

SG Database & Server Migration Procedure

Moving SG and idProducer Databases & Software to a new server ~ *with or without upgrading versions.*

2024 | SG 11.8.5



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System Database Migration Procedure

Sections and topics in this guide are order-dependent and should be performed in the correct sequence.

This procedure covers how to migrate the system (software & databases) to a new server, with or without upgrading the system software version.

TOPICS COVERED ...

- Important Requirements & Stipulations
- Setting up the new server (all systems)
- Updating maintenance agreement on original server (all systems)
- Creating Database Backup files on original server (all systems)
- Moving databases to the new server (all systems)
- Recreating Client Logins (all systems)
- Resetting idProducer license key (all systems)
- Upgrading databases (for system upgrades only)
- Registering the new server (all systems)
- Pointing SG Clients and Badging Clients to New Server (all systems)
- Pointing Loop/Clusters to New Server (all systems)
- Pointing Control Panels to New Event Server (all systems' 600/635 CPUs)
- Updating Flash to hardware panels (for upgrades only)
- Loading Data to panels (all systems)
- Appendix (related information)

RELATED GUIDES ...

<i>Supporting Documents</i>	<i>Description</i>
* Galaxy System Specifications Guide (pdf)	PC/Server, OS, IT, and System Specifications (latest)
* 635/600 Flash Load QRG (pdf)	How to Load Flash (600/635 Hardware)
* When referenced, the supporting documents provide in-depth instructions about the steps in this procedure.	
<i>Related System Documents</i>	<i>Description</i>
System Galaxy Software User Guide (pdf)	Software User Guide (latest)
Galaxy 635/600 Hardware Install Guide (pdf)	Hardware Installation Guide (latest)
Online Documentation Directory (webpage)	List of all Galaxy Documentation on the <i>SG Online Help website</i>

REQUIREMENTS & STIPULATIONS

1. The *new target server* must be running a version of Windows OS that is compatible with the version of System Galaxy that you will be installing.
2. On the *new target server*, all Windows Updates must be done before you install System Galaxy.
3. On the *new target server*, your Windows login must have *administrative rights*.
4. The *new server* must meet system requirements. See [System Specifications Guide \(pdf\)](#).
5. You must install the necessary drivers needed if you are attaching a badge printer to the new server.
6. You must obtain the correct version of **System Galaxy Install Media (USB/ISO)** to install on the *new server*:
 - IF UPGRADING: obtain the *new version* of System Galaxy you want to install on the *new server*.
 - IF NOT UPGRADING: obtain the *same version* of System Galaxy as is running on the *original server*.
7. If the SG Maintenance Agreement date is expired, you must renew the *agreement* before you make database backups. Contact authorized customer support for assistance.
8. Backing UP Databases: You must back-up the sysgal, sysgalarc, and idProducer databases to move them.
9. Backing up System Assets: System assets include biometric data, photographs, images, icons, logos, templates, reports, etc.
10. After you have completed moving and restoring the databases on the new server, you will need to recreate the Galaxy client logins for the sysgal and sysgalarc databases. The client logins are gcs_client and gcs_web_client. These logins must have the correct permissions applied. See the related instructions in this guide for details.
11. (UPGRADES ONLY) Database upgrades can be performed only after the database migration process is completed and the client logins have been recreated.
12. System Galaxy must be re-registered to the new server after the databases are moved.
13. All the idProducer Badging Clients must be pointed to the new server after the database is moved and reregistered. All Print Dispatchers must be restarted Make sure all clients can open the existing badges.
14. Final Backups (Best Practice): After you have finished with the upgrade/migration process, you should create a final set of database backup files from the new target server. Store these backup files in the designated safe location.

INSTALLING & SETTING UP THE NEW SERVER

This topic covers installing the System Galaxy, IIS, and idProducer software and services on a *new server*.

SYSTEM COMPONENTS INSTALLED IN THIS TOPIC ...

- System Galaxy (prerequisites, databases, SSMS, software and services)
- Microsoft IIS
- idProducer (web client software, database, and services)

TERMS USED IN THIS TOPIC ...

New Server = is the server that the software and databases are moving to (i.e., migrating to).

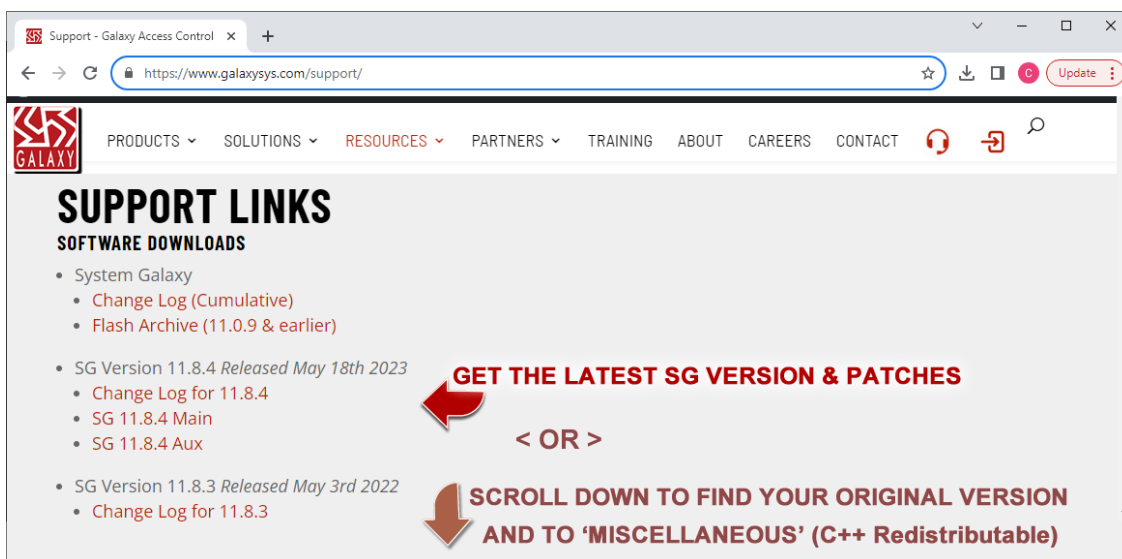
Original Server = the server that the software and databases are moving from (i.e., migrating from).

OBTAIN THE CORRECT VERSION OF GALAXY INSTALL MEDIA

ASSUMPTIONS ...

- You have a valid Dealer login/password to the Downloads/Support page.
- You have a stable internet connection for downloading the ISO files.

1. On the new server, open the Support page: <https://www.galaxysys.com/support/> (login required)
 - a. Scroll down to the **"SOFTWARE DOWNLOADS"** under Support Links (as pictured below).
 - **IF UPGRADING:** locate the latest released version (near the top of the list)
 - **NOT UPGRADING:** find the version that matches your *original server*. Open the SG Help\About screen on the original server to determine the correct version.
 - b. Download both **Main** and **Aux** files (the Main ISO is large and takes time to download).
 - c. (if available) Download any **Software Patch** for the SG version you downloaded.
 - d. (if needed) Download the **C++ Redistributable** zip file (scroll down to "MISCELLANEOUS").



INSTALL SYSTEM GALAXY ON THE NEW SERVER

ASSUMPTIONS & RECOMMENDATIONS ...

- You have installed the compatible *Operating System* and completed all *Windows Updates*.
- You "accept defaults" when installing the databases and software.
- You must restart the computer when you are prompted to restart.
- You must install IIS from the dedicated "Install IIS web server" option on the splash screen.

1. Double-click **SGSetup.hta** on the System Galaxy Install USB/ISO.

2. Run the installation steps from the **GCS Setup screen** as follows:

- ☐ Run "Step 1: Install Prerequisites" (restart required).
- ☐ Run "Step 2: Install Database" and choose New Install > Option-1 (accept the defaults).
Note: During the install, choose to install *SQL Server Mgt. Studio* and restart when prompted.
- ☐ Run "Step 3: SG Software" and choose Option A-Complete Install (accept defaults & restart).
- ☐ Run "Install IIS web server" (after install, click hyperlink <http://localhost> to verify installation).



GCS Installation USB/ISO (home screen)

3. Proceed to **Install idProducer Badging** instructions.

INSTALL IDPRODUCER BADGING ON THE NEW SERVER

This topic covers installing idProducer software, creating the idProducer Client website and publishing the database.

1. Click the “**Install idProducer Badging**” option on the *GCS Install splash screen*.

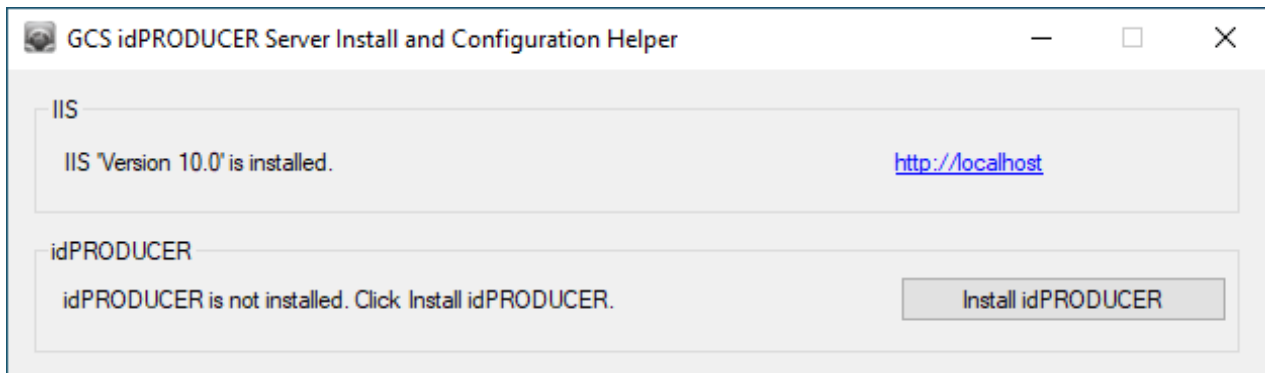
RESULT: The *GCS idProducer Install Helper* window will open.



GCS Installer (home screen): Install idPRODUCER Badging

2. When the *GCS idProducer Install Helper* window opens click the [Install idPRODUCER] button.

RESULT: The *idProducer Installation Program* window will open.



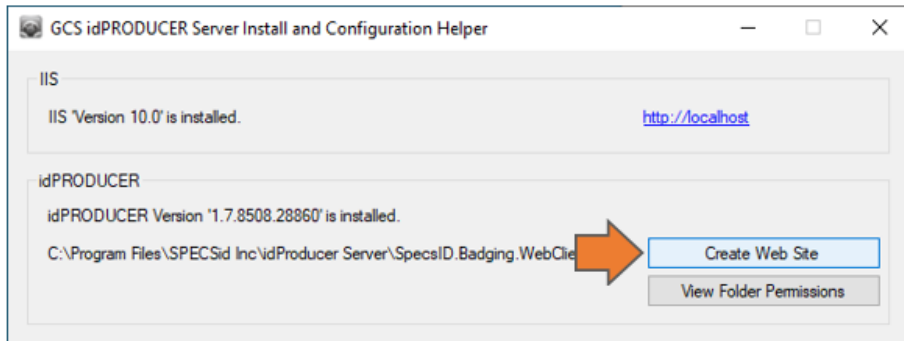
NOTICE: If the install is interrupted by a ‘Visual C++ Redistributable Error’, you must install the correct Visual C++ Redistributable files. Download the **Visual C++ Redistributable v14.3X** zip file from Galaxy Support page www.galaxysys.com/support . See [Appendix: Installing C++ Redistributable files](#) for exact instructions.

3. Click **Next** on the idProducer Welcome screen.
4. Check the 'Accept idProducer License' (checkbox) and click **Next**.
5. Choose to run a [**Complete**] install.
6. Click **Install** button to begin installing the software (a green progress bar will be displayed).
7. Click **FINISH** and wait for the idProducer Configuration Manager to auto-start.
8. While waiting for the Config Manager to open, go ahead to the Create Website.

CREATE IDPRODUCER WEBSITE ON THE NEW SERVER

9. Click the [**Create Web Site**] button on the *GCS idProducer Install Helper* window.

RESULTS: The installer will create the idProducer Client Website.



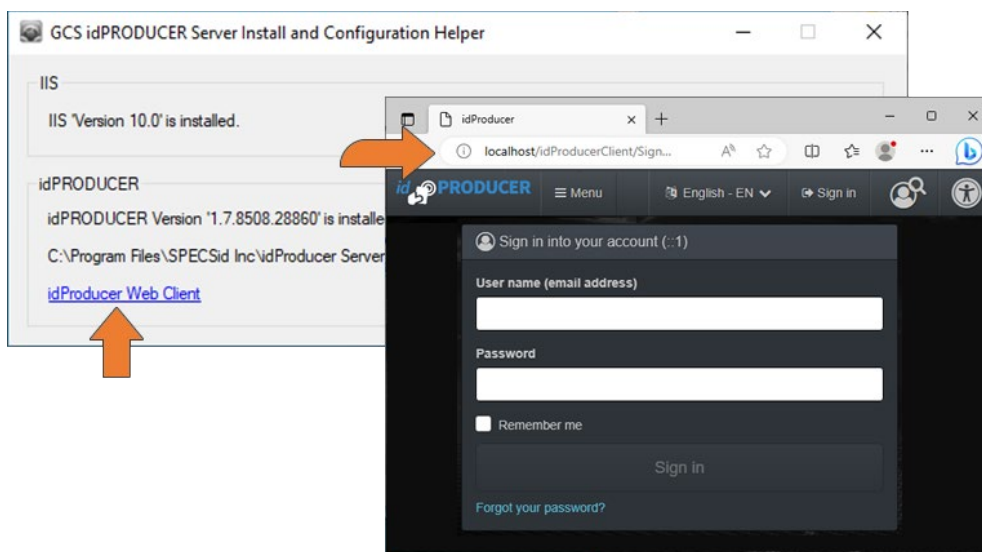
VIEW THE IDPRODUCER WEBSITE ON THE NEW SERVER

Verify the idProducer Website has been created as follows ...

