



mGovern – Your Mobile Solution

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Harris Govern
mGovern – Your Mobile Solution
Version: 1.0

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Harris Govern has taken due care in preparing this manual. However, nothing contained herein modifies or alters in any way the standard terms and conditions of the purchase, lease, or license agreement by which the product was acquired, nor increases in any way the liability of Harris Govern to the customer.

Preface

Welcome to *Govern for Windows*, a comprehensive and fully integrated transaction-driven system written exclusively for local governments. Govern includes a wide variety of database modules:

Computer-Assisted Mass Appraisal (CAMA)

- Appraisals / Property Valuations
- Comparable Sales Management

Financial Management

- Account Receivable
- Cash Collection

Land Management

- Appeals & Grievances
- Business & Individual Licenses
- Complaint Tracking
- Leasing
- Permit Tracking & Inspection Scheduling
- Planning
- Violations

Revenue Management

- Aircraft & Boat Excise Tax
- Miscellaneous Billing
- Personal Property Tax Billing
- Real Property Tax Billing
- Self-Reported Tax Billing
- Special Assessments
- Tax Title / Tax Lien / Tax Sales
- Utility Billing

Since 1980, *MS Govern*, formerly *PG Govern*, has worked hand-in-hand with local and state governments to simplify the implementation of software solutions that automate the flow of information related to their properties.

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Chapter 1: Setting Up an mGovern Deployment

Overview

This section describes how to set up a deployment for the mGovern application. In order to do this, you need access to the Govern database on the office server, a second server where you can create a temporary database, and a mobile device.

The procedures in this section only need to be performed when you are first setting up an mGovern deployment. Once the setup is complete, you can easily install the mGovern application on any appropriate device, by clicking the shortcut created by Deploy EZ.

WARNING: Prior to performing any installation, it is essential to perform a full backup of all source databases that are involved in the overall configuration process.

The procedures in this section are required to be performed in the order they are written:

1. Creating the Required Databases on page 1
2. Deploying mGovern on page 3
3. Creating a Connection Key for the Temporary Deployment on page 11
4. Initializing the Temporary Database on page 12
5. Installing the Deployment on page 14

Creating the Required Databases

The following are required for the deployment:

1. A Govern database is required to be running on a server. Typically this is the office server. This database is referred to as the **Source Database**. A source database can be either Oracle or Microsoft SQL 2008 or greater.
2. A database will be created on each mobile device that will be acting as a mGovern client. The mGovern application will be installed on each of

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these devices. This is required because the Govern database structure is copied to the mobile devices when the application is installed.

3. A Temporary Database will be created on a server. The temporary database is required for the initial deployment and initialization processes and for updating the deployments. It will not be used for maintaining property records.

The **Temporary Database** can be Microsoft SQL 2008 or greater or SQL Express.

During the deployment, the Govern database is copied from the source database to the temporary database.

Property records are copied from the source database to the Mobile database when you are logged in to mGovern and are performing a data transfer. Once records are transferred, you can perform es on the Mobile database and load, create, and modify records as you would on the main Govern database. When you have updated records, you can transfer them from the Mobile database to the main Govern database during the synchronization process.

Set Up Databases on the Mobile Devices

To set up the databases on the Mobile devices:

1. Log in to a Mobile device.
2. Launch SQL Server or SQL Express.
3. Create a new database and give it a name.

Note: It is important that the databases on all the mobile devices have the same name, for example Govern_Mobile. This name must be the same as the temporary database name.

4. Create a new user name for the database.
5. Assign a login name and password for this user name.
6. Select **db_owner** for the **Default Schema** and **Database Role Membership**.
7. Click **Save**.
8. Repeat this procedure on each Mobile device.

Setting Up the Temporary Database

There are multiple options for creating the temporary database. Some options are described in the Appendix section of this document. See *Temporary Database Options* on page 35

To set up the temporary database:

1. Log in to the server where you are creating the temporary database.
2. Launch SQL.
3. Create a new database and give it a name.

Note: It is important that the temporary database and the databases on the mobile devices have the same name, for example Govern_Mobile.

4. Create a new user name for the temporary database.
5. Assign a login name and password for this user.
6. Select **db_owner** for the **Default Schema** and **Database Role Membership**.
7. Click **Save**.

Oracle Environment - Setting Up mGovern

Note: This section applies to Oracle users only.

The `tns_admin` parameter is not supported while the mGovern application is offline.

This parameter determines the location of the tns administration files

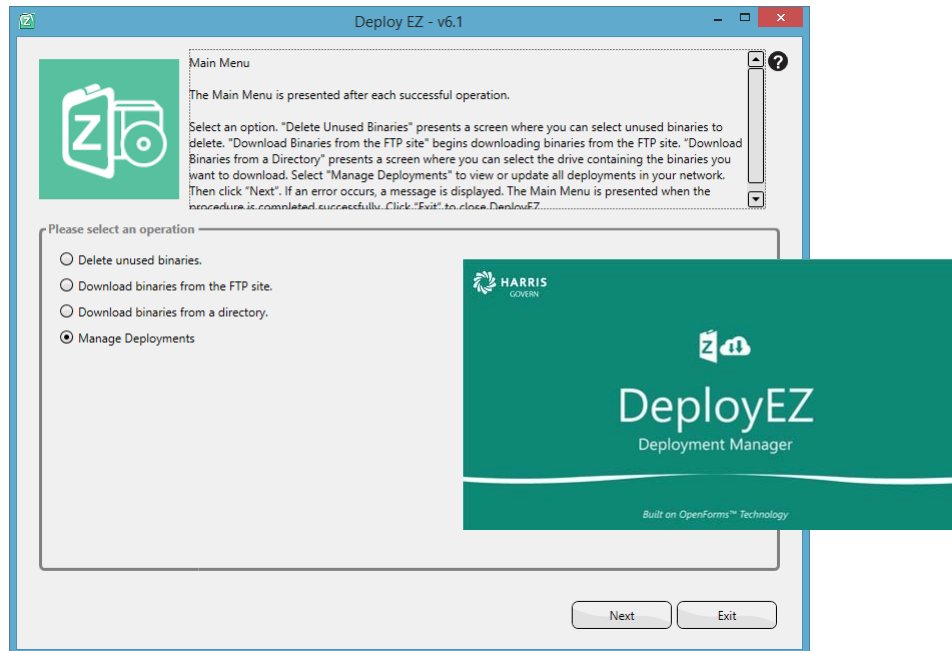
Deploying mGovern

The next step is to launch Govern Deploy EZ and create the mGovern Deployment.

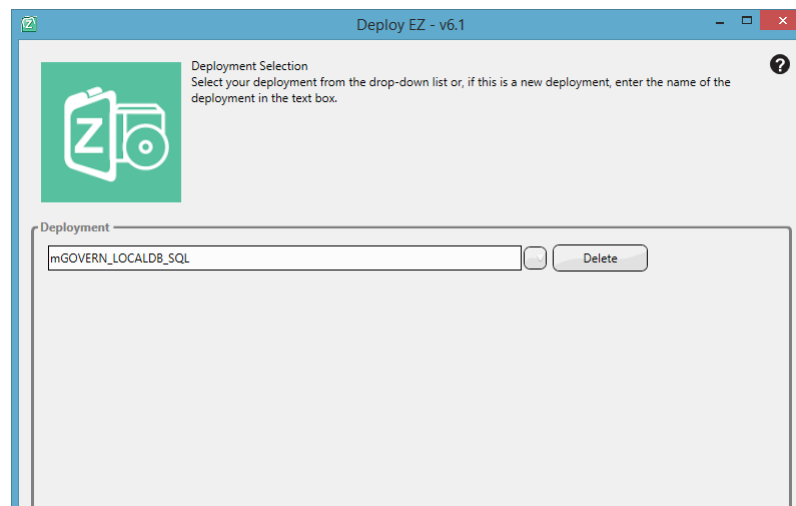
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To create the mGovern Deployment:

1. Launch Govern Deploy EZ.



2. Select **Manage Deployments** and click **Next**.
3. Enter a name for the deployment; typically, the deployment name describes the deployment and includes the server name and server type.
4. Enter the deployment name in the **Deployment** text box.




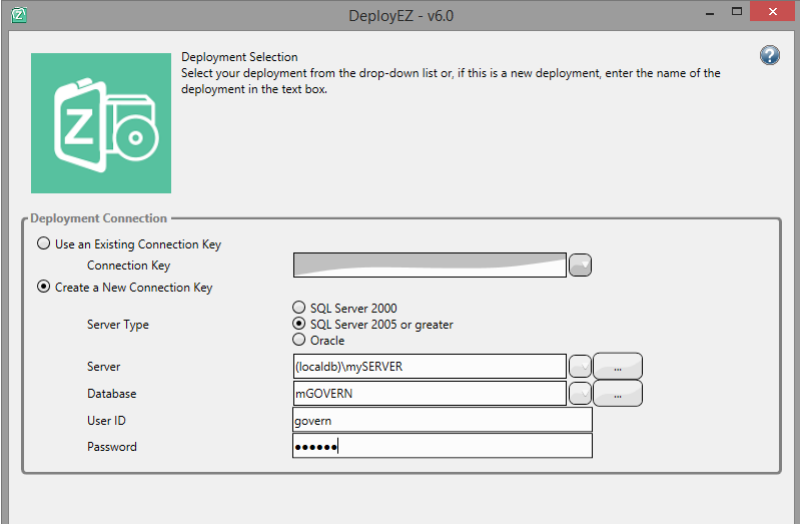
5. Click **Next**.

6. Select **SQL Server 2005 or greater** from the **Server Type** options.
7. Enter **localhost** in the **Server** drop-down list.

