Fortnox Connect
Installation manual

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Introduction

This document is a technical manual describing how to install the application "Fortnox Connect" and the windows service "CloudConnecct" and the related configuration

Fortnox Connect is the administration tool to configure the solution. License information, the connection to the SQL Server database, creation of Jobs and logging. Here you will also find logs with information about what is going on. Fortnox Connect is normally installed under c:\Program Files\FortnoxConnect.

CloudConnect is the core of the solution and contains all business logic to get data from Fortnox. It's a windows service that is running on the server in the background and will be auto started everytime the server is restarted etc.

1 System requriments

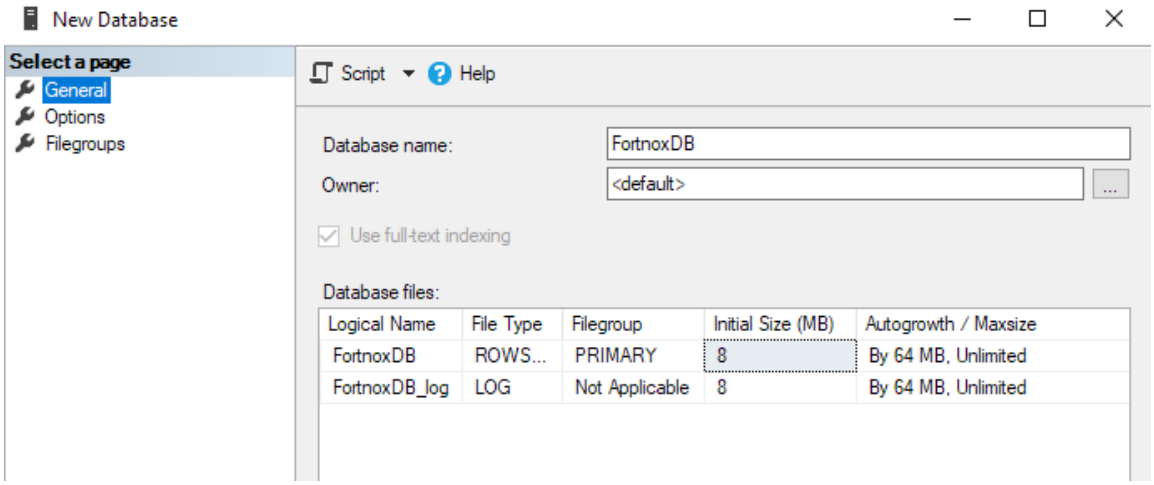
- SQL Server
  - 2008R2 or later senare
  - All editions from Express till Enterprise
  - Or Azure SQL
  - Database should be accessible via a "SQL Login" (username +password)
- Windows server (or computer)
  - Windows 8, Windows Server 2012, or later
  - Microsoft .NET 4.5.2 or later
  - Access to Internet to be able to make https-request to Fortnox
  - Access to SQL Server database above
  - Please note that Fortnox Connect and CloudConnect can (but dosent need to) be installed as a service on the same server/computer as SQL Server

2 Prepare the SQL Server database

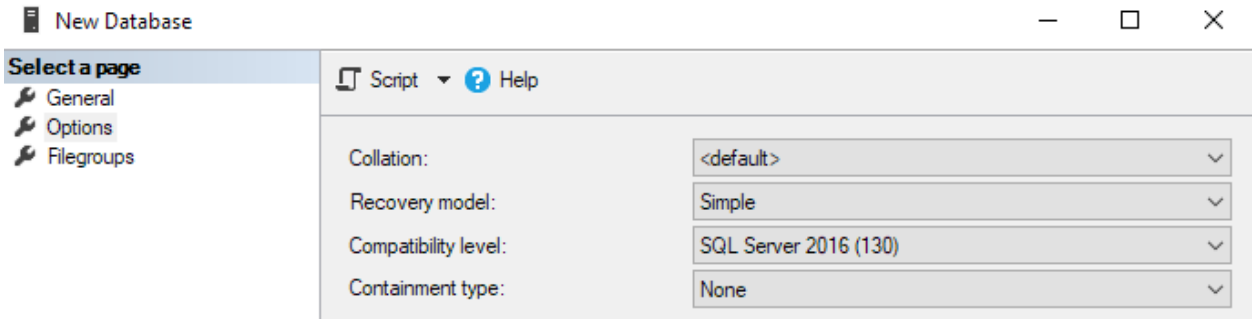
Use an existing SQL Server database or create a new one. In this example we have created a new database called "FortnoxDB"

2.1.1 Create a new SQL server database (or use an existing)

If a separate database should be created, use SQL Server Management Studio to create the database.