10. Click the **idProducer Web Client** hyperlink to launch the Client login webpage in your default browser.

RESULTS: The idProducer Website Client Sign-in page will open.

- DO NOT CREATE A LOGIN.
- DO NOT REQUEST A LICENSE.



11. Close the Browser and the *GCS Install Helper* window.

PUBLISH THE IDPRODUCER DATABASE ON THE NEW SERVER

The *idProducer Configuration Manager app*, should be open.

You can type "idProducer Configuration" in the Windows Search field from the Taskbar if you need to open the Configuration Manager manually.

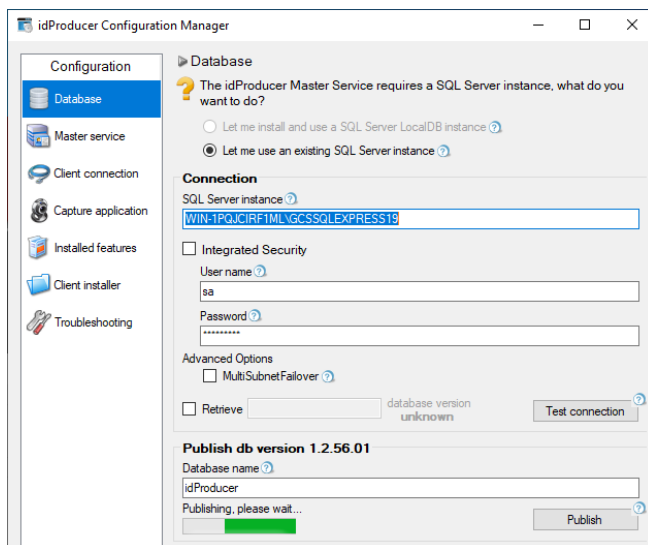
1. Publish the idProducer database as follows

- a) Choose the option to "use an existing SQL Server instance".
- b) Enter the **SQL Server Instance name** of the new server – i.e., server_name\GCSSQLEXPRESS (where server_name means the machine name of the new server).
- c) Enter Galaxy's default "sa" login credentials ("sa" & password).

If you do not get a successful connection, make sure you are using the correct sa password and have the SQL Instance name correctly spelled.

- d) Confirm that "idProducer" is displayed in the *Database Name* field.
- e) Click the **Publish** button to publish the database. *This publishes a blank idProducer database.*

NOTICE: If the install is interrupted by a 'Visual C++ Redistributable error, you must install the correct VC++ redistributable files. Download the **Visual C++ Redistributable v14.3X zip file** from the Galaxy Support page www.galaxysys.com/support . See [Appendix : Installing C++Redistributable files](#) for exact instructions.



idProducer Configuration Manager: Database screen > publishing the database

2. Click **OK** in to Successful Publish confirmation message.
3. Click **OK** to the message that says the *settings will be saved and idProducer services will start*.
4. Click **OK** to the Warning message pertaining to Web Clients. *Clients are configured in a later step.*
5. Close *idProducer Configuration* window and exit the GCS Setup splash screen.
6. Proceed to the next section.

INSTALL THE SYSTEM GALAXY PATCH ON NEW SERVER (OPTIONAL)

SKIP this section if there is no patch for the version of SG you installed on the new server.

ASSUMPTIONS...

- You must have completed the System Galaxy and idProducer Installation.
- You must have downloaded the SG Software Patch file from the Galaxy Downloads page.

1. Extract the zip file that contains your System Galaxy patch.
2. Run the patch executable on the new server.
3. Restart the computer to initialize the system.
4. Proceed to the next section.

VALIDATING THE NEW SERVER INSTALLATION

This topic covers validating that the System Galaxy and idProducer software is successfully installed.

IMPORTANT: Do NOT register the software at this time. Registration will be done in a later step.

1. Open/launch **System Galaxy software from the desktop icon** on the new server.

- a) Create a *login* and *password*,
- b) Sign-in to System Galaxy with the login you just created.
- c) Click **OK** to bypass the system registration reminder message.
Do not attempt to register the system!

RESULT: The main *System Galaxy window* will open, and you should see a "Default" Loop/Cluster. Since the databases have not been moved yet, none of your system programming will be visible at this point.

- d) Open the *Cardholder screen* from the menu path: **Configure > Cards > Cardholders**.
- e) Close System Galaxy software.

2. Open/launch the **idProducer Web Client from the desktop icon** on the new server.

- a) The **idProducer Web Client** will launch in your default browser, you might see a red warning message stating that the product license is needed.
- b) **Do not attempt to license idProducer product.** *This will be taken care of in a later step.*
- c) Close the web browser window.

BACK-UP DATABASES ON ORIGINAL SERVER

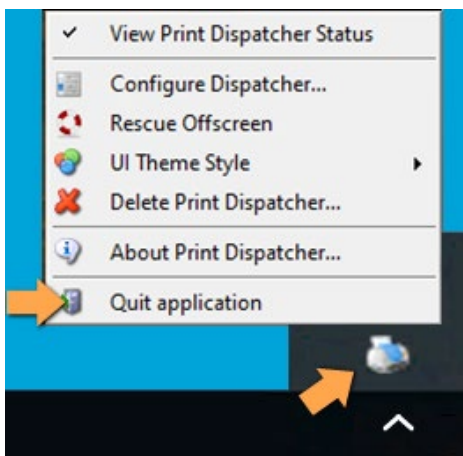
This topic covers how to back up and move the System Galaxy and idProducer databases on the original server.

VERIFY MAINTENANCE AGREEMENT IS VALID

1. Before you make backups, make sure System Galaxy product Maintenance Agreement is valid (not expired).
 - a. From the System Galaxy menu, go to **Configure > Options > Registrations > System**.
 - b. If the Maintenance Agreement is expired, you must contact authorized customer support to update the maintenance agreement.
 - c. Once the Maintenance Agreement is valid, you can proceed.

STOP ALL CLIENT CONNECTIONS TO ORIGINAL SERVER

2. On the original server, close all client connections as follows ...
 - a. Close all instances of **System Galaxy software** that is running on any/all client computers.
 - b. Close all instances of **idProducer software** (web clients) that is running on any/all computers.
 - c. Quit all **idProducer Print Dispatchers** on all clients. Do this by opening the Task-tray and right-clicking the *Print Dispatcher Icon*, then selecting **Quit application** from the shortcut menu (shown below).
 - d. Stop the **idProducer Connector services** on all client computers from the Windows® Services screen.



Print Dispatcher Task Menu

STOP & DISABLE ALL GALAXY SERVICES ON THE ORIGINAL SERVER

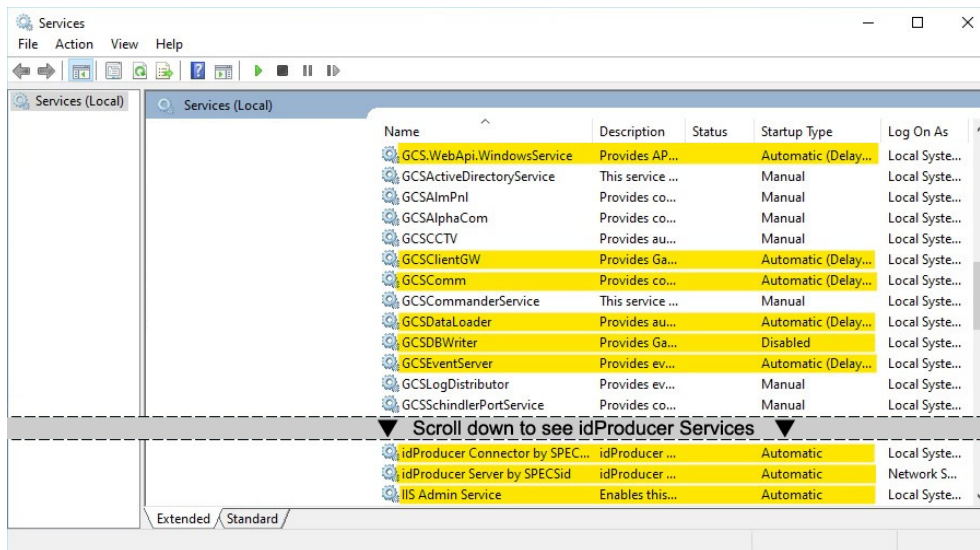
On the original server, you must stop and disable the following services ...

- | | |
|--|---|
| <input type="checkbox"/> GCS WebAPI service | <input type="checkbox"/> idProducer Connector service * |
| <input type="checkbox"/> GCS ClientGW service | <input type="checkbox"/> idProducer Server service |
| <input type="checkbox"/> GCS Comm service | <input type="checkbox"/> IIS Service |
| <input type="checkbox"/> GCS DataLoader service | |
| <input type="checkbox"/> GCS DBWriter service | |
| <input type="checkbox"/> GCS Event service | |
| <input type="checkbox"/> GCS (and any other GCS service) | |

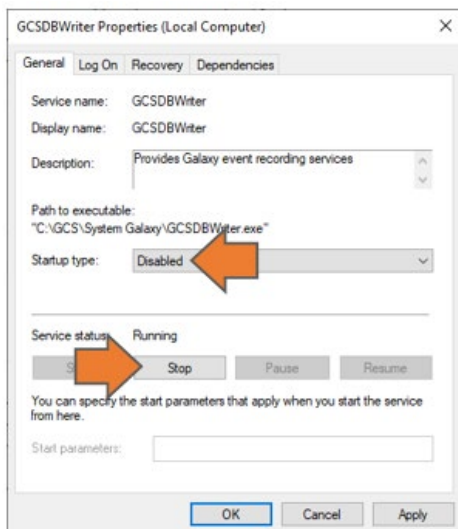
* Must be stopped on every client workstation.

Notate which other services you stopped.

3. Open the *Services* window by typing "Services" into the Search field of the Windows Taskbar.

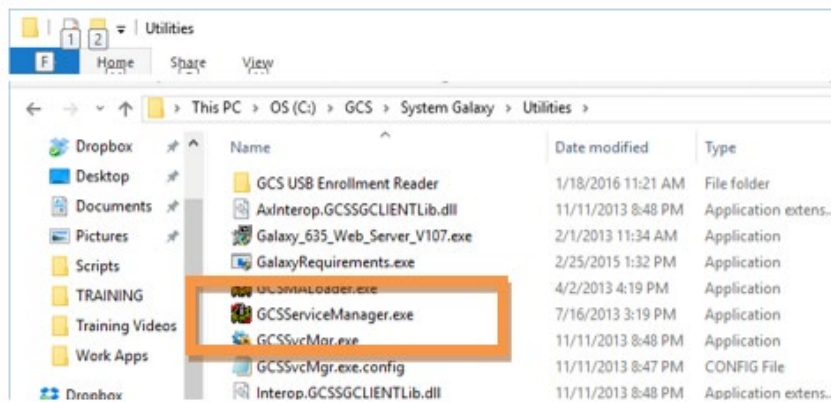


4. Double-click on the **name of the service** to open the Properties screen.
- Click the **Stop** button in the *Properties* screen.
 - Select the "**Disabled**" option from the Start Type droplist.
 - Click the **Apply** button.
 - Click **OK** to close the Properties screen. (make sure you do this for all the services listed)



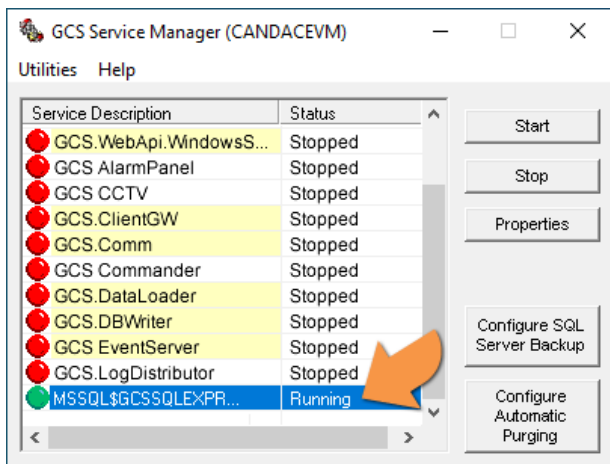
BACK UP THE DATABASES ON ORIGINAL SERVER

1. Open the **GCS Service Manger** from the System Galaxy folder: **c:\GCS\System Galaxy\Utilities**
2. Right-click on **GCSServiceManager.exe** and choose "Run as Administrator" from the menu.



C:\GCS\System Galaxy\Utilities > GCS Service Manager.exe

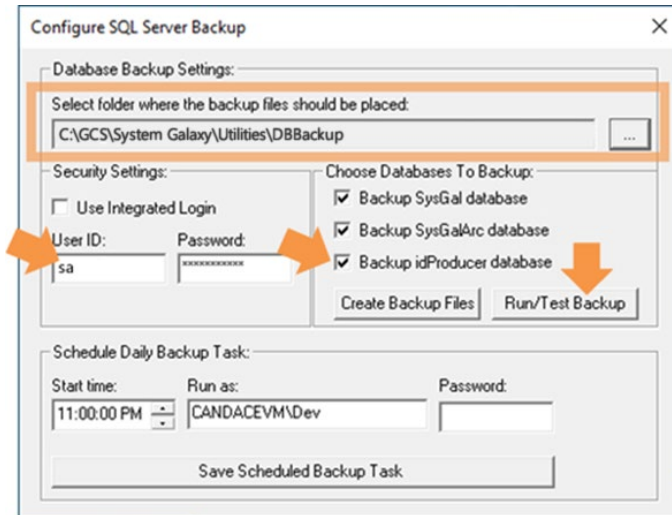
3. In the **GCS Service Manager** tool ...
 - a) select (highlight) "**MSSQL\$GCSSQLEXPRESS**" service at the bottom of the list.
 - b) click the **[Configure SQL Backup]** button, to open the backup screen.



