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RFgen Server and Console Install and Upgrade Guide

Mobile Unity Platform, Mobile Development Studio, Transaction Manager, User Management Console, and Enterprise Dashboard

All Editions
RFgen 5.2

Table of Contents

Introduction

RFgen's Mobile Unity Platform™ provides software programs that enables database management systems and Enterprise Resource Planning (ERP) system users to:

- Easily develop advanced Radio Frequency data collection (RFDC) applications
- Deploy RFDC applications to mobile devices
- Collect and transact data while connected to or disconnected from the network
- Manage and monitor the server, ERP connections, RFgen clients/users, and transaction processes.

This document covers the installation and upgrade procedures for the:

- Mobile Development Studio
- Mobile Unity Platform™
- Mobile Enterprise Dashboard
- Transaction Management Dashboard
- User Management Console

The **Mobile Unity Platform** is a session enabler and manager that allows data collection devices to interact with the databases or (optionally) with legacy /Host screens and ERP packages in multi-user/pooled connection mode. Management of services, devices, users, transactions as well as other administrative functions are controlled from various consoles and dashboards. Access the RFgen server is through the RFgen Mobility Unity Platform Services console.

The **Mobile Development Studio** is graphical and script-based solution for rapid development, test, deployment and management of wireless, data collection solutions (mobile applications). The Mobile Development Studio system is structured to interface with systems using ODBC/SQL, Host Screen Mapping protocols, XML, and select ERP packages. Development of applications is described in the next section under Solution Designer.

The **Team Foundation Server Integration** is automatically installed with the Mobile Development Studio. If installed using the Team Foundation Server Integration, it must be installed on the same system where your Mobile Development Studio is installed. It also uses the same installer as the Mobile Unity Platform/Mobile Development Studio.

The **Mobile Enterprise Dashboard**, **Transaction Management Dashboard**, and **User Management Console** help you monitor your connected sessions, transactions, and users respectively. These dashboards can be downloaded for installation from the RFgen portal and use the same installer as the Mobile Unity Platform/Mobile Development Studio.

The **RFgen Mobile Client**, **Windows CE Client**, and **Windows Desktop** software enables your devices to communicate with the RFgen server in online mode (Thin client) and online/offline mode (Mobile client). They also help the server discover RFgen clients on the network. The RFgen Mobile Client products require a download of the packages from the RFgen portal (for Windows CE or Windows Desktop), GooglePlay (for Android) or iOS(for iOS).

For installation documentation on RFgen client products, you can download the guides from the online help home page which can be accessed from any of the installed products listed above.

Server Supported Platforms

Windows Servers 2008, 2012, 2016, and 2019.

(Also, compatible with Windows 7, 8, and 10)

Downloading the RFgen Server Software

1. Go to RFgen.com
2. At the top right of the website, click on **Login**.
3. A user account is required to download products. If you do not have an account, please register, click on "Don't have an account" and fill in the form.
4. Once you are done, log again.
5. Select **Resources > Product Portal** from the menu.
6. Click on **Product Downloads** tile. (Its the first tile on the page).
7. On the **Product Downloads** page, you can download older versions of RFgen products from the **RFgen Version Downloads** menu (right side of the page) or click on the **Download Version 5.2** link at the bottom of the page.

Which package should I choose?

The **Mobile Unity Platform** package automatically installs these products. You can also personalize your install and only install products you want.

- Mobile Unity Platform (RFgen Server) and Console
- Mobile Development Studio
- Mobile Enterprise Dashboard
- Transaction Management Dashboard
- User Management Console

Client Installations

To select the RFgen client software for a device platform, use the RFgen Version Downloads menu. For more details on installing the client software, refer to the documentation for the platform (Android, iOS, Windows Desktop, or Windows CE).

Minimum Hardware Requirements Per Server

The following requirements will support install of the Mobile Unity Platform/Console and the Mobile Development Studio, Mobile Enterprise Dashboard, Transaction Management Dashboard, and User Management Console on the same server.

Processor - 2 GHz or better; Intel or AMD chip

Memory – See Memory Requirements by Connection Type below.

Hard Drive - An RFgen installation can use up to 500 megabytes of hard drive space depending on how many options are installed.

BEST PRACTICE - RFgen recommends the purchase of a Development and/or Test Server to only be used for application development and testing purposes. The configuration of the Development/Test Server would follow the same requirements describe above.

If installing a server to be dedicated to Transaction Management, the minimum is also the same as above.

See Also: ERP Connection Requirements.

Memory Requirements by Connection Type

ERP or System	RFgen Server	Client Per-Connection	Database Connection	Screen Mapping	Per ERP Connection
Deltek CostPoint	15 MB	10 MB	10 MB	NA	NA
General Connectivity/Legacy Systems	15 MB	10 MB	10 MB	25 MB	NA
Oracle E-Business Suite	15 MB	10 MB	10 MB	NA	NA
Oracle JD Edwards	15 MB	10 MB	10 MB	25 MB	100 MB
Oracle SCM	15 MB	10 MB	NA	NA	NA
SAP	15 MB	10 MB	NA	NA	30 MB

Notes:

Deltek CostPoint	Deltek CostPoint uses a Web Service object in place of an ERP Connection and the memory usage by the web service is nominal.
General Connectivity & Legacy Systems	If your data connector is setup for Connection Pooling (a licensed database connection shared by multiple clients), each pooled connection would use approximately 10 megabytes. To estimate your memory requirements, multiply the total number of pooled connections by 10. For example, 5 pooled connections would require approximately 50 megabytes. If Connection Pooling is disabled, each active client would have its own connection, and each connection would use approximately 10 megabytes. To estimate your memory requirements, multiply the total number of client connections by 10. For example, 5 client connections would require approximately 50 megabytes.
Oracle JDE	If your JDE is setup for Connection Pooling, (a single licensed database connection shared by multiple clients), each pooled connection would use approximately 100 megabytes. To estimate your memory requirements, multiply the total number of pooled connections by 100 megabytes. For example, 5 pooled connections would require about 500 megabytes of memory. If Connection Pooling is disabled, each client would have its own connection, and each connection would use approximately 100 megabytes. To estimate your memory requirements, multiply the total number of client connections by 100 megabytes. For example, 5 client connections would require approximately 500 megabytes of memory.
Oracle EBS	If your ERP is setup for Connection Pooling (a licensed database connection shared by multiple clients), each pooled connection would use approximately 10 megabytes. To estimate your memory requirements, multiply the total number of pooled connections by 10. For example, 5 pooled connections would require approximately 50 megabytes. If Connection Pooling is disabled, each active client would have its own connection, and each connection would use approximately 10 megabytes. To estimate your

	memory requirements, multiply the total number of client connections by 10. For example, 5 client connections would require approximately 50 megabytes.
Oracle SCM Cloud	If your data connector is setup for Connection Pooling (a licensed database connection shared by multiple clients), each pooled connection would use approximately 10 megabytes. To estimate your memory requirements, multiply the total number of pooled connections by 10. For example, 5 pooled connections would require approximately 50 megabytes. If Connection Pooling is disabled, each active client would have its own connection, and each connection would use approximately 10 megabytes. To estimate your memory requirements, multiply the total number of client connections by 10. For example, 5 client connections would require approximately 50 megabytes.
SAP	If SAP is setup for Connection Pooling (a licensed database connection shared by multiple clients), each pooled connection would use approximately 30 megabytes. To estimate your memory requirements, multiply the total number of pooled connections by 30. For example, 5 pooled connections would require approximately 150 megabytes. If Connection Pooling is disabled, each active client would have its own connection, and each connection would use approximately 30 megabytes. To estimate your memory requirements, multiply the total number of client connections by 30. For example, 5 client connections would require approximately 150 megabytes.

Licensing Requirements

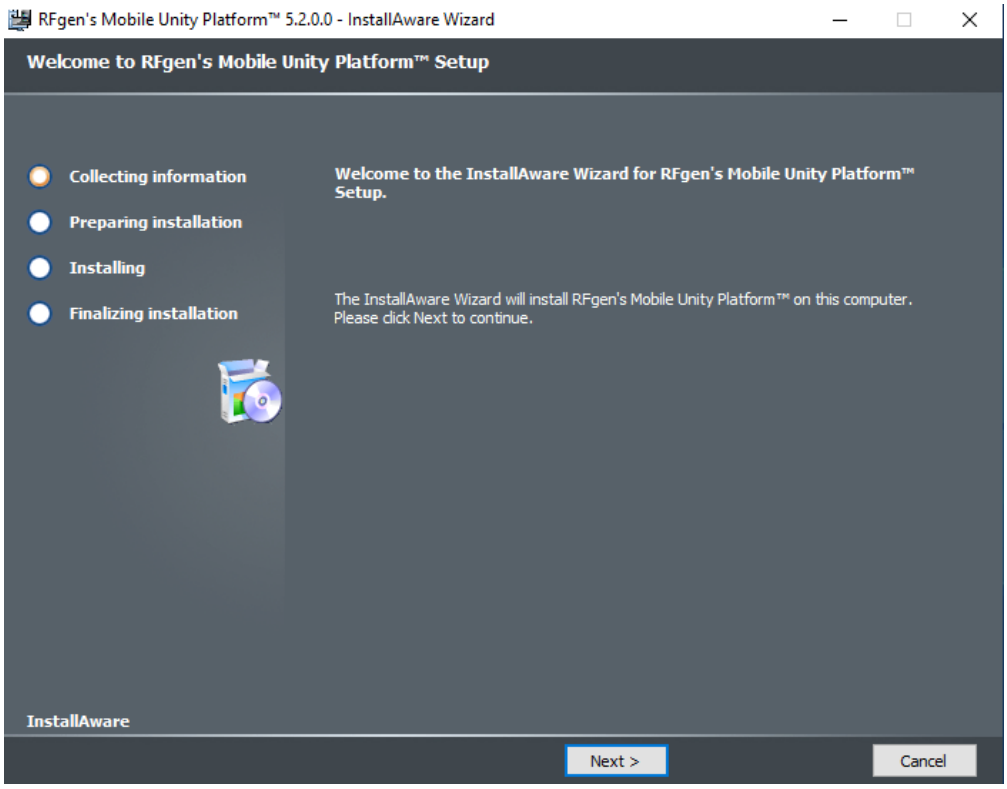
RFgen 5.2 requires a 5.2 license and authorization code on the server where you will be upgrading and/or running the Mobile Unity Platform and/or RFgen Mobile Development Studio. Contact RFgen Support for assistance. This requirement applies to test servers and trial servers.

Installing RFgen

The RFgen's Mobile Unity Platform.exe installs all the RFgen products except the RFgen clients.

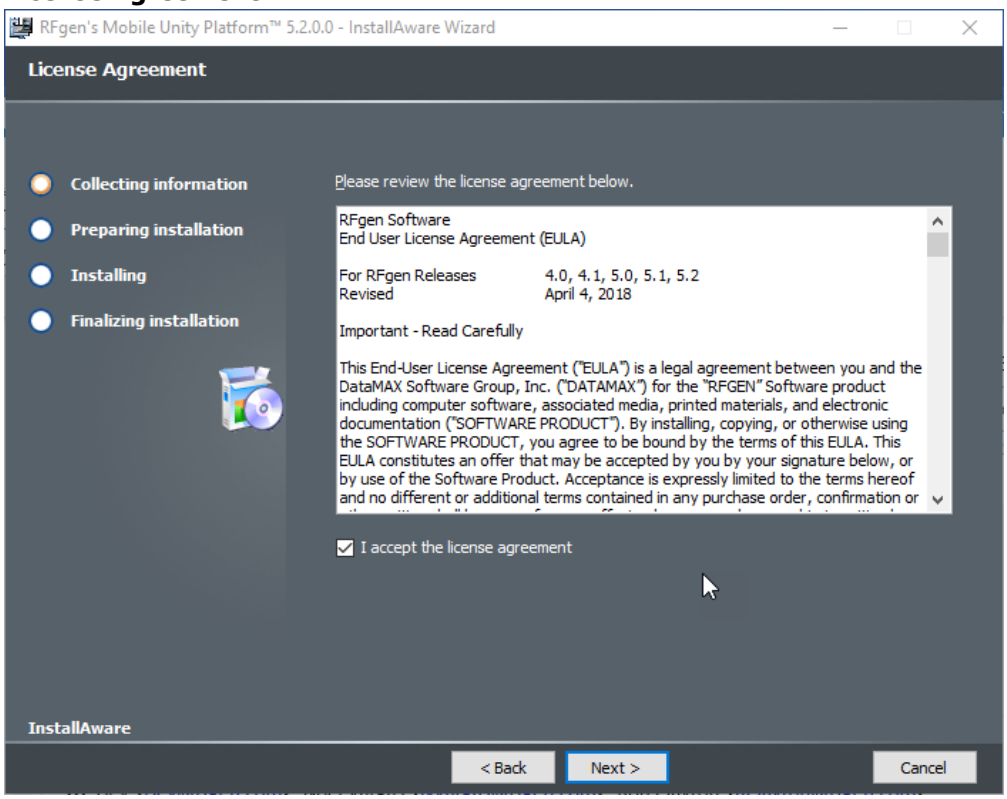
To get started, simply click on RFgen's Mobile Unity Platform.exe or Mobile Development Studio.exe. The Welcome screen displays.

Welcome Screen



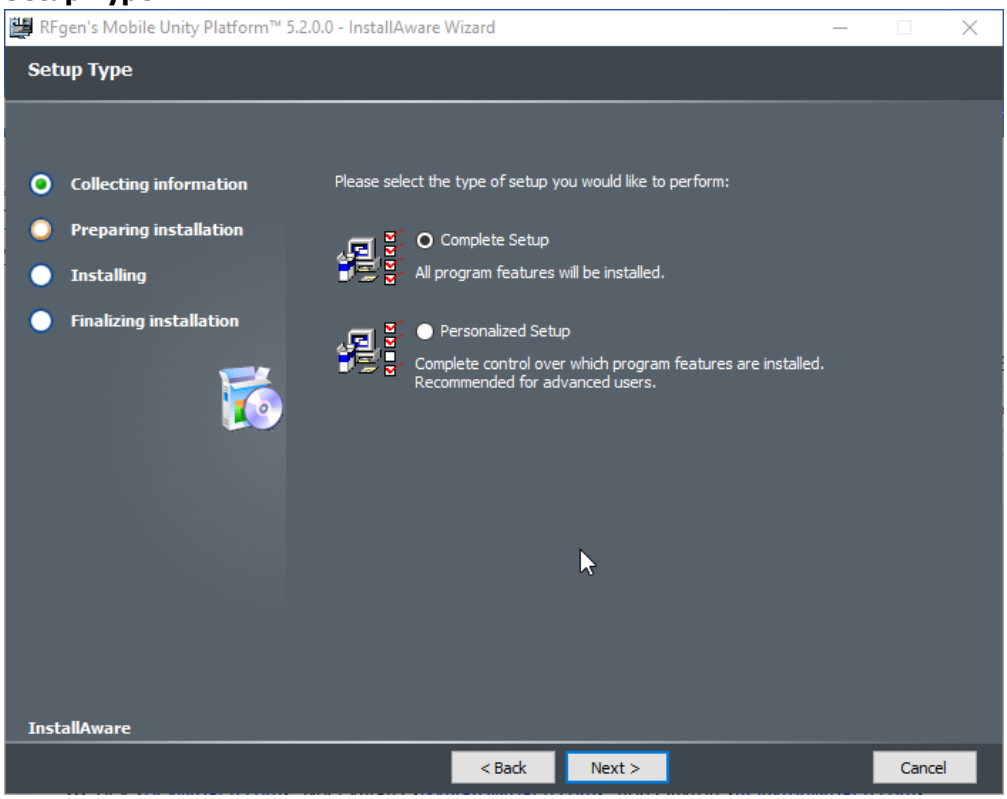
Click **Next** to continue or **Cancel** to exit the app.

