

Moving a Database to a New Location

This document covers how to back-up and restore a database, including moving the database to a new server or location. Also included are the requirements for moving and/or upgrading the main Communication/Event Server and GCS Services (System Galaxy software).

GENERAL REQUIREMENTS

1. GENERAL REQUIREMENTS:

- You will obtain the *correct version** of the System Galaxy install media (USB/ISO), to install the MSSQL Server Express and Database Management Studio onto the new server.
Optionally, you can install an Enterprise version of MSSQL Server and DBMS software onto the new server.

* This can be the same or a newer version of SQL Server.

- You will obtain the *correct version** of the System Galaxy install media (USB/ISO), for the System Galaxy software ONLY IF you are either ...
 - (a) upgrading the existing System Galaxy software on the original server.
 - (b) or moving System Galaxy software & GCS Services to the new server.

* This can be the same or a newer version of System Galaxy as needed.

- If the DB backups are automated, you need to find out where the backup files are located. If the admins use the [Galaxy GCS Service Manager utility](#) to create automated backups, then you can find the backup path in the [SQL Backup Configuration screen](#) of the GCS Service Manager utility.
- BACKING UP SYSTEM ASSETS: Before you perform a move or upgrade the SG Software, you should back up all system assets. System assets include system logs, reports, badge templates, biometric data, photographs, images, icons, logos, etc. You should do this if you are moving or upgrading or both.

2. MOVING BUT NOT UPGRADING SYSTEM GALAXY:

- If you are also moving the *main Communication/Event Server*, make sure that the version of System Galaxy installed on the new target server is the same as the original server.
- Remember to back up your system assets.

3. MOVING AND UPGRADING SYSTEM GALAXY: Product registration must be valid (not expired).

- Before moving the database to the target SQL Server, you must verify that the *maintenance expiration date* is valid (not expired). Open the System Galaxy *Product Registration screen* from the menu: [Configure > Options > Registration > System](#).
- After updating the maintenance date, you should perform back-ups of the databases before and after an upgrade. The first backup protects your data in case the upgrade fails. The second backup creates a backup of everything after the upgrade is done.
- Remember to back up your system assets.

UPDATING THE SYSTEM REGISTRATION (Maintenance Expiry)

These steps are only needed if you are upgrading System Galaxy software.

1. Log in to System Galaxy with a dealer login.
2. Open the *Product Registration* screen from the menu: **Configure > Options > Registration > System**.
3. Enter the new **Expiration Date** and the **Registration Code** you obtained from.

Product Registration

System Registration

Current System ID: 2560383631 Registered System ID: 2560383631 Created Date/Time: 3/15/2023 12:31:45 PM Workstation Count: 2

Customer Name: CER INC Authorized Galaxy Dealer Name: GCS DEALER Dealer Phone Number: 1-800-222-999

Software License: AST1H - EL3OR - DL1V3 - 1SUB2 - 1YES Register via the Internet

Product Level: Corporate

System-Wide Features:

- CCTV Control
- Card Data Import/Export/Replication
- Event Log Output (RS-232/TCP/IP/File)
- S.G. Time & Attendance
- User Status/Who's In
- Galaxy DVR
- 3rd Party DVRs
- Alarm Panel Support
- Guard Tour
- Passback & Door Groups
- Graphic Device Status
- 508i & 502i Support
- Biometric Interface Support
- Unlimited Card Capacity (600 only)
- Access Rule Override (600 only)

DVR Limit: 0

Software Maintenance Settings:

Expiration Date: 3/29/2024

Maximum Version: 11.xx

Limits:

Maximum Clients: 5

Maximum Readers: 128 # Used: 2

Maximum Biometric Readers: 0

Maximum DSI-Based Readers: 0

Web Client Options

- Web Module/LaunchPoint (ASP Model) Support
- Photo ID Badge Printing *
- * Web Module Requires Card Exchange
- * LaunchPoint Requires idPRODUCER

Badge Printing System: No Badging System

* Badging System Software must be installed before completing registration.

Maximum Badge Printers: 0

idPRODUCER License Type: Basic

Visit GCSOnline Web Registration Site

Registration Code: GH6W2HGY Report

Last Registered Date/Time:

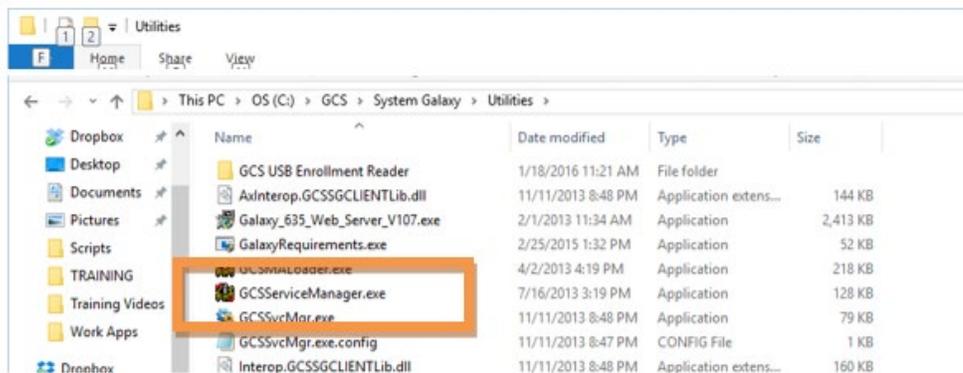
OK Cancel Apply

System Galaxy > Product Registration screen

CREATING DATABASE BACKUPS

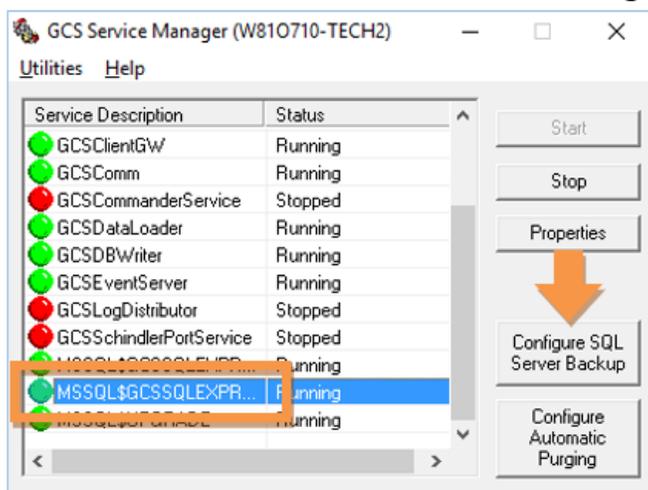
You can use the **GCS Service Manager utility** to create database backup files using the following steps. The backup files (*.BAK files) will be moved/copied to the new SQL Server location.