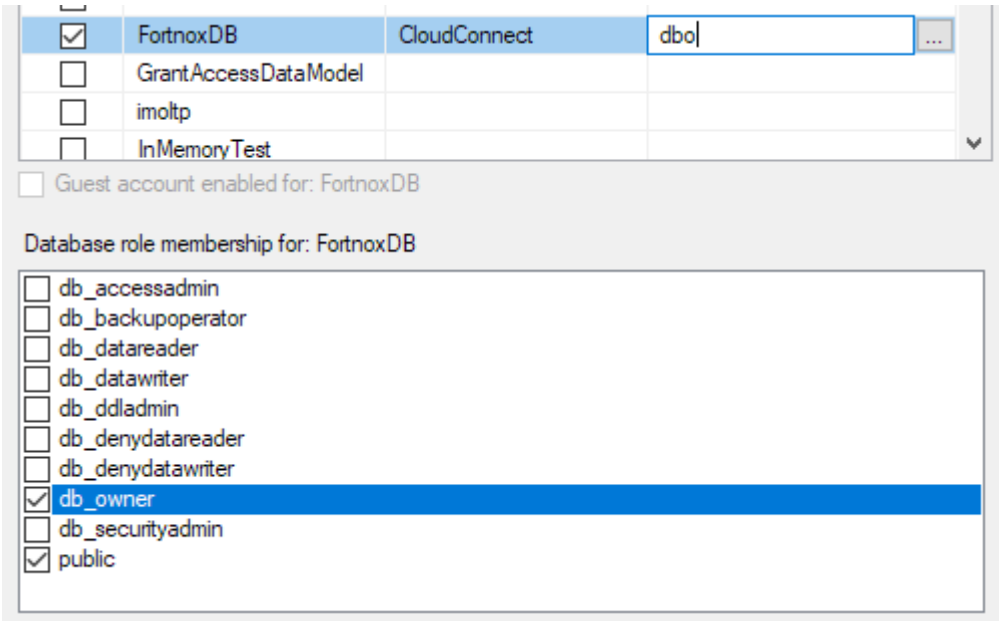
The database can be in "Simple" recovery mode.



2.1.2 Create a new user in SQL Server (SQL-Login) for Cloud Connect

Cloud Connect will need to be able to login against the database using a "SQL Login".

- ☐ Create a new SQL-Login (user) in the instance. Name the SQL-login "CloudConnect" or something similar
- ☐ Create a new password, that never expires
- ☐ Give the new SQL-login "db owner" rights to the database created under the tab "User Mappings"


FortnoxDB
CloudConnect
dbo
GrantAccessDataModel
imoltp
InMemoryTest
Guest account enabled for: FortnoxDB
Database role membership for: FortnoxDB
db_accessadmin
db_backupoperator
db_datareader
db_datawriter
db_ddladmin
db_denydatareader
db_denydatawriter
db_owner
db_securityadmin
public

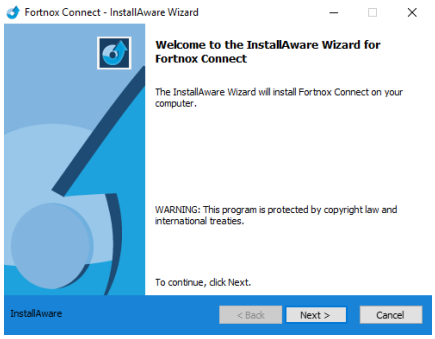
3 Install and configure Fortnox Connect and the CloudConnect Service

Download the install instructions here: http://www.ifrontsystems.com/ifrontdownload.html. (this document)

3.1 Install

3.1.1 Run the Install Wizard

- ☐ Execute the install package ”FortnoxConnect.exe” that you have downloaded.
- ☐ Next…Next…Next etc



3.1.2 Execute the install scripts in the target database

Included in the Fortnox Connect installation package there exists two sql scripts that creates a specific database schema and adds one stored procedure to the database. By using a separate schema you can target an existing database containing other data without the risk of table name collision.