Note: Users that are using the LocalDB method should specify **(localdb)\serverNAME** as the server. *Where serverNAME is the name of the server specified in the LocalDB instance.*

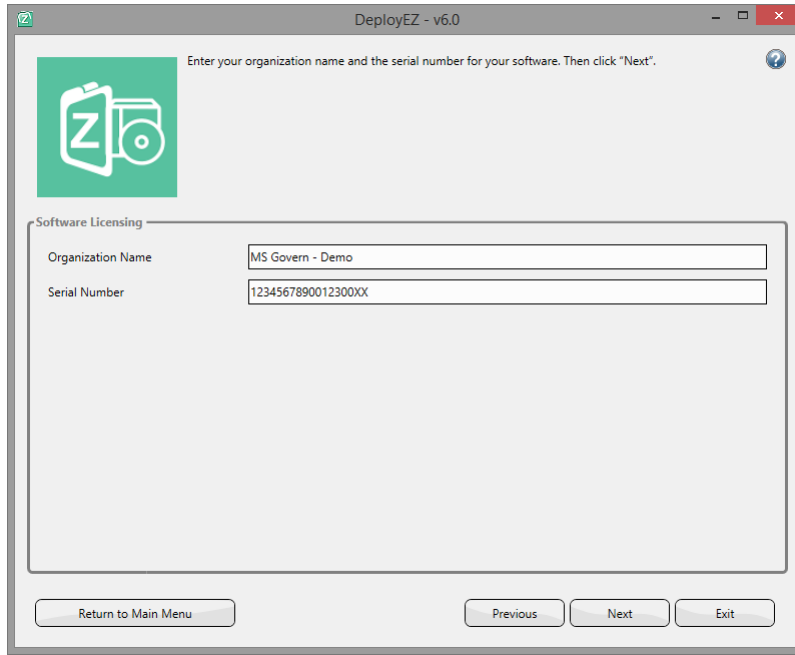
This name is referenced when you install the database on each mobile device.

8. Enter the database name in the **Database** text box.
Alternatively, you can select the database from the drop-down list or click the ellipsis button  to perform a search and select the database from the results.
9. Enter the credentials for the Mobile database in the **User ID** and **Password** text boxes.



TIP: User should note that at times refresh issues may occur between DeployEZ and SQL Server. This may arise as a result of DeployEZ being out of synch with SQL Server. As a result the correct Server or Database is not listed in the combo box when the **Create a New Connection Key** option is selected. In such instances a restart of the DeployEZ is recommended.

10. Click **Next**.



11. Enter the name of your organization in the **Organization** text box.

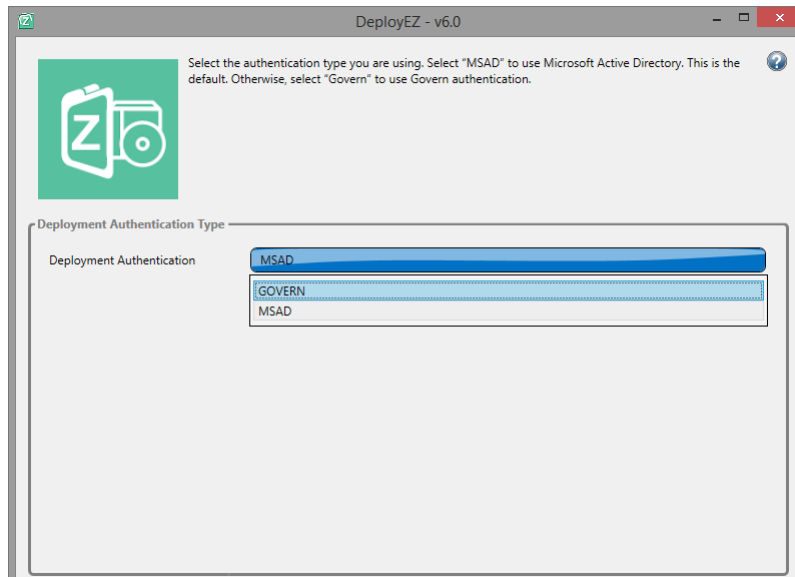
12. Enter the serial number for your product license.

13. Click **Next**.

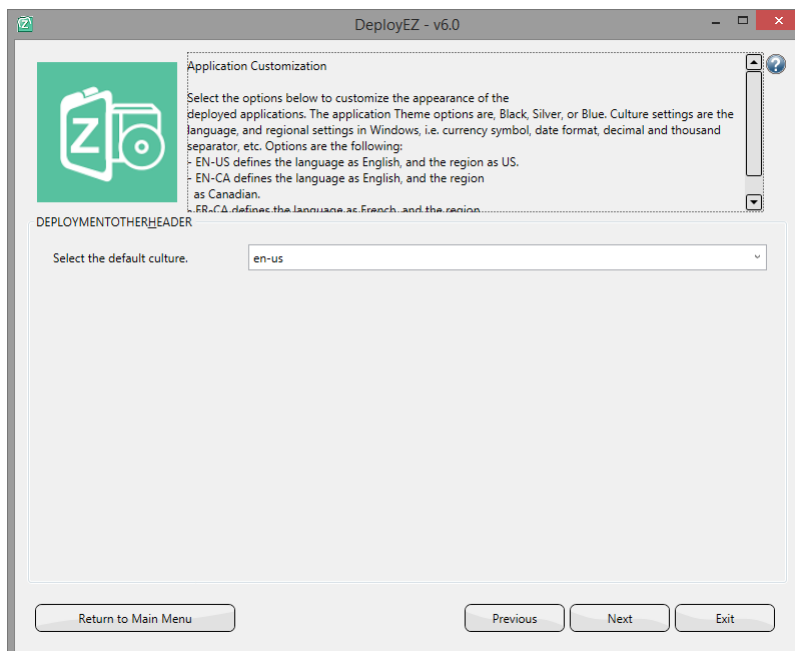
14. Select the authentication type in the **Deployment Authentication** text box. Available types are:

- Microsoft Active Directory (MSAD): Authentication is performed using your Windows credentials.

- The Govern Authentication type will require a Govern user name and password be entered in the .



15. Click **Next**.

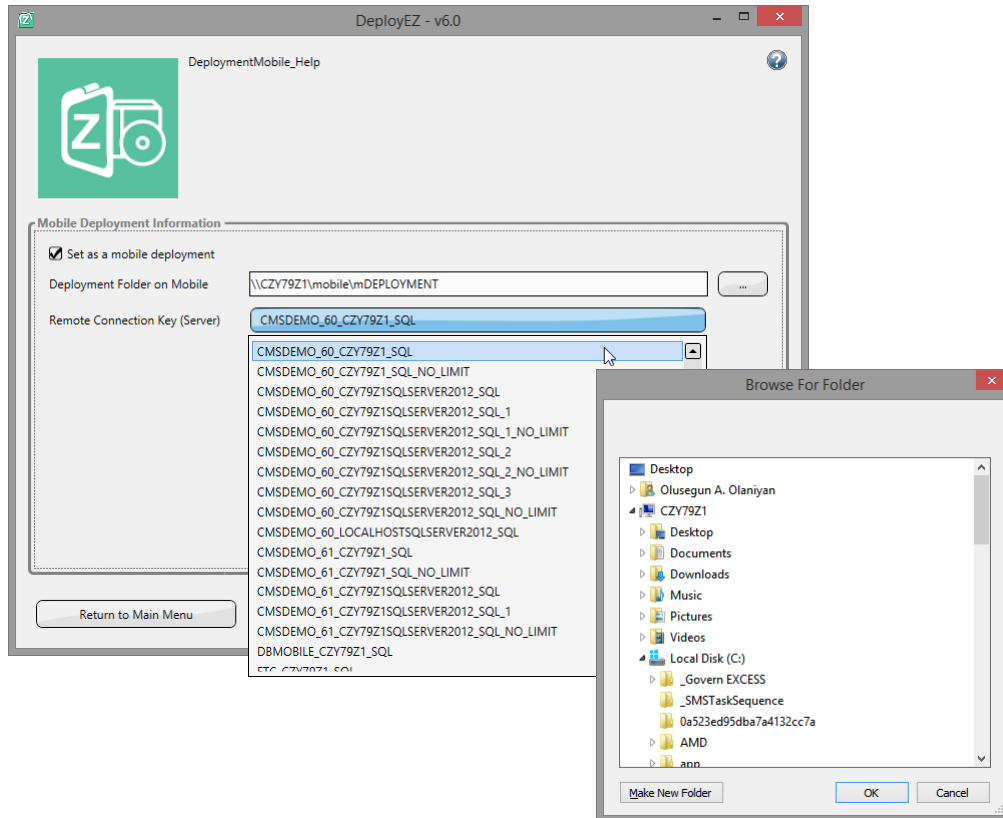


16. Select a culture to define the language and regional settings for the mGovern interface from the **Default Culture** text box.

17. Click **Next**.

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18. Select the **Set as mobile deployment** check box.

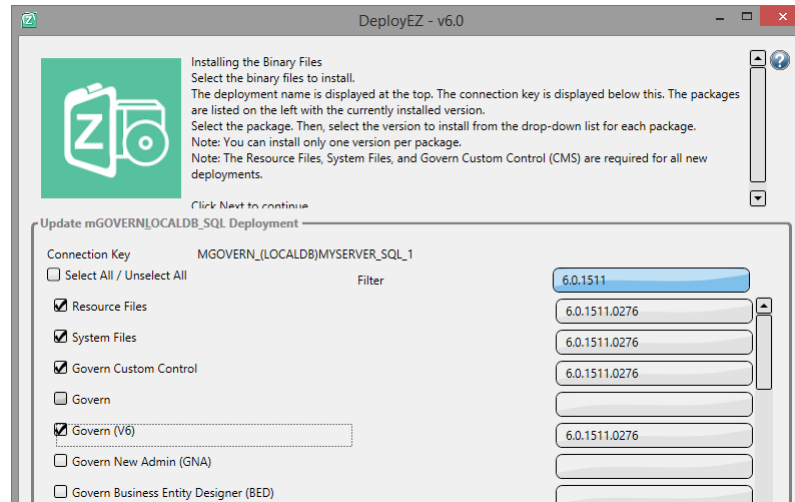


19. Click the ellipsis button  and create a folder for the Mobile deployment.

The folder must be created on the server where the deployment is run.