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.



System Galaxy\Utilities > GCS Service Manager.exe

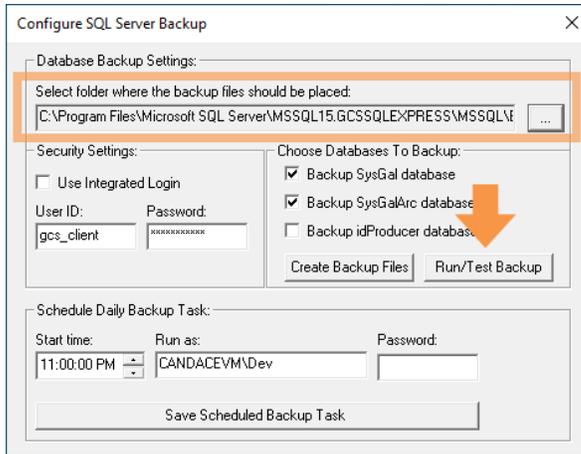
3. Click **YES** on the Windows 'User Account Control' message box.
4. Select (highlight) "**MSSQL\$GCSSQLEXPRESS**" and click the **[Configure SQL Backup]** button.



GCS Service Manager > showing MSSQL Service selected

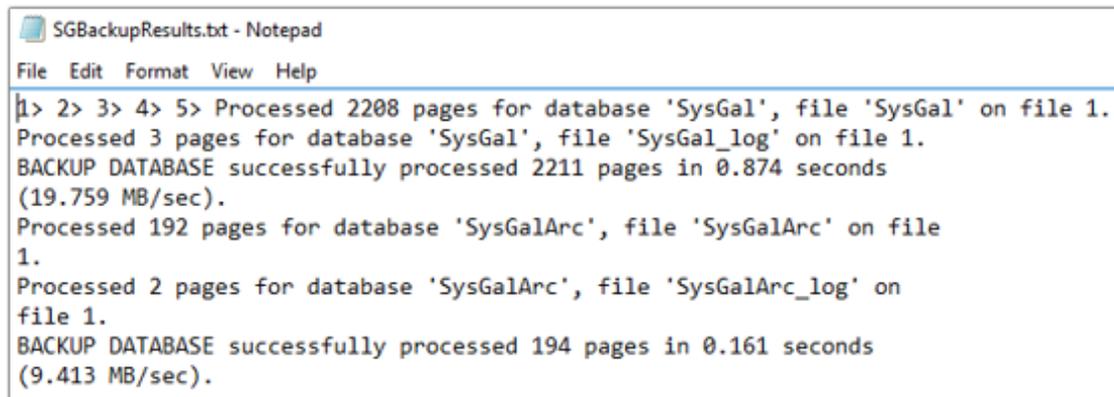
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5. Notice the designated *backup path* and click the [Run/Test Backup] button.



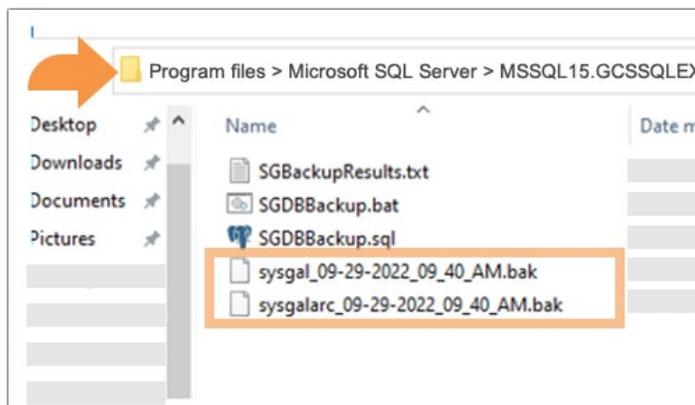
GCS Service Manager > Configure SQL Backup screen

6. A confirmation file named "SGBackupResults.txt" should automatically open in Notepad.



RunTest Backup > SG Backup Results

7. Browse to the *backup folder path* that was designated in the Backup Configuration screen. The **SysGal** and **SysGalArc** (.bak) files will be located in there with the SGBackupResults.txt.



RunTest Backup > Timestamped Database Backup files

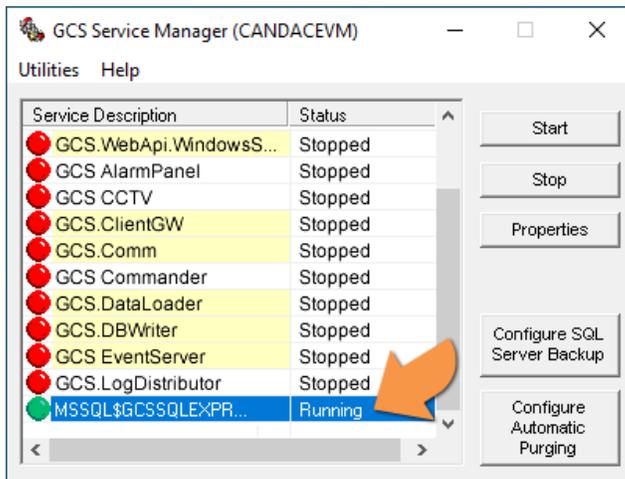
Copying Database Backup Files to Target Server

This topic describes the requirements and steps to copy your database files to the target SQL Server.