- ☐ In SQL Management Studio – try to login with the new SQL-login you just have created in step 2.1.2
- ☐ Execute the ”CreateSchemaCC.sql” to the target database. You will find the script in folder c:\Program Files\FortnoxConnect after installation
- ☐ Execute the script FortnoxPluginScript.sql that creates a stored procedure that is used to automatically create the tables within the database. You find the script under c:\Program Files\FortnoxConnect)

3.2 Configuration of Fortnox Connect

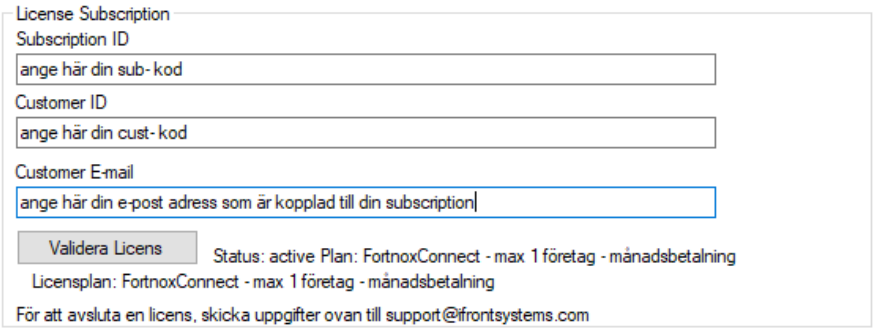
After installation, the Fortnox Connect admin tool is started automatically.

(Note: If the installation is performed on a server where you as a user do not have full admin rights, you might need to start the application “as an administrator”. If not – the

data in the admin application will not be saved. In windows start menu, right-click on Fortnox Connect and select "Run as administrator")

In the admin tool, there are three different things that needs to be configured.

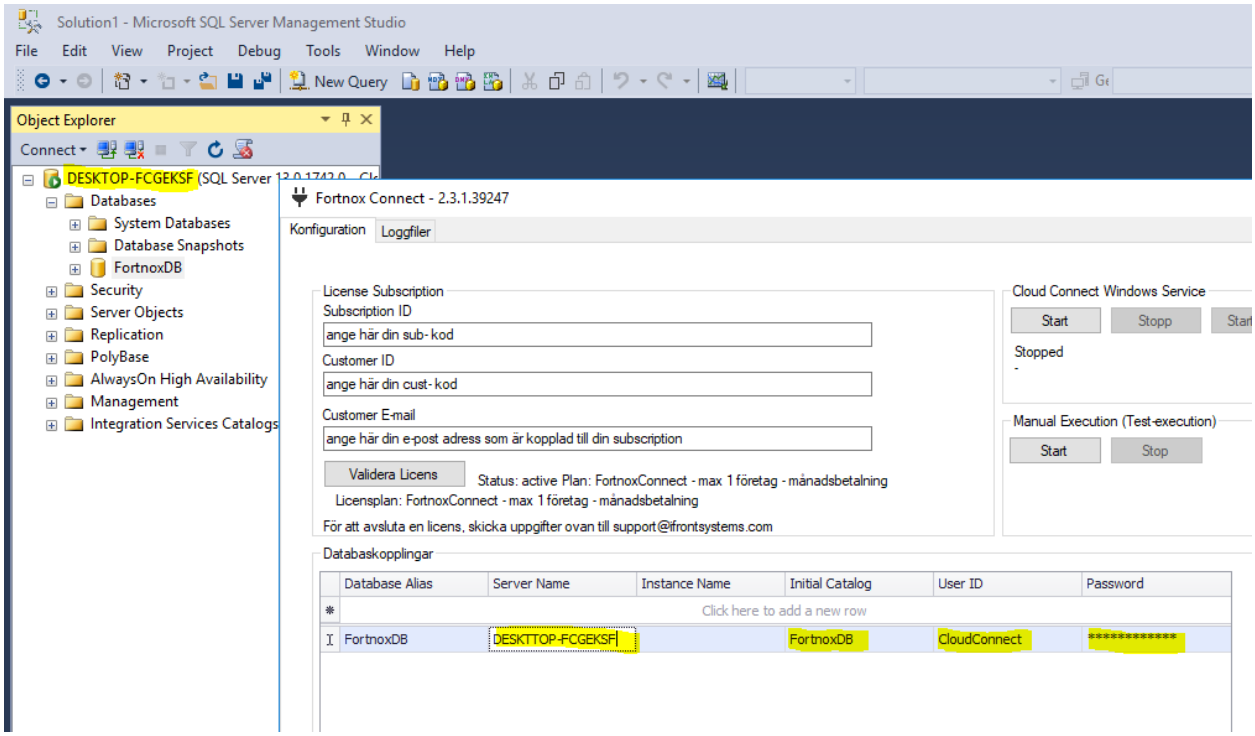
3.2.1 Licens subscription



- ☐ Enter the information you have recived via e-mail after signing up for the service
- ☐ Click "Validate License"
- ☐ Check that you get "Status: active Plan" and the correct subscription