20. Select the connection key to the source database on the server.

21. Click **Next**.

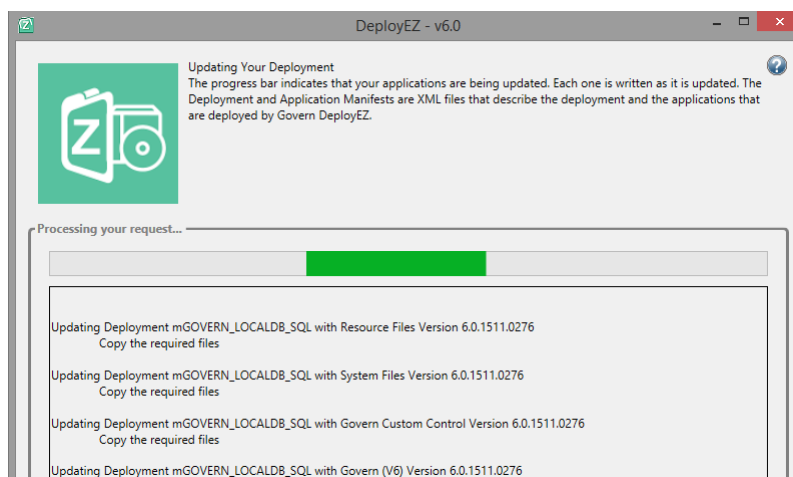


22. Select the release version for the packages that you want to install from the Filter text box.

23. Select the following packages:

- Govern
- Resource Files
- System Files
- Govern Custom Control

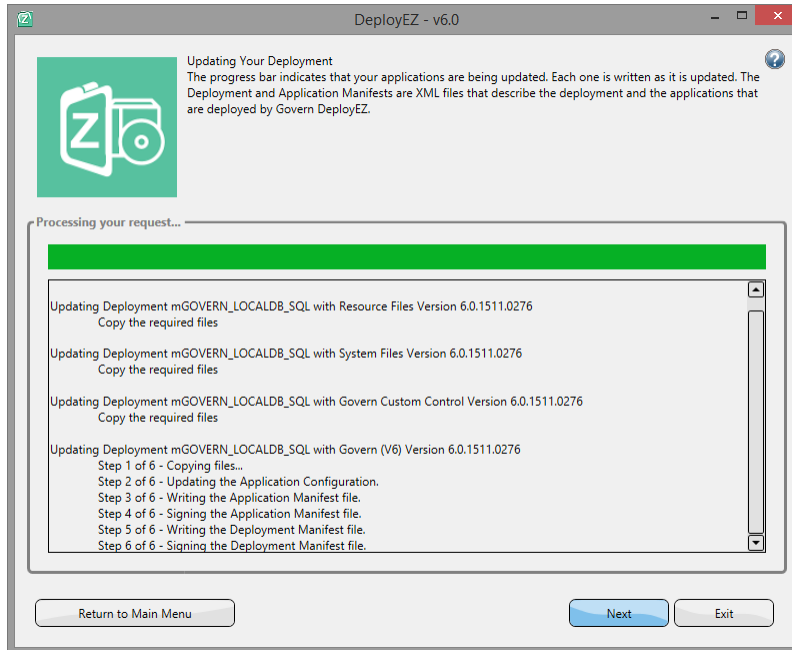
24. Click **Next**.



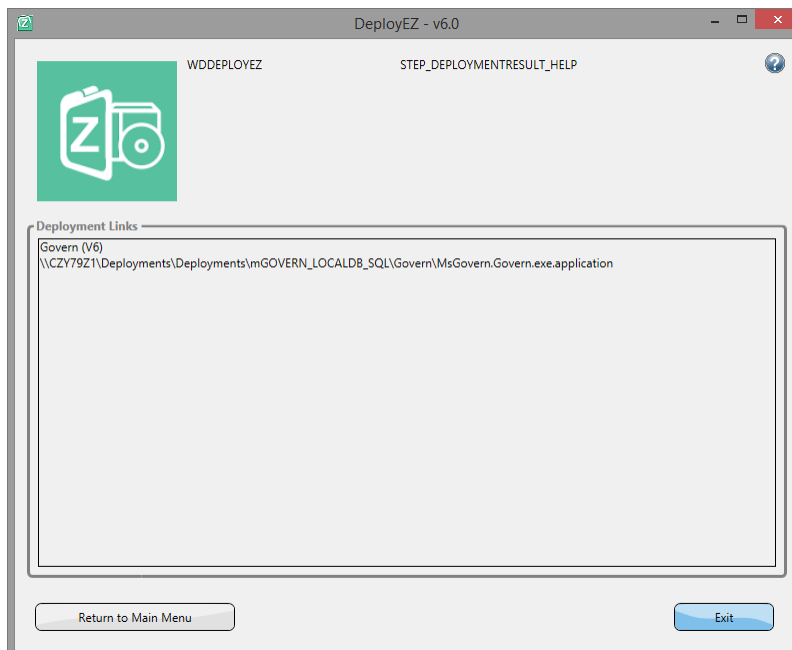
The Progress bar indicates the progress of the installation. Each step is written as it is performed.

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25. Click **Next** when the button is enabled.



26. Click **Exit** to close DeployEZ.

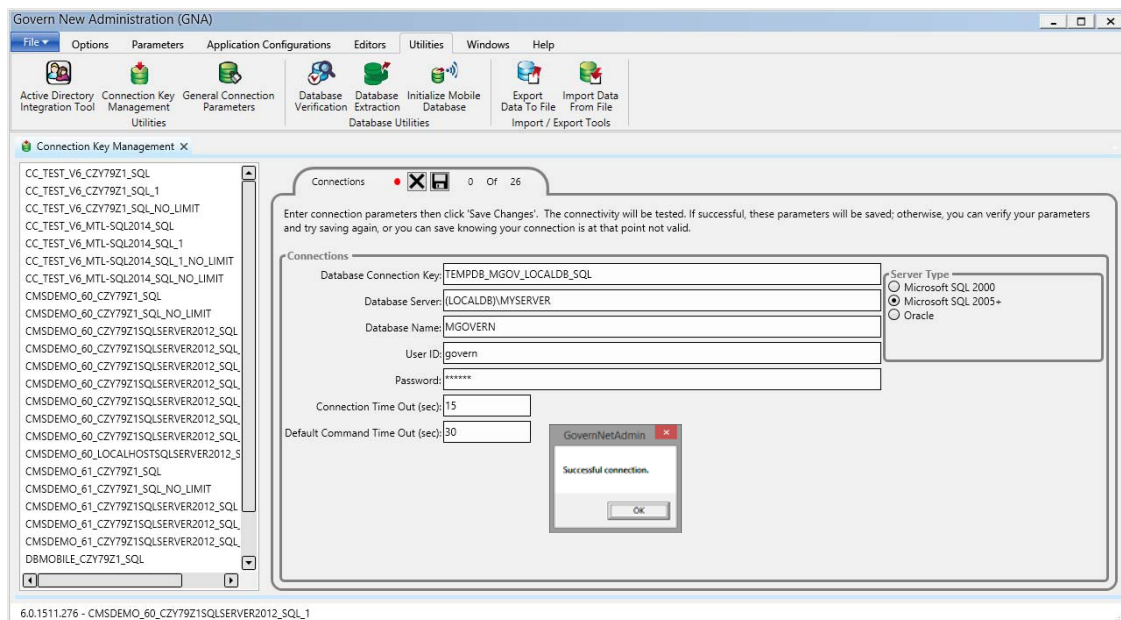



Creating a Connection Key for the Temporary Deployment

The next step is to run Govern New Administration (GNA) and create a connection key for the temporary deployment,

To create a connection key for the temporary deployment:

1. Launch GNA on the computer used for the temporary deployment.
2. Select **Utilities > Connection Key Management**.




3. Click the **New** icon  to create a new connection key for the temporary deployment.
4. Define a name for the connection key and enter it in the **Database Connection Key** text box.

Typically, the connection key name is made up of the database name, the server name, and the server type, separated by underscores:

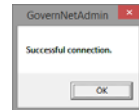
DatabaseName_ServerName_DatabaseType
For example, GOVERNMOBILE_CMSDEMO_SQL

All characters in the connection key name will be forced to upper case.

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5. Select **Microsoft SQL 2005** under the **Server Type** options.
6. Enter the credentials for the database created for the mobile deployment in the **User ID** and **Password** text boxes.
7. Leave the default settings in the Default **Connection Time Out** and **Default Command Time Out** text boxes.
8. Click **Save** .

The connection is automatically tested. A message will appear to confirm that the connection was successful.



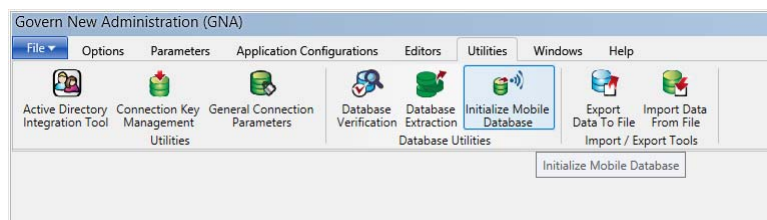
About Alternate Connection Keys

In environments where there are multiple databases, the *Govern New Administration (GNA)* can access alternate databases by creating secondary and tertiary connection keys. Users should note that Govern Mobile does **NOT** support the use of *Alternate Connection Keys*. Unlike the GNA, Govern mobile was designed to function with a single connection key.

Initializing the Temporary Database

The next step is to initialize the temporary database for the mGovern deployment. This process copies settings from the source database to the temporary database.

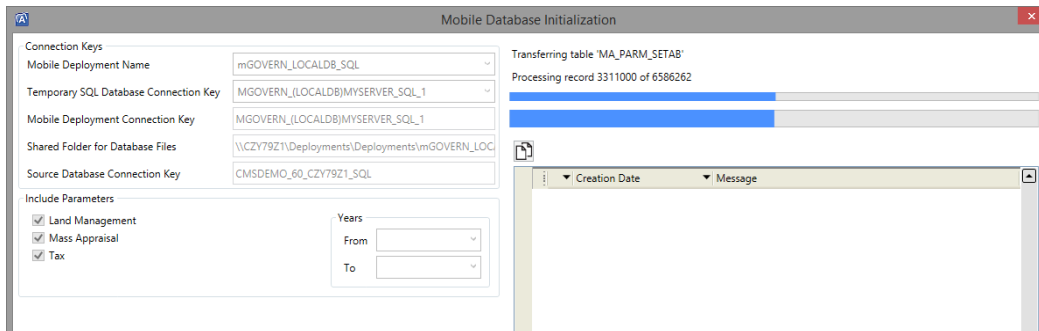
To initialize the temporary database:



1. Launch GNA on the computer used for the temporary deployment.
2. Select **Utilities > Database Utilities > Initialize Mobile Database**.

This opens the Mobile Database Initialization window.

3. In the *Mobile Database Initialization* > **Connection Key** group, select the connection keys that correspond with the following:



4. Select the name of the mobile deployment from the **Mobile Deployment Name** drop-down list.
5. Select the connection key to the temporary SQL database from the **Temporary SQL Database Connection Key** drop-down list.

This is the database that you created when you set up the Mobile Deployment. See *Creating the Required Databases on page 1*.