GCS Service Manager > MSSQL Service selected.

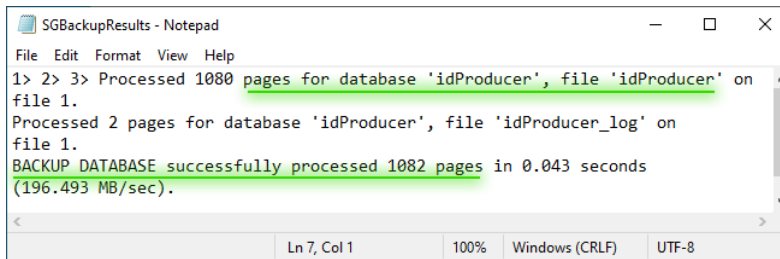
4. In the **Configure SQL Server Backup** screen, do the following steps ...

- a) Assign the desired **backup path** using the **Browse [...]** button to select the appropriate folder.
 - (GCS Default path) **C:\GCS\System Galaxy\Utilities\DBBackup**
- b) Enter your **sa login credentials** (sa & password)
- c) Select (check) all the database checkboxes (SysGal, SysGalArc and idProducer).
- d) Click the **[Run/Test Backup]** button to generate the backup files.



GCS Service Manager > Configure SQL Backup screen

5. The “SGBackupResults.txt” should automatically open in Notepad.



```

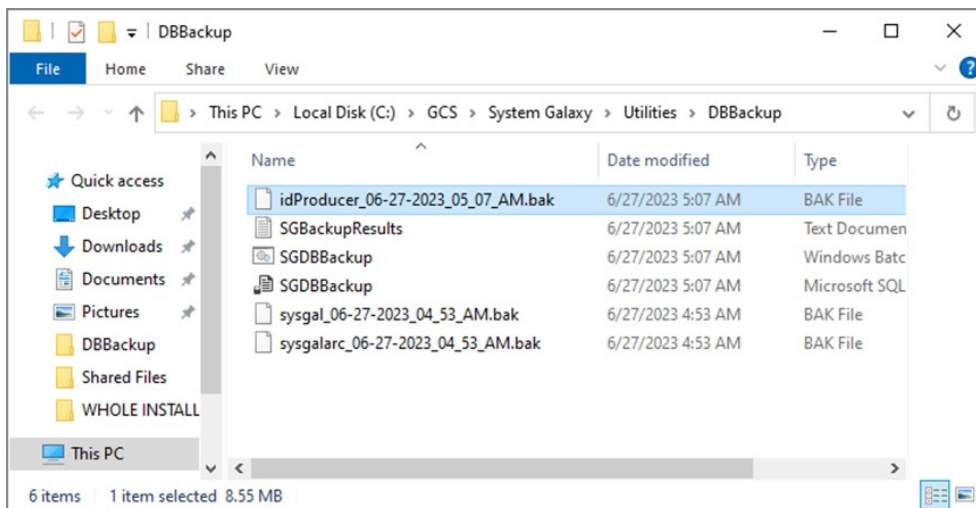
File Edit Format View Help
1> 2> 3> Processed 1080 pages for database 'idProducer', file 'idProducer' on
file 1.
Processed 2 pages for database 'idProducer', file 'idProducer_log' on
file 1.
BACKUP DATABASE successfully processed 1082 pages in 0.043 seconds
(196.493 MB/sec).
Ln 7, Col 1    100%    Windows (CRLF)    UTF-8

```

Run/Test Backup > SG Backup Results text file

6. Windows Explorer auto-opens to the *backup folder path* that was designated in the **Configure SQL Backup** screen.

RESULTS: The database .bak files and Backup Result files will be shown.



RunTest Backup > Time-stamped Database Backup files

7. **Move all backup files to an accessible location on the new server.**
- idProducer database
 - SysGal & SysGalArc databases
 - And all system assets
8. Close all screens that were opened by the backup process.
9. *This completes the steps to backup files on the original server. Proceed to the next section to Move and Restore databases.*

MOVING DATABASES TO THE NEW SERVER

This topic covers the process of migrating the databases to the new server, which includes recreating the client logins, running scripts, and editing app settings.

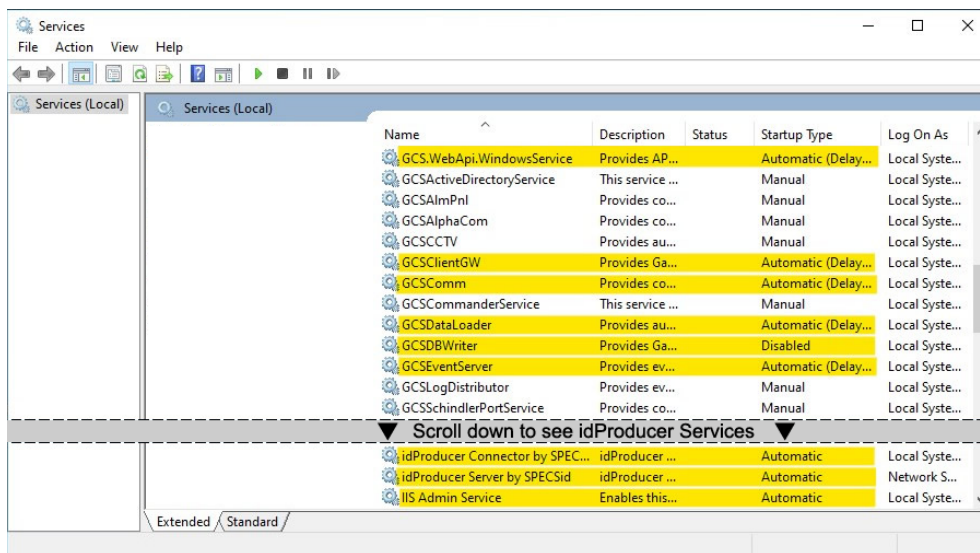
STOP DATABASE CONNECTIONS ON THE NEW SERVER

1. Ensure **System Galaxy software**, **idProducer web client (browser)** and **Print Dispatcher** are not running.
2. On the new server, you must stop the following services ...

- | | |
|--|---|
| <input type="checkbox"/> GCS WebAPI service | <input type="checkbox"/> idProducer Connector service |
| <input type="checkbox"/> GCS ClientGW service | <input type="checkbox"/> idProducer Server service |
| <input type="checkbox"/> GCS Comm service | <input type="checkbox"/> IIS Service |
| <input type="checkbox"/> GCS DataLoader service | <input type="checkbox"/> System Galaxy software application |
| <input type="checkbox"/> GCS DBWriter service | |
| <input type="checkbox"/> GCS Event service | |
| <input type="checkbox"/> GCS (and any other GCS service) | |

Notate which other services you stopped.

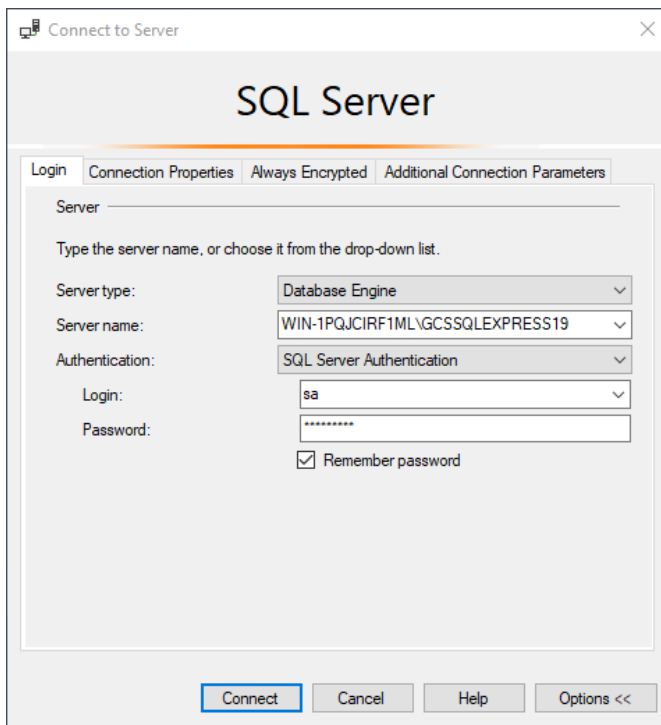
3. Open the *Services window* by typing "Services" into the Search field of the Windows Taskbar.



4. Right-click the **name of the service** and choose 'STOP' from the shortcut menu.
5. Do this for every service listed above.

LAUNCH SQL SERVER MANAGEMENT STUDIO ON THE NEW SERVER

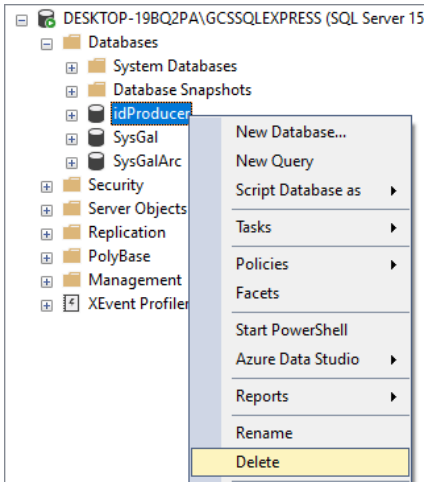
1. Move a copy of all the database .bak files into the SQL Server Backup folder on the new server.
PATH \$:\Program Files\Microsoft SQL Server\MSSQL15.GCSSQLEXPRESS\MSSQL\Backup
2. Launch the **SQL Server Management Studio** and login to the System Galaxy SQL instance.
 - a. Select **Database Engine** for Server Type.
 - b. Select the correct **Server Name**
(machine_name\instance_name)
 - c. Select **SQL Server Authentication** type.
 - d. Enter the “sa” login and password.
 - e. Click **Connect** to connect to the GCSSQLEXPRESS instance and its databases.



SQL Server Mgt Studio > Login window

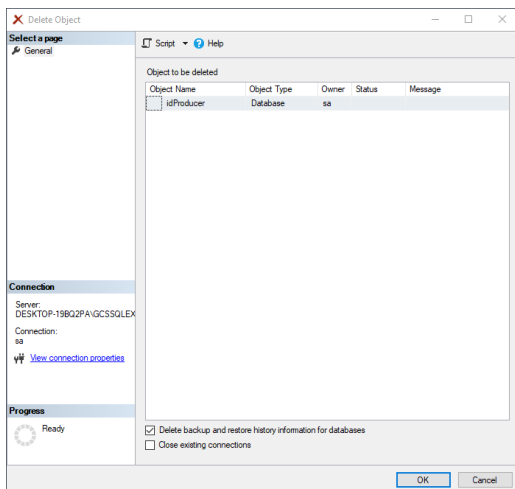
DELETE THE BLANK DATABASES FROM THE GCS SQL INSTANCE

1. Under the **GCSSQLEXPRESS** instance, expand the **Databases** branch.
2. Delete the following databases from the database branch ...
 - ***SysGal***,
 - ***SysGalArc***
 - ***idProducer***
- a. Right-click each database name and select Delete from the shortcut menu.



SQL Server Mgt Studio > Object Explorer

- b. Click the **OK** button to confirm the deletion, as needed.



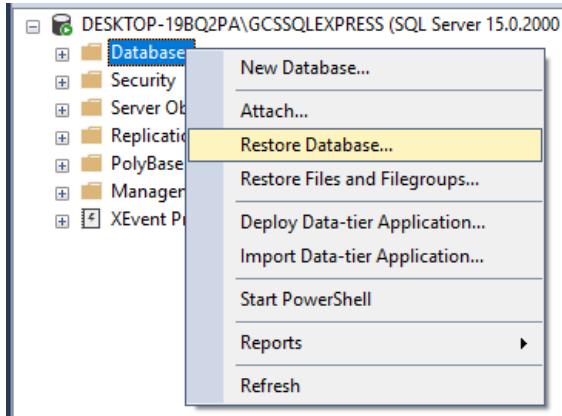
SQL Server Mgt Studio > Deleting Database Object

- c. Repeat these steps for all 3 databases separately (***SysGal***, ***SysGalArc*** and ***idProducer***).

RESTORE BACKUP DATABASES ON THE GCS SQL INSTANCE

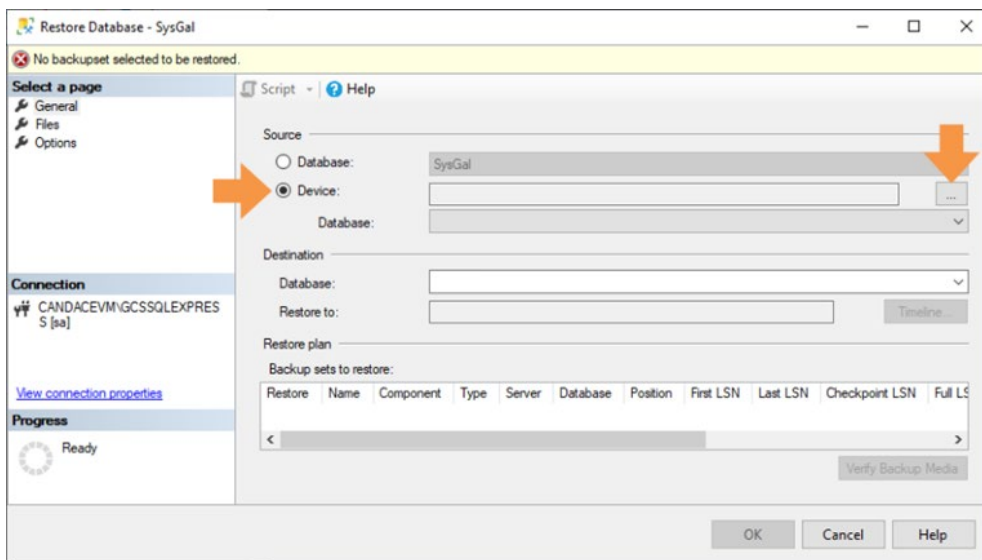
This section covers restoring the backup databases that you copied into the MSSQL Backup folder (**SysGal**, **SysGalArc** and **idProducer**).