License Agreement



If you are installing RFgen for the first time, this screen displays. Click the "I accept the license agreement" then click **Next** to continue.

Setup Type

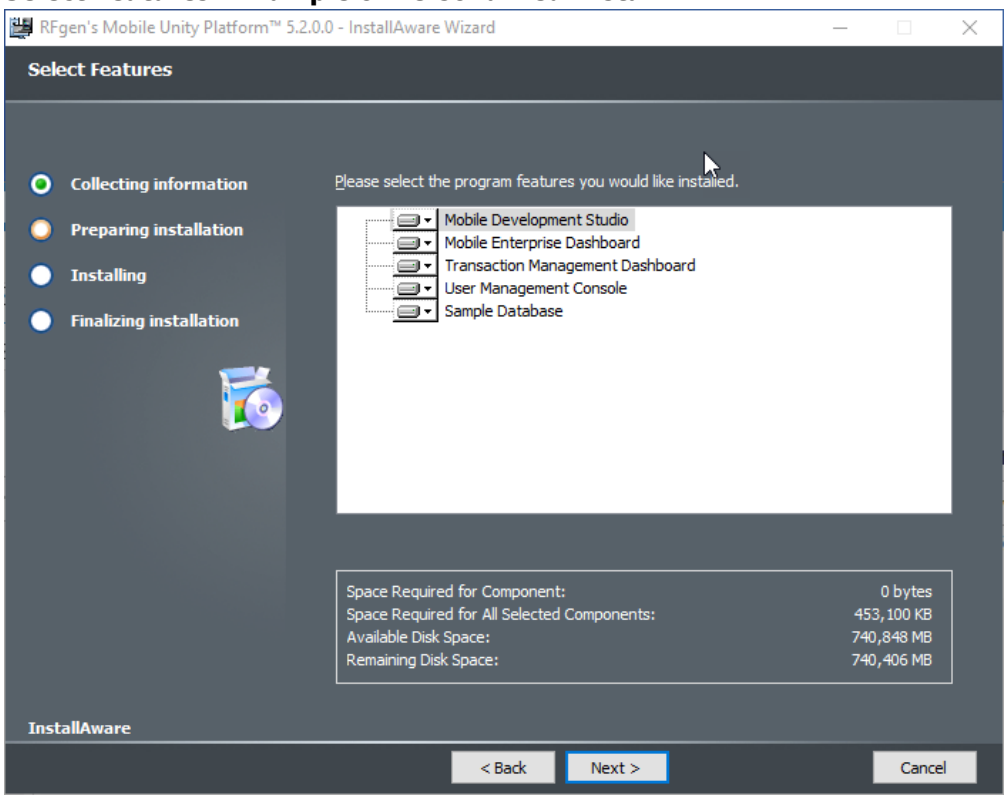


This screen enables you to select the specific RFgen product you want to install in addtion to the RFgen server.

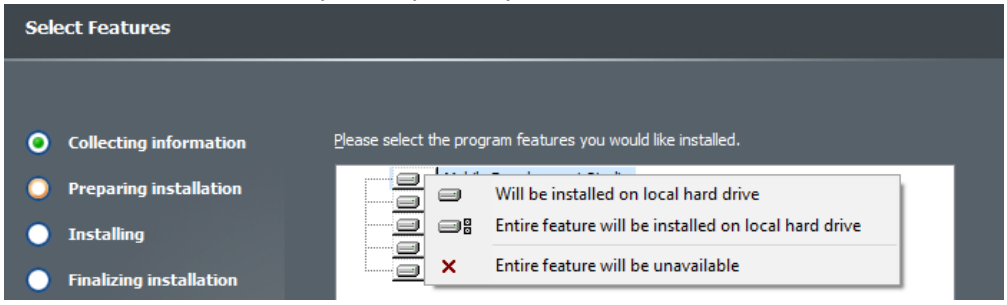
- *Complete Setup* installs all products -- Mobile Unity Platform Server/Console, Mobile Development Studio, Enterprise Dashboard, Transaction Management Dashboard, or the User Management Console.
- *Personalized Setup* -- Use this feature to OMIT products you do NOT want installed.

If you select Complete Setup and click Next, this takes you to the Destination folder.

Select Features - Example of Personalized Install



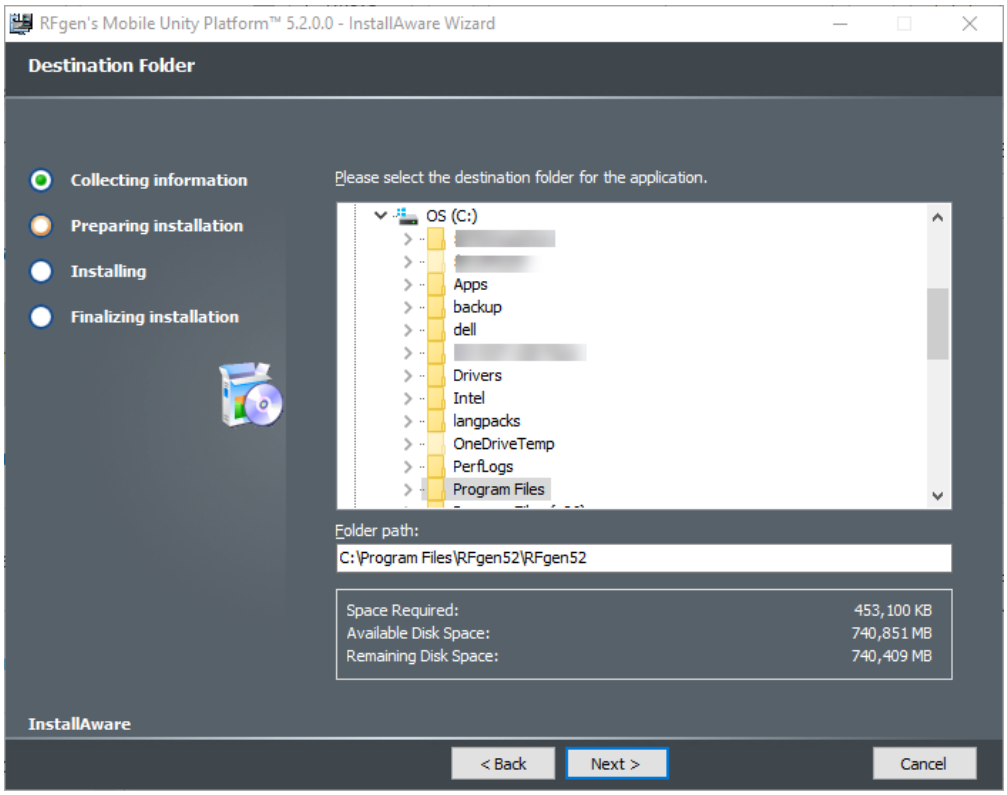
If you selected *Personalized Setup* in the prior step, you can select the product and/or Sample Database to be installed. Note that the specific space requirements are also described.



When you click the down arrow, the options "Will be installed on local hard drive" and "Entire feature will be installed on local hard drive" will yield the same results. If you select "Entire feature will be unavailable" this will prevent it from being installed.

Click **Next** to continue.

Destination Folder



If you are installing the 64-bit version or x86-bit version, the installer defaults to these locations respectively:

`\Program Files\RFgen52 or \Program Files (x86)\RFgen52`

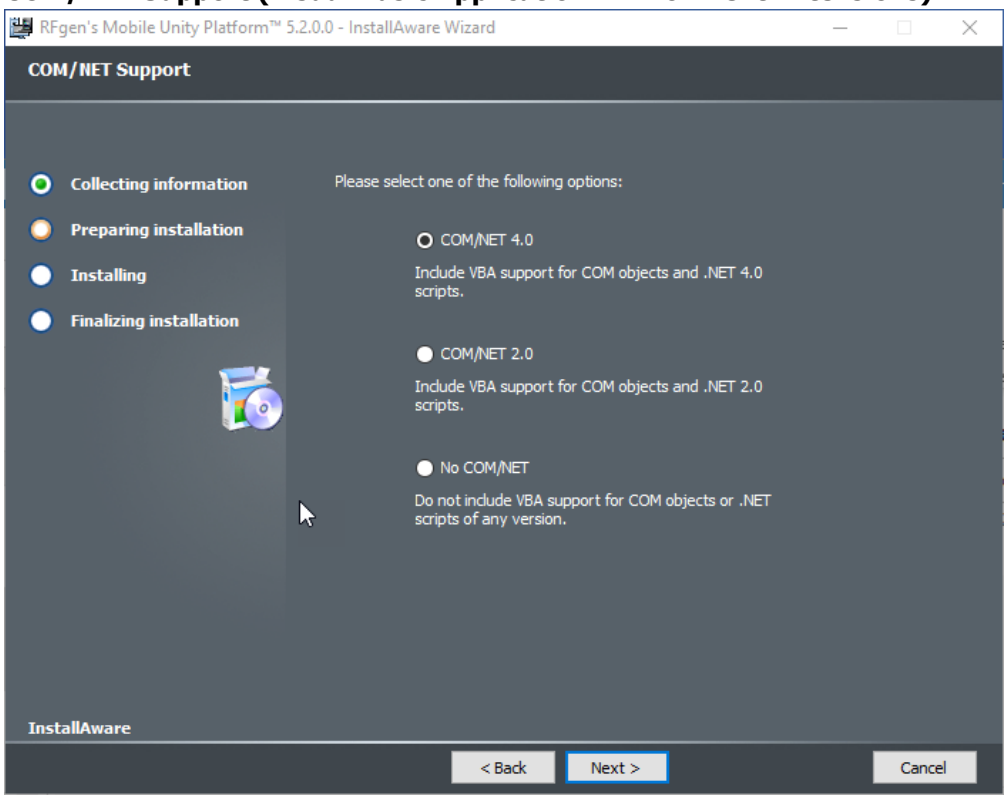
The default database (RFgen.db) installs to:

`C:\ProgramData\RFgen52`

You can customize the destination by editing the path in the Folder Path field.

Click **Next** to continue.

COM/NET Support (Visual Basic Application Environment Extensions)



The COM/NET Support screen allows you to install additional software that extends the functionality of Microsoft Visual Basic for Applications (VBA). VBA is the programming language used to develop mobile applications in the Mobile Development Studio.

No COM/NET - Choose this third option if you DO NOT plan on developing applications in the Mobile Development Studio, or, you want to simply skip installation of COM/NET right now. You can choose to install it later via this installer.

COM/NET 4.0 – Choose this option if you plan on developing or customizing applications in the Mobile Development Studio and do not have mobile apps using scripts coded with dependencies to older versions COM or NET. COM/NET 4.0 is not backwards compatible with older versions of code.

Note 1: Once you install COM/NET 4.0, it cannot be removed individually without removing the entire set of products.

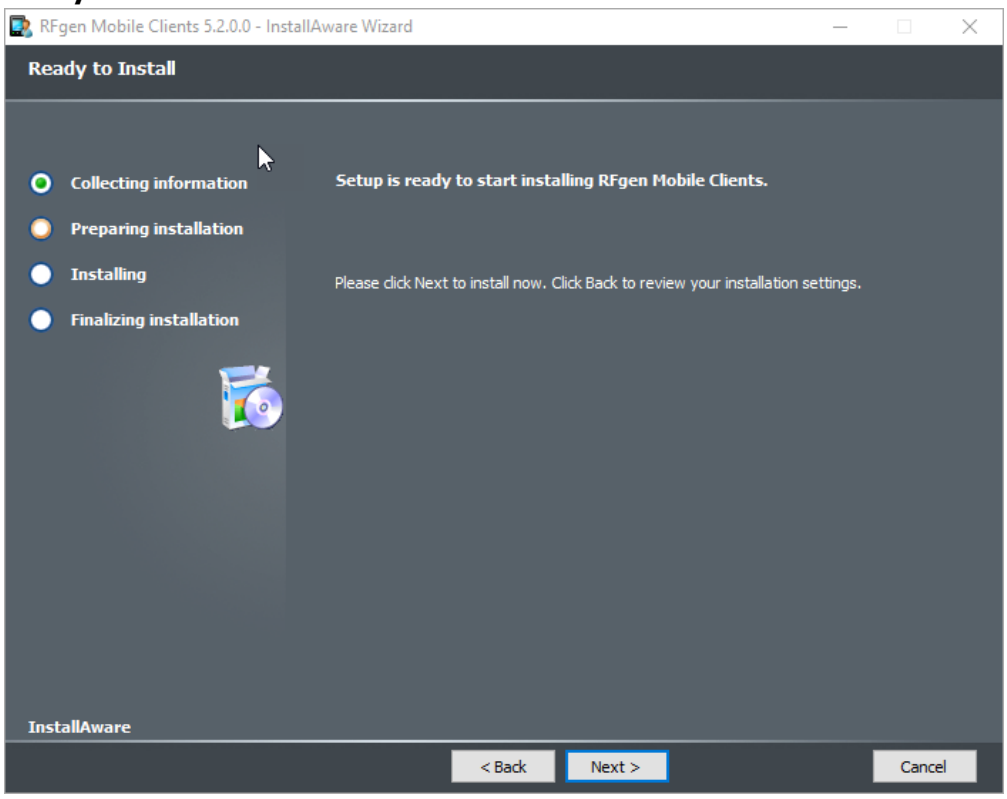
Note 2: If you are planning on connecting the RFgen Mobile Development Studio to the Microsoft Team Foundation Server for code management (source control) purposes, the Microsoft .Net Framework 4.5 is required on the same system where your RFgen Mobile Development Studio is installed.

COM/NET 2.0 – Choose this option if you plan on developing new mobile applications or mobile applications that you plan on modifying and you know these use the VBA code used this version of COM/NET.

Note: Once you install COM/NET 2.0 it cannot be removed individually without removing the entire set of products.

Click **Next** to continue.

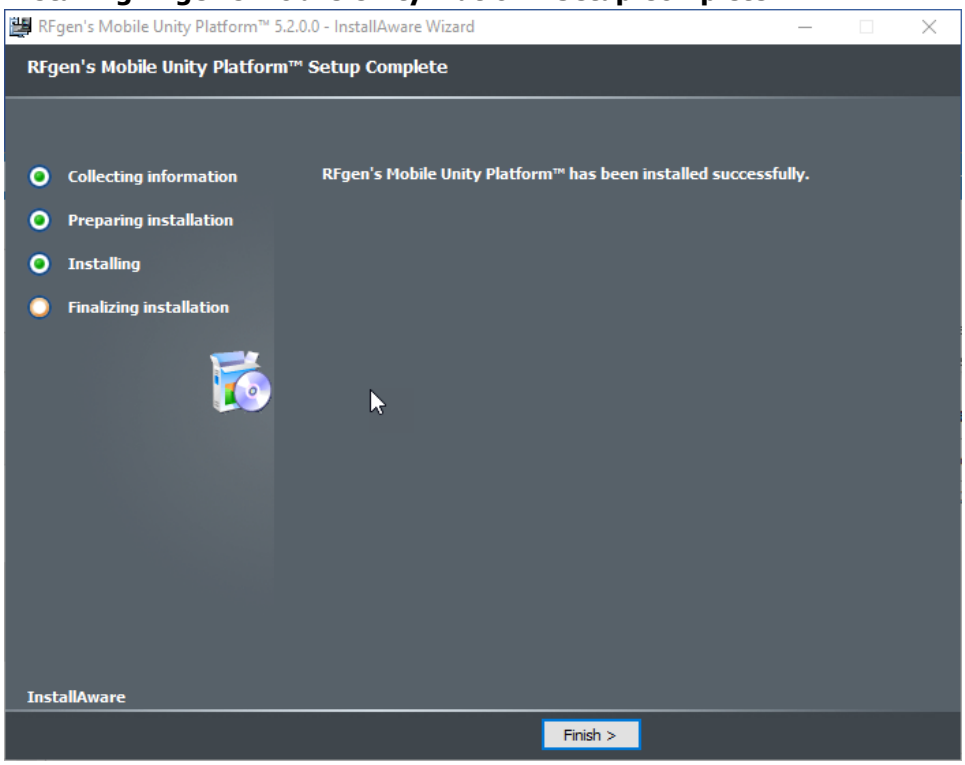
Ready to Install



Click **Next** to finish the process.