The following parameters are automatically populated based on these two selections:

- Mobile Deployment Connection Key
- Shared Folder for Database Files
- Source Database Connection Key

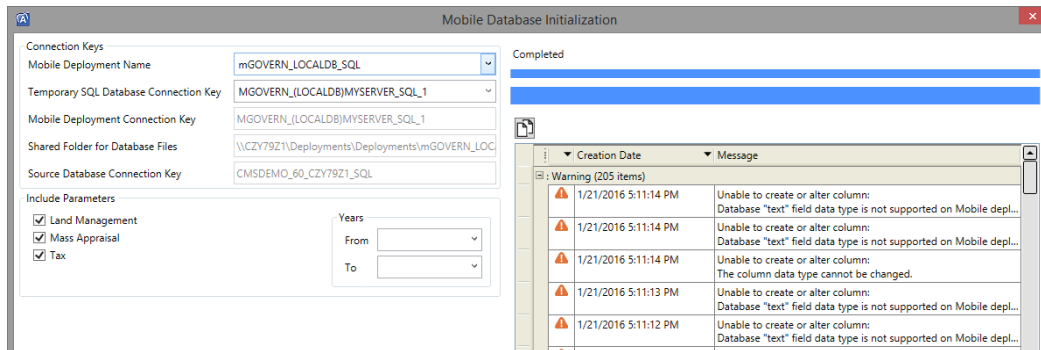
6. Select the tables to process. By default the following three tables are selected:

- **Mass Appraisal (MA_PARM)**
- **Permit (PM_TYPE)**
- **Tax**

7. Select the starting and ending years for the process or leave the **Starting Year** and **Ending Year** fields blank to process all years. When a Year range is specified, the tables for the selected years are copied from the source database to the temporary database.

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8. Click **Start**.



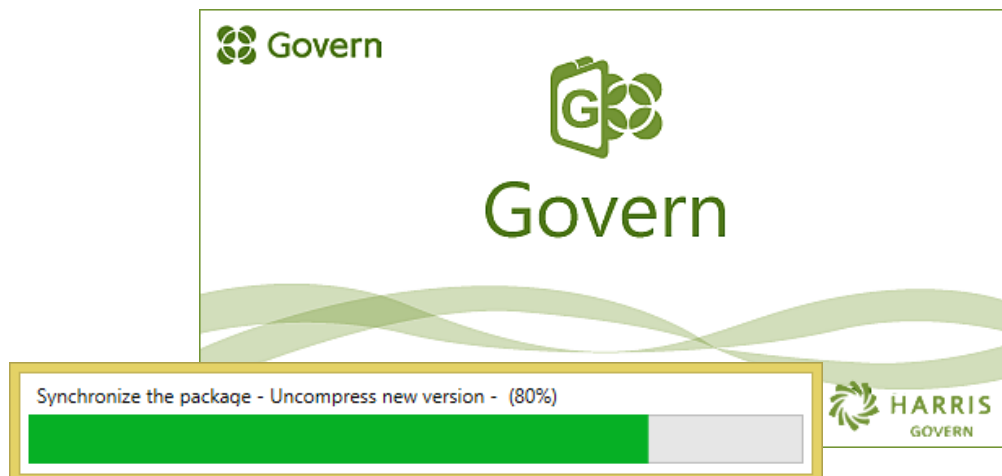
Installing the Deployment

Running mGovern for the First Time

When you are ready to run mGovern for the first time, connect the mobile to a secure Local Area Network (LAN) or high speed network. Ensure that the network connection is constant so that files are transferred without interruptions.

Note: The constant LAN or high speed connection is required only the first time that the application is run on the mobile client.

An automatic synchronization is performed when you launch the application.

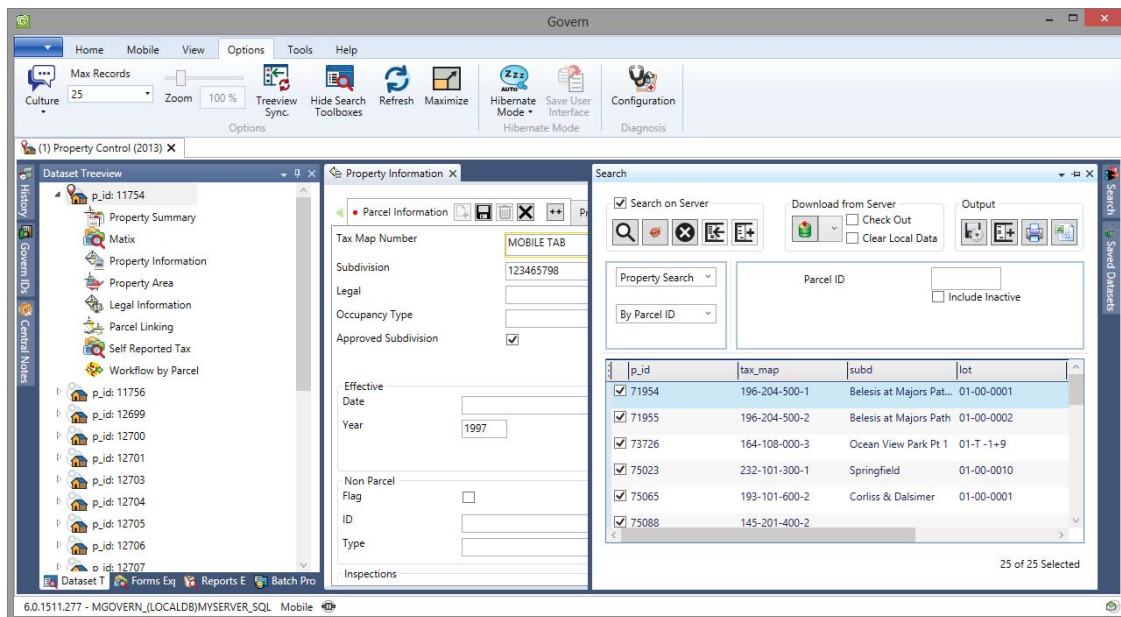


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Chapter 2: Using mGovern


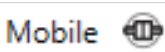
Overview


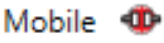


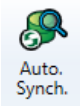



The mGovern application has the same look and feel as the Govern OpenForms data entry application. The user forms are the same and you can update records and work in both applications in the same manner. What differentiates the mGovern interface from Govern is the additional features for transferring property records and ensuring that the data in the mobile database are synchronized and consistent with the data in the main Govern database on the office server.



The information that is specific to mGovern is displayed under the **Mobile** tab in the Ribbon, additional visual cues on the Status bar.

The following table provides an overview of the icons that are specific to mGovern:

Description	Icon	Description	Icon
Connected (Ribbon)		Connected (Status bar)	

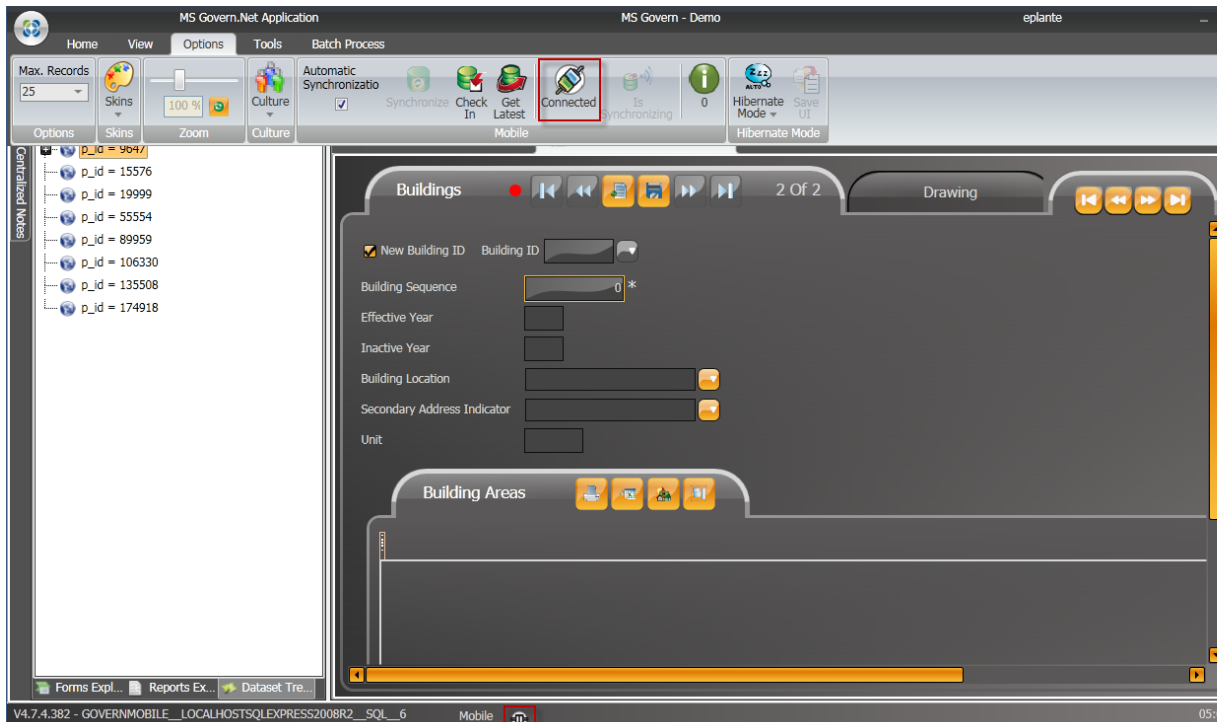
Description	Icon	Description	Icon
Disconnected (Ribbon)		Disconnected (Status bar)	
Messages (Ribbon)		Messages (Status bar)	
Automatic Synchronization		Manual Synchronization	
Get Latest (server updates on parcels not checked out)		Check In	



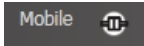
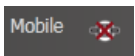
This section describes the following tasks in the order that they are typically performed:

- Viewing Connection Status on page 17
- Viewing Error and Informational Messages on page 18
- Performing es on ing for and Loading Parcels on page 21
- Saving a Dataset and Appending Data on page 22
- Checking Out Property Records on page 26
- Transferring Parcels on Transferring Property Records on page 27
- Synchronizing Data on page 29
- Checking In Data onChecking In Data on page 32