1. Right-click the **Databases** branch name and select "Restore Database..." from the menu option.



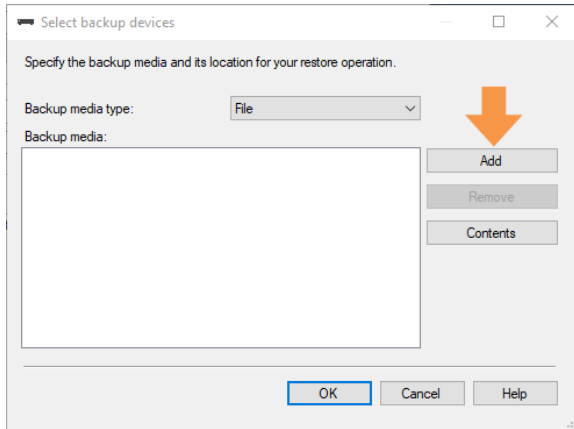
SQL Server Mgt Studio > Object Explorer

2. Select the **General** tab of the *Restore Database* screen ...
3. Click the **Device** radio button in the *Source* section of the page.
4. Click the **Browse [...]** button to browse to the MSSQL Backup folder .



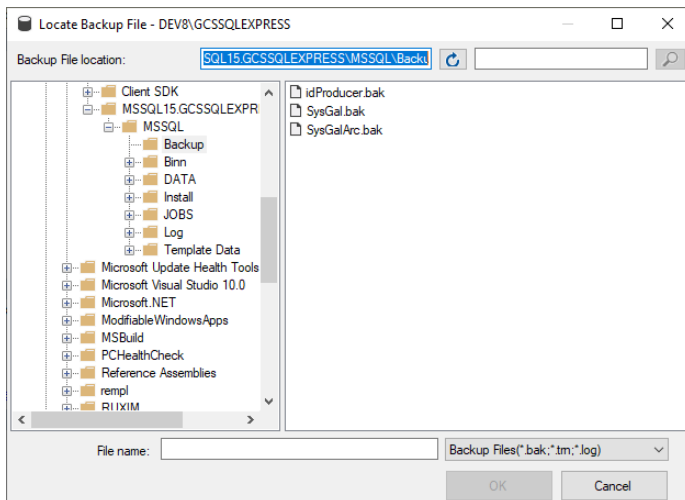
SQL Server Mgt Studio > Restore Database: General page

5. Click the **Add** button to open the Backup folder.



Restore Database General > Add Devices

6. Select (highlight) one database filename that you want to restore (i.e., *sysgal*, *sysgalarc*, *idproducer*).

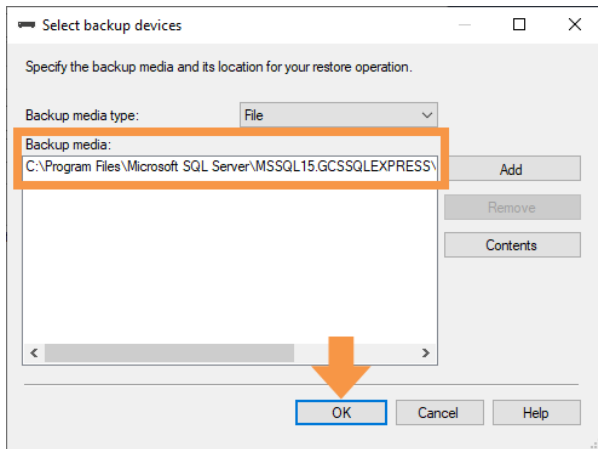


Restore Database General > Select Backup file

7. Click **OK** to select the bak file.

8. Click **OK** to add the Backup folder.

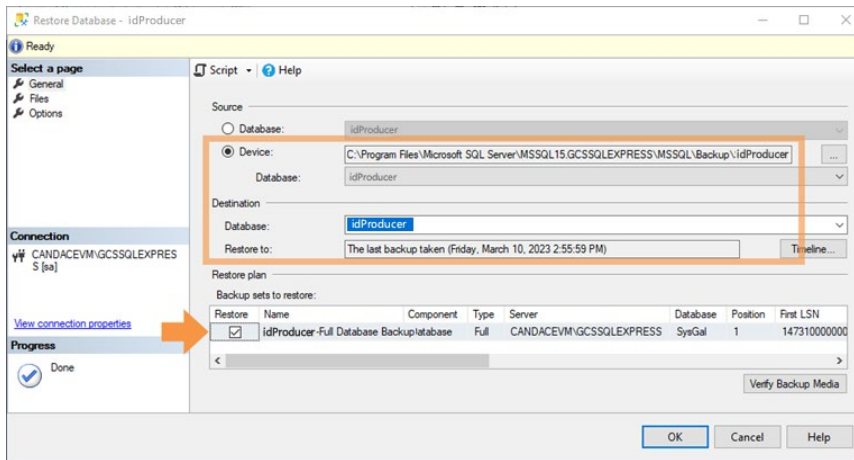
NOTE: the backup path (shown here) is the MSSQL15 backup path on the local server for SQL Server v2019. Your backup path could vary but should display correctly in this screen.



Restore Database General > Add Backup Path

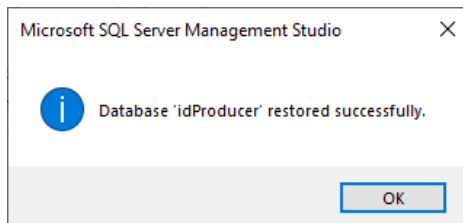
9. When you return to the **General** page, the fields should be populated as follows ...
 - Under *Source*, the **Device** field should display the *backup path* to the *database files*.
 - Under *Destination*, the **Database** field should display the database name you chose.

10. Verify the **Restore checkbox** (is "check") in the Backup Sets listview.
11. Click the **OK button** to restore the selected database.



Restore Database > General page: Full Database Backup

12. Click the **OK button** to confirm the successful restoration.



Restore Database Files > Confirmation message

13. Repeat these same steps in this section to restore the other databases.
14. Refresh the entire *SQL Instance branch* when you are finished restoring all the databases.

MANUALLY DELETE THE GCS USER LOGINS ON THE NEW SERVER

You must delete the *client logins* at each database branch (sysgal/sysgalarc)..

1. **(SysGal) Delete the GCS User Logins at the SysGal database as follows ...**
 - a. Expand the **SysGal database** that is under the **Databases** branch.
 - b. Expand the **Security >Users** branches and delete GCS User Logins as follows:
 - c. Right-click the "**gcs_client**" and choose **Delete** from the shortcut menu.
 - d. Right-click the "**gcs_web_client**" and choose **Delete** from the shortcut menu.

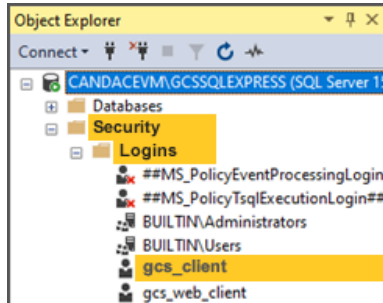
2. **(SysGalArc) Delete the GCS User Logins at the SysGalArc database as follows ...**
 - a. Expand the **SysGalArc database** that is under the **Databases** branch.
 - b. Expand the **Security >Users** branches and delete GCS User Logins as follows:
 - c. Right-click the "**gcs_client**" and choose **Delete** from the shortcut menu.
 - d. Right-click the "**gcs_web_client**" and choose **Delete** from the shortcut menu.

3. Refresh the **Databases** branch and verify that both logins are deleted ...
 - a. (SysGal) Under SysGal's **Security>Users** branch, verify both logins (**gcs_client** & **gcs_web_client**) are removed (not visible) in the list of logins.
 - b. (SysGalArc) Under SysGalArc's **Security>Users** branch, verify both logins (**gcs_client** & **gcs_web_client**) are removed (not visible) in the list of logins.

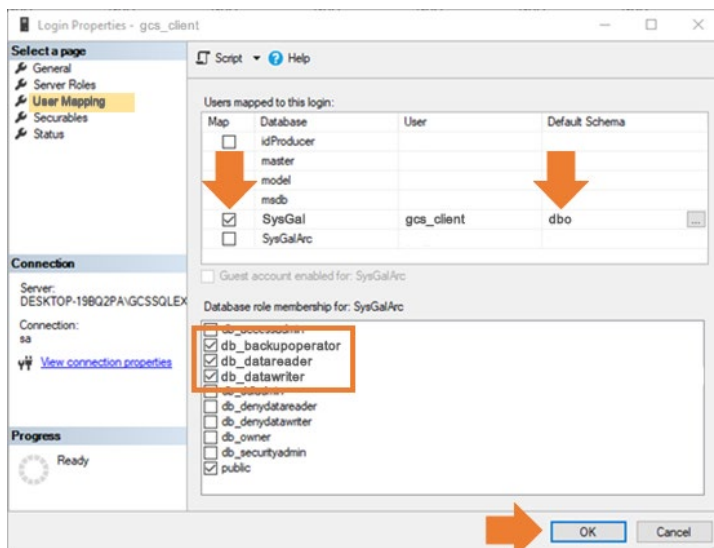
MANUALLY RECREATE GCS USER LOGINS ON THE NEW SERVER

1. Recreate the **gcs_client** logins as follows ...

- Expand the **Security>Logins** branch that is under the GCSSQLEXPRESS instance.
- Double-click on the **gcs_client** login. This will open the *Properties* screen.



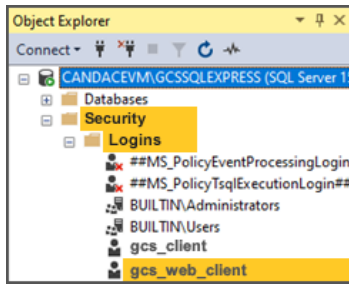
- In the Properties screen, select the *User Mapping* screen.
- Choose ("check") the **SysGal** database and enter "**dbo**" in the **Default Schema** field.
- Enable (check) the **db_backupoperator**, **db_datareader**, and **db_datawriter** and **public**.
- Click **OK** to recreate the GCS User Login. The client login will be added to the chosen database.



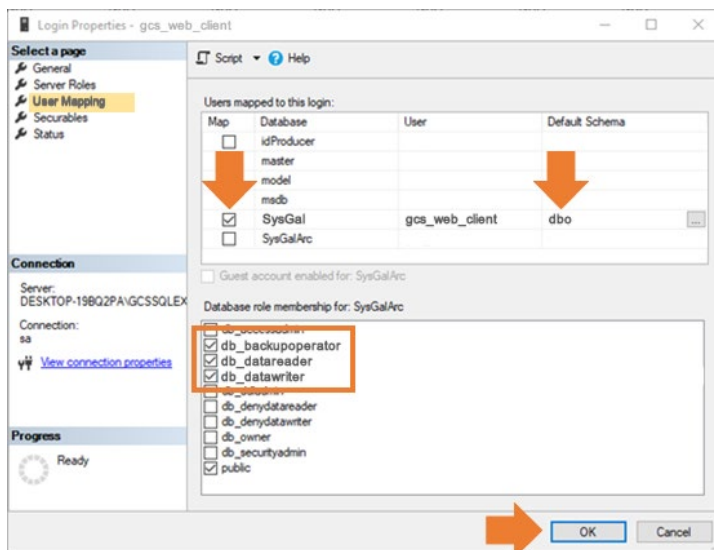
- Repeat Step-1 to recreate the **gcs_client** login for the **SysGalArc** database.

2. Recreate the **gcs_web_client** logins as follows ...

- Expand the **Security>Logins** branch that is under the GCSSQLEXPRESS instance.
- Double-click on the **gcs_web_client** login. This will open the *Properties* screen.



- In the Properties screen, select the *User Mapping* screen.
- Choose ("check") the **SysGal** database and enter "**dbo**" in the **Default Schema** field.
- Enable (check) the **db_backupoperator**, **db_datareader**, and **db_datawriter** and **public**.
- Click **OK** to recreate the login. The client login will be added to the chosen database.



- Repeat Step-2 to create the "**gcs_web_client**" for the **SysGalArc** database.
- Proceed to Running the License Script on the **idProducer** database.

RUN THE IDPRODUCER LICENSE (SQL STATEMENT)

This topic explains how to reset the idProducer license to "null". This must be done so that the license can be recreated when the system is re-registered in a later step.

ASSUMPTION:

- You must have successfully restored the backup file for the idProducer database.

- Open the SQL Server Management Studio (SSMS) and sign-in using SQL Authentication and "sa" login.
- Expand the "Databases" branch in the SSMS Object Tree.
- Right-click on the "idProducer" database name and choose **New Query...** from the shortcut menu.
RESULT: a blank Query tab will open.

- Enter (or copy/paste) the **SQL statement** (below) and click **Execute** toolbar button.