The Installing screen will display.

Installing RFgen's Mobile Unity Platform Setup Complete



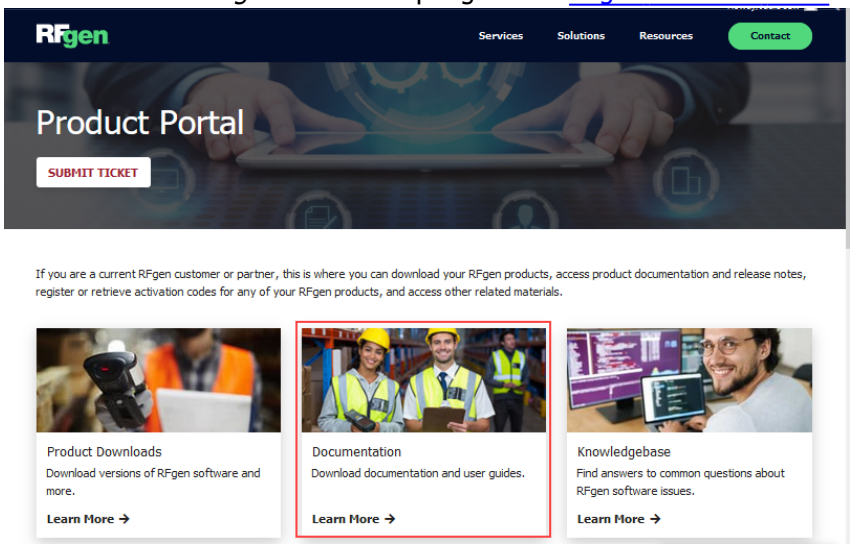
You are now ready to begin running your RFgen product. Click **Finish** to exit the installer.

Once Your Product Is Installed

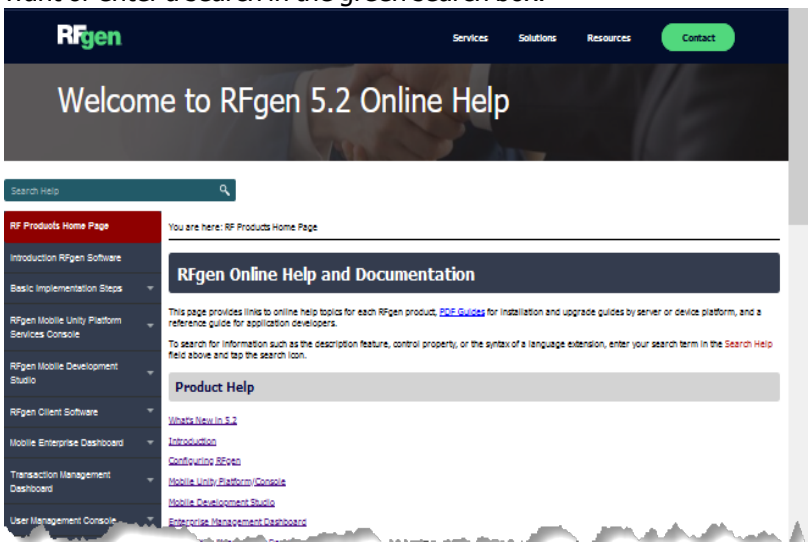
If you installed all the following products (on the same server or different servers), configure the **Mobile Development Studio** and/or **Mobile Unity Platform** before configuring connections to any of the dashboards or consoles. The configuration information for all the following products is available in the **RFgen 5.2 User Guide** (User Manual) and **online help**.

- Mobile Development Studio
- Mobile Unity Platform™ Console
- Mobile Enterprise Dashboard
- Transaction Management Dashboard
- User Management Console

To download the *RFgen User Guide* pdf go to the RFgen Customer Portal and select Documentation.



To view *online help*, launch the product, click Help > Mobile Document Manual, then click on the topic you want or enter a search in the green search box.



Load Balancing

Load Balancing is a process that enables two or more RFgen servers to distribute the client workload up the number of clients the server is licensed to support. After RFgen is configured for load balancing, the load balancing process will run automatically as part of the service. Load Balancing is an optional configuration and requires additional licensing.

How it works

If a server fails, the remaining server will accommodate the total number of licenses (theirs + the total from the failed server) before reverting back to the number of licenses it was originally certified for after 7 days. For example, when one of the load balanced servers fails, its clients are disconnected. The disconnected clients can attempt a reconnection to that server again. If that reconnection fails again, then the clients automatically go to the next load-balanced server listed in their profile and attempt a connection to that server. Since the remaining live server has the combined license count, all the clients should be able to connect to the remaining server.

Load Balancing is configured under the RFgen Configuration > Application Services: Load Balancing Cluster screen. The information on which server to connect to is provided in the Profile that was deployed to the client.

RFgen will support IP addresses, but if the IP of the server changes, this will require manual changes on the client if the server IP address was used.

Note that RFgen 5.2 can also resolve to multiple IP addresses. If you had 300 devices on one server, then added a second load-balanced server and updated your DNS settings with the information of the additional server, and your devices can then be load-balanced to the new server without changing the profiles on the existing clients.

In the Mobile Profile of the client to be load balanced, make sure the Load Balanced server is listed in the Device Configuration section. If you want the client to prompt the user to select a server, set the Mobile Profile > Device Settings: Auto Connect value to "Disabled."

If you want the client to auto connect to one of the servers on the list, set Auto Connect to "Enabled".

If you plan on using Load Balanced RFgen Servers, contact your RFgen Sales Representative to ensure your servers and clients licensed appropriately before you start.

For details see "**To Setup Load Balancing**" in this guide.

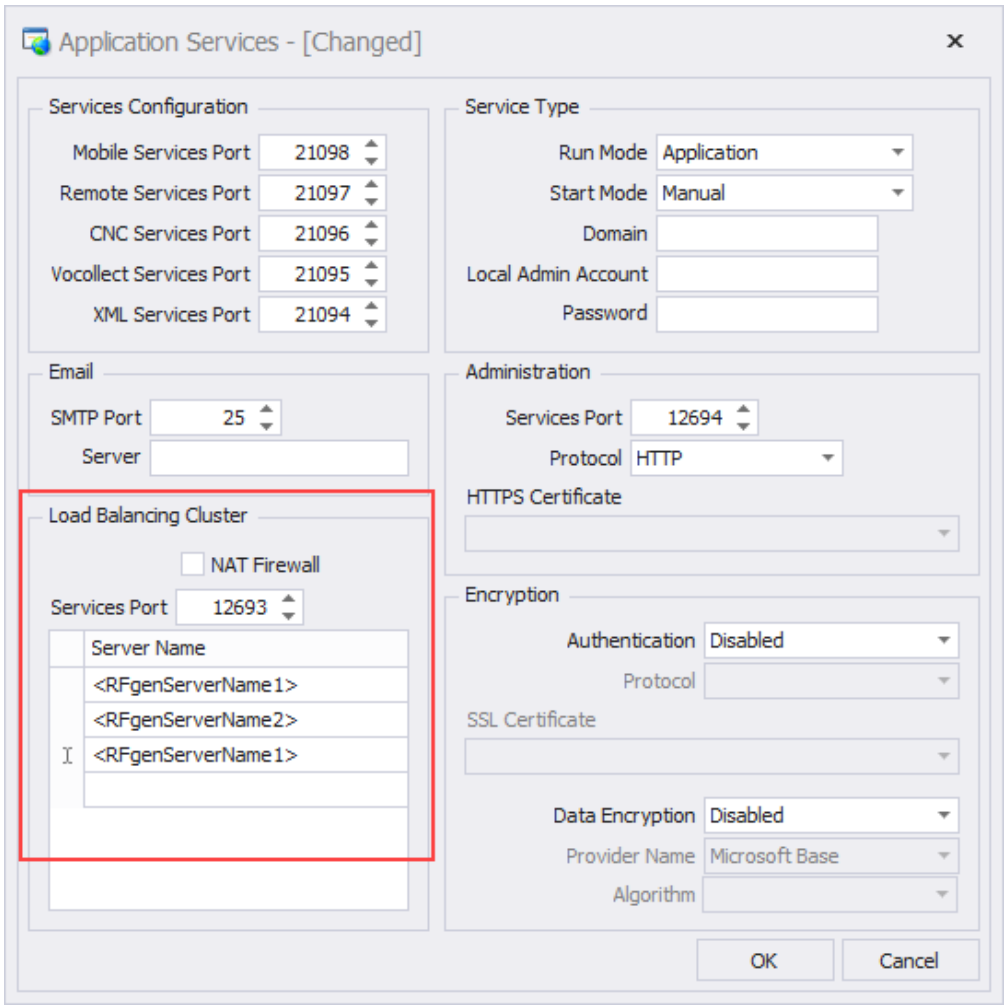
If you are using a third-party load balancing system, software, or appliance, consider configuring your the RFgen initionalization (RFgen.ini) file with the **LBHealthChecker function**. For more information, refer to the knowledge base article "How to heath check communication between 3rd party Load Balancers and RFgen."

To Setup Load Balancing

Load Balancing is a process that enables two or more RFgen servers to distribute the client workload up the number of clients the server is licensed to support. After RFgen is configured for load balancing, the load balancing process will run automatically as part of the service. Load Balancing is an optional configuration and requires additional licensing.

- For more details on how load balancing works, see the topic "Load Balancing".
- For more details on how to test load balancing, see the topic "To Test Load Balancing".

Setup Steps



*Before you start, obtain and install the licenses needed to support the number of clients to be shared between servers.

1. From your Mobile Development Studio or Mobile Unity Platform console, go to: **Configuration > Application Services: Load Balancing Cluster**
2. Enter the Server Name(s).
3. If port if its different from the default (port 12693) enter the port number.
4. If your load balanced servers are behind a firewall, check the **NAT Firewall** checkbox. This enables the resolution of the DNS server name(s) to the IP address of the servers if they are behind a firewall. For more details see the topic RFgen Load Balancing with NAT Firewall enabled.
5. Click **OK**.
6. The load balance service will run as part of the RFgen service.
7. To view the status of the configured server services, launch the **Mobile Unity Platform Console**

and scroll towards the bottom to see a panel displaying the status of the Load Balanced cluster.

8. You are now ready to test client connections if the server goes down.

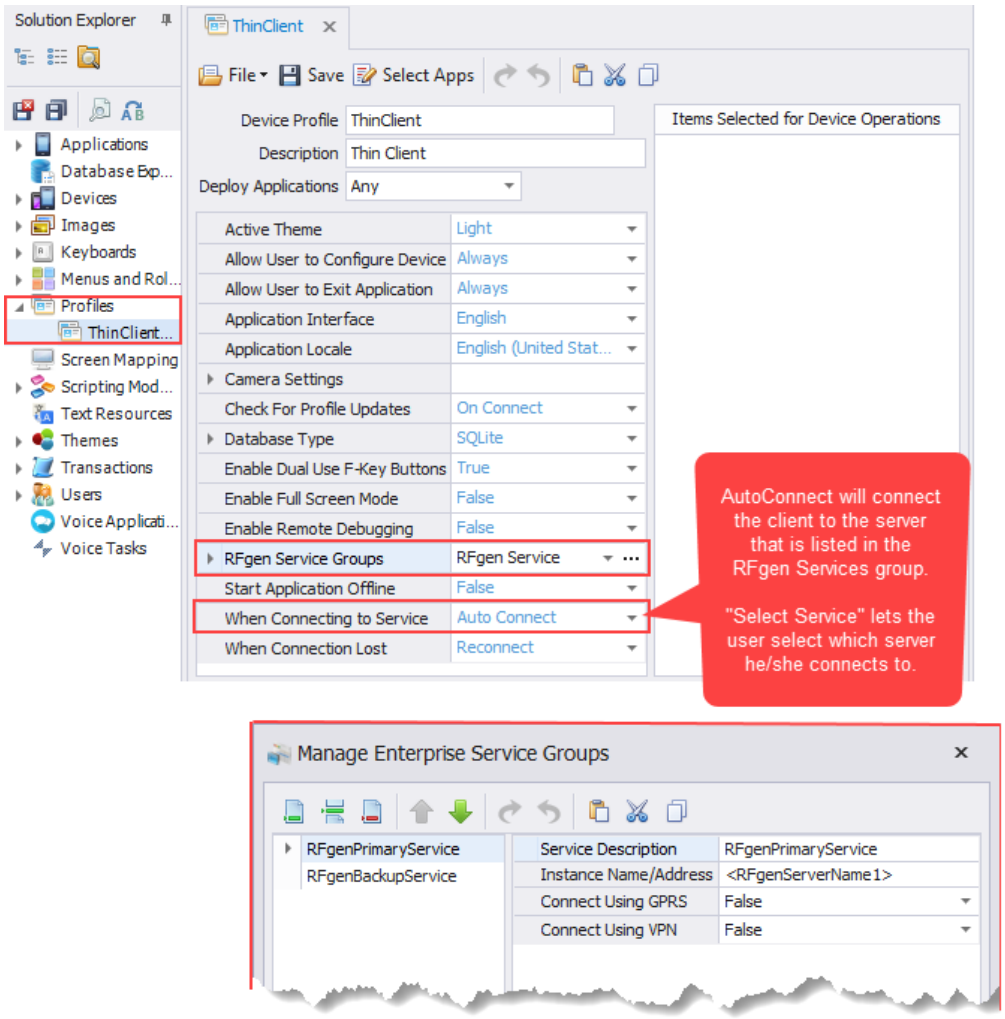
To continue see "To Test Load Balancing".

To Test Load Balancing

Load Balancing is a process that enables two or more RFgen servers to distribute the client workload up the number of clients the server is licensed to support. After RFgen is configured for load balancing, the load balancing process will run automatically as part of the service. Load Balancing is an optional configuration and requires additional licensing.

- For more details on how load balancing works, see the topic "Load Balancing".
- For details on how to setup load balancing, see the topic "To Setup Load Balancing".

1. Setup the server(s) to be load balanced in the **Configuration > Application Services: Load Balancing Cluster** screen.
2. Ensure the **Profile RFgen Service Group** is configured with the names of the load balanced servers and **When Connecting to Service** is set to **Auto Connect** before the profile is installed to the client.



3. After the Profile has been deployed to the client. Make sure the client has Auto Connect enabled in RFgen 5.2 Configuration > Mobile Settings or in 5.2, Configuration > Application Settings.
4. Run the client.
5. The client may connect to any server listed in the Load Balancing Cluster.
6. To view the status of the cluster and connected clients, open the **Mobile Unity Platform Console**. A status panel should display near the bottom of the screen.
   You can also check the Mobile Enterprise Dashboard to see which server the client is currently connected to.
7. Shut down one of the server services.
8. Interact with the client (open a form, type into a textbox, etc) .
9. The client will discover that the current server it is connected to is no longer available.

10. The client should now automatically try to connect to the other servers that were listed under Configuration > Service Connection.
11. Check the status of the Load Balanced Cluster again via the **Mobile Unity Platform Console**.
12. To test the sharing of the licenses after client reconnection, do the above test with multiple clients at the same time.
13. The rest of the servers should be able to handle the combined license count for 7 days.

Upgrade Methods

The methods you can use to upgrade your environment.

In-Place Upgrade

This method **SAVES YOUR OLD ENVIRONMENT** and allows you to keep a working version of your existing RFgen environment (databases, connections and RFgen server) and then upgrade to RFgen 5.2.

Migration

This method **TRANSFERS AN EXISTING DATABASE/CONNECTIONS TO A NEW ENVIRONMENT**. You install RFgen 5.2 to a server/virtual machine where RFgen has not be previously installed, then transfers your existing RFgen databases/configurations into the new RFgen 5.2 environment. This method is often used by Support. The process for this is on page.

