following sections:

Pega Mobile Overview	Provides an overview of Pega Mobile.
PGP Mobile	Describes how PGP has been configured to support Pega Mobile applications.
PGP Mobile Offline	Describes how PGP has been configured to support Pega Mobile applications.

Pega Mobile overview

Mobile solutions

Mobile solutions provide government developers with several features and scenarios that help develop and deploy mobile apps to suit different businesses. Professionals and citizen developers can work in the model and take advantage of these features to create a modern mobile experience.

With low-code authoring, you can create a mobile channel for your application and effectively configure the content of the app in the model. For more information, see [Mobile solutions](#).

Pega 8 Mobile Overview

Pega provides four mobile deployment models: Device Browser, Pega Mobile Preview (previously Pega Mobile Express), Pega Mobile Deployment Kit, and Custom Mobile App.

Device Browser

Pega web applications built with responsive UI can be accessed from any device, for example, any tablet or any smartphone, using the device's native web browser, such as Google Chrome, Apple Safari, Microsoft Edge, and so on. No app store or developer licensing accounts are needed to follow this model.

Pega Mobile Preview

For testing purposes, Pega provides the Pega Mobile Preview app available as a free registered download from the Google Play Store for Android, or from the App Store for iOS (See also Pega Mobile Express). The Pega Mobile Preview app is a generalized Pega application launcher that takes the place of a web browser providing application access to device services like GPS and Camera with configurable security controls that a browser-based interaction does not have.

Pega Mobile Deployment Kit

After the testing is complete, Pega can generate an application-specific mobile deployment kit much like Pega Mobile Preview, but custom tailored to the specific application channel and target platform. This allows the customer to have complete control over kit distribution.

Custom Mobile App with Pega Connect SDK

Experienced mobile application authors can build completely custom mobile apps and enable them to interact with Pega via the *Pega Mobile SDK*. For more information, see [Mobile features overview](#).

Mobile Offline

Offline support ensures that key work scenarios are available to your users when they work in the field or in situations with limited or no connectivity.

The following scenarios are available as offline support for your application.

Field workers support

Maintain business continuity and assist users with specific offline tasks.

Data collection

Collect data in the form of a questionnaire.

Data always available

Provide field workers with offline data catalogs that are necessary to perform their tasks, such as offline catalogs of addresses or parts.

Case attachments

Use attachments in cases, such as videos or PDFs that are seamlessly available in offline mode. Mobile users can also add new attachments to cases and ensure that these attachments are available to other users when the app synchronizes with the server.

PGP Mobile

Business issue

Government customer requirements for applications include deployment to mobile devices like tablets and cell phones.

PGP solution

In PGP 8.x all components have been enabled for mobile operation and feature a responsive UI that adjusts automatically to different screen sizes and input devices.

Customer use

Application case types built in App Studio automatically benefit from the mobile-aware responsive UI.

PGP Mobile Offline

Business issue

Government customer requirements for mobile applications include operation in conditions where mobile devices move in and out of areas with no cellular or wireless reception.

PGP solution

In PGP, the following core components have been enabled for mobile offline operation.

- Capture interview
- Conduct assessment (simple survey questions only)
- Activity plan task

Mobile applications built with these components will automatically store data when offline conditions are encountered and synchronize the stored data with server when offline condition is resolved.

More PGP components are enabled for offline operation in future releases.

Customer use

Customers who wish to use the offline capabilities in PGP implementations must follow three steps.

1. Enable *Offline* support in the Mobile Channel Settings.
2. Create and populate an *Offline Configuration* rule.
3. Develop mobile application case types in App Studio using one or more of the PGP Mobile Offline enabled components.

Enabling offline support

Enable offline support to advance cases even if the users' devices are not connected with the server.

1. Navigate to the mobile channel definition for your application.
2. Click the **Configuration** tab, and then click the **Offline** category.
3. Select the **Enable offline support** check box.
4. Click the **Add case type** link and select the application case types enabled for use in the offline mode.