PREREQUISITES

- You must install the appropriate *system components* on the *target SQL Server* before you can copy the backup database files – *shown in step 1 below*.
- These instructions use industry-standard terminology to describe copying or moving files. The old server is called the *original server* or *source server*. The new server location is the *target server*.

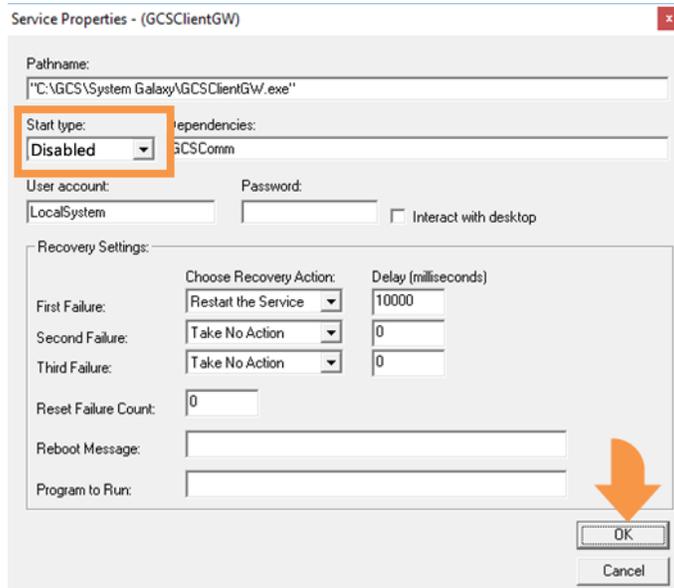
1. On the new *target server*, install the necessary System Galaxy components from the Galaxy Installation Disk (USB/ISO) – by clicking **Setup** to launch the Installer Program:
 - a. (required) Install Part-1 - Prerequisites
 - b. (required) Install Part-2 - SQL Server Components (choose New Install)
 - c. (optional) Install Part-3 - SG Client Software (choose Option-A Client & GCS Services) only if the *target server* will also be running the main Communication/Event server.
2. Copy the database backup files (.bak files) onto the target server.
Best Practice: Copy files into the *MSSQL Backup folder* on the target server - or onto a portable drive that you use to transfer the files (i.e., not the server desktop). Always retain a safe copy
3. Stop the appropriate Galaxy services as follows ...
 - a. Before stopping GCS Services, make a note of which services are running (green icon) so the correct services can be restarted.
 - b. On the Communication server, stop all of System Galaxy services that begin with "GCS". Do not stop any service that starts with MSSQL\$ - see image below.
 - c. Also shut down all System Galaxy clients (close the SG Software).



GCS Service Manager > showing GCS Core Services Stopped

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4. (conditional) If you are moving the main Communication Server to the new target server, then you must disable the GCS Services on the *original server*. *You do not need to do this if the main Communication Server is not moving.*
 - a) To disable a GCS Service using the GCS Service Manager Utility, select (highlight) the service name and click the **Properties** button.
 - b) In the Properties screen, change the **Start Up Type** to "Disabled" and click OK to save/close the Properties screen.



GCS Service Manager > Properties screen: disabling service

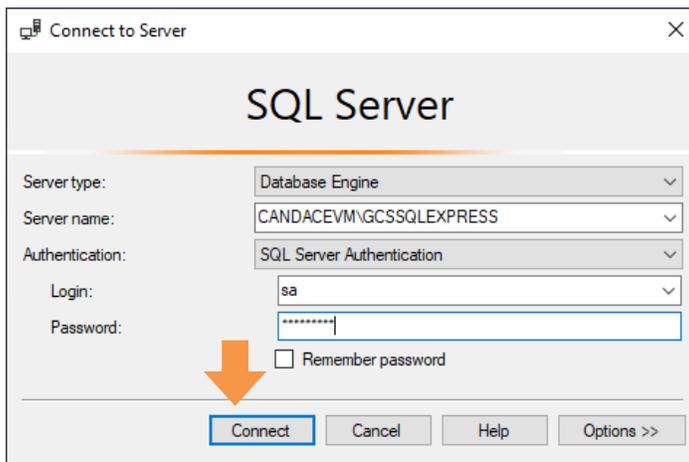
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RESTORING DATABASE BACKUPS (Moving to new Server)

These instructions describe how to restore the database backup files to a new SQL Server location.

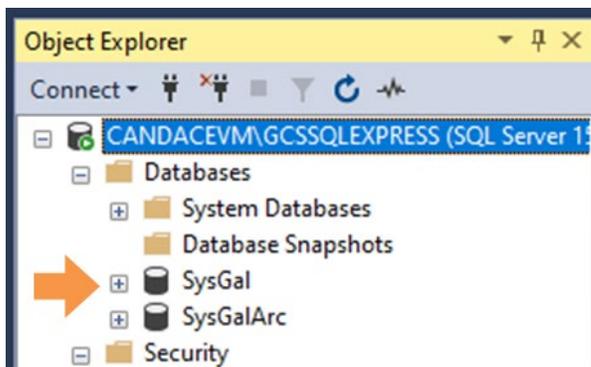
REQUIREMENTS

- You must have already backed up your database files and copied/moved them to the new target server before you can begin these steps.
1. From the Windows start menu, open the **SQL Server Management Studio**.
 2. In the SQL Server connection window, connect as follows ...
 - a. Choose the correct machine\SQL instance name
 - b. Choose 'SQL Server Authentication'
 - c. Enter valid login credentials: "sa" and the password
 - d. Click the **Connect** button.