New Install

This method installs RFgen 5.2 to a server/virtual machine where RFgen has not be previously installed. Instead of transferring existing RFgen database/configurations to this system, a new database of applications developed in RFgen 5.2 are used. This method is best for customers who were on RFgen 3.x, 4.0 or 4.1, and are working with RFgen Services to create/customize their 3.x, 4.x apps to run on 5.2.

Best Practices

While the upgrade process does create a backup, we recommend you:

- Copy your RFgen application database to another location.
- Run a Script Validation Report in your current environment
- Perform the upgrade in a test environment.
    - See the steps for the selected Upgrade Method for details.
- Run a Script Validation and Upgrade Report to address changes.
- Review What's New in the RFgen Help > Mobile Development Documentation > What's New in 5.2.

Source Control/TFS Users

If you are upgrading your **Mobile Application Development Studio** and your application database is stored/managed by a source control system such as MicroSoft Team Foundation Server (TFS), **you must check out everything from your Source Control System before upgrading your RFgen server**. If you do not check out all the objects before your upgrade of the RFgen server, TFS won't recognized the objects that were checked in after the upgrade.

After your RFgen server has been upgraded, you can check everything back into your source control system.

Upgrade Paths

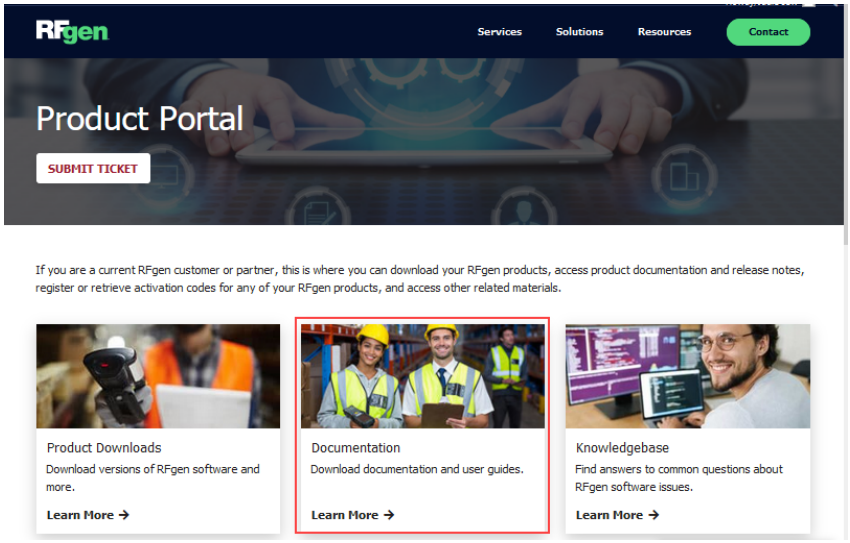
If you are on RFgen 3.x, 4.x, 5.0 or 5.1, you can upgrade directly to 5.2.

Note: Graphical Telnet communication is no longer supported in RFgen 5.1 or higher.

Each major upgrade has additional functionality and properties which may result in a different look and feel or behavior in an application. If you would like your applications to take advantage of the RFgen 5.2 visual and usability features available in RFgen 5.2, contact your RFgen Sales Representative to discuss consultative assistance.

For information on updating RFgen Clients, refer to the **Install and Upgrade Client documentation** for the platform of the client. The pdfs are available from:

RFgen.com > Resources > Customer Portal [You must login to get to the Customer Product Potal], Product Portal > Documentation page.



Save My Old Environment Upgrade Method

As mentioned earlier, this method allows you to keep a working version of your existing RFgen environment (databases, connections and RFgen server) and then upgrade to RFgen 5.2.

The RFgen upgrade process will not correct any pre-existing issues within your current RFgen solution set.

BEFORE starting the upgrade process, you should perform a full script validation from the current **Mobile Development Studio**menu option and make backup copies of your RFgen application database and store it in an off-site location.

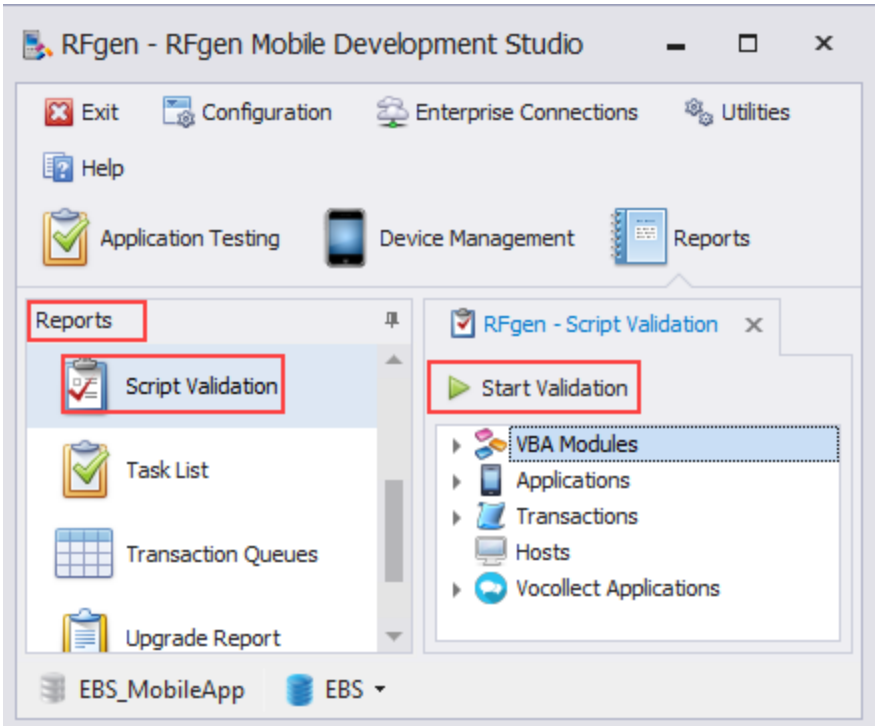
Before You Upgrade -- Validate

The RFgen upgrade process will not correct any pre-existing issues within your current RFgen solution set.

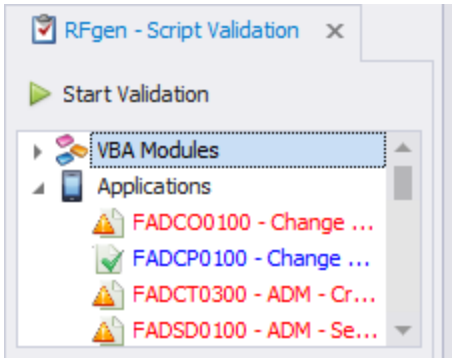
Before starting the upgrade, you should perform a system validation validation all scripts used to build the applications in the **current Mobile Development Studio** to determine and document which ones are or are not currently functional. If any are issues are found, make a note of which applications are affected.

Another useful practice is get a screen capture state of your applications and modules so you have a "Before Upgrade" image that can be compared to the After Upgrade after you perform a validation in the new environment.

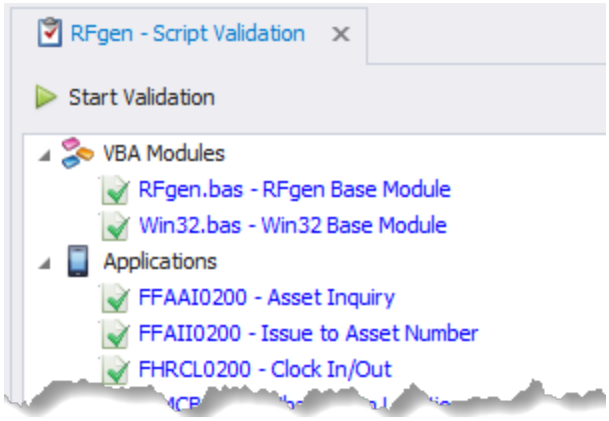
For RFgen 5.1: Select Reports > Script Validation > Start Validation.



Note issues. For example, in each category, if you see a notification icon and red text, this would be an issue that currently exists in your script.



Example of Scripts with Issues (Warning icons)



Example of Scripts without Issues (green checkmarks)

Make sure you review all the modules in the output (i.e. VBA Modules, Applications, Transactions, and Vocollect Applications (if used)).

Step 1. Determine existing application database location

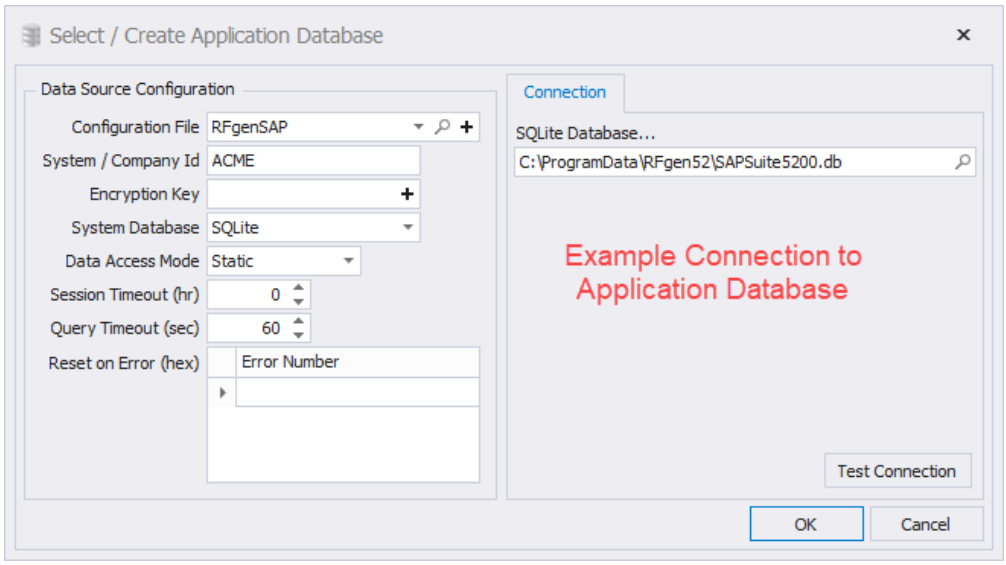
Determine and document the location of your existing RFgen Application Database.

You should also create a backup of your database (RFgen Application database and configuration .rcf file) and store them in a offsite location -- a location that is not accessed by the RFgen server.

For RFgen 5.0 or 5.1

From your Application Database menu, open Configuration > Application Database.

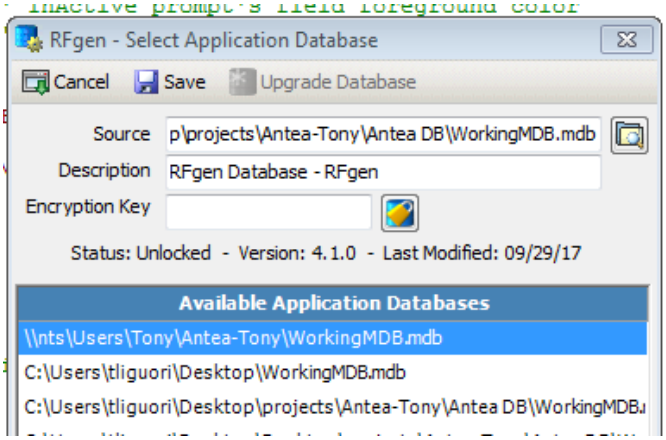
Image the RFgen - Select / Create Application Database screen and/or take a note on each of these settings as you will be copying the actual database in step 3.



Example of a RFgen 5.1 Application Database location

For RFgen 4.1

This information is found under the Mobile Application Database menu, under Configuration OR under the Select RFgen Master Database, found under Options. Note the top three elements:



Step 2. Create a new folder to use for RFgen 5.2 testing

For our example, we created a folder in C:\RFgenTestSqliteDB\RFgen52.

Step 3. Checkout TFS (Source Control) Objects

Most users do not have their RFgen application database stored and managed by a source control system and will not need to follow this step.

CAUTION: If your application database is source controlled by a third party system such as the MS Team Foundation Server (TFS), check out everything BEFORE you upgrade.

If you do not do this, TFS won't recognize the objects after the upgrade.

Step 4. Copy your existing RFgen Application Database

Copy your database into the new folder. You will be upgrading this new copy into your RFgen 5.2 environment.

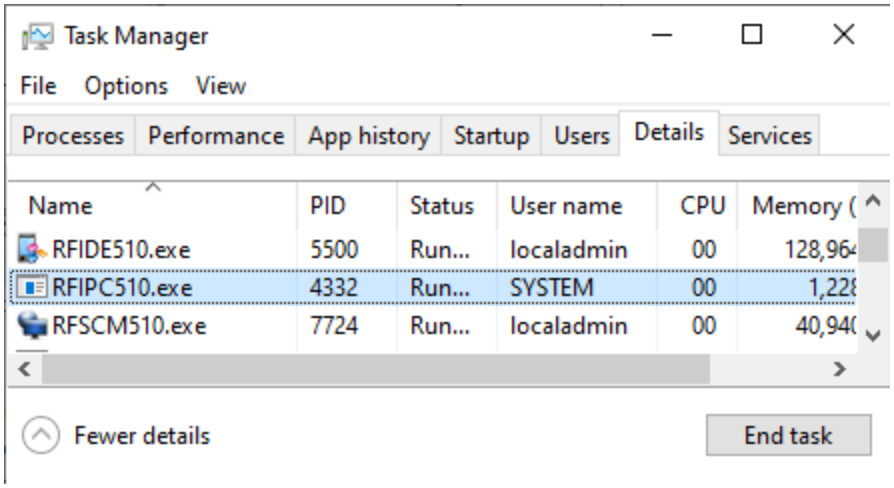
For example, we copied our RFSAPSuite_5113.db from C:\ProgramData\RFgen51 to C:\RFgenTestSQLiteDB\RFgen52

Step 5. Change your existing desktop icon

If you have a RFgen 5.0 or 5.1 desktop icon (shortcut), now is good time to change the icon as the new version of Mobile Development Studio might have the same icon as your older one.

Refer to the Microsoft Windows documentation for your version of Windows to remove the desktop icon.

Step 6. Stop Services, then Install RFgen software



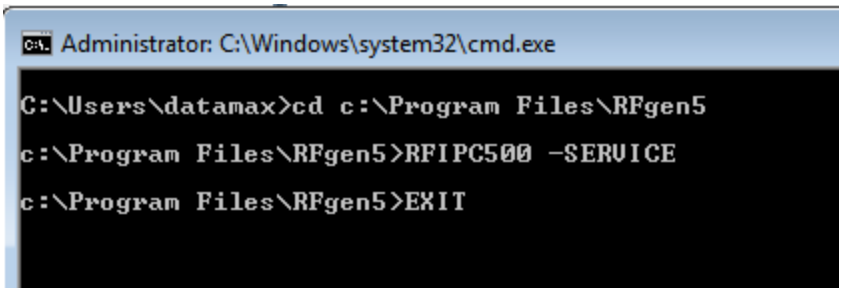
1. Close all RF* services before starting the update.
   For **5.0** this includes the RFIDE500.exe, RFIPC500.exe and RFSCM500.exe
   For **5.1** this includes the RFIDE510.exe, RFIPC510.exe, and RFSCM510.exe.
   If you are running the RFgen Desktop Client on the system, make sure that is stopped as well.

2. Using a local administrator account, install the RFgen software (i.e. RFgen 5.2 Mobile Unity Platform Services) if you have not done so already.

3. During the installation, RFgen will create a new 52 folder in %AppData%\Program Data if the 64-bit package was used. This location can retained as we will be using the C:\RFgenTestSQLiteDB\RFgen52 folder for storage of our test items later on. For more details, refer to the installation steps at the beginning of this guide.