Viewing Connection Status

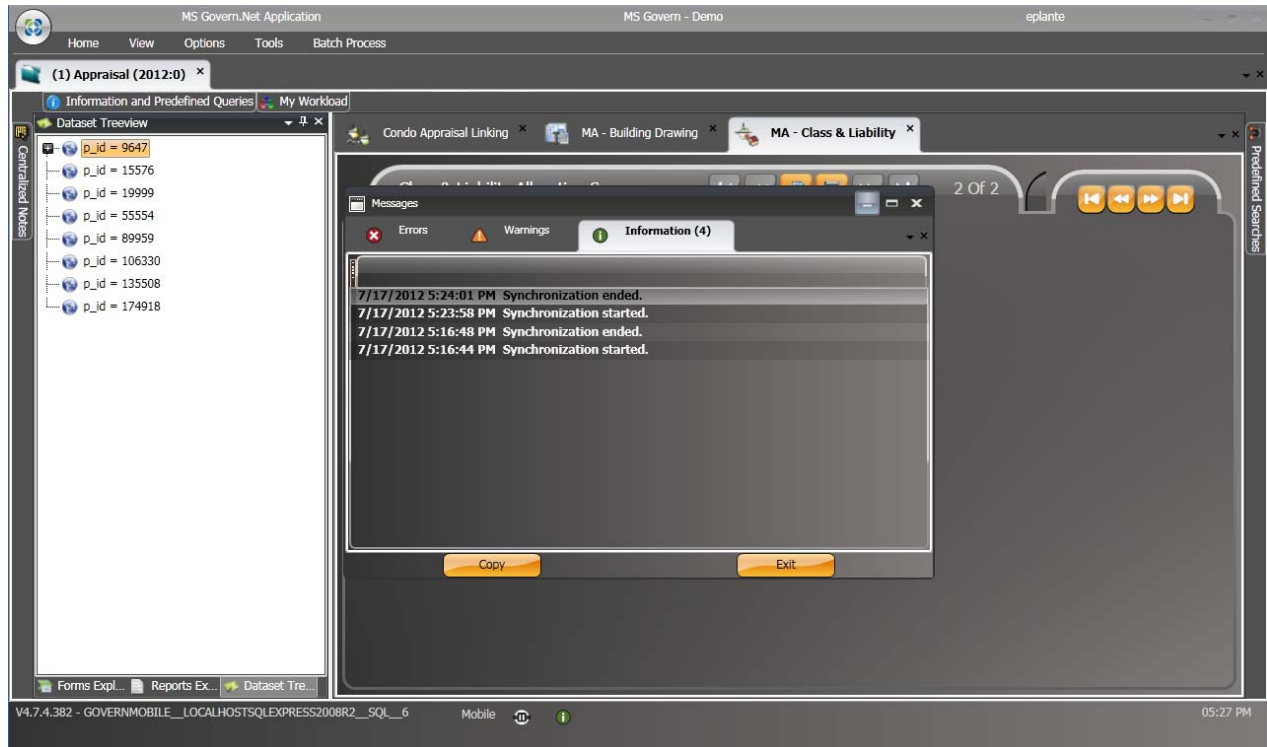
The *Connection Status* of the mGovern application is displayed on both the Govern Ribbon, under Options, and on the Status Bar.



- On the **Options** menu on the Govern Ribbon:
 -  The **Connected** icon is displayed in the **Options** menu of the ribbon when mGovern is successfully connected to the office server.
 -  The **Disconnected** icon is displayed in the **Options** menu of the ribbon when mGovern is disconnected from the office server.
- On the Status Bar beside the datasource connection key:
 -  The status indicator is white when the application is successfully connected to the office server.
 -  The status indicator is red when the application is disconnected from the office server.

Viewing Error and Informational Messages

Icons are displayed in the **Options** menu of the Govern Ribbon and on the status bar when errors and warnings occur or when there is new information about the synchronization.




mGovern Ribbon


To access the error messages from the Govern Ribbon:

1. Launch mGovern.
2. Select the **Options** menu on the Govern Ribbon.
3. Select the **Messages** icon

The **Options** menu displays an icon for each type of message that currently exists for the application and has not been read. From most to least severe, messages can be error, warning, or informational.

 Error Message icon

 Warning message icon

 Informational Message icon

mGovern Status Bar

To view the error and informational messages from the Status bar:

1. Launch mGovern.

An icon is displayed for each type of message that currently exists for the application and has not been read. This means that a maximum of three icons can be displayed on the Status bar.

For example, if all message types have been generated and none read, all three icons are displayed.



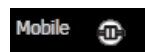
if informational and warning messages have been generated, but not error messages, or if the error messages have been read, the informational and warning message icons are displayed:



if informational messages have been generated, but not error or warning messages, or if the latter messages types have been read, only the informational message icons are displayed:



If no new, unread messages have been generated, no icons are displayed.

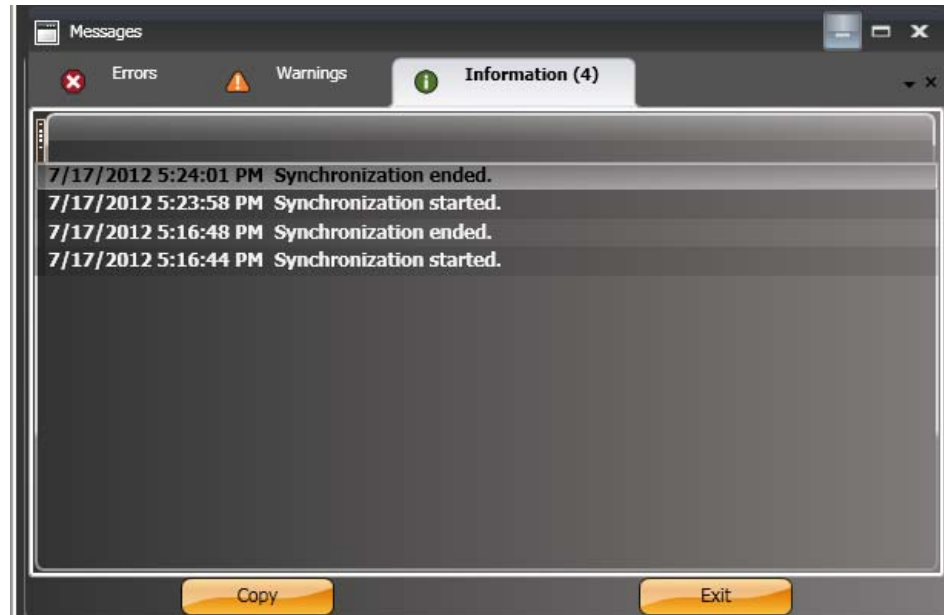


Reading Error Messages

To read the error and informational messages:

1. Launch mGovern.
2. Click on a message icon in the Govern Ribbon or on the status bar.

The Message screen opens to the type of message that corresponds to the icon that you selected:



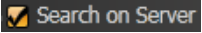
The number of messages generated for each type are displayed on the tab next to the message type.

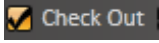
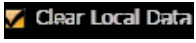


3. Click **Copy** to copy the messages to the Windows clipboard. You can then forward the message by e-mail or save it as required.
4. Click **Exit** to close the message screen.

ing for and Loading Parcels

You can perform a , using the Predefined screen as you would in Govern. The mGovern version has extra features and icons for transferring parcels between the main Govern database on the office server and the database on the mGovern.

These icons are used for performing the following tasks:

Option	Description
 Search on Server	on Server: Select the on Server option to perform a on the office server, in order to retrieve the parcels you require. This is the same as performing a in Govern.

Option	Description
	Check Out: Check out property records on the office server in order to lock them. When parcels are in Check Out, other users are unable to make modifications to them.
	Clear Local Data: Select this option to delete the data currently on the Mobile device. Tip: You can select this option at the same time that you transfer the data to the mobile database.
	Transfer Parcels: Download parcels from the Govern database on the office server to the database on the mGovern.
	Load Parcels: Load the parcels that you require for your Model, as you would in Govern. This adds the parcels to the Dataset Treeview.

Saving a Dataset and Appending Data

As in Govern, if you are using the same records multiple times, you can create a **Saved DataSet**. This can include records from multiple types of es and can be accessed at any time.

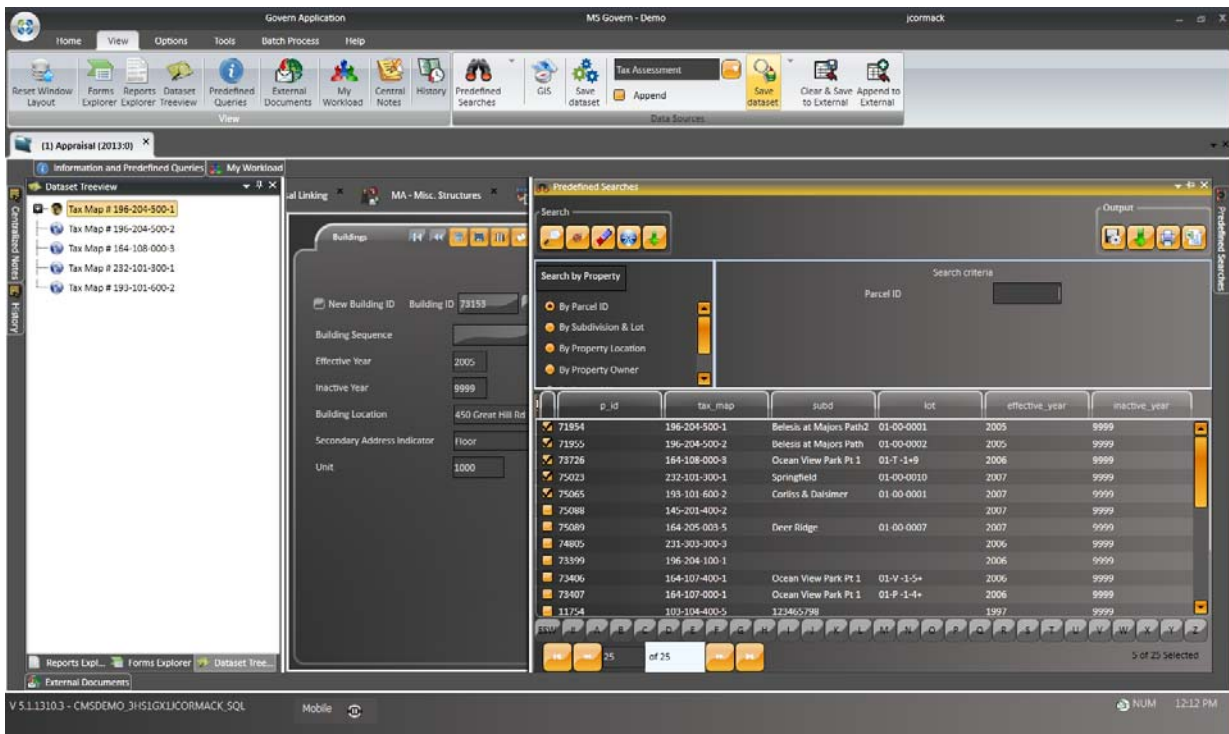
The procedures to save a dataset and append data to it are the same as those used in Govern OpenForms.

Once you create and save a dataset, you can perform a by that dataset and quickly retrieve the parcels you require from the office server.