SQL MUST USE EXACT SYNTAX:

```
update idProducer.dbo.Subscription set License = null where SubscriptionID = 1000
```



SQL Server Mgt Studio > SQL Query tab

- To confirm your license is null, you can run the following SQL Statement on the idProducer database:

SQL MUST USE EXACT SYNTAX:

```
select [SubscriptionID], [CompanyName], [License] FROM [idProducer].[dbo].[Subscription]
```

RESULT: the License column should be "null" for SubscriptionID 1000

- Close the *Query tab* without saving. And the SSMS window.
- Continue to the next section for Upgrading System Databases.

UPGRADE THE SYSTEM DATABASES

These steps are only needed if you are upgrading the new server to a newer version of System Galaxy than was running on the original.

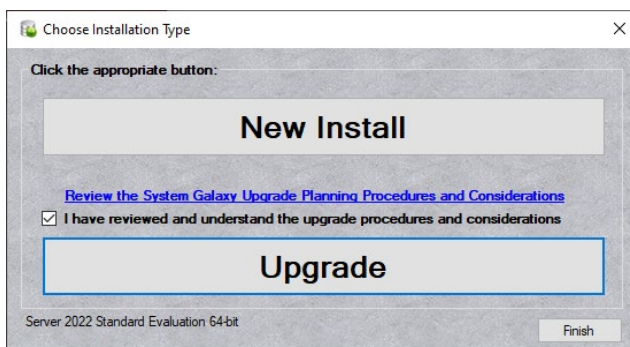
If you are not upgrading your system version, you do not need to upgrade the databases.

UPGRADING SYSTEM GALAXY DATABASES

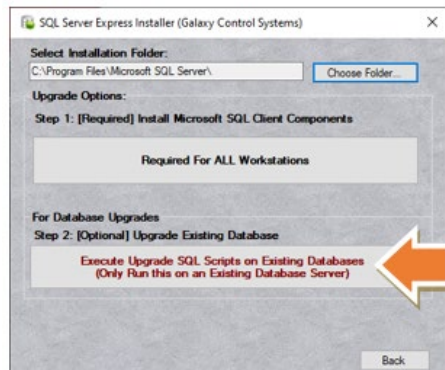
1. Launch the System Galaxy Installer USB/ISO and select Step-2 Upgrade Database.



2. Click **Continue** button on the MSSQL Precheck screen.
3. Click the **UPGRADE** button.



4. Select **Step-2 Upgrade Existing Database** option.



5. Select (highlight) your **SQL Instance name**.
6. Enter the **sa login** credentials and click the **[Connect to Server]** button.
7. Click **[Upgrade SysGalArc Now]** button and allow the upgrade to complete. You must do SysGalArc first.
 - a) Click **OK** to close the *Stop Services* reminder message box.
 - b) Click **OK** to close the "Upgrade Successful" message when the upgrade is completed.
 - c) Save your results file on the desktop for easy retrieval.
 - d) Verify the SysGalArc Results File has no *red error messages* at the end of the file.

The screenshot shows a window titled "Upgrade Databases" with a close button (X) in the top right corner. The window is divided into five steps:

- Step 1: Choose SQL Server Instance:** A list box shows "GCSSQLEXPRESS19" selected.
- Step 2: Choose Security & Click Connect:**
 - Authentication: SQL Server Authentication (dropdown)
 - User Name: sa (text box)
 - Password: [masked with dots] (password box)
 - Connect to Server (button)
- Step 3: Stop ALL Galaxy Software & ALL GCS Services on ALL Machines**

Important: All Galaxy software and GCS services must be stopped on all machines in the system before executing upgrade scripts.

Stop GCS Services on this Machine (button)
- Step 4: Select Archive Database & Click the Appropriate Button**

Select Archive Database: SysGalArc (dropdown)

Backup 'SysGalArc' Now (button)

Upgrade 'SysGalArc' Now (button)
- Step 5: Select Main Database & Click the Appropriate Button**

Select Main Database: SysGal (dropdown)

Backup 'SysGal' Now (button)

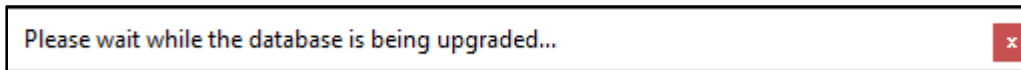
Upgrade 'SysGal' Now (button)

At the bottom right, there are two buttons: "Back" and "All Finished".

8. Click [**Upgrade SysGal Now**] button and allow the upgrade to process. You will get a “successful” message when it is finished. This process will take a few minutes.

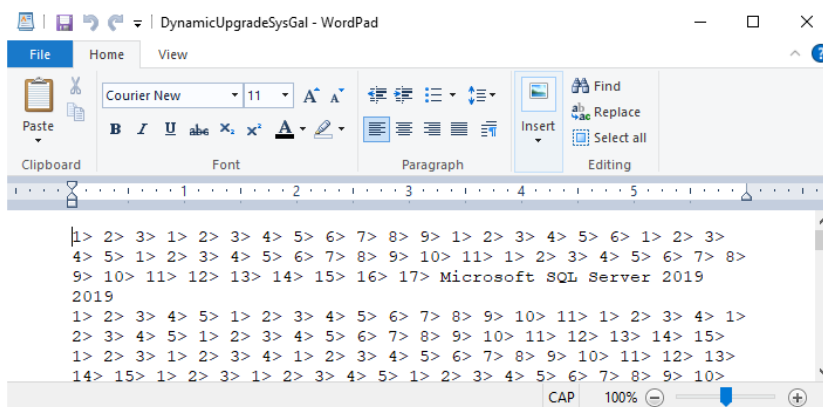
- a) Click **OK** to close the reminder message to stop Services.
- b) You will get a “**Please Wait while database is upgraded ...**” message.

Do not close this message.



- c) Click **OK** to close the “*Upgrade Successful*” message when the upgrade is completed.
- d) Save the *Results file* on the desktop for easy retrieval.
- e) Scroll to *the* bottom of the text file to verify that there are no errors (red text).

IMPORTANT: If the *Results file* shows errors, you should redo the SysGal upgrade by clicking the *Upgrade SysGal Now* button again and allow the SysGal upgrade to run a second time. If there are no errors in the second results file, then you can proceed to the next section. If it still finishes with errors, save the results on the desktop and contact authorized tech support.



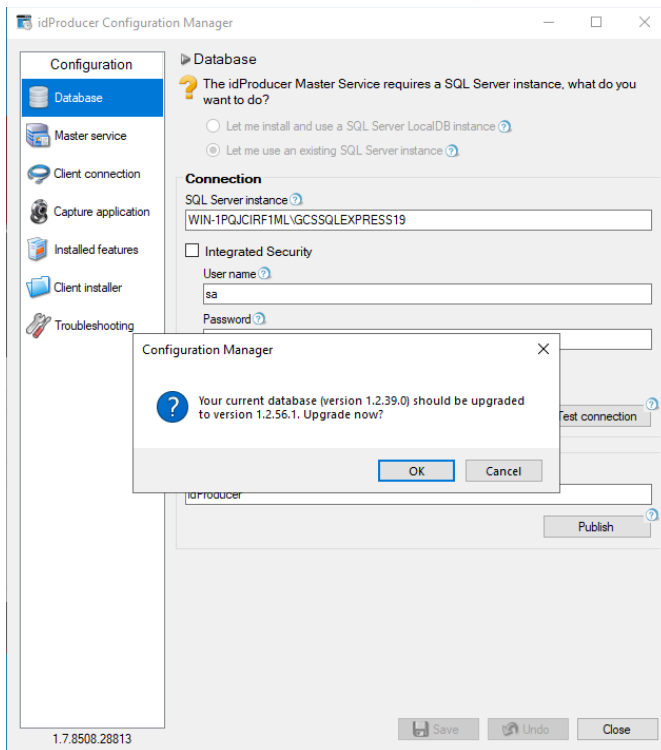
9. Click **All Finished** button to close Galaxy installer window,
10. Click **Exit** on the System Galaxy Installer splash screen when finished.

CONNECT AND UPGRADE THE IDPRODUCER DATABASE (MOVE & UPGRADE)

Skip this section if you are not upgrading. Proceed to [Validating idProducer Existing Database Connection](#).

This section describes how to upgrade the idProducer database after you have moved it to the new server.

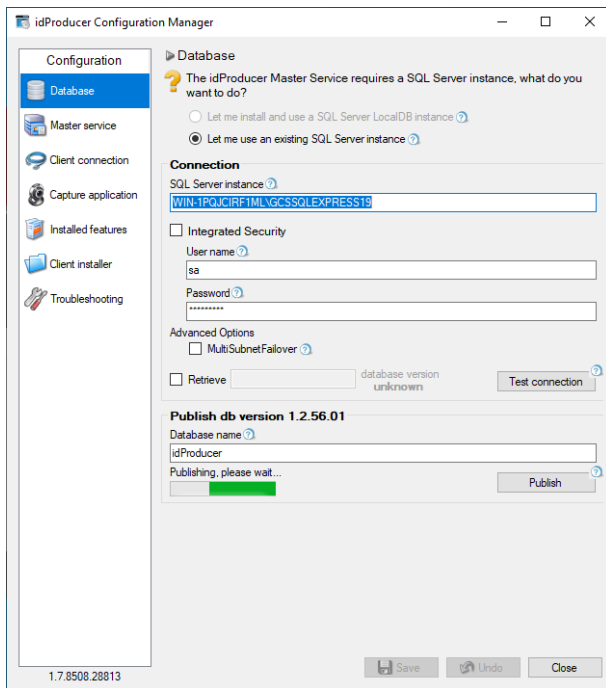
1. Open the **idProducer Configuration Manager** from the Windows Search bar.
2. The **idProducer Configuration Manager** should auto-detect the database version and prompt the user to upgrade the database.
3. Click **OK** on the message box to begin the database upgrade.



idProducer Configuration Manager: Database screen

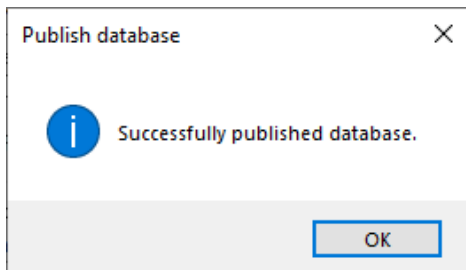
NOTICE: If the install is interrupted by a 'Visual C++ Redistributable Error', you must install the correct Visual C++ Redistributable files. Download the **Visual C++ Redistributable v14.3X zip file** from Galaxy Support page www.galaxysys.com/support. See [Appendix: Installing C++ Redistributable files](#) for exact instructions.

4. The *Configuration Manager* will indicate that the database is being upgraded and published at the bottom of the screen (green bar). **Allow this operation to finish.**

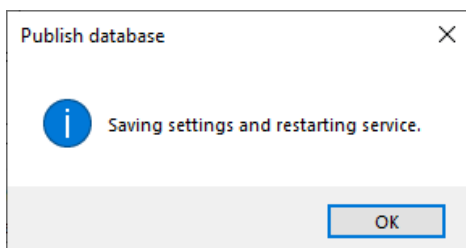


Configuration Manager: Database screen

5. When the upgrade is finished, click **OK** to close the *Successful Publish* message.

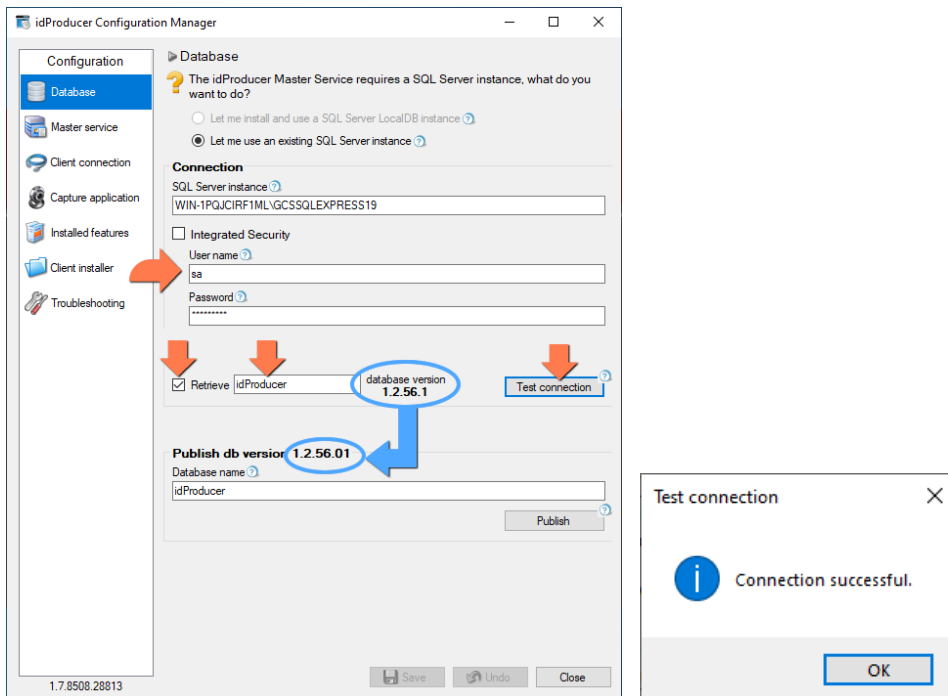


6. Then click **OK** to *Save Settings and Restart Services*.



7. The Config Manager should show the new idProducer database version.
8. The Config Manager should show the *default sa login*.
9. Verify the Published and Retrieved database versions match by doing the following steps ...
 - a. Select ("check") the **Retrieve** checkbox option.
 - b. Enter the database name is "**idProducer**". (i.e., must match the actual database name).
 - c. Click the **Test Connection** button to retrieve the *database version number*.