Step 7. Run the RFgen Service

If you have been running RFgen 5.1, you will need to run the RFIPC510 -SERVICE option from CMD as shown below:

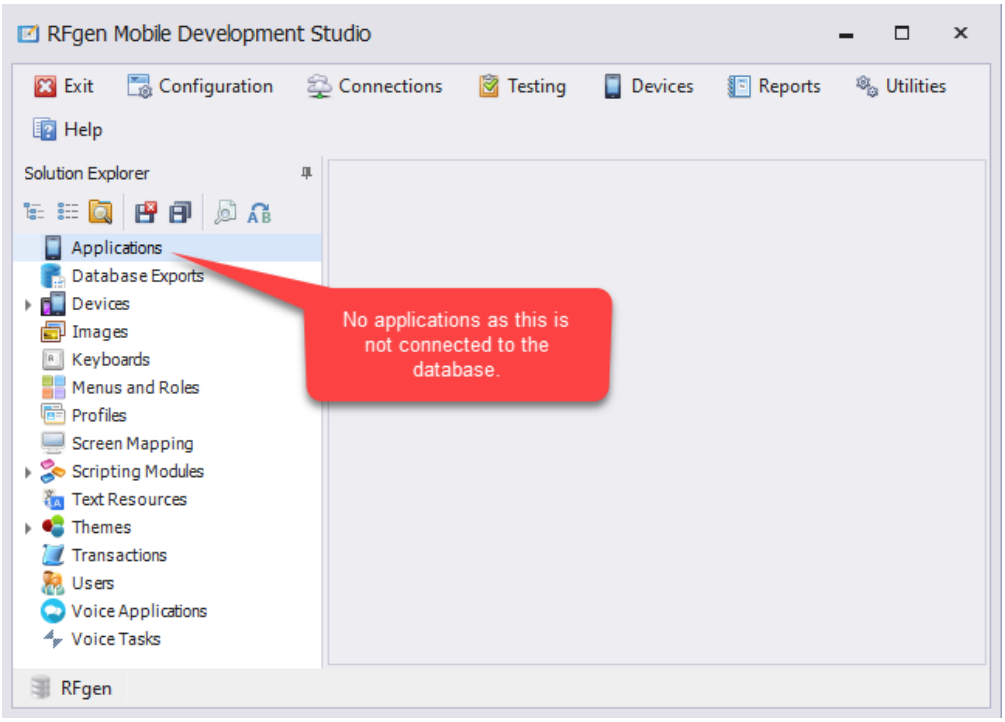


Check that your Original RFgen5 Mobile Development Studio is working.

Step 8. Run the RFgen 52 Mobile Development Studio

Start up the RFgen Moible Development Studio and run as Administrator so you can perform an upgrade of the application database.

When you launch the Mobile Development Studio, **it will not be connected to any databases** if you used the defaults during installation (C:\ProgramData\RFgen52).



Since we created a test folder C:\RFgenTestSQLiteDB\RFgen52, step 2, we will be forcing a connection to this location by modifying the configuration file path.

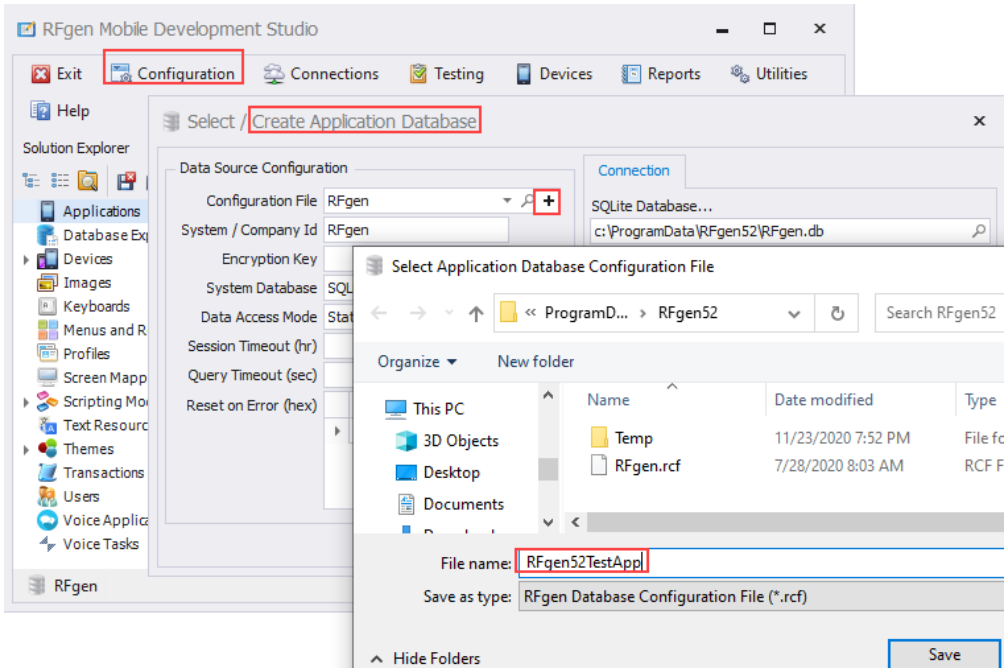
Step 9. Create a new configuration file

RFgen 5.2 should now be running with either a blank database.

There are two ways to connect to the application database. You can either create a new configuration file to store the path, or, you can modify the "RFgen" configuration file that comes with the new install of RFgen 5.2. The first option lets you keep the RFgen configuration file in case you want to have multiple files. The second option is easier if your database type is SQLite.

Option 1: Create a new Configuration file

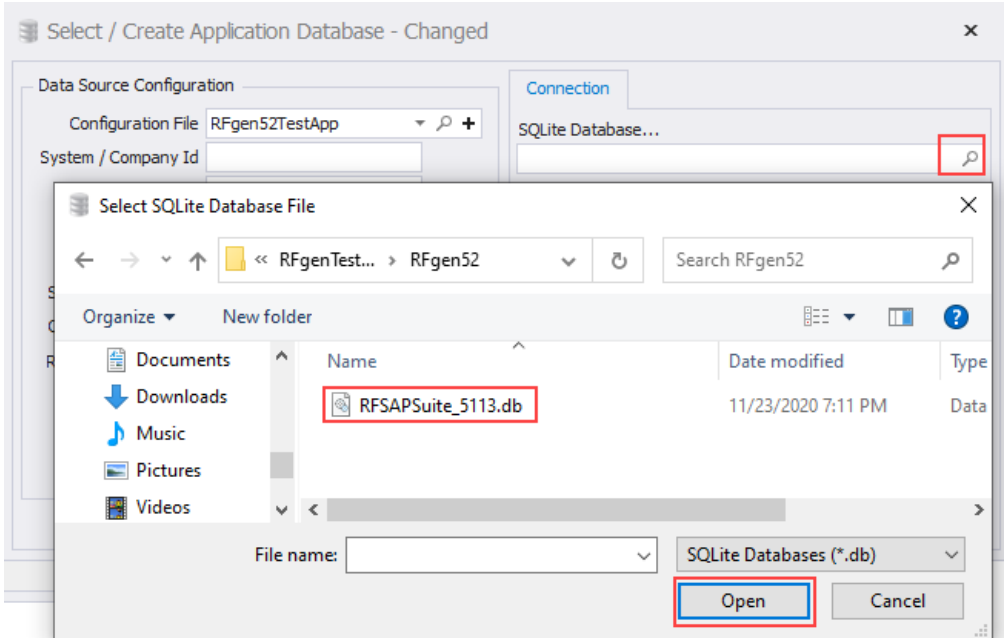
a. Create a new RFgen52 configuration file by selecting **Configuration > Application Database** then select the **+** sign found next to the Configuration File name, and enter the new configuration file name you wish to use. In this example will use *RFgen52TestApp* as the name for the new configuration file.



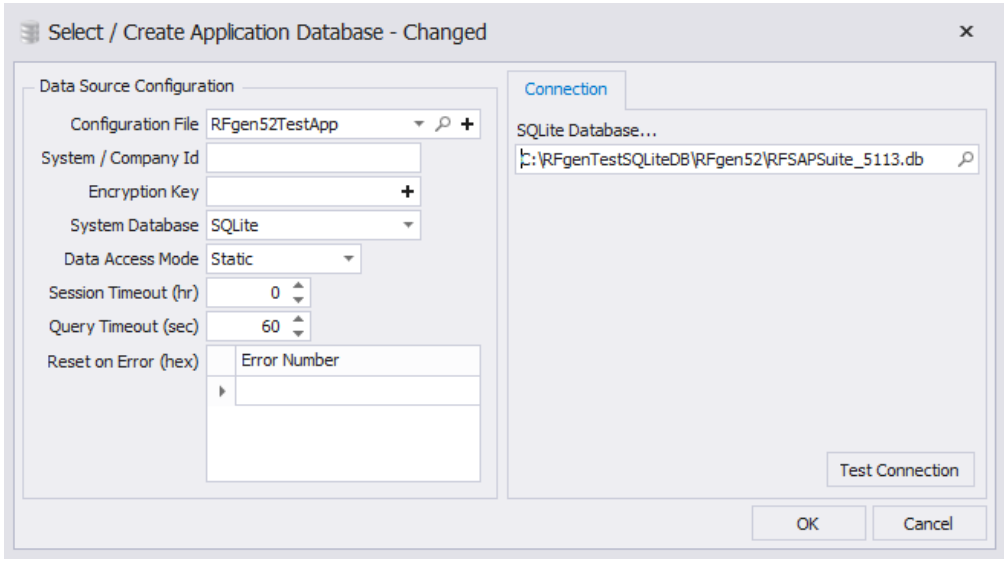
b. Select **Save**. This will clear the configuration settings …

c. Now populate the Connection settings as saved in Step 2. For example, we change the System Database to *SQLite*, which is the type used in our example.

d. In the SQLite Database field, point to the location where you created a folder in step 2. In our case this location was C:\RFgenTestSQLiteDB\RFgen52. Selec the file and click Open.



e. The SQLite Database field is populated with your location.



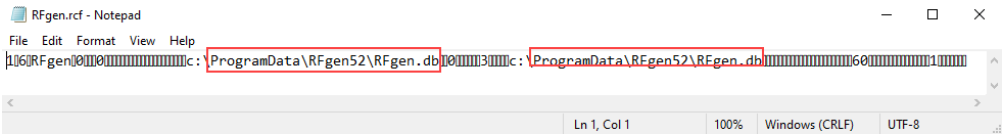
e. Continue to the next step to Test Connection and finish upgrading the database.

Option 2: Modify RFgen.rcf file that comes with the new install of RFgen 5.2.

a. Navigate to where RFgen installed your program files. For example c:\ProgramData\RFgen52.

b. Open the RFgen.rcf file with an editor like Notepad

c. Modify the paths.



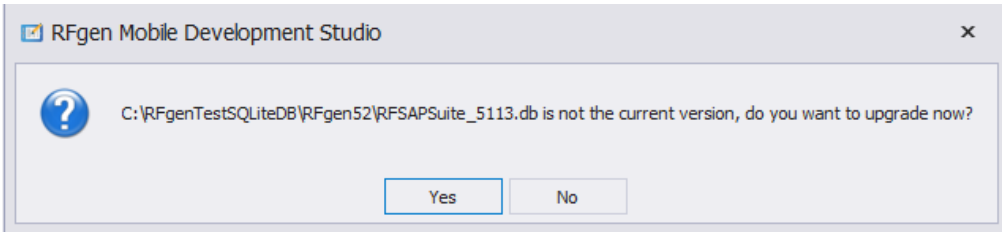
For example, from ProgramData\RFgen52\RFgen.db to C:\RFgenTestSQLiteDB\RFgen52 C:\RFgenTestSQLiteDB\RFgen52.

You will be asked if you want to save these changes. Say Yes.

e. Continue to the next step Test Connection and finish the upgrading the database.

Step 10. Test your connection and upgrade

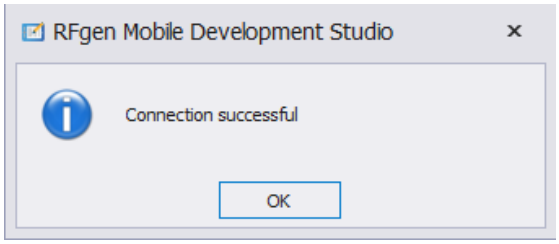
a. Click Test Connection. A message such as "... database is not the current version, do you want to upgrade now?



b. Click **Yes** to begin the upgrade process. At this point the process will review all the existing applications and process them into the RFgen 5.2 formats.

The time requirement and number of process steps will vary based on the complexity of the solution database.

c. A Connection Successful message should display.



If you do not see this message, or the upgrade does not run, verify if you are running as administrator.

d. Upon completion of the process, click **OK** and **OK** again to load the updated application database into RFgen.

e. Once you have completed step b, proceed to Post Upgrade Activities. This provides a checklist of items to look for now that your upgrade is done.

Post Upgrade Activities

Once your Mobile Development Studio v5.1 has been upgraded, the following items should be quality checked:

____ Review **Reports > Upgrade Report**

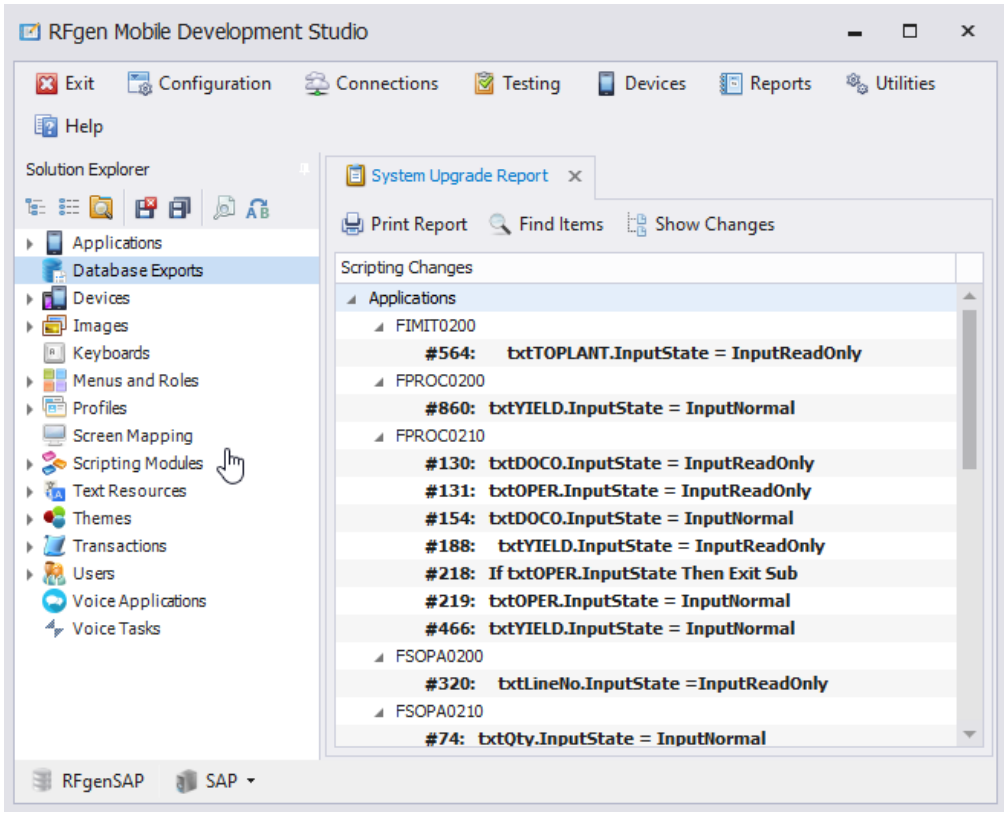
____ Run a Syntax Check on Application Scripts from **Utilities > System Validation**

____ Review Applications in Testing that were format changes.

____ Check **Text Resources** (Language Translation Resources) and the applications to verify updates were performed properly.

____ Click on **Help > What's New** for a list of changes between 5.0 or 5.1 and 5.2. For example, 5.2 now adds built-in device skins so you can visualize how an application will look at runtime -- this is enabled when you select the device skin in Testing > Option menu.

