

# RCS Transfer Service

## Description and Instructions for Use

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## Description

### Purpose

IMTT has a use case that requires heat trace data to be available on Ignition. Heat trace data is saved in Raychem Supervisor (RCS) trend groups in a serialized format in SQL Server tables. The RCS Transfer Service deserializes the trend group data and provides them in SQL Server tables that can be read by Ignition.

### Architecture

The RCS Transfer Service consists of a Windows Service, Windows Forms GUI, and configuration file.

The service runs the RCS Transfer Service “core”, which regularly reads the configuration file for transfer parameters. The service will log to a file in a chosen directory as well as to the GUI if it is open.

The GUI is used to edit the service configuration and to monitor the service logs.

The configuration file holds the configuration for the trend group transfers, as well as some basic service configurations.

## Configuration File Properties

### appSettings Properties

Property	Description
logfilepath	Path that logs will be written to
servername	SQL Server address
databasename	Database containing serialized tables
username	SQL Login credentials
password	SQL Login credentials

### trendGroupsConfig Properties

Property	Description
trendGroups	Collection of trend groups available for transfer
guid	GUID for the trend group in RCS
name	Name for the trend group in RCS
description	Description for the trend group in RCS
ismonitored	Is the trend group being transferred?
lastrefresh time	Last time the trend group was transferred
scanrate	How often the service retrieves data
pull days	Time range of historical data pulled

## Usage

### Installing the RCS Transfer Service

1. Open command prompt as an administrator.
2. Enter command: `cd PathToRCSTransferServiceFolder`
3. Enter command: `IC.RCS.RCSService --install`
4. Enter command: `sc start RCSTransferService`

### Uninstall the RCS Transfer Service

1. Open command prompt as an administrator.
2. Enter command: `sc stop RCSTransferService`
3. Enter command: `cd PathToRCSTransferServiceFolder`
4. Enter command: `IC.RCS.RCSService --uninstall`

### Opening the RCS Transfer GUI

1. Open "IC.RCS.RCSForm" exe file in the RCSTransferService folder by right clicking and running as administrator.
2. You can only change the configuration of the service and trend groups if the service is running.
3. Close the GUI when finished, otherwise other users may not be able to use the GUI correctly.

### Configure the Service Manually

1. All configuration parameters in the GUI are also able to be changed manually in the service configuration file.
2. Open the "IC.RCS.RCSService" configuration file in the RCSTransferService folder.
3. Change the values as needed and save.
4. Restart the service.

## Using the GUI

### Service

#### Commands

- Start/Stop the service
- Check the connection of the GUI to the service. While disconnected, the GUI cannot monitor the service logs nor change the trend groups configuration.

#### Database Connection

- The service requires a SQL Login that has db\_reader and db\_writer roles, as well as execute permission on stored procedures in the database.
- Specify the SQL Server address, username, and password for SQL login credentials. The database is assumed to be named "ehtplus", any deviations will require changes to the application.

- Check the SQL connection and save the SQL parameters with the “Check SQL Connection” button. If connected to the service and the service can connect with the SQL credentials, then it will show “connected”.

### Logging

- Choose the folder directory where the service’s logs will be written to. Default is “C:\temp”.

### Trend Groups

- “Refresh” will pull the current trend groups configuration used by the service.
- “Save” will save any changes to the trend groups configuration table on the GUI to the service.
- “Pull from SQL” will check the ehtplus database for new trend groups and any changes to the existing trend groups name and descriptions. If new trend groups are found that are not in the service’s configuration, then they will be added to the GUI and “Save” must be clicked to save them to the service as well.
- The user of the GUI can change the “Monitored”, “Scan Rate (s)”, and “Time Span (d)” columns.

### Log

- Users can view the form and service logs in real time. There are three main categories of logs:
  - Service – messages related to the startup/shutdown of the Windows service
  - Core – messages from the main transfer service functionality
  - Form – messages from the opened GUI

## Considerations for the Future

- It is assumed that the SQL Server database with the RCS trend group data is always named “ehtplus”.
- The application has only been tested when installed on the same machine as the SQL server but should be able to work on remote computers if the remote computer itself has access to the SQL Server machine and the required port is open.
- The service can handle various device types, but new trend groups added to the transfer should be monitored closely to make sure that all data is being transferred correctly. Any discrepancies may require editing the application code or editing the Raychem Supervisor class libraries that are referenced to deserialize the data.