(If you want to cancel the subscription, send a mail to support@ifrontsystems.com)

3.2.2 Database connections



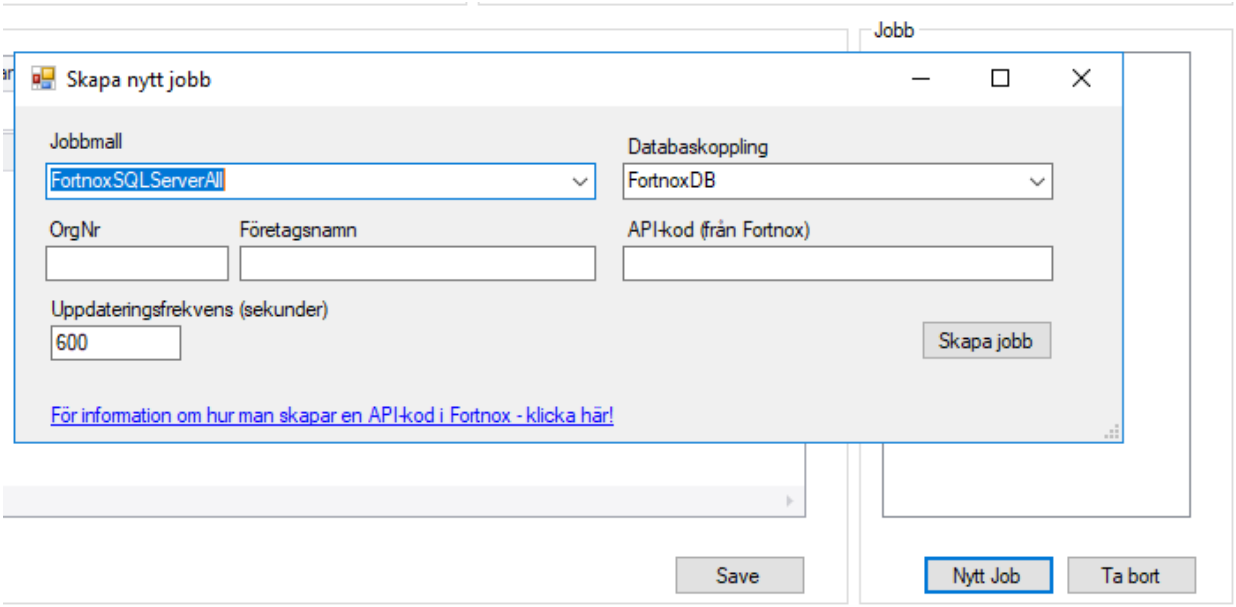
- ☐ Add/Edit the "Server Name", to the name of the SQL-server computer/server where the target database is stored. The name of the instance is shown in management studio in the top-left tree)

☐ Update the "Initial Catalog" (database name), "UserID" and "Password", so it matches the database and user configuration managed configured in 2.1.2.

- ☐ Click the Save button

3.2.3 Add a new Job

- ☐ Click the button ”Add Job”, a new dialog to create a new job is opened.
- ☐ Use the job template ”FortnoxSQLServerAll”
- ☐ Select the database connection you have just configured. Default: FortnoxDB
- ☐ Enter the organisation number for the organisation, the company name. The format of these doesn’t matter.