MSSQL Server SA Login

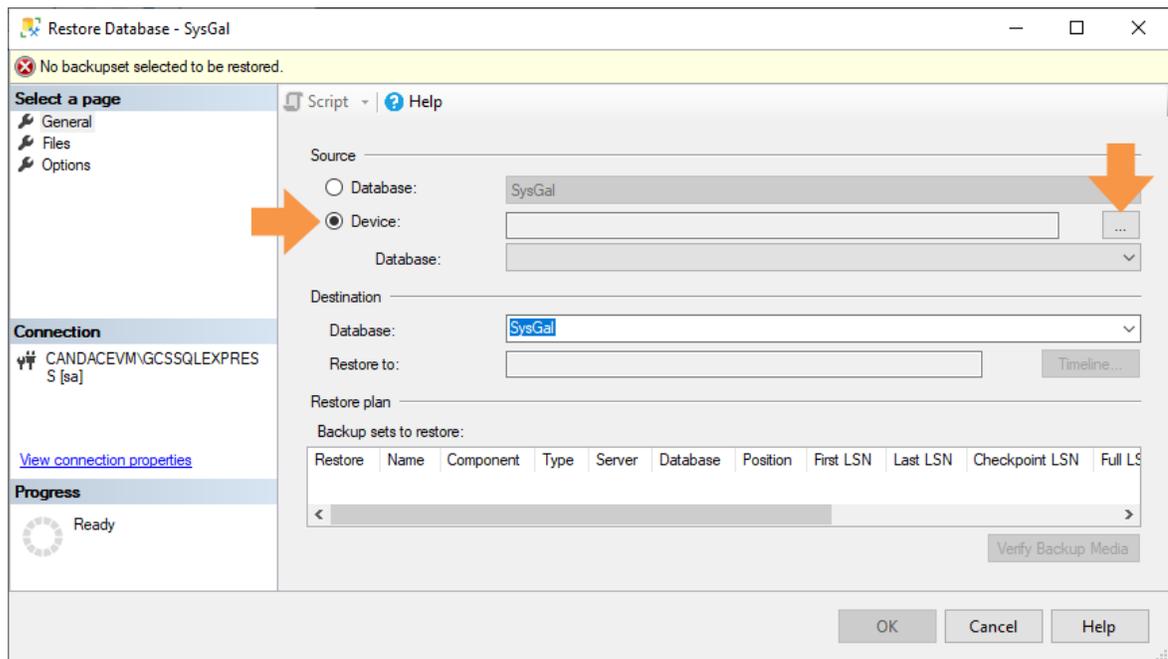
3. In the Object tree, expand the "Databases" branch.
4. Right-click the **database** you want to restore and select **Tasks > Restore > Database**.



MSSQL Server Object Tree

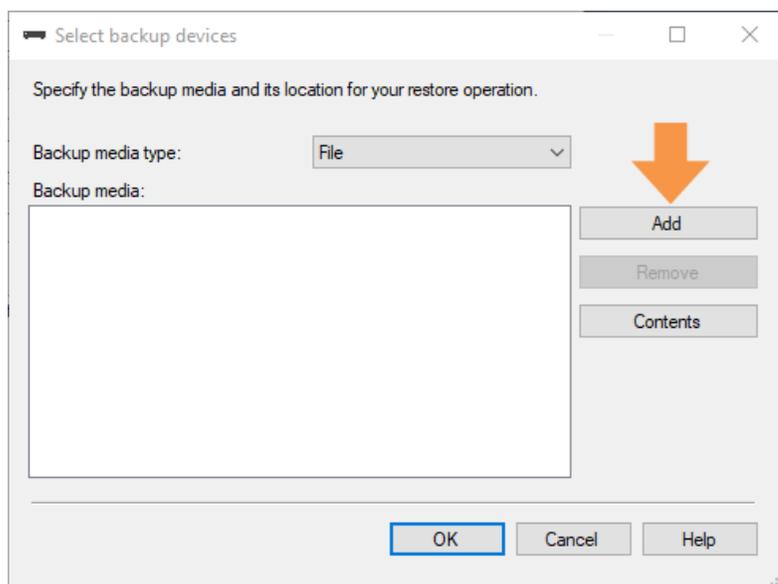
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- Click the **Device** radio button in the *Source* section of the General page.
- Click the **Browse [...]** button to browse to the SysGal.bak file location.
(When you repeat these steps for the SysGalArc database, you will see the SysGalArc database name.)



SQL Studio > Restore Database: General page

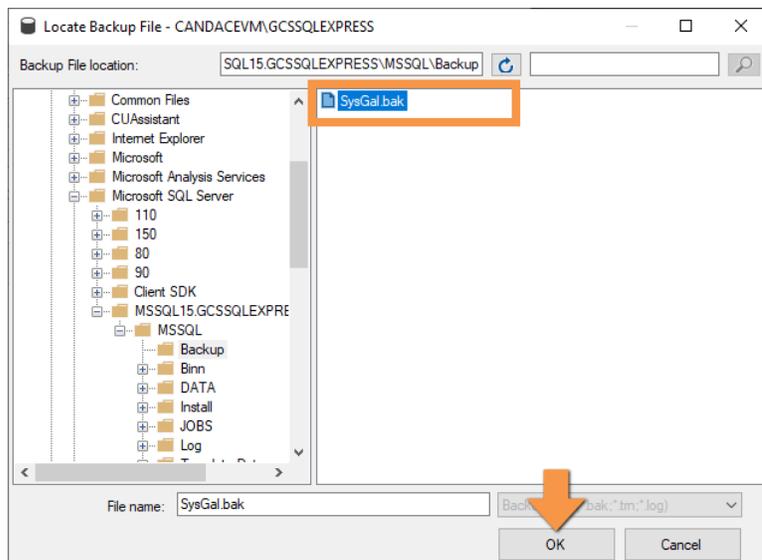
- Click **Add** to open the Backup folder.