Creating a Saved Dataset


To save a dataset:

1. Launch mGovern.
2. Open a Profile that includes the user forms you want to access.
3. Open the Predefined es pane and perform a .



4. Select the records to include in the dataset.
5. Load the records to the Treeview.
6. Open the **View** menu on the mGovern Ribbon.



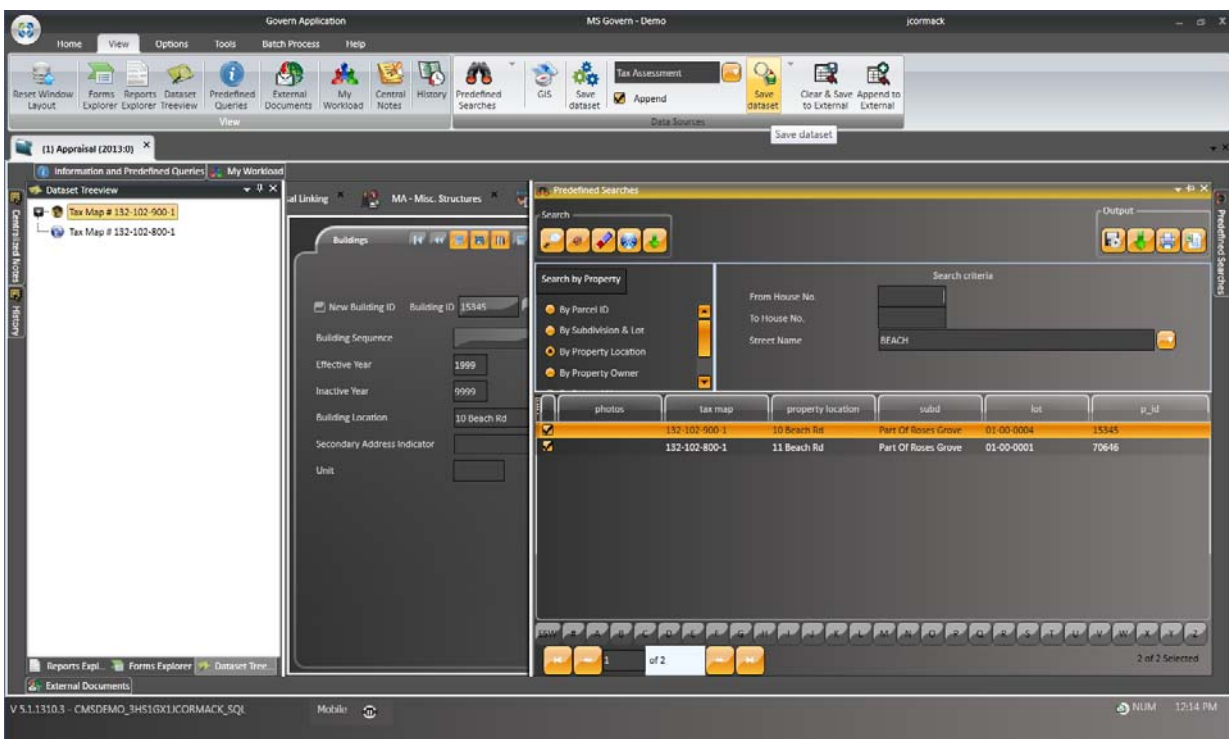
7. Enter a name for your saved dataset in the **Datasources** section of the menu.
8. Click the **Save Dataset** icon .

Appending Records to a Saved Dataset

You can add records to a dataset from one or multiple types.


To append records to a dataset:

1. Perform a new .
2. Load your records to the TreeView.



3. Open the **View** menu on the Govern Ribbon.
4. Select your dataset in the Datasources section.



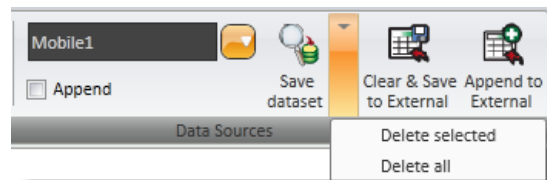
5. Select the **Append** checkbox.
6. Click the **Save Dataset** icon .

Deleting a Saved Dataset

You can remove one or all of your datasets using the icons in the Options menu.

To delete one or more saved datasets:

1. Launch mGovern.
2. Open a Profile and model.
3. Open the **View** menu on the Govern Ribbon.
4. Select your dataset in the Datasources section.



5. Click the arrow beside Saved Dataset to expand the menu.
6. Do one of the following:
 - Click **Delete Selected** to delete the selected dataset.
 - Click **Delete All** to delete all saved datasets.

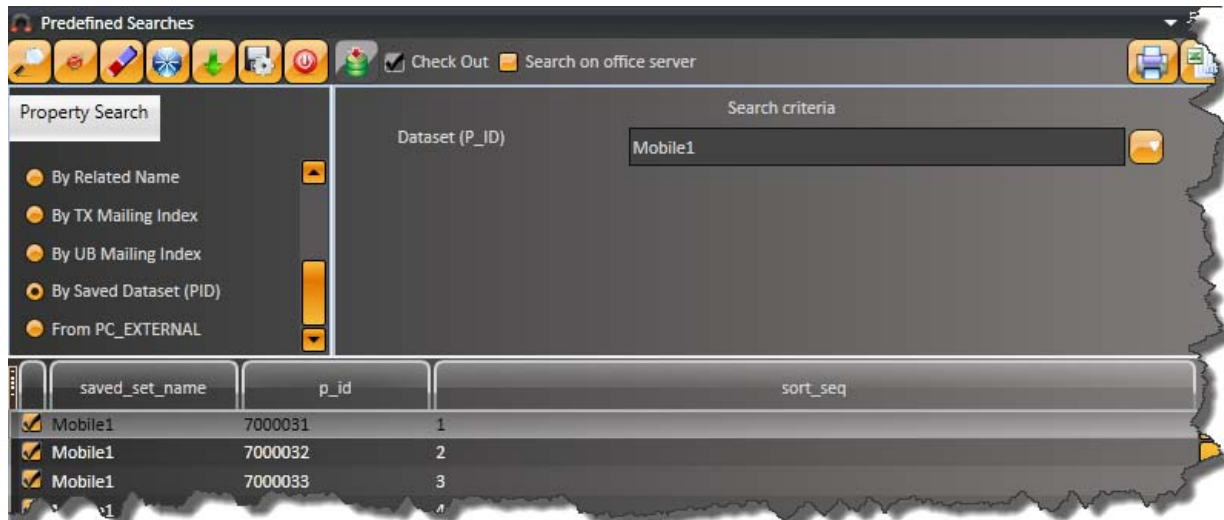
Performing a by a Saved Dataset


You can perform a **by Dataset** in order to retrieve parcels using a previously saved dataset.

To perform a by saved dataset:

1. Launch mGovern.
2. Open a Profile that contains the required user form.
3. Open the **Predefined** screen.

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4. Click on the Dynamic Group and select the group, such as **Property** .
5. Select **By Saved Dataset** .
6. Select your saved dataset from the **Dataset** drop-down list.
7. Click the icon 

The retrieved parcels are displayed under the Results.
8. If you do not require all the parcels, deselect the ones you do not want to load.
9. Click the **Load** icon to load your dataset to the Dataset Treeview.

Checking Out Property Records

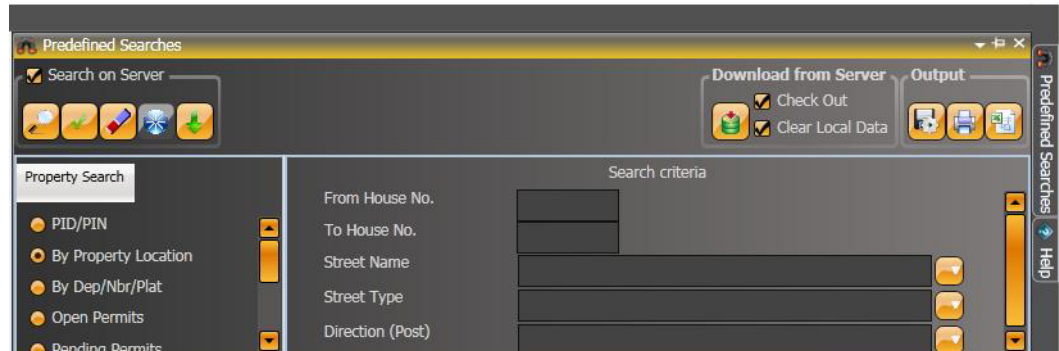
The purpose of Checking Out property records is to lock them on the main Govern database on the office server. When they are locked, the records can only be modified from the mGovern application.


This ensures that two people are not working on the same parcels in two different locations at the same time.

By default, the **Check Out** parameter is selected on the Predefined es window. The Check Out occurs when you transfer the parcels from the main Govern database to the mGovern database. *See Transferring Property Records on page 27.*

To perform a Check Out:

1. Launch mGovern.
2. Open the Predefined screen.



3. Select the Dynamic Group for the type of you want to perform, such as **Property Location**.
4. Enter your criteria.
5. Click the icon 

The retrieved parcels are displayed under the Results.

Transferring Property Records

The transfer makes a copy of selected property records on the Govern database located on the office server and adds them to the database on the mGovern device.




When you Check Out the transferred records, they are locked on the main Govern database on the office server. Other users are unable to make modifications to them.