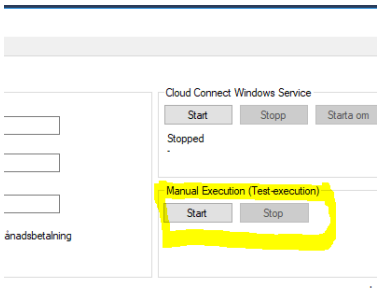


- ☐ Create an API-code within Fortnox and paste this API-code in the text box
  - For information about how to create an API-code within Fortnox, see this short film;
  - https://www.youtube.com/watch?v=Gvg5MDJfO4E&feature=youtu.be
  - Within the Fortnox user administration, under Integrations, add a new one and search for ”IFRONT AB”, and you will find Fortnox Connect SQL Server. Add and approve that the application is authorized to request data from Fortnox.
- ☐ Adjust the refresh interval. Default every 10 minute (600 secounds)
- ☐ Click ”Create job”

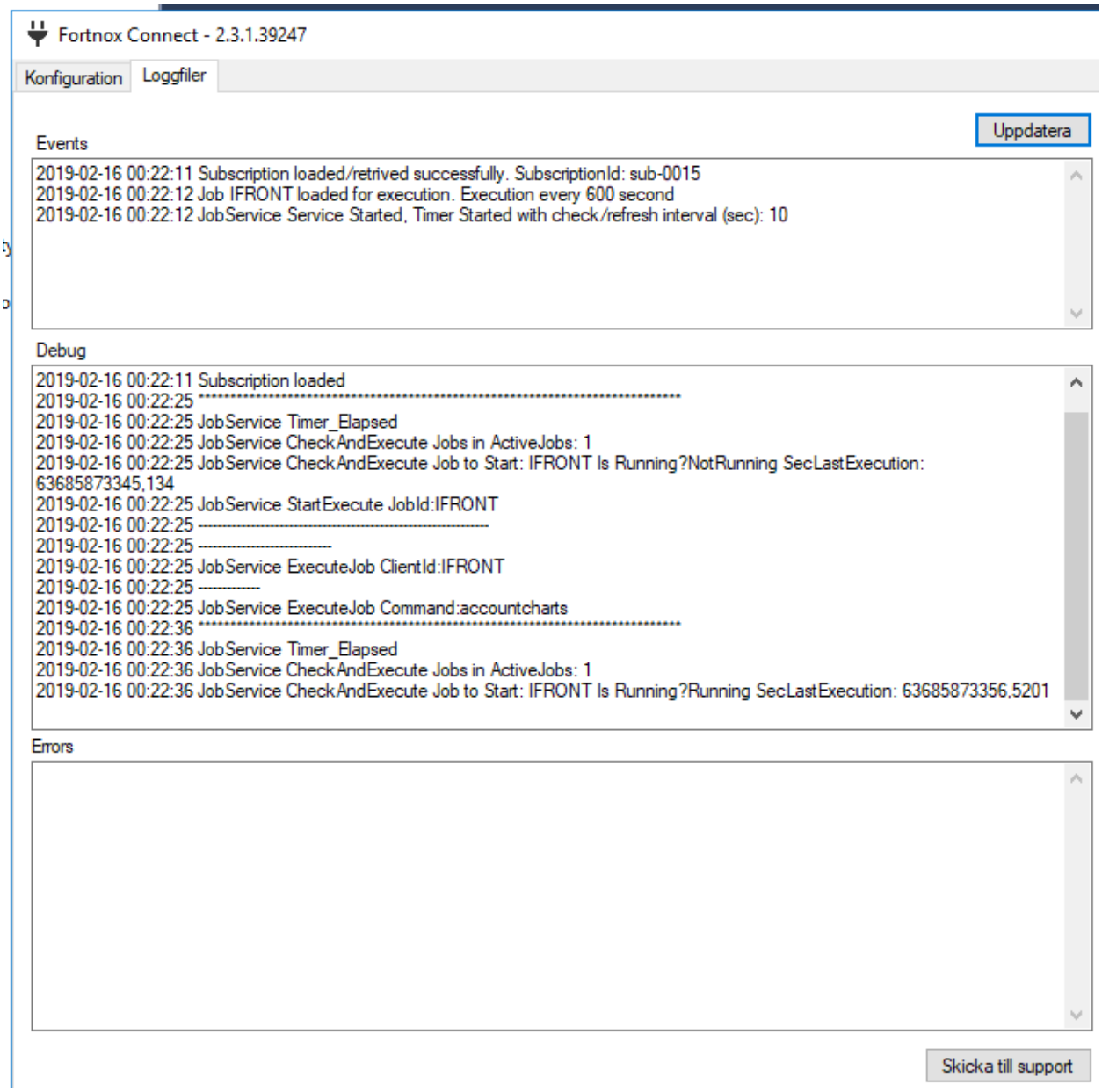
3.3 Direct testing of data transfer

In this step all the configuration of the application is finished. Before starting the CloudConnect windows service, you can test run the integration direct from the Fortnox Connect admin tool.