Restore Database General > Add Devices

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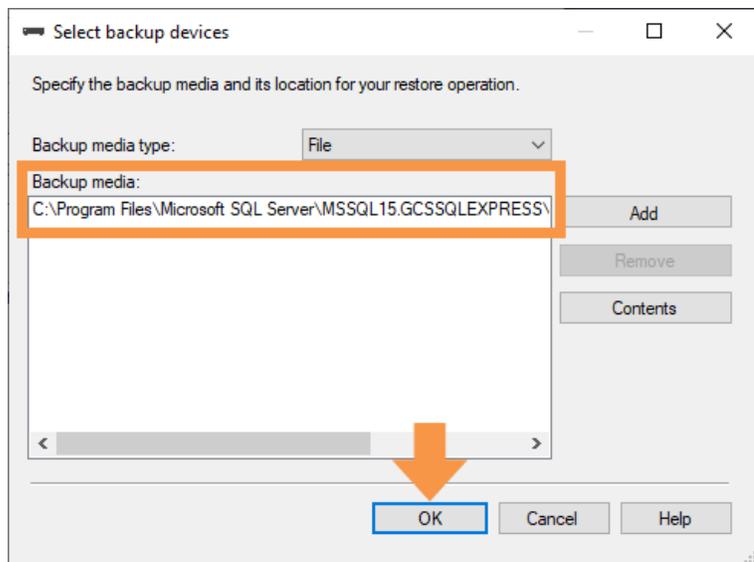
8. Select (highlight) the **SysGal.bak** filename and click OK to return to the General page. (When you repeat these steps for the SysGalArc database, you will see the SysGalArc database name.)



Restore Database General > Select Backup file

9. Click **OK** to open the Backup folder.

NOTE: the backup path (shown below) 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.

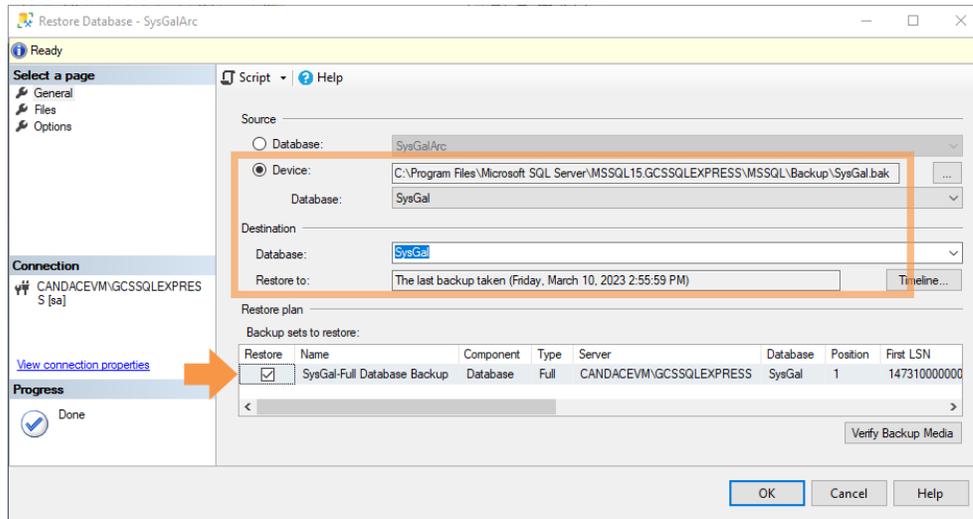


Restore Database General > Add Backup Path

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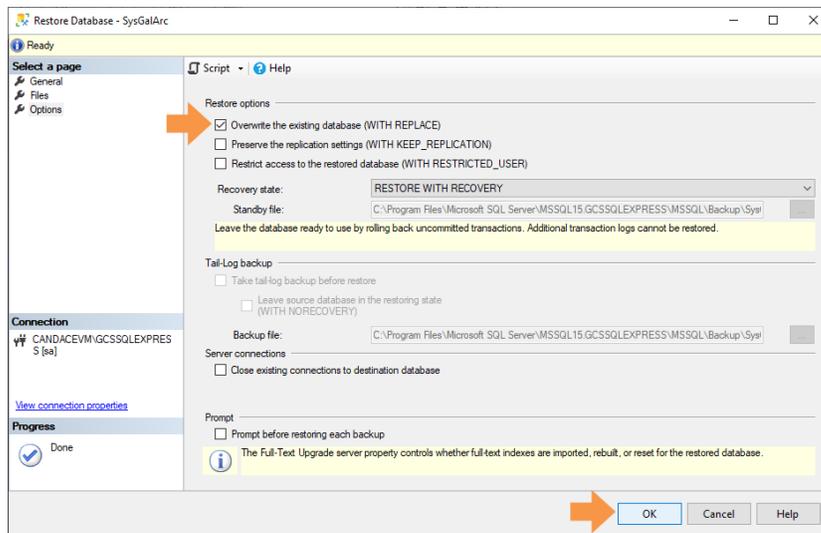
10. In the *General page*, the **Source** and **Destination** fields will be populated with the designated backup path and the **SysGal** database filename. (When you repeat these steps for the SysGalArc database, you will see the SysGalArc database name.)

11. The **Restore** column checkbox should be “checked”.



Restore Database > General page: Full Database Backup

12. In the lefthand pane, click the **Options** page and enable the **Overwrite checkbox** and click **OK**.



SQL Studio > Restore Database: Options page

13. Repeat all the steps in this section for the **sysgalarc** database.

RESTORING GCS CLIENT LOGINS

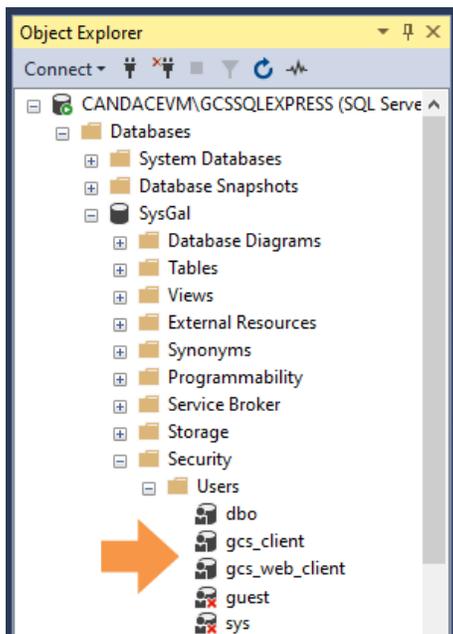
This section describes recreating the *gcs_client* & *gcs_web_client* logins for both databases (sysgal/sysgalarc).