Example System Upgrade Report:



Transfer Existing Database to a New Environment Method

As mentioned earlier, this method installs RFgen 5.2 to a server or virtual machine where **RFgen has not been previously installed**. Your existing RFgen databases/configurations are transferred into the new RFgen 5.2 environment and the application database is updated once the connection is successful made.

Limitations to This Method

- The Transfer Existing Database/Connections option to a new environment method does not allow the user to keep a working version of their existing RFgen environment.
- Once the application database has been updated, its no longer backward compatible with older versions.

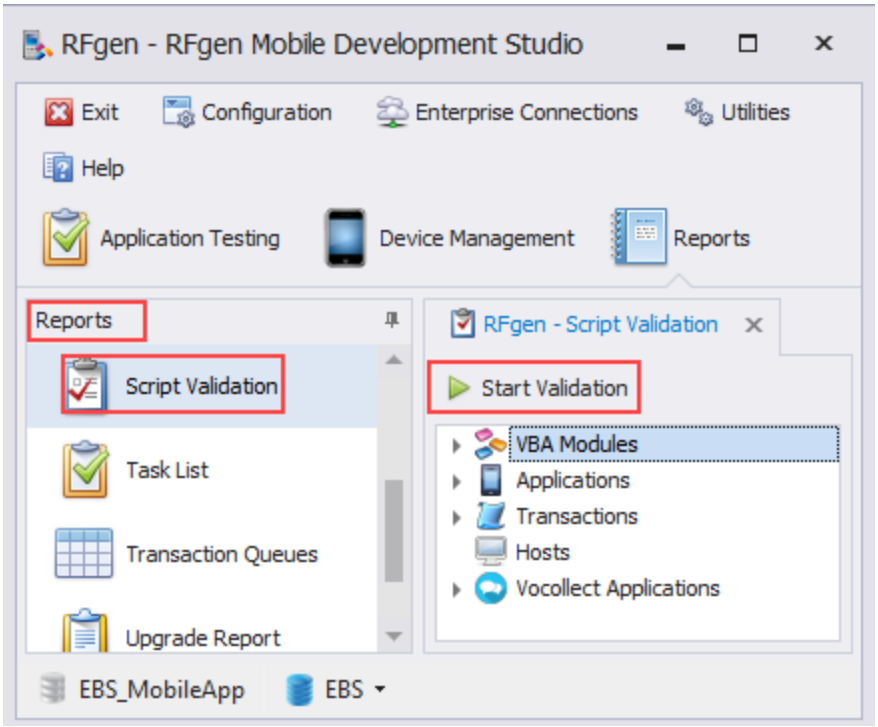
Before You Upgrade -- Validate

The RFgen upgrade process will not correct any pre-existing issues within your current RFgen solution set.

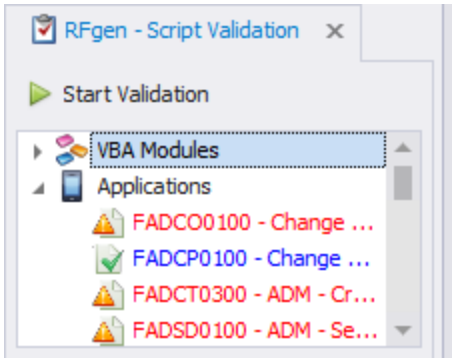
Before starting the upgrade, you should perform a system validation validation all scripts used to build the applications in the **current Mobile Development Studio** to determine and document which ones are or are not currently functional. If any are issues are found, make a note of which applications are affected.

Another useful practice is get a screen capture state of your applications and modules so you have a "Before Upgrade" image that can be compared to the After Upgrade after you perform a validation in the new environment.

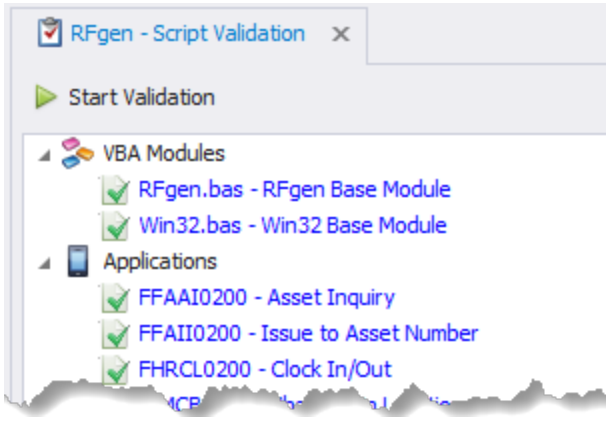
For RFgen 5.1: Select Reports > Script Validation > Start Validation.



Note issues. For example, in each category, if you see a notification icon and red text, this would be an issue that currently exists in your script.



Example of Scripts with Issues (Warning icons)



Example of Scripts without Issues (green checkmarks)

Make sure you review all the modules in the output (i.e. VBA Modules, Applications, Transactions, and Vocollect Applications (if used)).

N1. Document existing database location

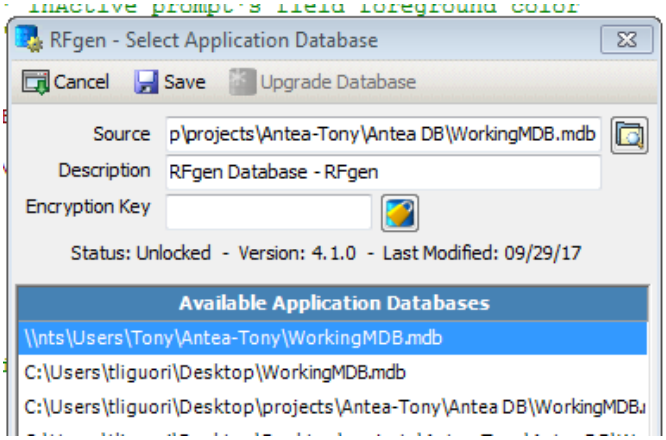
Determine the location of your existing RFgen Application Database and document the settings. YOU will need a copy of your RFgen application database from your old environment. When you install and launch RFgen, its helpful to "run as Administrator."

For RFgen v5.0 or v5.1

From your Application Database menu, open Configuration > Application Database. Image the screen and/or document each of these settings as you will be copying the actual database (generally shown just above the Database Login field).

For RFgen v4.x versions

This information is found under the Mobile Application Database menu, under Configuration OR under the Select RFgen Master Database, found under Options. Note the top three elements:



N2. Install RFgen Software and Copy Database

Using a local administrator account, install the RFgen 5.2 software if you have not done so already in your new environment / 5.2 server.

1. Close all RF* services before starting the update. This includes RFIPC520.exe.
2. During the installation, RFgen will create a new 52 folder in %AppData%\ProgramData.
3. **(Option 1)** After installation is performed, copy the RFgen application database from the old environment to the new environment location.
   For example, if your RFgen application database was "RFSAPSuite_5073.db," you would copy it from:

   %AppData\ProgramData\RFgen51\RFSAPSuite_5073.db
   to
   %AppData\ProgramData\RFgen52\RFSAPSuite_5073.db

4. **(Option 2)** If you do not want to copy the database to the new environment, you can modify the RFgen 5.2 Configuration Files to connect to your database where it currently is located.
   BEFORE using Option 2, you should have a backup copy of your database stored in a different location. You should also disconnect it from the your old RFgen environment.
   Do NOT have your application database connected to two different RFgen servers (v5.1 and 5.2) running at the same time as this will cause issues. Once you successfully connect to 5.2 it will upgrade and this change cannot be undone.

N3. Modify rcf file and start up services

a. RFgen 5.2 installs by default, a database configuration file called the **RFgen.rcf** to the location where you selected for data. (I.e. C:\ProgramData\RFgen52).

b. Using a tool such as Notepad, from your Microsoft Windows explorer, navigate to C:\ProgramData\RFgen52 or the location where you installed the data files. Edit the **RFgen.rcf** file so it points to the RFgen application database file from step N2.

c. Save the .rcf file with a unique name and .rcf extension.

Example:

In Notepad, you can see the RFgen.rcf stores the path to the RFgen.db (an empty application database file).

```
1 6 RFgen 0 0 c:
\ProgramData\RFgen52
\RFgen.db 0 3 c:\ProgramData
\RFgen52
\RFgen.db 60
 1
```

We modified the RFgen.rfc from:

c:\ProgramData\RFgen52\RFgen52.db

to:

c:\ProgramData\RFgen52\RFSAPSuite_5073.db

```
1 6 RFgen 0 0 c:
\ProgramData\RFgen52\RFSAPSuite_
5073.db 0 3 c:\ProgramData\RFgen52
\RFSAPSuite_
5073.db 60
 1
```

Exit the ProgramData\RFgen52 folder and proceed with the next step.

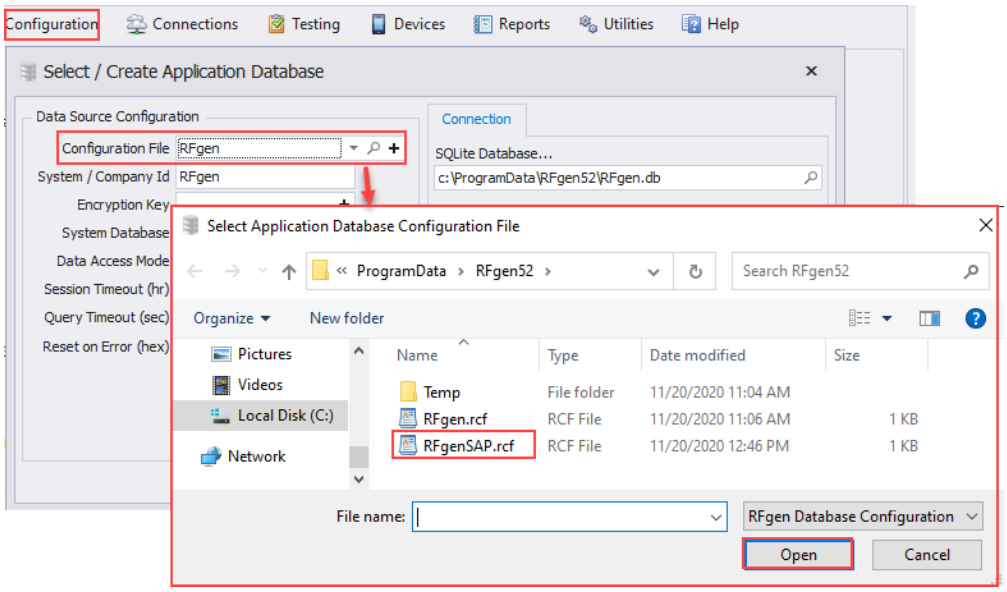
N4. Connect to Database and Upgrade

Open the **RFgen Mobile Development Studio** or the **RFgen Mobile Unity Platform console** to make these changes. When making changes, its best to "Run As Administrator," but you can also make the changes without running as administrator.

By default, the RFgen 5.2 server points to the RFgen.db which is empty. Change the Configuration File "RFgen" to the one you modified in the previous step, make sure the system and connection information is correct then press Test Connection.

1. Select **Configuration > Application Database.** The Select / Create Application Database screen displays.

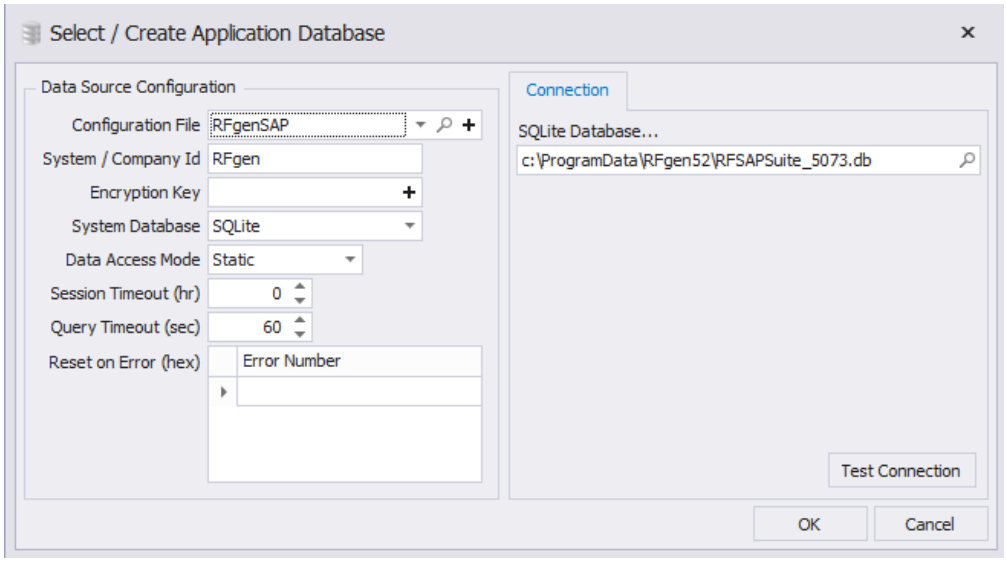
2. Switch the Configuration File from RFgen.db to the one you configured in step N3.



Example of the selected RFgen configuration from that was created in step N4.

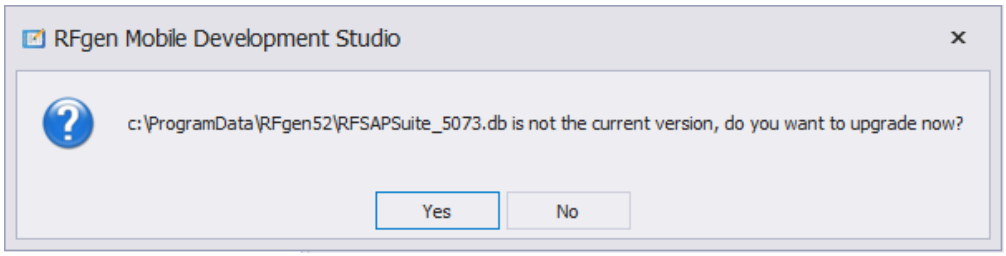
3. RFgen 5.2 defaults to the **SQLite** database type. If your application database type is SQLite, the other fields should update automatically.

If your database is not SQLite, you will need to change the **System Database** type and other fields in this window to enable RFgen to read the data and perform updates.



Example screen after the configuration file was changed.The new database was SQLite.

4. Click on **Test Connection**. The message "**This database requires upgrading**" or the message similar to the one below will displays. Click **Yes.**



At this point the process will review all the existing applications and process them into the RFgen 5.2 formats.

Note: The time requirement and number of process steps will vary based on the complexity of the solution database. A copy of the database is automatically stored.

If the upgrade process did not work, make sure you are running as Administrator and try again.