5. Click **Submit**, and then click **Save**.

For more information, see [Setting up mobile apps](#).

Creating an offline configuration rule

Manage data synchronization as a device transitions between online and offline modes and identify data elements for Pega to explicitly manage. The *Offline Configuration* rule (*Rule-Config-Offline*) allows a developer to list application data elements that are managed offline.

To create or edit an Offline Configuration rule, navigate to **Configure > Mobile > Offline Configuration**.

In Pega, you can manage the following data resources offline.

- Data Pages
- Field Values
- Data Transforms
- Validate rules
- When rules
- Decision rules
- Decision Tree rules

For an example of an Offline Configuration rule, review the one provided for ICM: PGPICM.

For more information, see [Working with offline-enabled mobile apps](#).

Develop offline case types

Customers can design and develop Pega Mobile Offline case types following the guidance provided by the Pega Community.

PGP changes for Mobile Offline

New offline configuration rule

PGP provides a PGP-specialized Offline Configuration rule template for ICM that manages mobile offline data synchronization on the ICM Mobile Channel for the channel, its portal, and *Interview*, *Conduct Assessment*, and *Activity Plan Task* components.

Allow List Data Pages

- D_AppContext
- D_ICMAppContext
- D_OptionMapListAll
- D_InterviewTemplateListAll
- D_StatesListAll
- D_ConfiguredCountryList
- D_InvestigationListAll
- D_SubjectListAll
- D_AuthorizedInvestigations
- D_Association_Editable

Field Values

no field values

Data Transforms

- PegaPS-Work!InitializeInterview
- PegaPS-Data-Interview!LoadInterviewNotes
- PegaPS-Data-Address!SetStateLabel
- PegaPS-Data-Interview!SetInterviewTitle
- PegaPS-Work!ReassignAssessment
- PegaPS-Work!PostAddInterview_Ext

Validate rules

no validate rules

When rules

- Work-!pyCanDisplayAttachments
- Work-!CanDisplayDocuments
- Work-!pyHasAttachments
- @baseclass!Never
- Assign-!pzHasPrivilegeToClearAssignmentErrors

@baseclass!pzIsOfflineEnabled
PegaPS-Work!IsNotNewAndResolved

Decision Table rules

PegaPS-Data-Address!StateLabel

Decision Tree rules

no decision tree rules

Deny List

Excluded Data Pages

D_UITemplateMeta
D_pzClientStore_Item
D_pzClientStore_Action
D_pzClientStore_Category
Declare_pyDisplay
D_pzOfflineAttachmentList
D_pzManageExpress

Delta-Sync Deny List

Excluded Data Pages

D_QuestionOptions_Master
D_QuestionOptions
D_StartingFlows
D_pzOfflineCaseAttachments
D_pzSearchConfiguration
D_pzOfflineSettings

Resources

Images and icons

webwb/zblankimage.gif
images/busyIndicator.gif
images/pyEmailThumbnail.svg
images/pyURLThumbnail.svg
images/pyTextThumbnail.svg
images/pyPDFThumbnail.svg
images/pyWordThumbnail.svg
images/pyPPTThumbnail.svg
images/pyExcelThumbnail.svg
images/pyImageThumbnail.svg

images/pyDefaultFileThumbnail.svg
webwb/webwb/caret-down.svg
webwb/webwb/pycheckboxes.png
webwb/webwb/calendar-time-date.svg
webwb/pymodal_mask_img.png
webwb/requiredstar.gif
webwb/pzerror_icon.png
webwb/py-calendar-icon.svg
webwb/pymodal_mask_img.png
webwb/requiredstar.gif
webwb/pzerror_icon.png
webwb/webwb/caret-down.svg
webwb/py-calendar-icon
webwb/webwb/pycheckboxes.png
webwb/webwb/calendar-time-date.svg
webwb/pyConnected.svg
webwb/zblankimage.gif
images/busyIndicator.gif
images/pyEmailThumbnail.svg
images/pyURLThumbnail.svg
images/pyTextThumbnail.svg
images/pyPDFThumbnail.svg
images/pyWordThumbnail.svg
images/pyPPTThumbnail.svg
images/pyExcelThumbnail.svg
images/pyImageThumbnail.svg
images/pyDefaultFileThumbnail.svg
images/pzPegalcon.ico
images/pzPegalcon16.png
images/pzPegalcon32.png