RESULTS: The *retrieved version* should match the *published version* (see the blue arrow) if you installed the same version of idProducer on the new server as was running on the original server.



idProducer Configuration Manager: Database screen

10. In the Troubleshooting screen, you can start the idProducer services.
11. Click **Close** when you are finished.
12. This completes upgrading the idProducer database on the new server. Proceed to the following sections to repoint your clients to the new server.

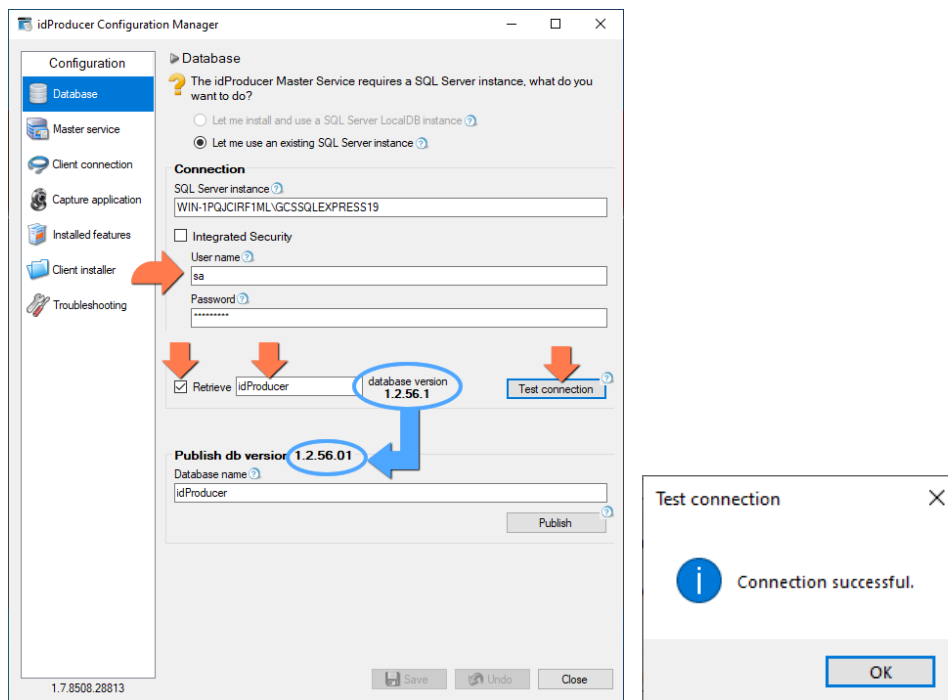
VALIDATE THE IDPRODUCER DATABASE CONNECTION (MOVE ONLY/NOT UPGRADING)

NOTE: If you are moving and upgrading the idProducer database, see the [previous section](#).

This section describes how to connect to the restored idProducer database for systems that are only moving the database (i.e., not upgrading).

- Open the **Configuration Manager** from the Windows Search bar.
- Verify the Database Connection Settings are filled out properly ...
 - a) The **SQL Server Instance** must be correct.
 - b) The Dealer *SA login* can be used.
- Select ("check") the **Retrieve** checkbox option.
- Verify the database name is "**idProducer**". (i.e., must match the actual database name).
- Click the **Test Connection** button to retrieve the *database version number*.

RESULTS (non-upgrade): The *retrieved version* should match the *published version* (see the blue arrow) if you installed the same version of idProducer on the new server as was running on the original server.



idProducer Configuration Manager: Database screen

- This completes connecting to the idProducer database on a non-upgraded server. Proceed to the following sections to re-register your clients to the new server.

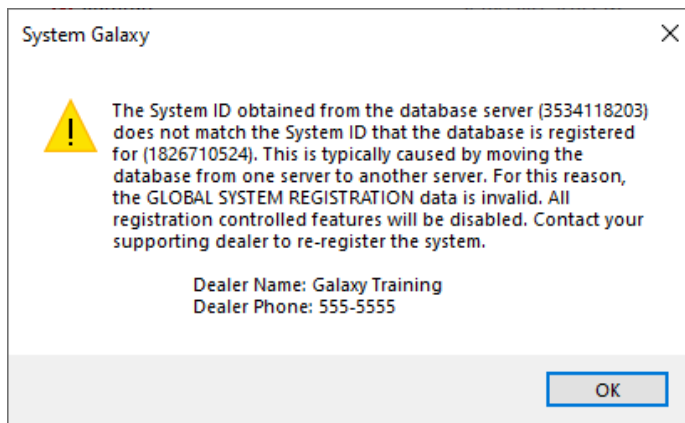
RE-REGISTER SYSTEM GALAXY

At this point you can open System Galaxy and reregister the system.

REQUIREMENTS ...

- The GCS Core Services are running (GCS Web API service, GCS ClientGW, GCS Comm, GCS DataLoader, GCS DBWriter, GCS Event service, IIS Service, idProducer Master service and Connector service) plus any other GCS Service that this site needs.

1. Launch/Start System Galaxy from the desktop icon.
2. Click **OK** to acknowledge the System ID message. This message is stating that the software must be re-registered you moved the database to a new computer.



3. Sign in with a master login that was valid at the original server.
4. Open the System Registration screen from the menu **Configure > Options > Register > System**.
5. Make sure the **Max Badge Printer Count** is correct before you register the system.
6. Contact Customer Support for assistance in re-registering your system. After you receive the registration code, you must enter it into the Code field and click APPLY to register it.

VERIFYING YOUR SYSTEM DATA

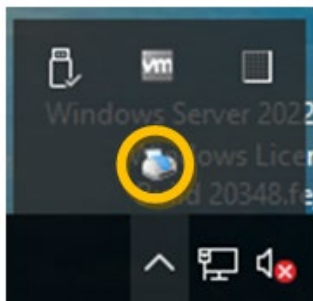
VERIFYING IDPRODUCER VERSION AND BADGING DATA

ASSUMPTIONS

- The idProducer Master service and Connector service are running, including IIS on the new server.
1. Launch the idProducer **Print Dispatcher** from the Windows search field on the taskbar.
 2. When the Print Dispatcher opens for the first time, it will prompt you to create a new dispatcher name.
 3. **Log In** to start the new Print Dispatcher running.




4. The Print Dispatcher icon should be visible in the Windows task tray.



Windows Taskbar: idProducer Print Dispatcher icon

VERIFY THE WEB CLIENT IS CORRECTLY LICENSED

1. Launch the idProducer Web Client from the desktop icon.
2. Sign-in to your licensed client using the master login.
 - LOGIN NAME: "master@idproducer.com"
 - PASSWORD: "master"
3. Verify your templates are all present by opening the *Template Editor* from the Web Client home page ...
4. On the Client homepage, click on **Template Editor** icon.
5. When the *Template Editor* opens, you can select Customer Subscription name(s) and verify your templates are correctly displayed.
 - For a **Basic license**, all the templates will be on the Root Subscription (as pictured).
 - For an **Advanced license**, there will be multiple Subscriptions which correlate to a different Galaxy Customer. The templates should be present for each Subscription.

Template Editor		Todd Testing	
+ Add		Import	Refresh
Download		Quick Search	Columns
		Sequence	
Template name	Card stock	Last modified	
750 MCCB Employee IDP		2023-05-05T10:04:43-04:00	
Color Change		2023-05-05T16:04:06-04:00	
GCS Template 1		2023-05-05T16:00:19-04:00	
GCS Test		2023-05-04T11:58:13-04:00	
NewCardTestAfterUpgrade		2023-05-04T12:07:29-04:00	

idProducer Template Editor page

VERIFY BADGES ARE VIEWABLE FROM SG CARDHOLDERS SCREEN

ASSUMPTIONS

- If you want to test print a badge at the badge printer, the correct print drivers must be installed.

SG Menu: Configure > Cards > Cardholders

- Open the Cardholder screen and verify that your badge designs are available for the existing cardholders and new cardholders.
 - For Basic License**, you should see all templates in the Cardholder Badge list for every cardholder, regardless of whether you have customers or not.
 - For Advance License**, you should only see the templates in the Cardholder Badge list that correspond to the templates in the related subscription.
- You may want to verify you can view or print a badge from System Galaxy.

System Galaxy: Cardholder screen

CONFIGURE THE CLUSTER PROPERTIES TO POINT TO THE NEW SERVER

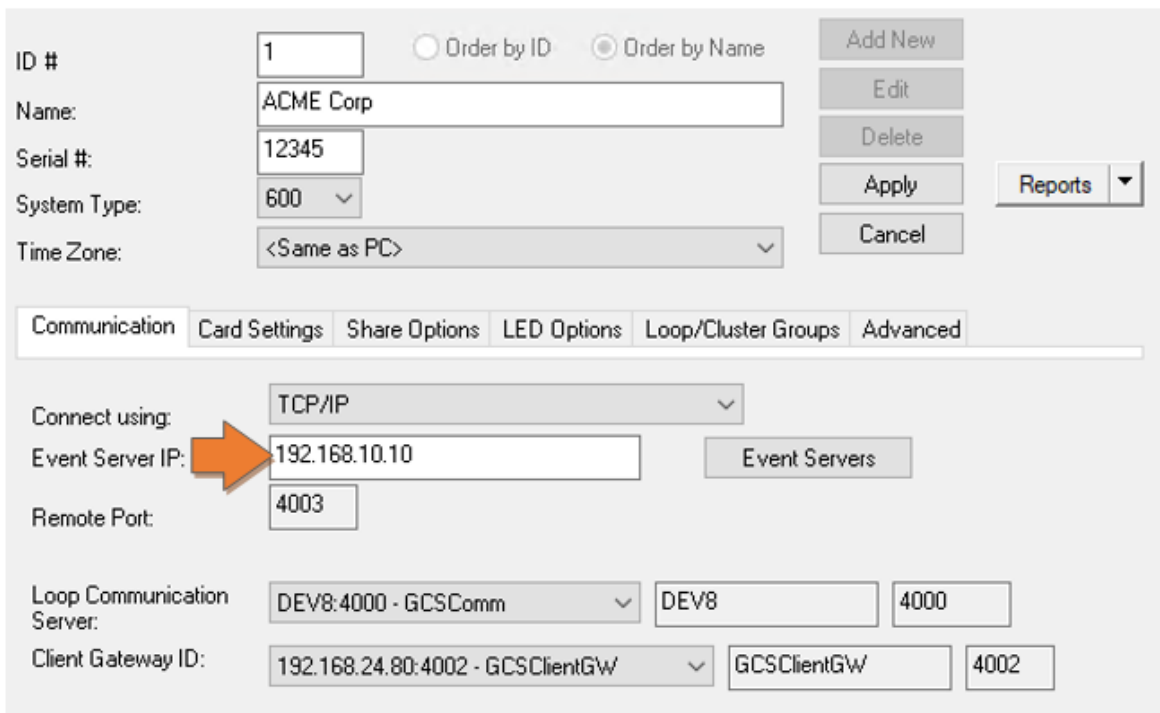
You must configure the *machine name* or *IP Address* of the new server into the Event Server IP field of the *Cluster Properties* screen. This must be done for every Loop/Cluster in the system.

Be aware that the 635/600 Controllers will not connect and start logging events until you change the Event Server IP Address in the panels.

SG Menu: Configure > Hardware > Cluster/Loop Programming

1. Open the Cluster Programming screen from the Hardware Tree as follows ...
 - Right-click the **Cluster Name** in the *Hardware Tree* to see the shortcut menu.
 - Choose **Properties** from the menu.
2. Configure the [Event Server IP] field to use the **Machine Name** OR IP Address of the new server.
3. Click **Apply** to save the changes.
4. Repeat these steps for every Cluster in the system.

IMPORTANT: After you save the *Cluster Properties* screen, you must also change the *Event Server IP Address* in every controller panel to match the IP Address of the new server from the Panel Webpage. Then the controllers can connect to the new server, and begin logging events.



The screenshot shows the 'Cluster Properties' dialog box, 'Communication' tab. The 'Event Server IP' field is highlighted with an orange arrow. The 'Connect using' dropdown is set to 'TCP/IP'. The 'Event Servers' button is visible next to the IP field. Below, the 'Loop Communication Server' and 'Client Gateway ID' fields are also visible.

ID #	1	<input type="radio"/> Order by ID <input checked="" type="radio"/> Order by Name	Add New
Name:	ACME Corp		Edit
Serial #:	12345		Delete
System Type:	600		Apply
Time Zone:	<Same as PC>		Cancel

Reports ▼

Communication | Card Settings | Share Options | LED Options | Loop/Cluster Groups | Advanced

Connect using: TCP/IP

Event Server IP: 192.168.10.10

Remote Port: 4003

Event Servers

Loop Communication Server: DEV8:4000 - GCSCComm | DEV8 | 4000

Client Gateway ID: 192.168.24.80:4002 - GCSCClientGW | GCSCClientGW | 4002

PROGRAM THE NEW EVENT SERVER IP ADDRESS INTO THE CONTROLLERS

Now you must configure the new server's IP Address into each 635/600 Controller by using the panel's embedded webpage so that the controller panels can connect and begin logging events.

REQUIREMENTS

- You must open the panel door open to be able to connect by web browser.
1. Open a web browser on a computer that is connected to the network.
 2. Enter the panel's **IP Address** into the URL field of the browser.
 3. click Panel Configuration link at the bottom of the Panel Status Webpage.
 4. Scroll down to the *Event Server addresses* table.
 5. Add the **IP Address** of the new server into the Event Server-1 field.
 6. Save your changes.
 7. Allow the controller to connect to the Event Server.