The instructions cover the following actions ...

1. **Deleting the client logins** under the Security>Users branch of both databases.
2. **Restoring the client logins** in the Security>Logins branch under the SQL Instance.
Remapping the client logins in the Properties screen under the Logins branch will automatically recreate all the client logins under the User branches for both databases, all at once.
3. **Restart the GCS Services.**

DELETING GCS CLIENT LOGINS

1. On the new *target server*, open SQL Management Studio and login/connect to your GCSSQL Instance using the SA password.
2. Expand **Databases > SysGal > Security > Users** branch - delete the existing *gcs logins* ...
 - a. Right-click on *gcs_client* login and choose Delete.
 - b. Right-click on *gcs_web_client* login and choose Delete.
3. Expand **Databases > SysGalArc > Security > Users** branch - delete the existing *gcs logins* ...
 - a. Right-click on *gcs_client* login and choose Delete.
 - b. Right-click on *gcs_web_client* login and choose Delete.



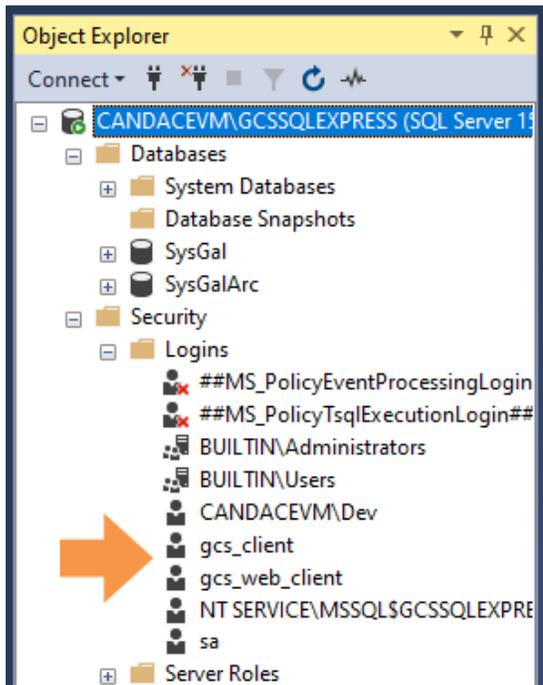
Object Tree > Database Users branch

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RESTORING GCS CLIENT LOGINS

You can restore the *gcs client logins* for both databases, by remapping the client logins from the Properties screen under the Logins branch.

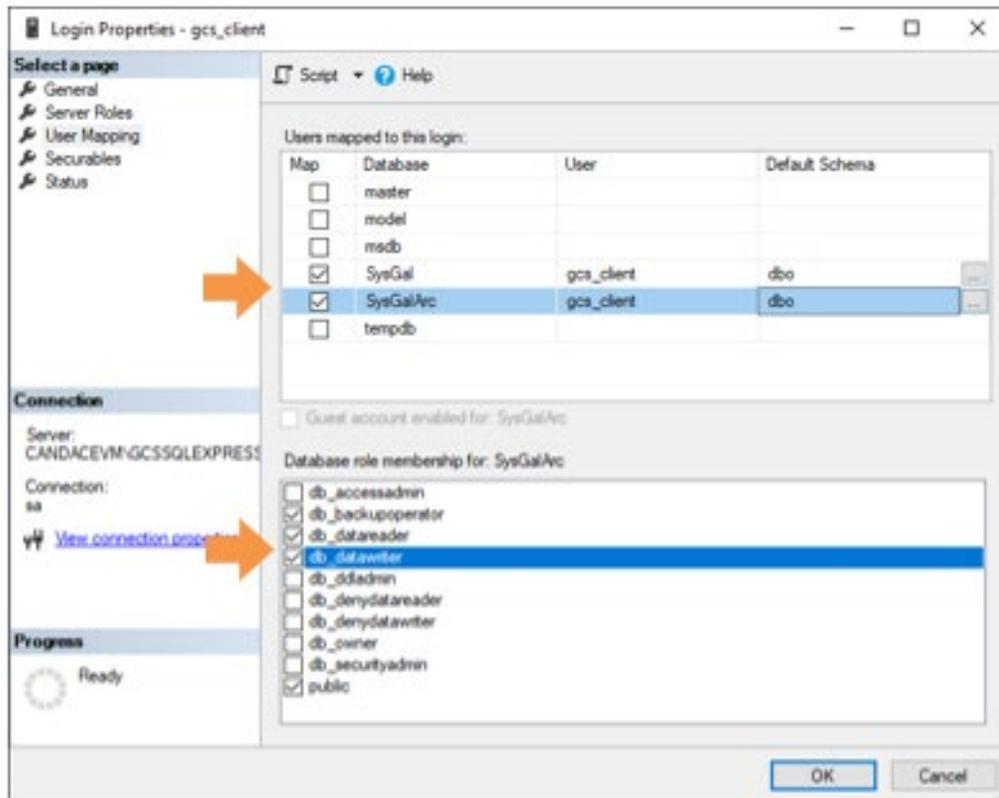
4. Expand the **Security > Logins** branch that is under the **GCSSQL Instance** (i.e., not the security branch under the database).
5. Under the **Logins branch**, right-click on the **gcs_client** login and select *Properties* from the menu.



MSSQL Object Tree > Instance Logins branch

Continue on next page ...

6. In the Properties screen, select the **Mapping page** (found in the lefthand menu).
7. Configure the User Mapping for the **gcs_client** login as follows ...
 - a. place a checkmark by the database names (both SysGal & SysGalArc)
 - b. type "dbo" into the Schema field for both databases
 - c. assign the membership roles for db_backupoperator, db_reader, and db_writer, as shown in the image below. Do this for both SysGal & SysGalArc databases.
8. Click **OK** to save the **gcs_client** mapping for both databases.