To transfer property records:

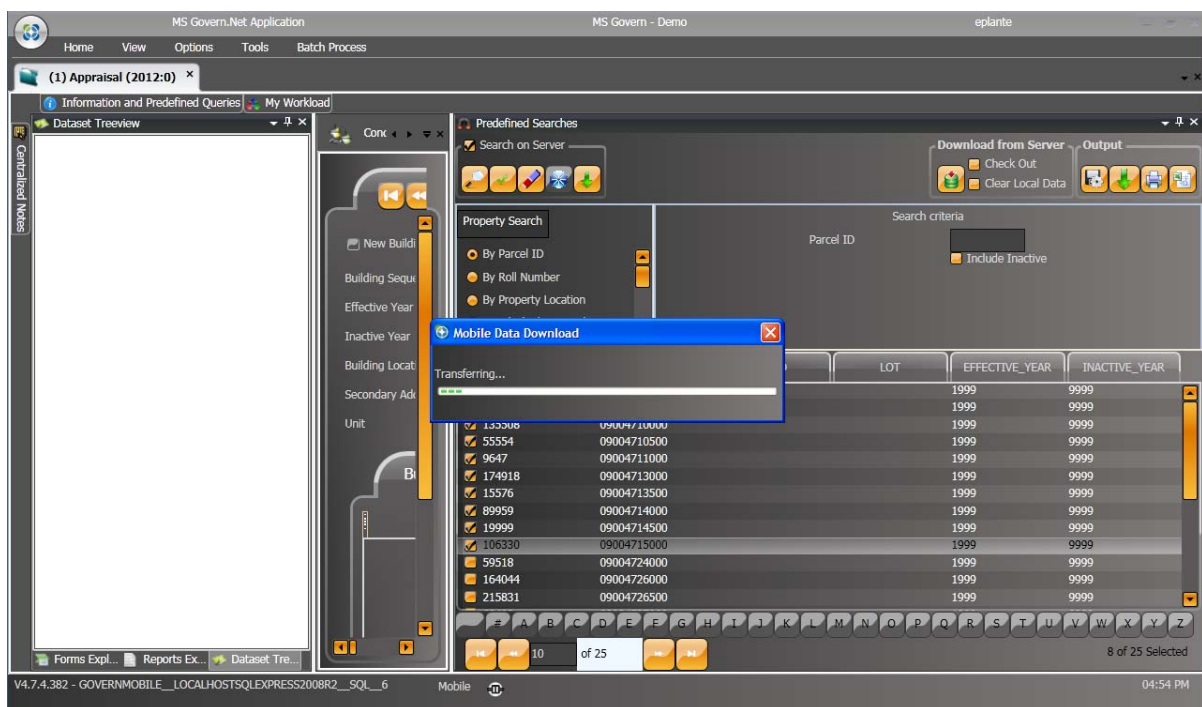
1. Launch mGovern.
2. Ensure that the mobile device is connected to the Govern database on the office server.

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The Connected icon is displayed in the Govern Ribbon under Options when mGovern is connected to the office server. See *mGovern Status Bar on page 20*.

3. Open the Predefined es.
4. Select the **on office server** check box  **Search on Server**.
5. Select the **Check Out** option  if you want to lock the parcels on the main Govern database on the office server.
6. Perform a for the required records.
7. Click the **Transfer Parcels** icon .

A progress bar indicates the progress of the transfer.

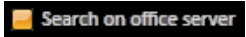


If the **Check Out** option is selected, property records are checked out, or locked, when the transfer to the mGovern database is performed.

Loading Property Records

Once property records are transferred to the mGovern device, you can load them to the Dataset treeview for the selected Profile.

To load property records:

1. Launch mGovern.
2. Transfer property records to the Mobile device as described under *Transferring Property Records on page 27*.
3. Open the required Profile, Model, and user form.
4. Open the Predefined es.
5. Deselect the **on office server** check box .
6. Perform a to retrieve records from the records that you transferred to the mGovern database.
7. Select the property records that you want to load in the results.
8. Click the **Load** icon.

Synchronizing Data

When you synchronize the data, the changes that you make to the property records on the mobile device are transferred back to the main Govern database on the office server.

At the same time, running Data Synchronization ensures that the data in the mGovern database are consistent with the data in the main Govern database on the office server.

Data synchronization does not transfer changes made on the main Govern database to the mGovern database.

If there are conflicts; for example, if there are differences in a property record, three level of messages are displayed in the messages window.

- **Error:** Error messages indicate that an error has occurred and that the data were not synchronized. The following is an example:
`2/22/2012 10:10:13 AM The synchronization completed successfully on the server, but an error occurred when updating your local database. You will need to re-download the data from the server...`
- **Warning:** Warning messages identify the records where the conflicts occurred. The following is an example:
`2/22/2012 10:10:13 AM The record could not be updated on the server because it has already been modified by`

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someone else OR it doesn't exist anymore. Table:
PC_PARCEL, Id: P_ID=7000064

- **Information:** Informational messages provide additional details. The following is an example:
IMPORTANT: The records that were not updated will stay out of sync until you re-download the data from the server. Then you will need to redo this changes. 2/22/2012 10:10:13 AM Synchronization started.

If an error, warning, or informational message is generated, the icons on the mGovern status bar and Options menu change to show this information: See *Viewing Error and Informational Messages on page 18*.

Errors could occur if, for example, you did not *Check Out* the data on the main Govern database. Checking Out the data is the best practice. It locks the records so that no else can make modifications to them. If you did not Check Out the data, changes could be made to the records on the main Govern database. Any changes that you made to the property records on mGovern would be transferred to the main Govern Database; however, changes made on the main Govern database would not be transferred to the mGovern database.

For example, if you changed the **Effective Year Built** on a Miscellaneous Structures record and at the same time, some one else updated the **Condition Code** for the same record, the Effective Year Built would be updated on the main Govern database when you synchronized the data. However, the Condition Code would not be updated on the mGovern database. You would need to download the record from the main Govern database again in order to be up to date. When you download the record again, both changes;i.e, the new Effective Year Built and the new Condition Code, would be transferred to the database for the mGovern application.

Synchronization Options

Synchronization options and information are displayed on the **Options** menu on the mGovern Ribbon in the **Mobile** section.



They include the following:

- Automatic Synchronization
- Manual Synchronization
- Is Synchronizing
- Check In

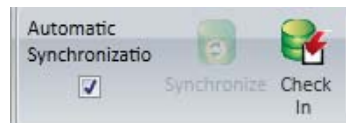
Automatic Synchronization

Automatic Synchronization ensures that the main Govern database and the mGovern database are kept consistent as long as the mobile device is connected to the Govern server. If there are conflicts; for example, if there are changes to a property record on the office server, error messages are displayed in the message window. *See Viewing Error and Informational Messages on page 18.*

It is recommended to keep Automatic Synchronization running when you are running mGovern and are connected to the main Govern database on the office server. This ensures that your modifications are updated.

To run Automatic Synchronization:

1. Launch mGovern.
2. Ensure that the connection between databases is successful.
3. Open the **Options** menu on the mGovern Ribbon.



4. Select the **Automatic Synchronization** option.

Manual Synchronization

You can run the Manual Synchronization at any time that you connect the mobile device to the main Govern database. Running the manual synchronization ensures that the data in both databases are up-to-date and that you are aware of any conflicts.

If there is a conflict; for example, if there are differences in a property record, error messages are displayed in the message window. *See Viewing Error and Informational Messages on page 18.*

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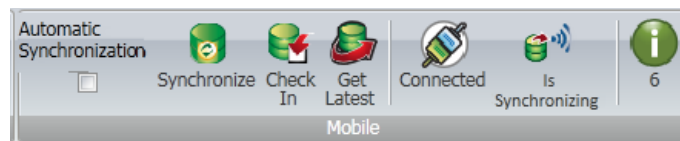
When you are running mGovern and are connected to the main Govern database on the office server, it is recommended to keep Automatic Synchronization running. This ensures that you are aware of any conflicts.

To run the Synchronization manually:

1. Launch mGovern.
2. Ensure that the connection between databases is successful.
3. Open the **Options** menu on the mGovern Ribbon.
4. Deselect the **Automatic Synchronization** option.



5. Select **Synchronize**.



The **Is Synchronizing** icon is activated during the process.

Checking In Data

When the data are synchronized, you can perform the Check In. This removes the lock on the property records that was put in place when you performed the Check Out.

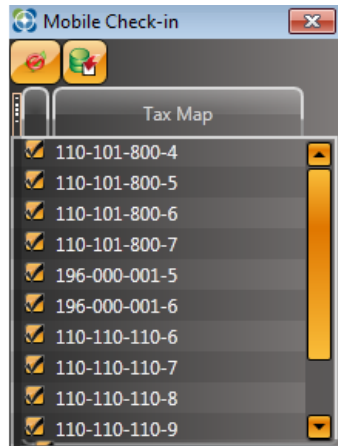
To perform a Check In:

1. Launch mGovern.
2. Ensure that mGovern is successfully connected to the main Govern Database.
3. Run an Automatic or Manual Synchronization.
4. Open the Options menu on the Govern Ribbon.

5. Click the **Check In** icon.



The following screen is displayed.



6. Select the property records that you want to Check In to the main Govern database.

7. Click the **Check In Selected Records** icon .

Once the Check In is performed, the property records are no longer locked on the main Govern database on the office server. You can continue to work on the property records on mGovern. You can also continue to run Data Synchronization. The modifications that you make to property records are transferred to the main Govern database when they are synchronized. However, errors are generated if modifications are made to the records on the main Govern database. Records on the mGovern are not updated.

Typical Workflow

When working with the mGovern application, you would normally proceed as follows:

In the Office

1. Connect the mobile device to the main Govern database.
2. Launch the mGovern application.
3. Verify the application is successfully connected.
4. Open the **Predefined** screen on the mGovern.
5. Select the **on Server** option.

6. Perform a to retrieve the required parcels.
7. Select the **Check Out** option.
8. Transfer the parcels to the mGovern database.
9. Select the **Automatic Synchronization** option until you are ready to disconnect the device.

In the Field

1. Open the user form you require in mGovern.
2. Update the records as required.
3. Continue to run the Automatic Synchronization if you are connected to the Govern database. This ensures that your modifications are backed up on the server and that you are aware of any conflicts.

Back in the Office

1. Launch mGovern.
2. Run the Automatic or Manual Synchronization to transfer your record updates to the main Govern database on the office server.
3. Check In the records to unlock them; so, that you can work on them in Govern.

APPENDIX A: Temporary Database Options

SQL Express LocalDB

The purpose of the SQL Express LocalDB is to provide a local environment that is easy to install and manage. Users should note that the LocalDB environment does not require the installation of a service or any security configuration. When installed an instance of the LocalDB runtime can be started as needed. SQL Express LocalDB can be downloaded from the Microsoft Website. Follow the instructions to install, then start an instance of the database server. For our example the LocalDB server instance will be mySERVER, and the temporary database is called mGOVERN.

After installing the SQL Express LocalDB open a command prompt...

Starting the LocalDB server

1. At the command prompt, type the following: **rootDRIVE:\> SqlLocalDb start "mySERVER"** or
rootDRIVE:\> SqlLocalDb create "mySERVER" -s

Result: LocalDB instance "mySERVER" started.