3.3.1 Start the transfer of data



- ☐ Click the button ”Start”, under direct execution
- ☐ Change tab to ”Log”, and click the Update button over and over again to see what is going on

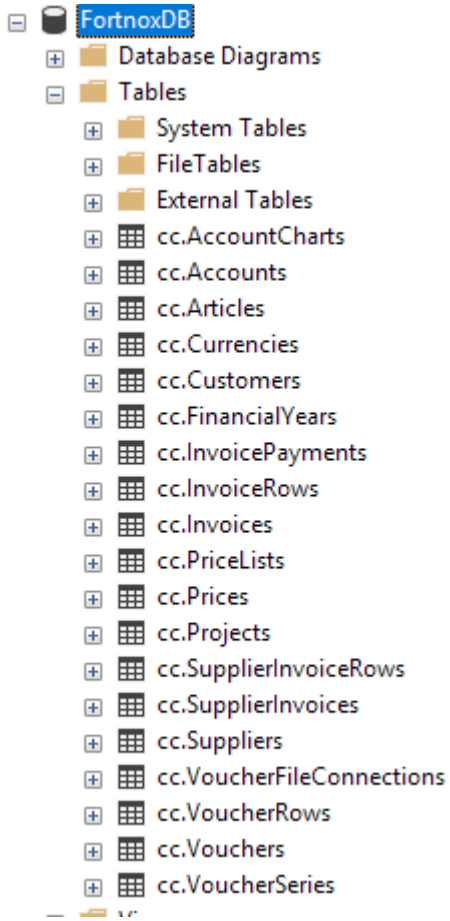


If everything is working ok, it should look as the screenshot above. If you find errors, try to review the error message and try to understand what can be wrong. It can be the database connection, the user rights of the SQL-login you have created, your API-code or similar. Try

stop the execution, change the settings, and again start the direct execution and review the logs.

3.3.2 Validate that data is recived

Open the target database using SQL Server Management Studio, and refresh the table tree under the target database. Check if there exist any tables, for example cc.AccountCharts.



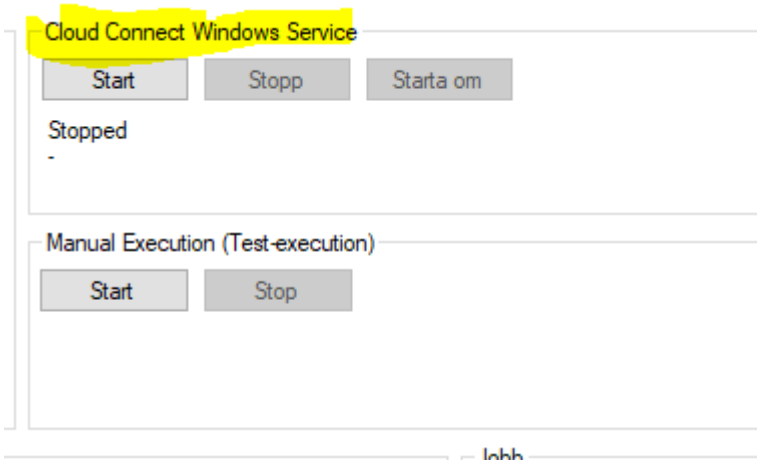
Please note: to retrive all the data, can during first-time-load take long time. 30 minutes to an hour. After the initial load, only incremental changes to data will be loaded.

The tables recived, will be based on what data you have in Fortnox. If you do not have any “PriceLists”, you will not get a table in the database with that name.

If everything works fine, you can now turn on the CloudConnect windows service that will run in the background on the server/computer.

3.4 Start the CloudConnect Service

3.4.1 Start the CloudConnect Service



- ☐ Klicka på ”Start” under Cloud Connect Windows Service
- ☐ Kontrollera igen loggarna att inga felmeddelanden visas

If – the service is not started, it can be due to the fact that you are not running the application as an “Administrator”. See intro in chapter 3.2.

If you are not able to start the service, see chapter 5.3.

4 Information regarding the data and example SQL

4.1 Data retrival

The tables and colums that has been created reflects the APIs that Fortnox exposes via their rest based WebAPI. For more information regaring what APIs are available, see https://developer.fortnox.se/documentation/resources/accounts/ . On left side you will find a list of available APIs.