RESULT: When the panel is connected, a "Controller Online" event should be logged in the Event Monitoring screen in System Galaxy. You can also verify panel connection status by sending a 'Get Controller Info' command from the *Loop/Cluster Diagnostics* screen or the *GCS Loader Screen* on the Flash tab.

8. Proceed to the next section for Loading the hardware panels.

LOADING FLASH TO A CONTROLLER (FOR UPGRADES ONLY)

If you upgraded System Galaxy's software version, then you must upgrade 635/600 controllers with new Flash.

NOTE: If you only migrated the databases to the same version of System Galaxy, then proceed to the section for [Pointing Clients to the New Server](#).

1. In system Galaxy's Help screen, determine which version of flash the 635/600 Controllers will need.
2. You can load the new Flash using the panel's embedded webpage as follows ...
 - a. Copy the current S28 Flash files to the computer you are using to connect to the panel.
 - b. You must upgrade flash in the CPU and then Update Daughter board flash.
 - c. Follow instructions in the [635/600 Flash Update Guide](#) to properly load flash.
3. After the new flash is loaded into the CPU, and all Daughter Boards have finished updating, you can verify that your panel has the new flash version from the Loop/Cluster Diagnostics.
4. Repeat these steps at every controller.
5. Proceed to the Loading Data section

LOADING DATA TO A CONTROLLER (FOR UPGRADES ONLY)

After you upgrade the flash in the controllers, you must load data to the controllers.

NOTE: If you only migrated the databases to the same version of System Galaxy, then proceed to the section for [Pointing Clients to the New Server](#).

1. Login to System Galaxy software with a master operator login.
2. In Galaxy's Hardware Tree, right-click on a 635/600 Cluster and **choose Load** from the shortcut menu.
3. When the *GCS Loader screen* opens, choose the *Load Data* tab.
4. Click the **Load Data button** and allow all data to load.
5. Repeat this for every cluster until all panels are loaded.
6. Walk test your system hardware as appropriate.

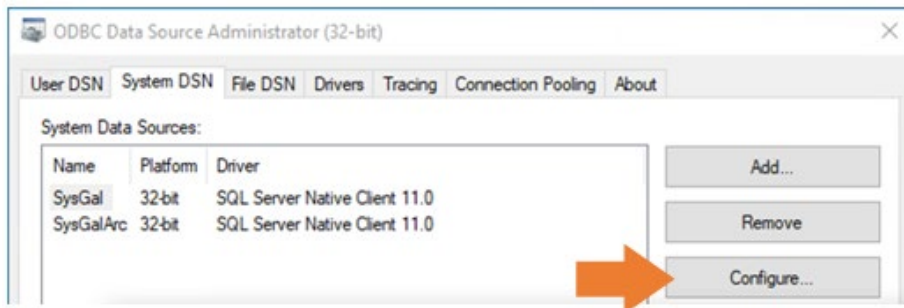
POINT CLIENTS TO THE NEW/TARGET SERVER

This section describes how to point the existing clients to the new target server.

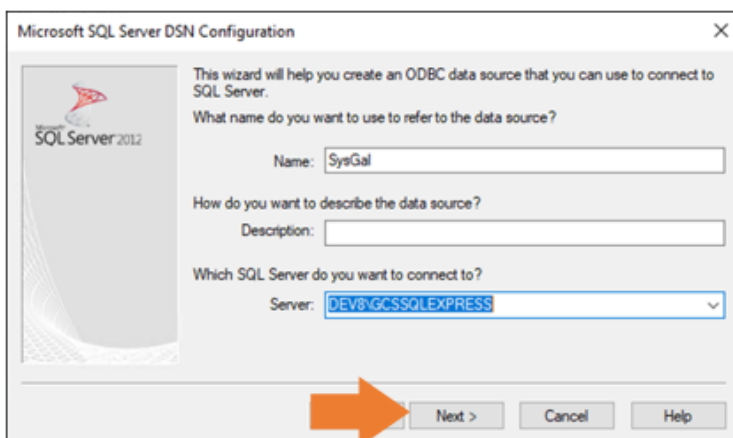
POINTING SYSTEM GALAXY CLIENTS (ODBC) TO NEW SERVER

The ODBC32 Data Source connections must be updated on all System Galaxy Client workstations with the machine name of the new server.

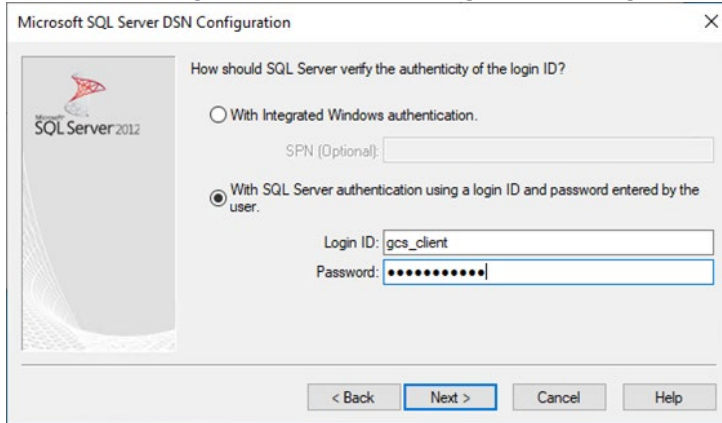
1. Open the **ODBC32 Data Source Administrator** app (You can find the app by typing ODBC into the Search field of the Windows Taskbar.)
2. Select the **System DSN** tab.
3. Select (highlight) the **SysGal** ODBC name and click **Configure** button.



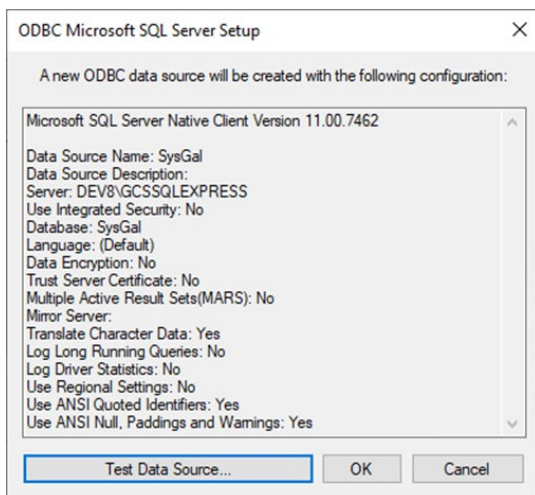
4. In the Server droplist choose the **Machine\Instance** and click **Next** button.



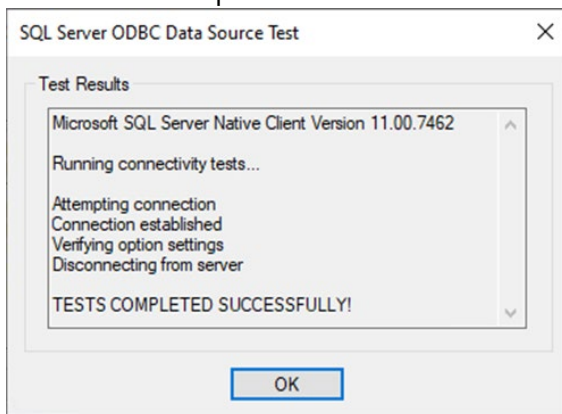
5. In the client login screen, enter the **gcs_client** login and *password* and click the **Next** button.



6. Click the [Test Data Source] button.



7. Click **OK** to accept the Success confirmation.



8. Repeat these steps for **SysGalArc** ODBC database connection.

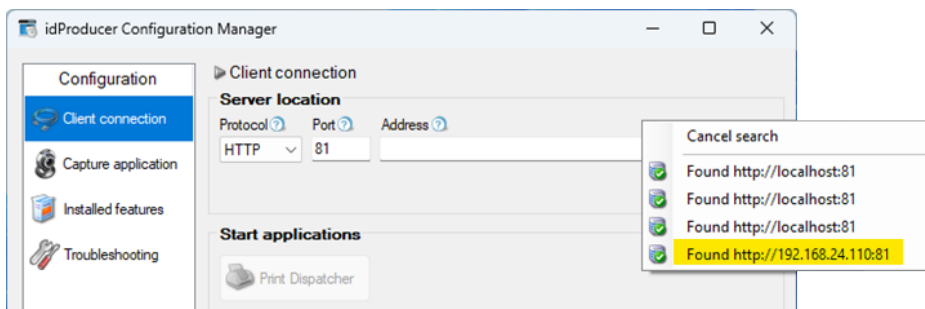
POINTING IDPRODUCER WEB CLIENTS TO THE NEW SERVER

All idProducer Web Clients are still pointed to the original server and must be provided with the new IP Address of the new server.

ASSUMPTIONS ...

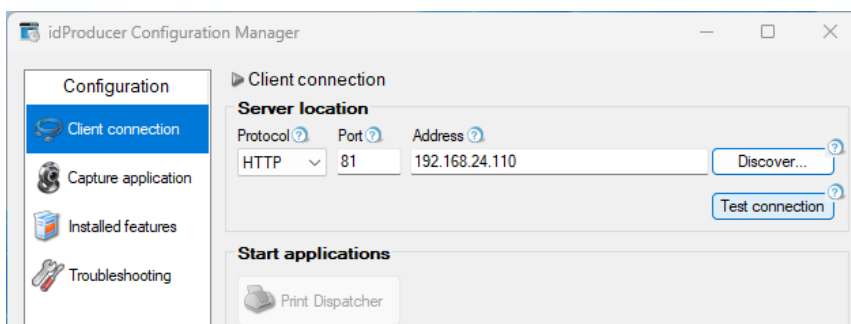
The idProducer Connector service is running on the client workstation.

1. Go to each client computer where the idProducer client software is installed.
2. Open the *idProducer Configuration* app. (You can find the app from the Search field of the Windows Taskbar.)
3. The *idProducer Configuration* app will open to the **Client Connection** screen.
4. Enter the **IP Address** of the new target server. (Or click *Discover* and select the IP Address from the list.).



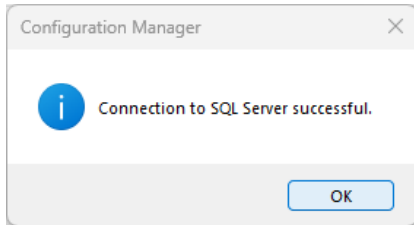
Configuration Manager: Client Connection screen

5. Select the **Troubleshooting** screen, and make sure the *Connector Service* is started.
6. Select the **Client Connection** screen, click **Test Connection** button.

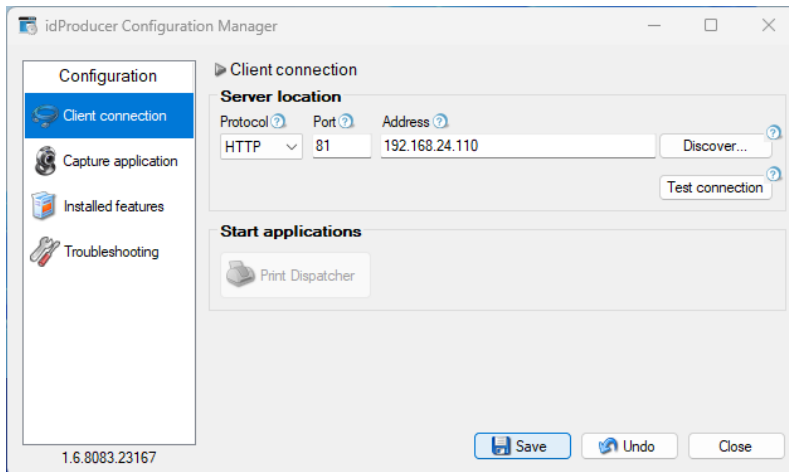


Configuration Manager: Client Connection screen

- Click **OK** to close connection successful message.



- Click **SAVE** on the Client Connection screen to save the new server address.



Configuration Manager: Client Connection screen

- Repeat these steps at each idProducer client workstation.

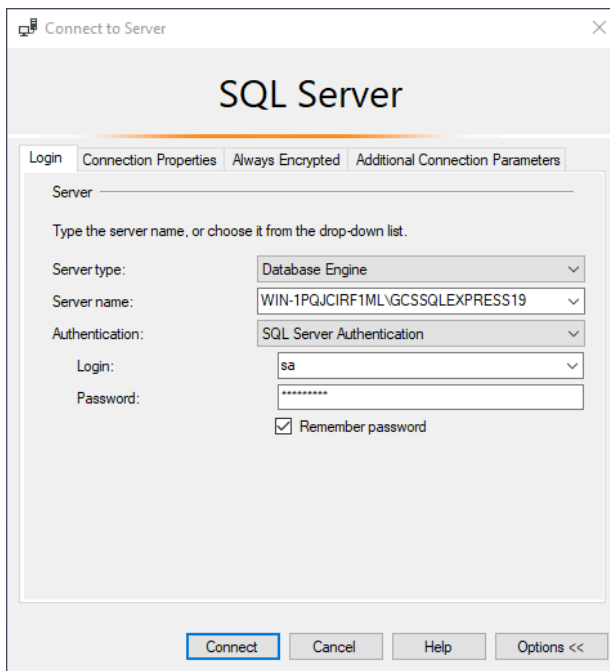
APPENDIX

HOW TO CREATING AN IDPRODUCER USER ACCOUNT

This topic covers creating a new user_login account for the idProducer database.

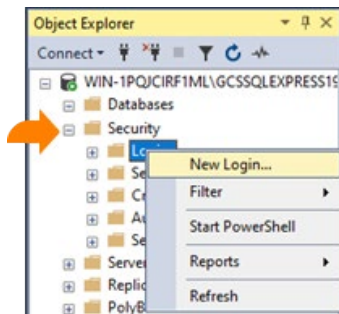
ASSUMPTIONS ...