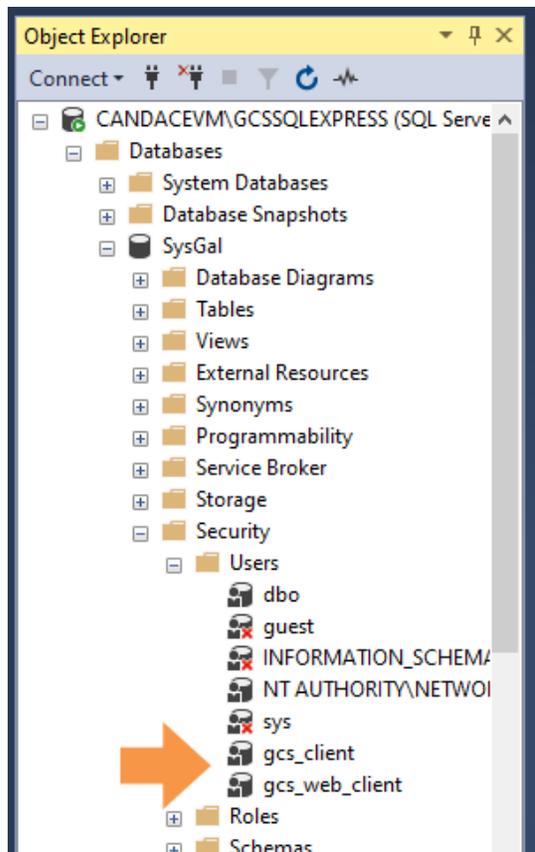


MSSQL Instance Login Properties for client & web client

9. Return to the **Logins branch**, and right-click the **gcs_web_client** and open the Properties screen.
10. Select the **Mapping page** and complete the mapping for **gcs_web_client** login as follows ...
 - a. place a checkmark by the database names (both SysGal & SysGalArc)
 - b. type "dbo" in the schema field for both databases
 - c. assign the membership roles for db_backupoperator, db_reader, and db_writer. Do this for **gcs_web_client** in both SysGal & SysGalArc databases.
11. Click **OK** to save the **gcs_web_client** mapping for both databases.

Continue on next page ...

12. Return to the database level and expand **Security > Users** branch for both databases (SysGal / SysGalArc).
13. You should see the **gcs_client** and **gcs_web_client** logins have been restored in both the SysGal and SysGalArc databases.



MSSQL Object Tree > Database Users branch

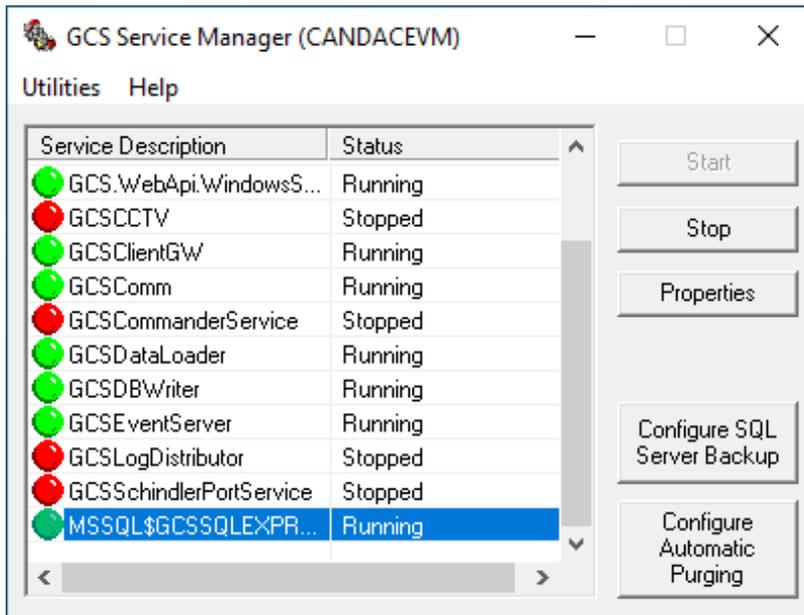
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RESTARTING GCS SERVICES

You will start the GCS Services on the server wherever the *main Communication/Event Server* is operating.

If you moved the *main Communication/Event Server* to a new location, you should make sure the GCS Services are disabled on the original server only.

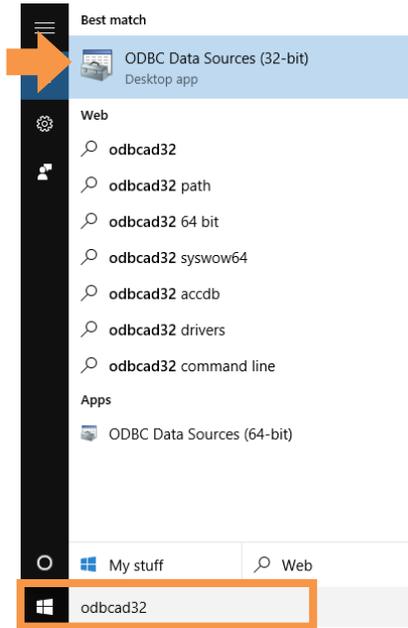
14. Restart the **GCS Services** on the main Communication Server using the *GCS Service Manager* utility.
 - a. GCS ClientGW Service
 - b. GCS Comm Service
 - c. GCS DataLoader Service
 - d. GCS DBWriter Service
 - e. GCS Event Service
 - f. GCS.WebAPI Service
 - g. also restart any GCS service that was running before you started the database migration.



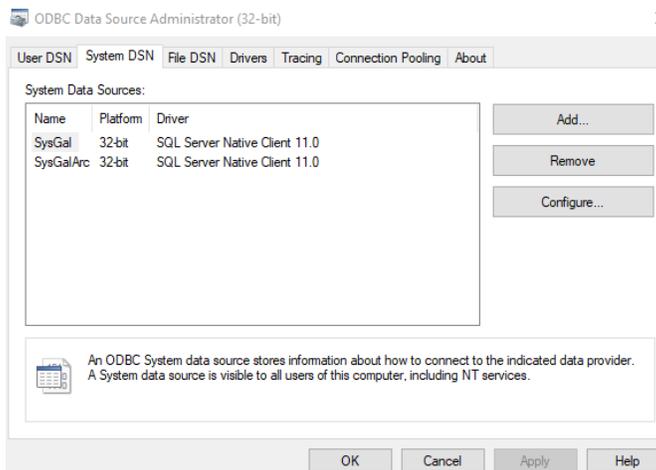
This completes the section on restoring the logins and starting services.