Data is loaded incremental. This implies that only data that has been added or changed from last synchronization will be retrieved. The "point-in-time" used in each request is based on the last known LoadDateTime -column in each table. This implies that if you delete all data within a table, all data will be again retrieved from the beginning of time.

Note that some tables are "sub-tables" to another table. The VoucherRows table is a sub-table to the Voucher table. If you clear the data in any of these tables, both tables must be truncated. The same applies to for example SupplierInvoiceRows and SupplierInvoices etc.

4.2 Tables and data types

All data from the Fortnox APIs is sent and will be retrived as "text". Each table will be created automatically, and due to this reason – all columns will also be set default as text columns (nvarchar(max)).

If you want to change a data type, for example Credit and Debit in VoucherRows, you can manually change the data type using Management Studio.

An alternative is to do perform this data transformation during the execution of queries. See "cast" exampel below.

4.3 Exempel SQL

General ledger transactions, including account, project and cost center.

```
Please note the "cast" of Credit and Debit.
select *,
cast(vr.Credit as decimal(18,4)) as CreditAmount,
cast(vr.Debit as decimal(18,4)) as CreditAmount
 from cc.VoucherRows vr
  left outer join cc.Vouchers vo on vr.[@url] = vo.[@url] and vr.ClientId = vo.ClientId
         left outer join cc.Accounts ac on vr.Account = ac.Number and ac.[Year] =
vo.[Year] and ac.ClientId = vo.ClientId
  left outer join cc.Projects pr on vr.Project = pr.ProjectNumber and pr.ClientId =
vr.ClientId
  left outer join cc.CostCenters co on vr.CostCenter = co.Code and co.ClientId =
vr.ClientId
```

5 Solve errors and problems

5.1 General information

If no tables are created and filled with data, check the following;

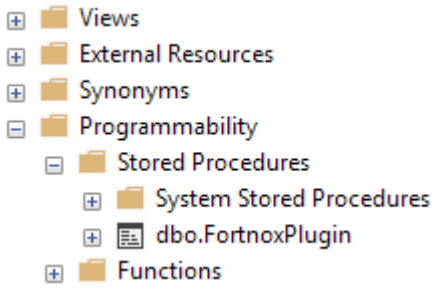
- Is the service started?
- Are there any error messages in the Event-log, or any other logs?

5.2 Database related problems

Common problem related to the database. Check;

- ☐ Is it possible to login to the target database using the SQL-login/password you have created for CloudConnect to use? Try login using Management Studio.
- ☐ Do the SQL-login created db-owner rights to the target database? I.e. is the user able to create new tables? See 2.1.2
- ☐ Is the schema ”cc” created in the database?

☐ Do the database contain a stored procedure called “FortnoxPlugin” under Programmability->Stored Procedures? (se 3.1.2)

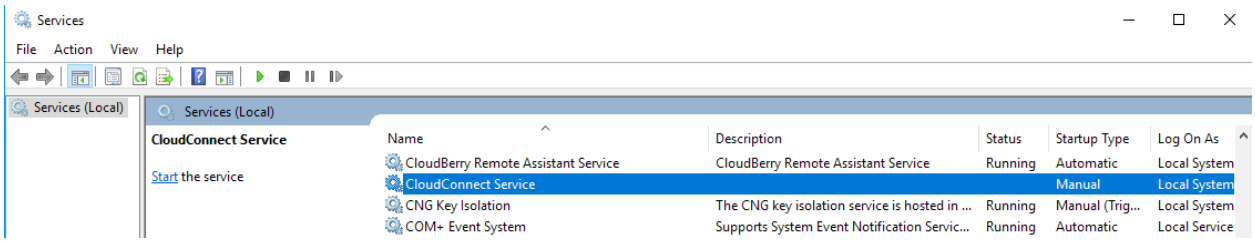


5.3 CloudConnect Service problems

5.3.1 If the CloudConnect service registration fails during installation

The CloudConnect Service must be registered in windows as a windows service. This is normally performed during the installation.

Go to Windows Services, and check that “CloudConnect Service” exists in the list of services.



If not – try to execute the .bat file C:\Program Files\CloudConnect\ManualInstallService.bat Try to execute this file as and adminstrator i.e.in windows search after "CMD", right-click on Command Prompt, and select "Run as administrator", and from the command promt execute this file)

CloudConnect should after this operation be available as a service, but not started.