5. When its done the message "**Connection Successful**" displays. Click **OK** to close the message.

6. Click **OK** again to load the updated application database into RFgen.

7. Proceed to Post Upgrade Activities. This provides a checklist of items to look for now that your upgrade is done.

Post Upgrade Activities

Once your Mobile Development Studio v5.1 has been upgraded, the following items should be quality checked:

____ Review **Reports > Upgrade Report**

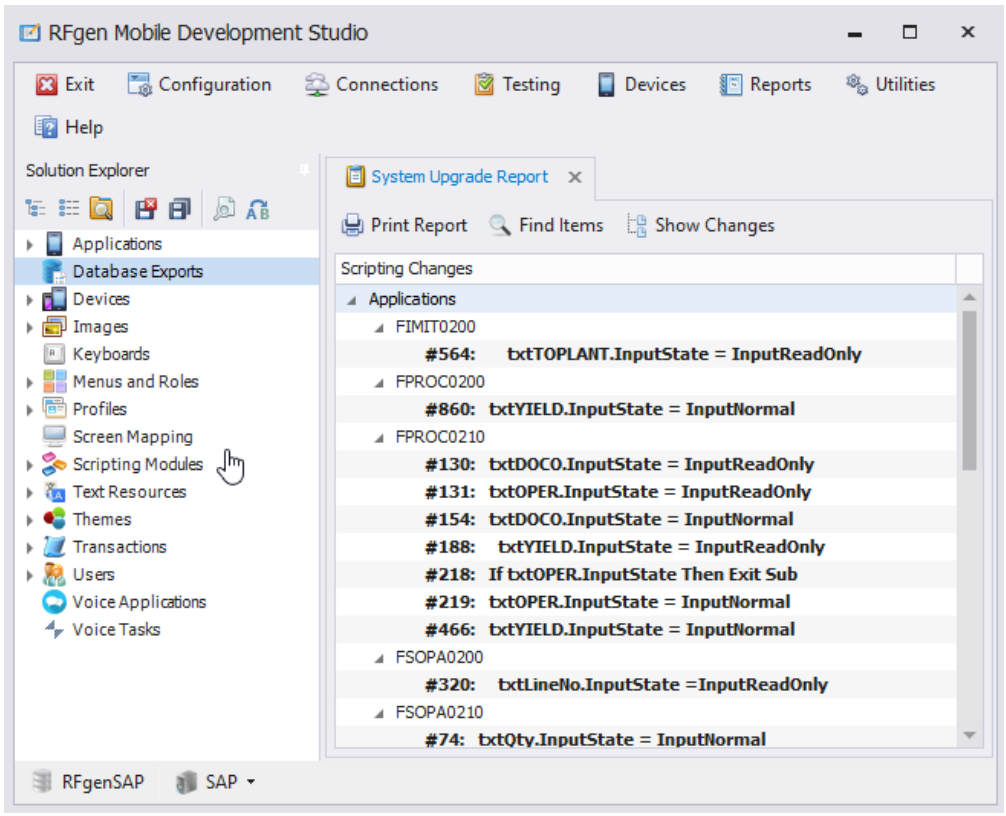
____ Run a Syntax Check on Application Scripts from **Utilities > System Validation**

____ Review Applications in Testing that were format changes.

____ Check **Text Resources** (Language Translation Resources) and the applications to verify updates were performed properly.

____ Click on **Help > What's New** for a list of changes between 5.0 or 5.1 and 5.2. For example, 5.2 now adds built-in device skins so you can visualize how an application will look at runtime -- this is enabled when you select the device skin in Testing > Option menu.

Example System Upgrade Report:



Post Upgrade Activities

Once your Mobile Development Studio v5.1 has been upgraded, the following items should be quality checked:

____ Review **Reports > Upgrade Report**

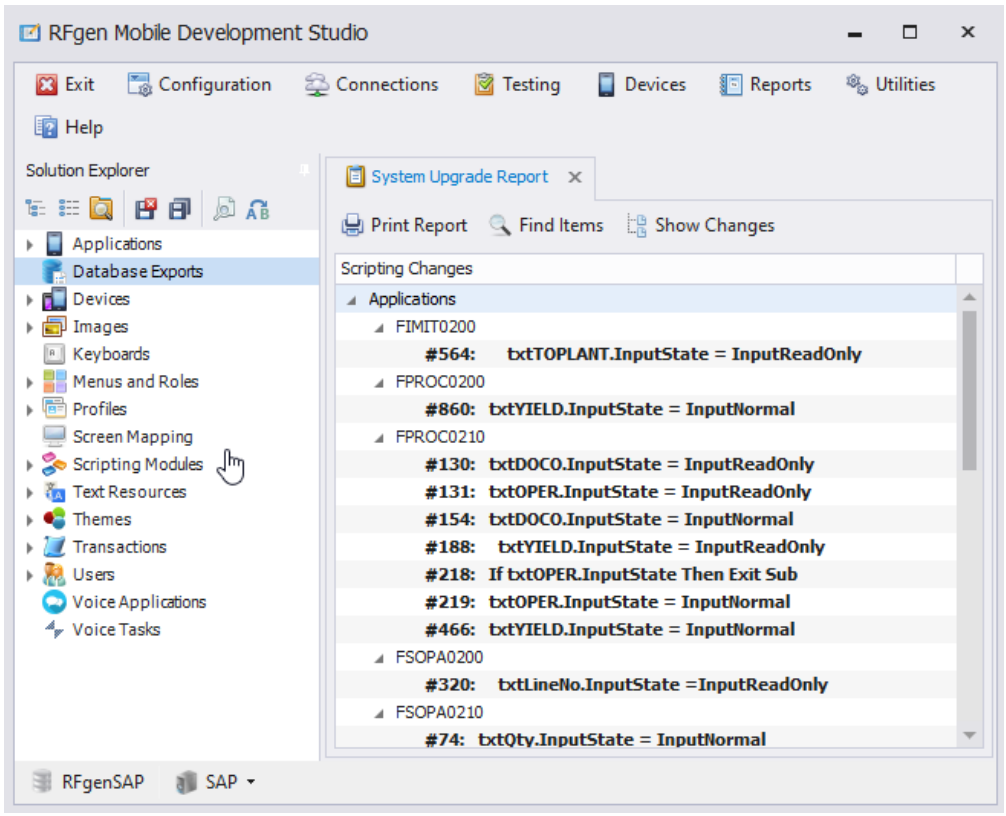
____ Run a Syntax Check on Application Scripts from **Utilities > System Validation**

____ Review Applications in Testing that were format changes.

____ Check **Text Resources** (Language Translation Resources) and the applications to verify updates were performed properly.

____ Click on **Help > What's New** for a list of changes between 5.0 or 5.1 and 5.2. For example, 5.2 now adds built-in device skins so you can visualize how an application will look at runtime -- this is enabled when you select the device skin in Testing > Option menu.

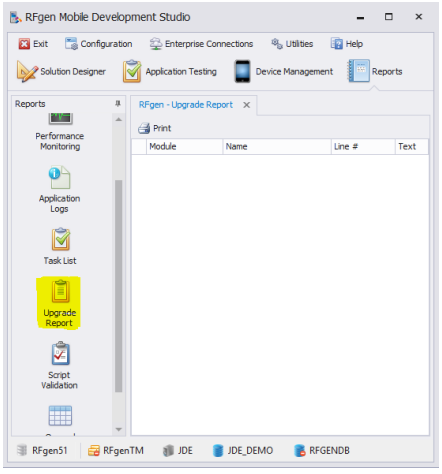
Example System Upgrade Report:



Check Update Reports

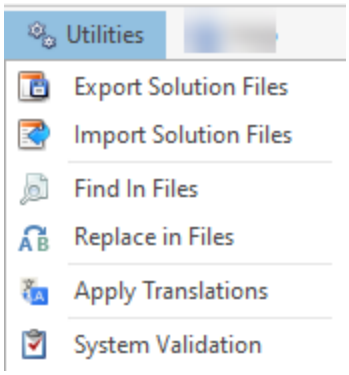
To check if there are any other update items to address, go to Reports > Update Reports.

This blank screen indicates no issues were found by RFgen.



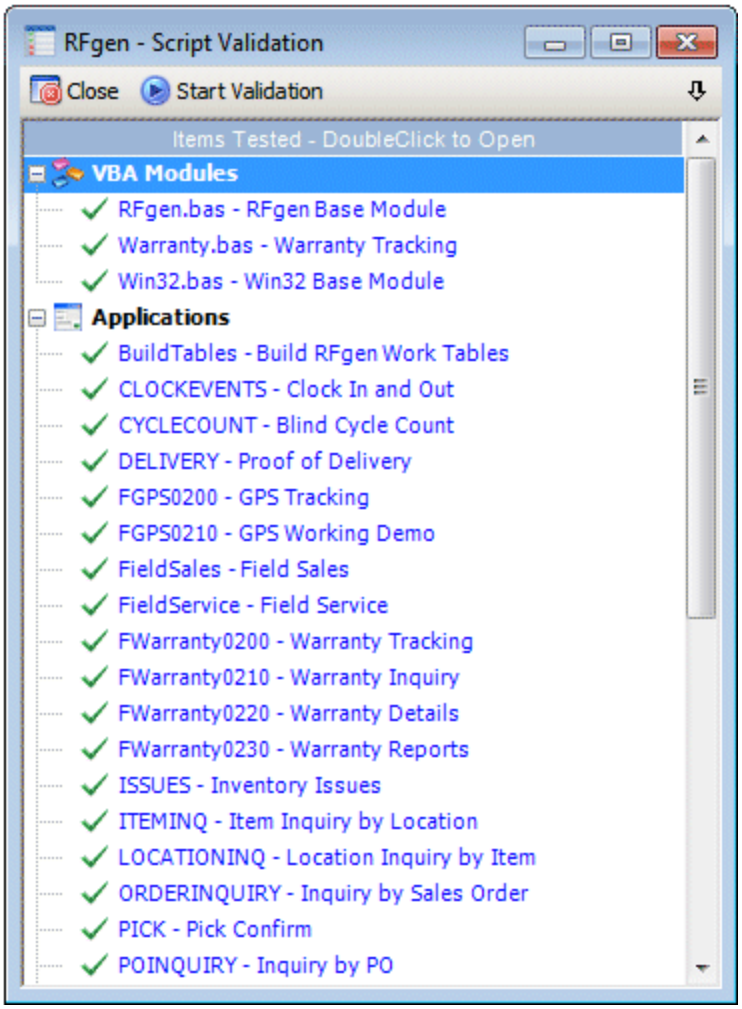
Given the flexibility with which users can write VBA code and create dependencies between objects, upgrades can sometimes result in unexpected issues. Although the Mobile Development Studio performs an upgrade code-check, the results of this test do not guarantee that your application logic is sound; it only reports that it is syntactically correct.

Script Validation



Use the **Validate System** utility in the Mobile Development Studio to perform a VBA syntax check for all coded objects. Any application or macro, etc. that has a syntactical error will display the yellow triangle-warning icon. Double-clicking on any line will load and display that code page for convenience.

This tool can also be used BEFORE you upgrade your RFgen software in order to track if there are any pre-existing issues within the script of an application.



Check Language (Localized) Resources

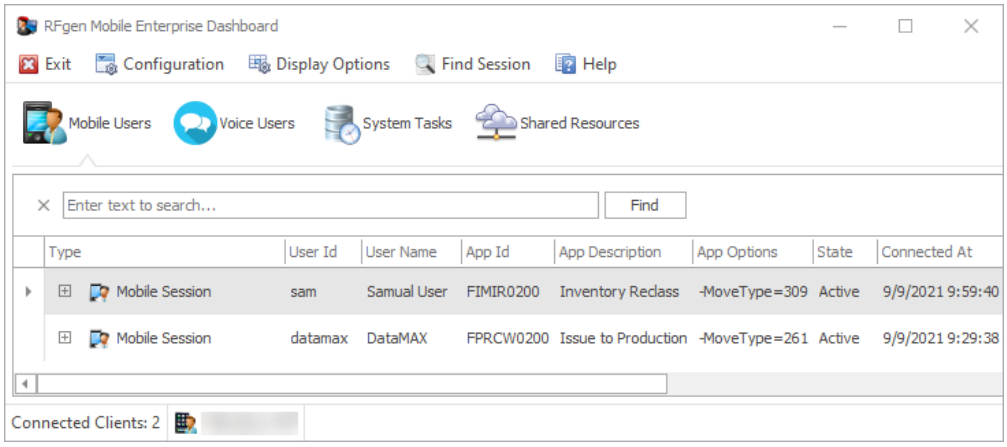
RFgen 5.1 added a new automated language translation feature.

If you had a list of string resource that were localized, make sure your text IDs, strings were updated.

For more details, see the topic on Text Resources.

Installing RFgen Mobile Enterprise Dashboard

The RFgen Mobile Enterprise Dashboard is installed through the RFgen Mobile Unity Platform installer. For information on installing the Dashboard separately from the RFgen server, see the section "Installing RFgen" in this guide.

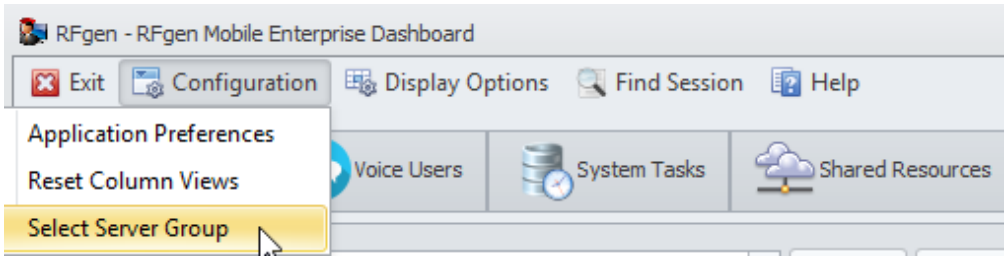


To launch the Mobile Enterprise Dashboard, select the program from your Windows Start > RFgen v5.2 folder.

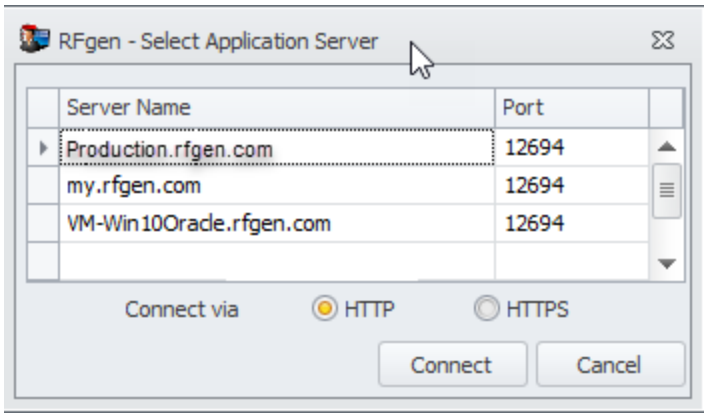
Note that the access can be setup to require elevated privileges (User name and password). For more details on authentication of Mobile Enterprise Dashboard users, see the **RFgen Users Guide > RFgen Development Studio > Configurating User Access Control**, or click here, to view the online help topic.

Configure Dashboard Host (RFgen Server) Connection

1. From the RFgen Mobile Enterprise Dashboard, select: **Configuration > Select Server Group**.



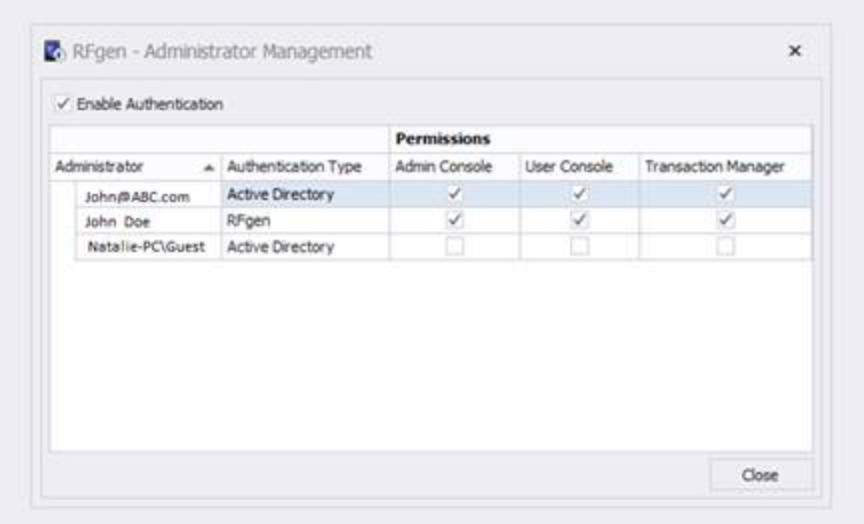
2. The **Select Application Server** screen displays.



Select the server as the source for viewing information in the dashboard.

3. Select the connection type (HTTP versus HTTPS).
4. Enter your credentials if required to access the server.
   Press Connect.
5. The server/server group you connected to displays in the lower left corner of the dashboard.

Configuring User Access Control



The **User Access Control** feature restricts administrative access to RFgen consoles and dashboards if they are configured to authenticate the user via the credentials saved in the RFgen server, or Microsoft Active Directory .

To prevent unauthorized access, the dashboard / console must be connected to the same application database that was used to configure User Access Control in the RFGen server.