UPDATE THE DATA SOURCES ON EACH CLIENT

1. On 64 bit machines, access the **32 bit ODBC Administrator** by entering "odbcad32" in the Windows Search field.
2. Open the "ODBC Data Sources (32 bit)" desktop application from the search results.

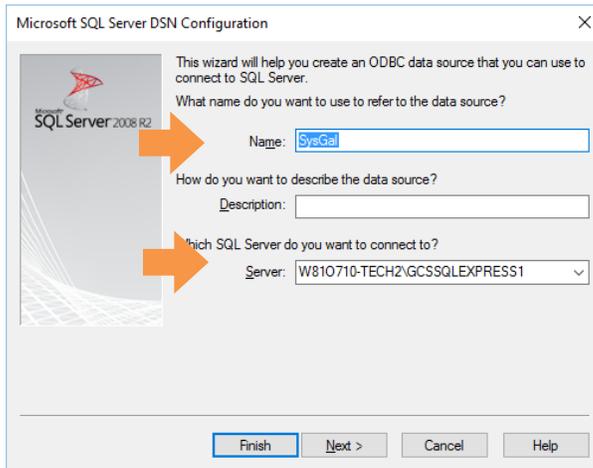


3. In the ODBC Data Source Administrator, select the System DSN tab and click Add.

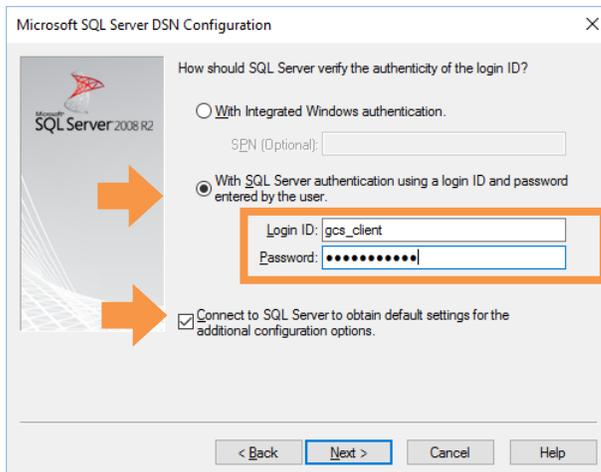


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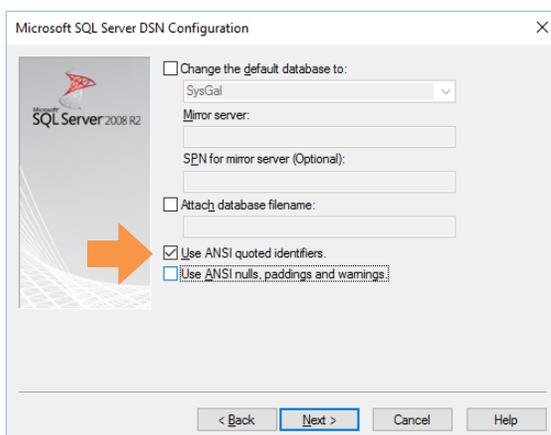
- In the DSN Configuration screen, select the appropriate target server (i.e., the *machine name\GCSSQL Instance name*) ... and click NEXT.



- Select SQL Server authentication and enter the `gcs_client` login and password.
- Also select/check the option to "Connect and obtain default settings ...", and click NEXT.

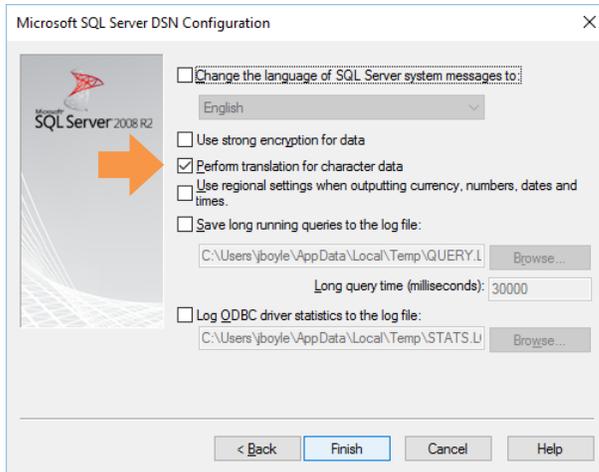


- Select/check the option to "Use ANSI quoted identifiers", and click NEXT.

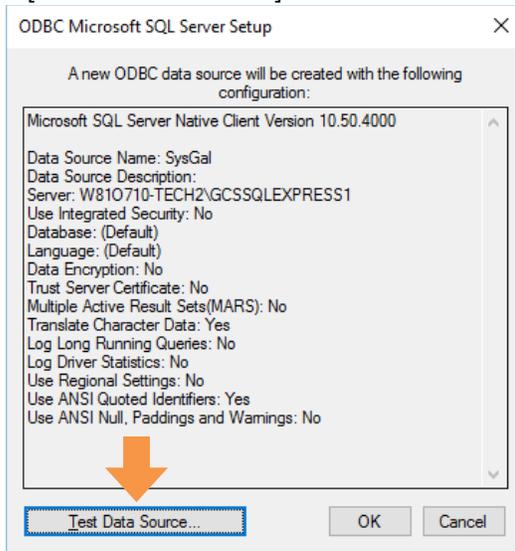


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8. Select/check the option to "Perform translation for character data", and click **FINISH**.



9. Click [**Test Data Source**] button.



10. Click **OK** when you receive "TESTS COMPLETED SUCCESSFULLY".