Stopping the LocalDB server

To stop and delete an instance, you can issue the following two commands:

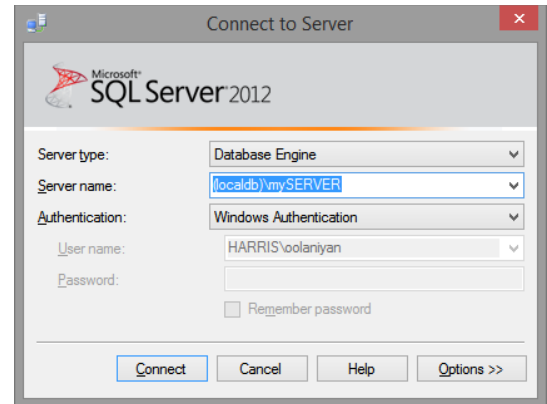
1. C:\> SqlLocalDb stop "mySERVER"
2. C:\> SqlLocalDb delete "mySERVER"

As there is no graphical user interface to connect to the LocalDB, a freely downloadable application like *Microsoft SQL Management Studio Express* can be installed on the mobile unit. Likewise the full Microsoft SQL Server Management Studio may also be used for the "front end".

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To Connect to the server using the Management Studio:

1. Click connect.
2. At the **Connect to Server** prompt, enter the server name as follows:
(localdb)\mySERVER
mySERVER is the name of our server instance.
3. When connected to the database, create the temporary database.



Advantage of using SQL Express LocalDB

This alternate method of managing the temporary database has the advantage of having the same instance for the source and the mobile database. It is unlikely that all users will configure SQL Server in the same manner. Issues can arise as a result of differing instances between the server hosting the source database and the mobile client.

APPENDIX B: Troubleshooting

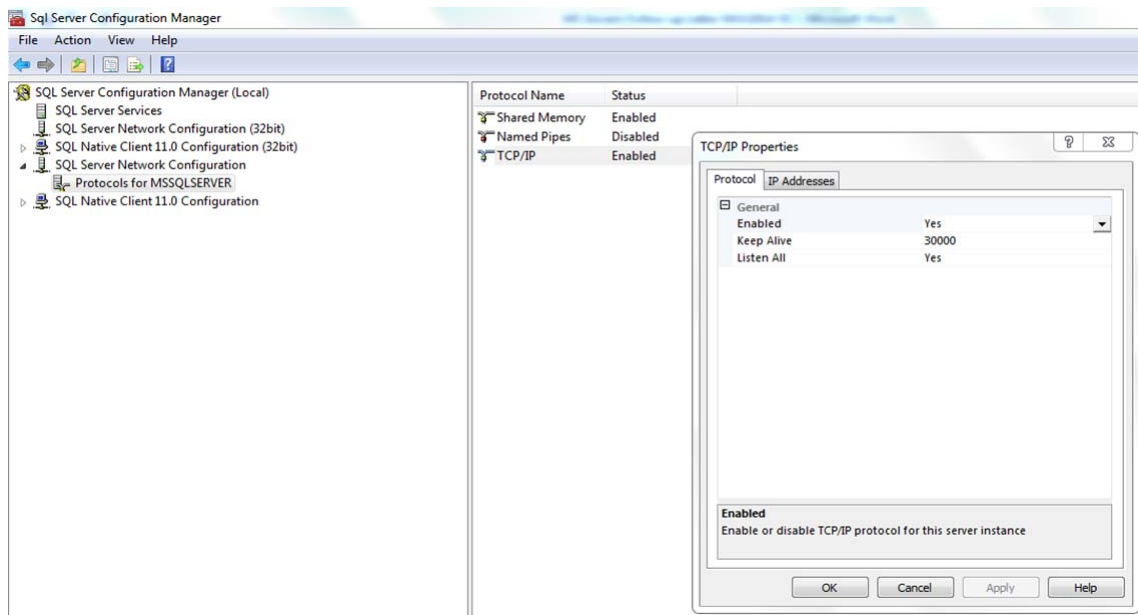
Introduction

As indicated earlier in this manual the usual issues that are encountered with installing and configuring the mGovern application are often related to permissions or access rights. The following are known issues with a “work-around” for commonly encountered issues.

Installations on Microsoft Surface Pro Tablet

SQL & Firewall Setups for Mobile Surface Access

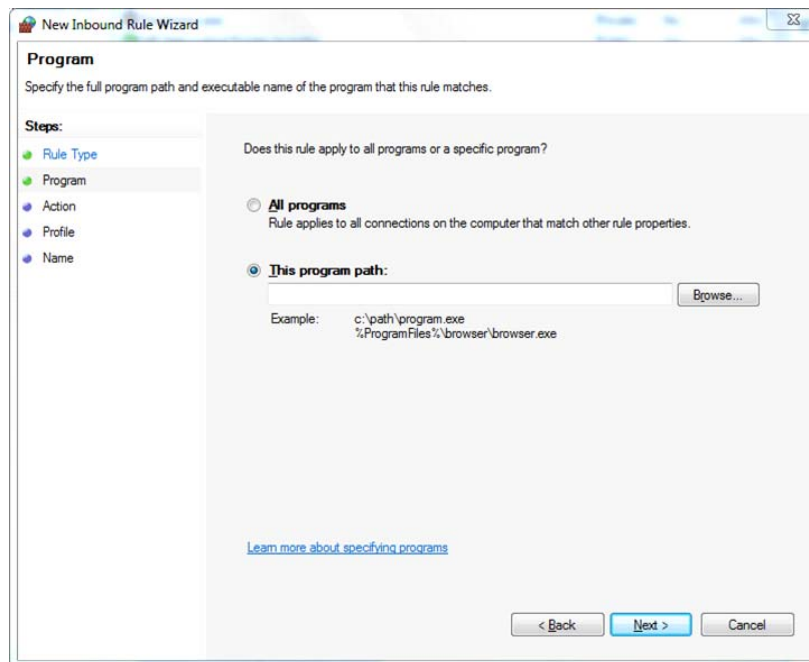
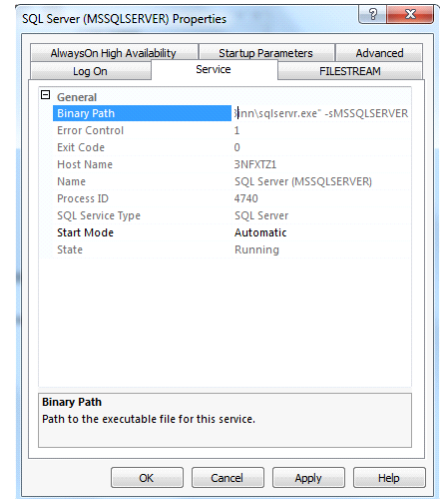
1. Launch SQL Server Configuration Manager
2. Go to “SQL Server Network Configuration”
3. Go To “Protocols for MSSQLSERVER”
4. Ensure that TCP/IP is Enabled as indicated below:



5. Go to “SQL Server Services”
6. Double Click on “SQL Server (MSSQLSERVER)”

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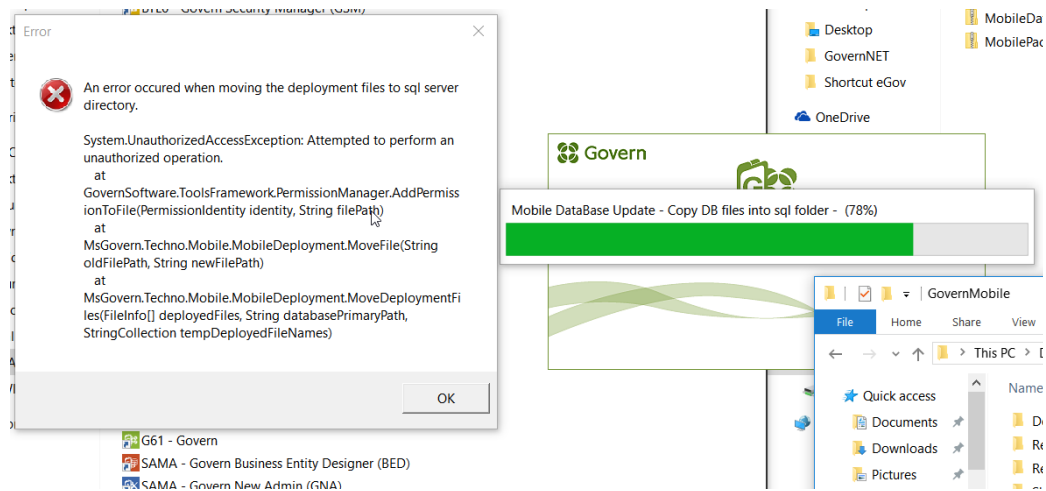
7. Go to “Service” Tab
8. Note the VALUE of the Binary Path as indicated here.
9. Launch Control Panel
10. Select Administrative Tools
11. Select “Windows Firewall with Advanced Security”
12. Right Click on “Inbound Rules” and Select “New Rule”
13. Keep “Rule Type” as Default – Click Next
14. Type the Path identified in STEP 5 ABOVE “C:\Program Files\Microsoft SQL Server\MSSQL11.MSSQLSERVER\MSSQL\Binn” and click **Next**.



15. Maintain Defaults in ALL other windows when you click **Next**.

A Note about Permissions

In Windows, access to a folder on a file server is determined through two sets of permissions, the share permissions set on a folder and the permissions set by NTFS (which can also be set on files). What is relevant here is that Share permissions and NTFS permissions are independent, i.e. neither one changes the other. The final access permissions on a shared folder are determined by taking into consideration both the share permission and the NTFS permission entries. The more restrictive permissions are then applied. Knowing all this then, it is critical to. Therefore, when a message like the following is displayed, it is possible that the issue is related to a shared folder.



Empty Search Combo Boxes on Remote Deployments

When a Mobile deployment is remote in the field, i.e. away from local the home database that it synchronizes with, combo boxes that are populated by (Table: NA_NAMES) or (Table: PC_ADDRESS) search queries could result in empty combo boxes. This behavior has been observed with queries that may use the SQL SELECT DISTINCT statement:

Ex.: SELECT DISTINCT <columnName> FROM NA_NAMES; or SELECT DISTINCT <columnName> FROM PC_ADDRESS;

These types of queries are valid, the queries are by design intended to search on the Parent or Local Database. The understanding is that the Local but should be executed when the mobile deployment is connected to the home/main database.

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Explanation: The combos should be populated by selecting the Search on Server option to search the Parent/Home database while the Mobile deployment is docked at the office, and the Search on Server option is available. When the deployment is on the road, the child/remote database becomes the Local database. The search combo boxes will now be populated with the required data records.

Tip: As a Best Practice for successful use of mGovern while in Remote Mode, i.e. away from the office, users should include as a part of their planning schedule, a process to pre-load searches with the names and addresses of locations that will be visited. This should be done while at the office. When a search is performed with the **Search on Server** option selected, the combo's will be populated by pre-fetching the parcels from the LOCAL/Home database. As a result of this process when you are remote your search results for the parcels will