For example, if you had two application databases -- one called Test, the other Production -- and User Access Control was only setup in the RFgen server when it was connected to the Production database, if the console / dashboard was connected to the Test database, the user will not be prompted to enter his/her credentials.

But, it the console / dashboard was changed to use the Production application database, the user would be prompted.

To Enable Authentication

This feature is used for restricting access to the:

- *Admin Console* (the Mobile Enterprise Dashboard)
- User Console (User Management Console)
- Transaction Manager (Transaction Management Dashboard)

1. In the **Mobile Dev Studio**, click on **Configuration > User Access Control**.
2. Click on the **Enable Authentication** box.
3. Right-click on any of the column headings (or white space).
4. Select the desired action to add, edit, or removed an administrator.
5. If adding, enter the user's information, then click **OK**.
6. Check the box for one of the following that the administrator will be allowed to access.
7. Click **OK** to save your changes.

Update the Target Dashboard / Console

1. Launch the dashboard / console.
2. In the Configuration or Connection menu, select Application Database.
3. In the Data Source Configuration > Configuration File, click on the down arrow.
4. Select the application database that has the User Access Control settings.
5. (Optional) Click Test Connection. Click OK.
6. The application database should display on the lower left corner.
7. Click **OK**.

Installing RFgen User Management Console

The RFgen User Management Console is installed through the RFgen Mobile Unity Platform installer. For information on installing the UMC Console separately from the RFgen server, see the section "Installing RFgen" in this guide.

To launch the User Management Console, select the program from your Windows Start > RFgen v5.2 folder.

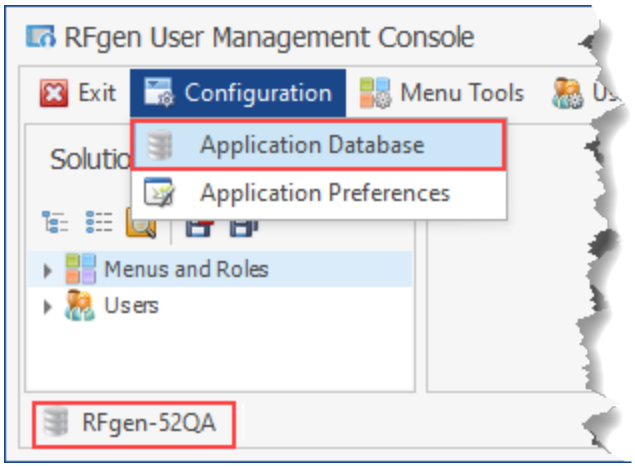
Note that the access can be setup to require elevated privileges (User name and password). For more details on authentication of UMC Console users, see the **RFgen Users Guide > RFgen Development Studio > Configurating User Access Control**, or click here, to view the online help topic.

Configure Host and/or Data Source

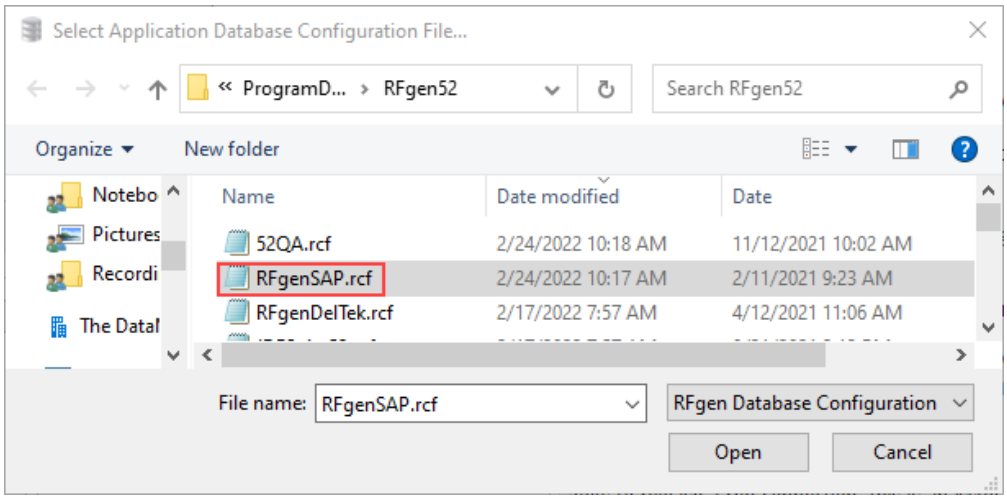
Before you configure users or menus, ensure your User Management Console (UMC) is connected to the correct application database that is the source for your user's menus and applications, check your **Configuration > Application Database.**

Example Configuration Setup

In this example, the UMC application database of users and applications is connected to a test version of a RFgen 5.2 QA database, but not the production database (i.e. (i.e. SAP). To change this to their production database (i.e. SAP), the administrator follows the steps below.



1. Click Configuration > Application Database.



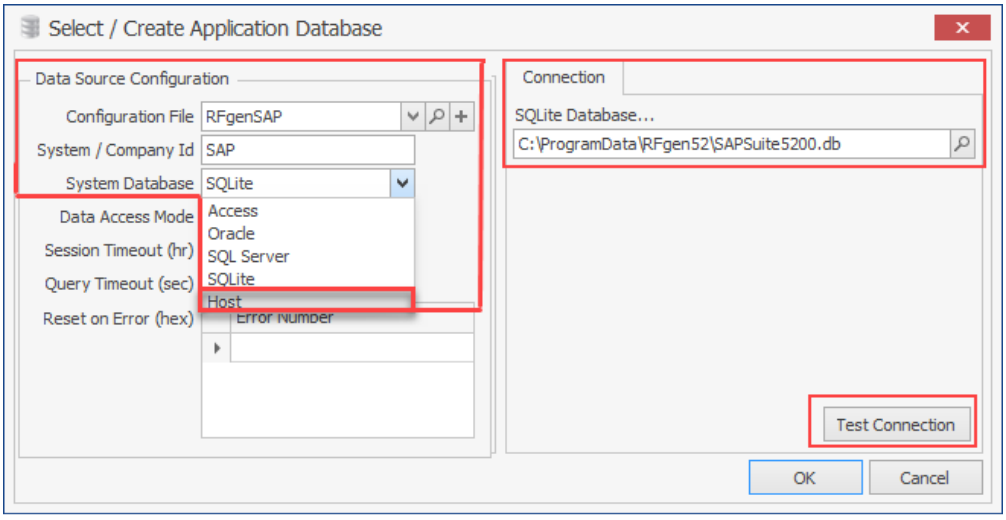
2. Change or add the **Configuration File**. Click on the Search or drop down icons to browse to the **rfc file** that contains the path to the application database you want to use. The rfc file by default is placed in the %APPDATA%> Program Data > RFgen52 folder. In this example the 52QA.rcf is replaced with the RFgenSAP.rcf. The location of the rcf files may be different on your system.

If the Configuratio File is blank: Click on the **Configuration File** plus (**+**) icon, and enter a new name for the rfc file in the Windows system pop-up screen (the location where you want the rfc file stored). For example instead of using the default name "RFgen" you want to use the name "MyTestConfig.rcf."

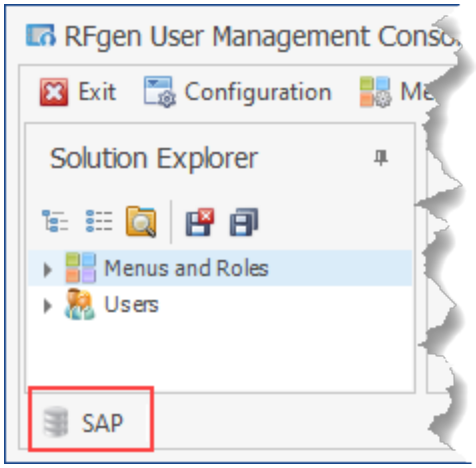
3. Enter the **System / Company ID** name that will be associated with your rcf file.

4. In the **System Database** menu, select the RFgen application database that is to be associated with your new rcf file.

If the database is not showing up in the right pane, you may need to change the System Database type (the default is SQLite) or switch to the Host that has the data source. (See example below.)



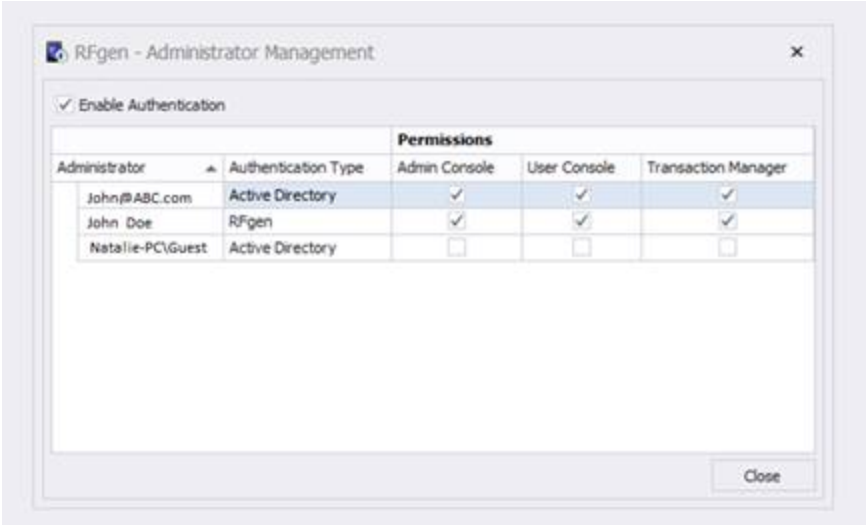
5. Ensure the Connection tab shows the correct path to the desired file. Click on **Test Connection** to check if the connection is valid. If it is successful, click **OK**.



The lower right corner will show the name of the datasource. In the example above we show "SAP".

For more details on the other fields in the Select/Create Application Database screen, see Config App DB.htm

Configuring User Access Control



The **User Access Control** feature restricts administrative access to RFgen consoles and dashboards if they are configured to authenticate the user via the credentials saved in the RFgen server, or Microsoft Active Directory .

To prevent unauthorized access, the dashboard / console must be connected to the same application database that was used to configure User Access Control in the RFGen server.

For example, if you had two application databases -- one called Test, the other Production -- and User Access Control was only setup in the RFgen server when it was connected to the Production database, if the console

/ dashboard was connected to the Test database, the user will not be prompted to enter his/her credentials. But, it the console / dashboard was changed to use the Production application database, the user would be prompted.

To Enable Authentication

This feature is used for restricting access to the:

- *Admin Console* (the Mobile Enterprise Dashboard)
- User Console (User Management Console)
- Transaction Manager (Transaction Management Dashboard)

1. In the **Mobile Dev Studio**, click on **Configuration > User Access Control**.
2. Click on the **Enable Authentication** box.
3. Right-click on any of the column headings (or white space).
4. Select the desired action to add, edit, or removed an administrator.
5. If adding, enter the user's information, then click **OK**.
6. Check the box for one of the following that the administrator will be allowed to access.
7. Click **OK** to save your changes.

Update the Target Dashboard / Console

1. Launch the dashboard / console.
2. In the Configuration or Connection menu, select Application Database.
3. In the Data Source Configuration > Configuration File, click on the down arrow.
4. Select the application database that has the User Access Control settings.
5. (Optional) Click Test Connection. Click OK.
6. The application database should display on the lower left corner.
7. Click **OK**.

Installing RFgen Transaction Management Dashboard

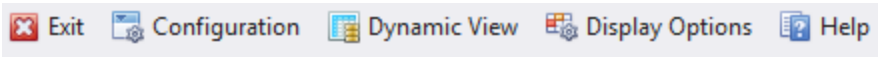
The RFgen Transaction Management (TM) Dashboard is installed through the RFgen Mobile Unity Platform installer. For information on installing the TM Dashboard separately from the RFgen server, see the section "Installing RFgen" in this guide.

To launch the TM Dashboard, select the program from your Windows Start > RFgen v5.2 folder.

Note that the access can be setup to require elevated privileges (User name and password). For more details on authentication of TM Dashboard users, see the **RFgen Users Guide > RFgen Development Studio > Configurating User Access Control**, or click here, to view the online help topic.

Configuring the Transaction Management Dashboard

To set a connection to the data source and/or RFgen Server hosting TM transactions are processed, select **Configuration > Application Database**.

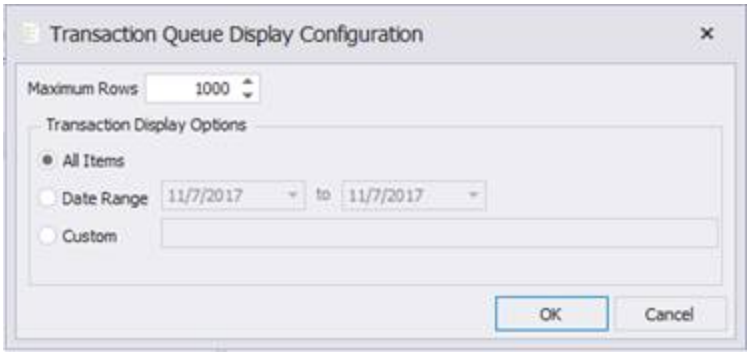


The **Configuration Menu** contains:

- **Application Preferences** - for setting your user interface themes and locale.
- **Application Database** which stores the solution objects displayed in the User Management Console.

The **Dynamic View** button toggles between Static and Dynamic views of transactions. The Static View will display transactions that have already occurred whereas the Dynamic View displays transactions as they occur in real time.

The **Display Options** are used to narrow down the records being displayed in this window. Click the toolbar button on the far right to get this configuration screen.



Over time the list of completed transactions can become very large.

Maximum Rows will limit the display to the first configured number of entries. To see the most recent entries, use the data range option and set the Maximum Rows to a high value.

Transaction Display Options – **All Items** shows an unrestricted list of entries and **Date Range** will limit the entries to a date-based on their created date.

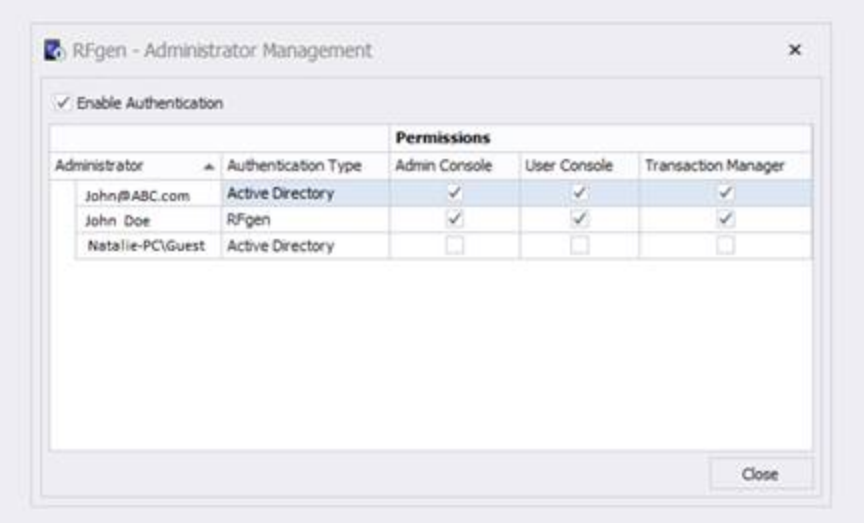
The **Custom** option is an ability to specify your own Where clause for the lookup. The actual names of the fields in the Queue database must be known as well as the type of field. An example would be:

where SeqNo = 1

(See TM.GetItemsEx for examples of table fields and types.)

The **Help** will display the online help for the Transaction Management Dashboard.

Configuring User Access Control



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Update the Target Dashboard / Console

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2. In the Configuration or Connection menu, select Application Database.
3. In the Data Source Configuration > Configuration File, click on the down arrow.
4. Select the application database that has the User Access Control settings.
5. (Optional) Click Test Connection. Click OK.
6. The application database should display on the lower left corner.
7. Click **OK**.