Fonts

webwb/webwb/pxfont-OpenSans-Bold.woff2
webwb/webwb/pxfont-OpenSans-BoldItalic.woff2
webwb/webwb/pxfont-OpenSans-ExtraBold.woff2
webwb/webwb/pxfont-OpenSans-ExtraBoldItalic.woff2
webwb/webwb/pxfont-OpenSans-Italic.woff2
webwb/webwb/pxfont-OpenSans-Light.woff2
webwb/webwb/pxfont-OpenSans-LightItalic.woff2
webwb/webwb/pxfont-OpenSans-Regular.woff2
webwb/webwb/pxfont-OpenSans-Semibold.woff2
webwb/webwb/pxfont-OpenSans-SemiboldItalic.woff2
webwb/pxfont-OpenSans-Bold.woff2
webwb/pxfont-OpenSans-BoldItalic.woff2
webwb/pxfont-OpenSans-ExtraBold.woff2

webwb/pxfont-OpenSans-ExtraBoldItalic.woff2
webwb/pxfont-OpenSans-Italic.woff2
webwb/pxfont-OpenSans-Light.woff2
webwb/pxfont-OpenSans-LightItalic.woff2
webwb/pxfont-OpenSans-Regular.woff2
webwb/pxfont-OpenSans-Semibold.woff2
webwb/pxfont-OpenSans-SemiboldItalic.woff2
webwb/uikit-icons.woff2

Locales

Locale ID

no locales

For more information, see [Working with offline-enabled mobile apps](#).

PGP Offline JavaScript Support Library

The *pyPega_UI_UserScripts_Offline* Static Content Bundle rule has been extended to include the *pega_pgp_utils.js* Text File rule, a PGP JavaScript library that facilitates some specialized PGP data management for offline scenarios.

The *pega_pgp_utils.js* JavaScript library contains functions that help manage data in the mobile device's data cache while in an offline state using the Pega *Client Cache API*.

Changes to PGP features

Interview Component

The *InterviewInfo* Section rule was modified to call several of the JavaScript functions in *pega_pgp_utils.js*. In the Change Action for the Interview Template drop-down list, a Run Script was added to the Action Set to call the *LoadInterviewNotes()* function to retrieve the selected template from the mobile device's client cache and populate the *InterviewNotes* property when in an offline state.

Similarly for the *NonMandatoryWithCurrentLocation* Section rule, the *Country* dropdown calls the *setStateLabel()* function to populate the states for a selected country.

The *PersistInterview* Declare Trigger rule has been added to save an Interview instance during the data synchronization.

The *MoveCaseAttachments* Declare Trigger rule has been added to associate attachments collected while in an offline state with the Interview data instance.

Conduct Assessment Component

For ICM Assessment (Pega Survey), PGP overrides a Pega Survey extension *Work-pyResolveSurvey* Flow rule as *PegaSP-Work.pyResolveSurvey* and extends it to associate an Assessment to an Investigation or Subject.

Activity Plan Task case type

The *TaskInformation* Section rule has been modified to include the Pega *Work-pyOfflineCaseAttachments* Section rule which conditionally displays in the place of the *PegaPS.ViewAttachments* Section rule when *pzIsOfflineEnabled* is true.

Appendix A Pega JavaScript API

JavaScript APIs for offline-enabled mobile apps

<https://community.pega.com/knowledgebase/articles/mobile/86/javascript-apis-offline-enabled-mobile-apps>

Mobile Offline Data-Sync Architecture

https://agilestudio.pega.com/prweb/AgileStudio/app/agilestudio_/doc/DOC-6234