- In SQL Server Management Studio (SSMS), you must log-in to the 'GCSSQLEXPRESS' instance.
1. Open *SQL Server Management Studio* software using the Windows Search field on the taskbar.
 2. Log into 'GCSSQLEXPRESS' (or the Galaxy instance) using '**SQL Authentication**' and the **default 'SA' Login**.
 - a. Select **Database Engine** for Server Type.
 - b. Select the correct **Server Name**
(*machine_name\instance_name*)
 - c. Select **SQL Server Authentication** type.
 - d. Enter the "**sa**" login and the **password**.
 - e. Click **Connect** to connect to the GCSSQLEXPRESS instance and its databases.



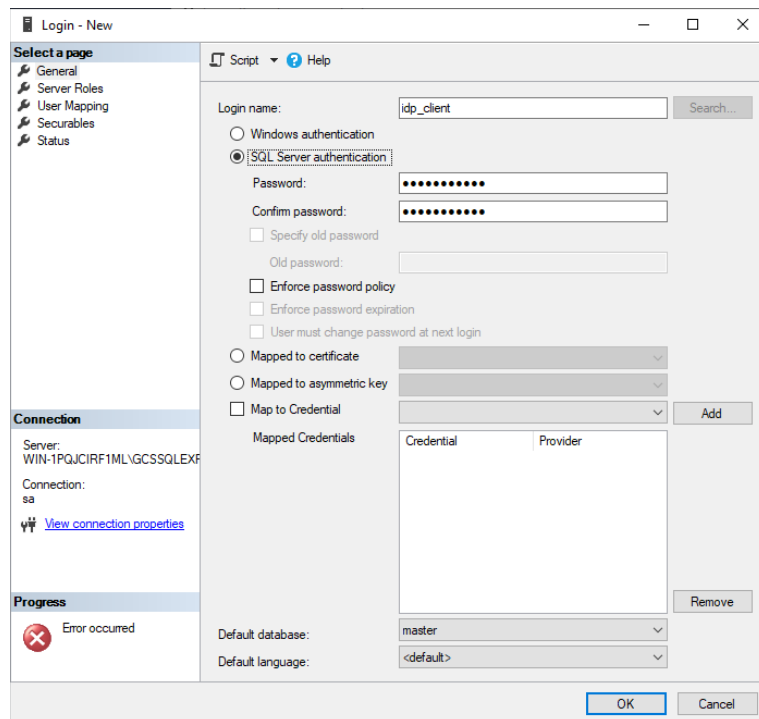
SQL Server Mgt Studio > Login window

3. Expand the **Security** branch under the GCSSQLEXPRESS instance.
4. Right-click on **Logins** branch and select **New Login** from the shortcut menu.



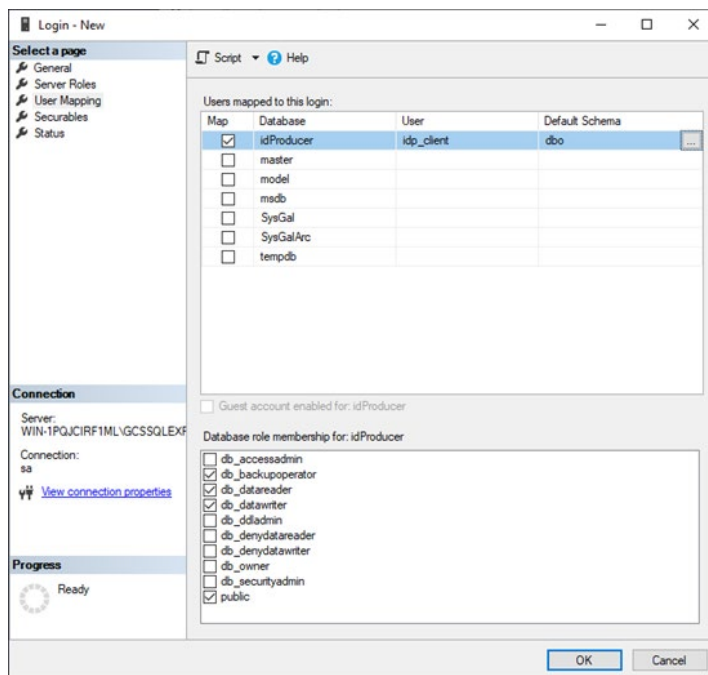
SMSS: Object Explorer > New Login menu option

5. Create the **idProducer User Account** as follows ...
6. Enter the **User Name** you wish to use (the username in the screenshot is just an example)
7. Select **SQL Server Authentication** button.
8. Enter a **password** in the Password field.
9. Re-enter the **password** in the Confirm Password field.

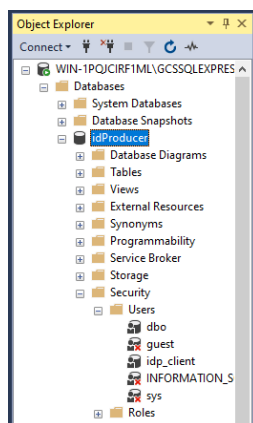


SMSS: General screen > Creating SQL Login

10. Select the *User Mapping* screen.
11. Enable (check) the **idProducer database** in the list at the top of the screen.
12. Enter the same Login Name in the User column that entered in the General screen (if needed).
13. Enter "dbo" in the Default Schema column.
14. Enable (check) the following roles in the **Membership Roll list**
 - db_backupoperator
 - db_datareader
 - db_datawriter
 - public
15. Click **OK** to create the user account.



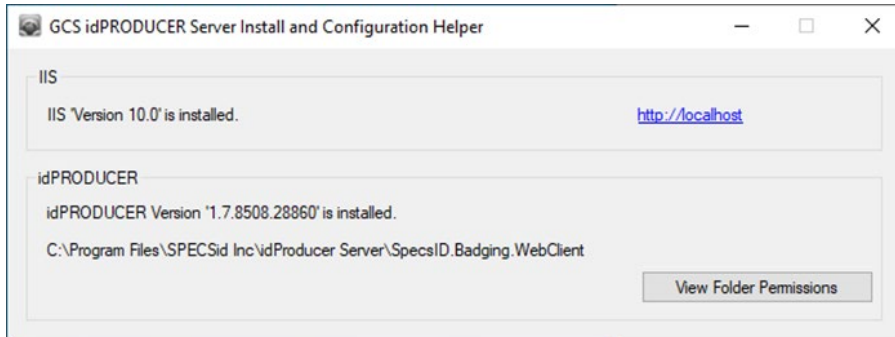
16. The user login account is added to both Engine Logins branch and Database Users branch ...
 - the GCSSQLEXPRESS > Security > Logins branch.
 - the GCSSQLEXPRESS > Databases > idProducer Security>Users branch.



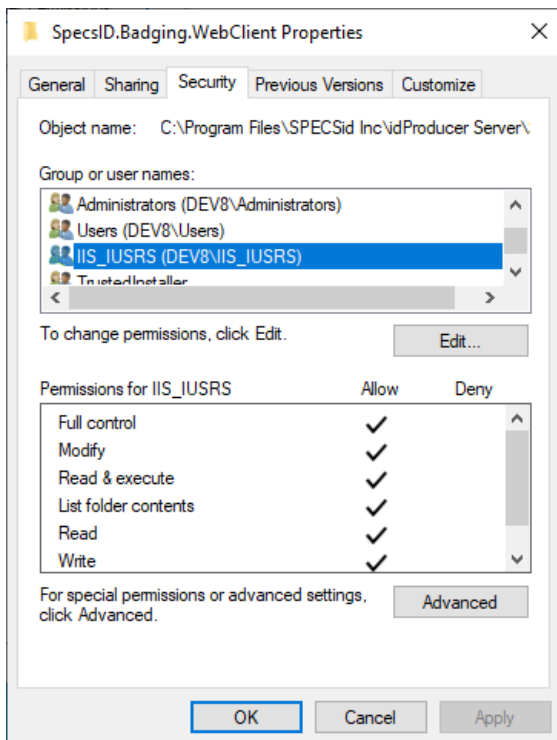
SMSS: Object Explorer > idProducer database Users branch shown

VIEW 'IIS_IUSERS' FOLDER PERMISSIONS ON THE NEW SERVER

1. Insert the System Galaxy Install Media (USB/ISO) splash screen by clicking SGSetup.
2. Click the **Install idProducer** option to open the Install Configuration Helper (shown below).
3. Click the [**View Folder Permissions**] button on the *GCS idProducer Install Helper* window.



4. Select the *Security tab*, in the Properties window.
5. Scroll down and select (highlight) the **IIS_IUSRS** name in the Group listview.
6. Verify that the Permissions listview shows "Full Control" is allowed (is checked); and all permissions under it are also checked.
7. (if needed) Click the Edit button and enable the permissions as appropriate, and click **Apply** to save.



8. Click **OK** to close the *WebClient Properties* window.

HOW TO VERIFY GCS USER LOGINS ARE DELETED AND RECREATED

If user logins are not created or the permissions are not enabled, you can manually create and enable them.

If the GCS User Logins and permissions are not correctly added, the symptoms will be problems getting services to run and unable to start System Galaxy.

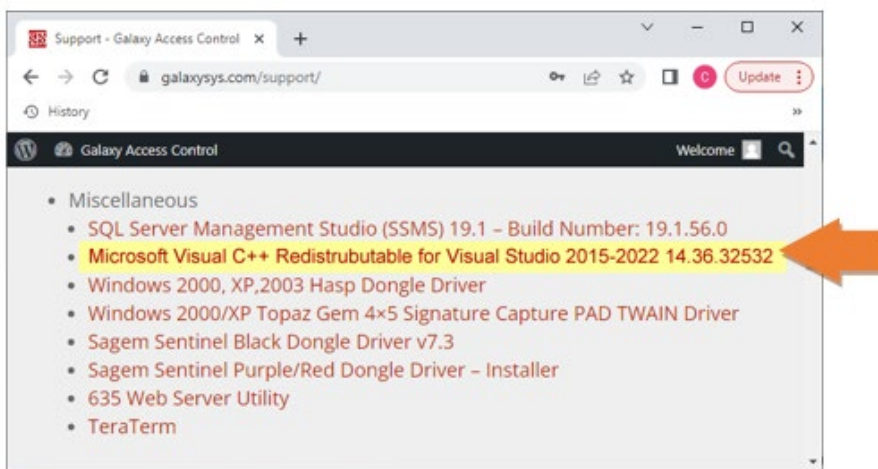
1. Verify the **GCS User Logins** are deleted as follows ...
 - a) Select (highlight) the **Databases branch** and click **Refresh** button.
 - b) Navigate to the **Security>Users branch** of the SysGal database.
 - c) Verify that the **gcs_client** and **gcs_web_client** logins are deleted (not present).
 - d) Repeat these steps for the SysGalArc database.
2. To create **gcs_client** logins, do the following ...
 - a) Expand the **Instance level** and navigate to **Security > Logins** branch.
 - b) Double-click on the **gcs_client** to open it in the Properties screen.
 - c) In the *User Mappings screen*, select ("check") the **SysGal** database and type "**dbo**" into the Schema field.
 - d) On the bottom half of the screen, enable ("check") the permissions (i.e., **db_reader**, **db_writer**, **db_backupoperator**). And *public* should be already checked.
 - e) Click **OK** to save and add this user and permissions to the database level.
 - f) Repeat these steps to add **gcs_client** user to the **SysGalArc** database.
3. To create **gcs_web_client** logins, do the following ...
 - a) expand the **Instance level** and navigate to **Security > Logins** branch.
 - b) Double-click on the **gcs_web_client** to open it in the Properties screen.
 - c) In the *User Mappings screen*, select ("check") the **SysGal** database and type "**dbo**" into the Schema field.
 - d) On the bottom half of the screen, check the permissions: **db_backupoperator**, **db_reader**, **db_writer**.
 - e) Click **OK** to save and add this user and permissions to the database level.
 - f) Repeat these steps to add **gcs_web_client** user to the **SysGalArc** database.
4. Verify the client logins were correctly added to both databases as follows ...
 - a) Refresh the Databases branch and navigate to the **Security>Users** branch of the SysGal database.
 - b) Double-click the **gcs_client** login to open the Properties window and verify that the correct permissions are enabled(checked) in the Membership Roles screen (i.e., **db_reader**, **db_writer**, **db_backupoperator**, and *public should be checked*).
 - c) Double-click the **gcs_web_client** login to open the Properties window and verify that the correct permissions are enabled(checked) in the Membership Roles screen (i.e., **db_reader**, **db_writer**, **db_backupoperator**, and *public should be checked*).
 - d) Repeat these steps for the SysGalArc database for both the **gcs_client** and **gcs_web_client** logins.

HOW TO DOWNLOAD & INSTALL VISUAL C++ FILES

This section is required only if you need to install the newer version of VC++ Redistributable files before publishing the idProducer database.

Skip this section only if the idProducer database published successfully without a Visual C++ error.

1. Open your *web browser* and go to the Galaxy Dealer Support web page www.galaxysys.com/support (dealer login needed).
2. Scroll down to the "Miscellaneous" section of the Support page.
3. Click on "**Microsoft Visual C++ Redistributable for Visual Studio v14.3X**". *The zip file should download to your Download folder.*



4. Open your Download folder and extract the VC++-redist.exe files from the zip folder.
 - a) Double-click on **VC_redistx86.exe** to run the x86 install. Close when finished.
 - b) Double-click on **VC_redistx64.exe** to run the x64 install. Close when finished.
5. Restart the computer to initialize the newly installed C++ modules.
6. Return to the section for publishing the idProducer database. The database should be able to upgrade and or publish without errors.