



Multi Entity Management for Microsoft Dynamics Business Central

How-to Setup Cross Database functionality



1.1 Setup Guide for Cross Database transfer.

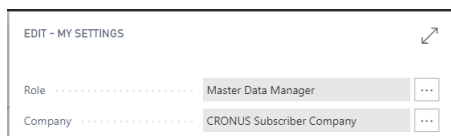
This Guide describe how to setup Multi Entity Management (MEM) to perform Cross Database replication.

1.2 Setting up Subscriber Database

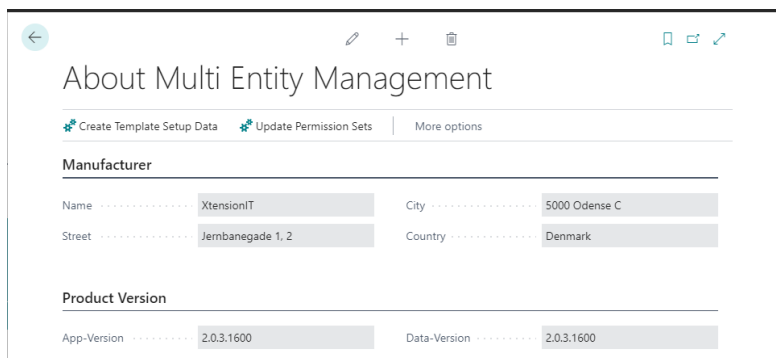
To start with, we are preparing the Subscriber Database with the Dependent Companies to receive Data. After the preparation, all the replication setup will be managed in the Publisher Database with the Template Company holding the Master Data.

1.2.1 Initial Setup

- Start Business Central with the Role “Master Data Manager”



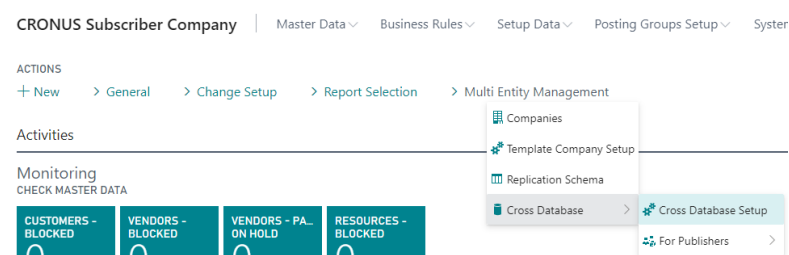
- Go to “About Multi Entity Management” Page



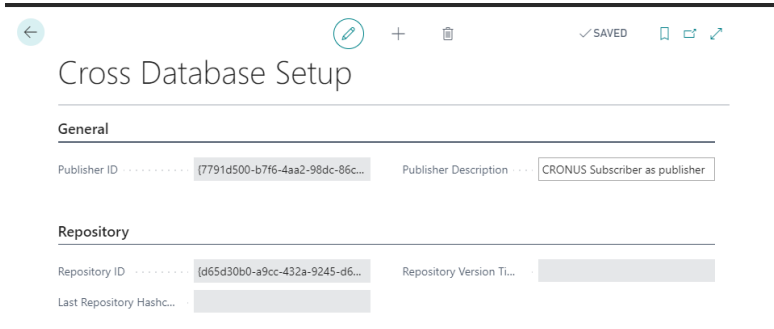
- Activate function “Create Template Setup Data”
- Activate function “Update Permissions Sets”

1.2.2 Cross Database Setup

- Go to the “Cross Database Setup”



- When the “Cross Database Setup” Page is opened, MEM is performing an automatic setup. Please note that the “General” section, is only used, if the Subscriber Company, also acts as a Cross Database Publisher.



- After the Page have been shown on the screen, just close it again.

1.2.3 Setup Web services

- Go to the “Web Services” list (Use Alt+q to search for the page)
- Edit the “Web Services” list.
- Add Codeunit 5397816 “XTEMEMSubscriber Data Service” to the list.
- Give the service a proper name in the field “Service Name”.
- Set a Checkmark in the field “Publish”
- Add Codeunit 5397819 “XTEMEM Subscr Mgt Svc Interf” to the list and insert a proper name I the field “Service Name”.
- Give the service a proper name in the field “Service Name”.
- Set a Checkmark in the field “Publish”
- The field “SOAP URL” will be updated with a value

WEB SERVICES ✓ SAVED

Search + New Edit List Delete Reload Open in Excel More options

Object Type ↑	Object ID	Object Name	Service Name ↑ ▼	All Tena...	Publ...	OData V4 URL	OData URL	SOAP URL
Codeunit	5397819	XTEMEM Subscr Mgt Svc Interf	MasterDataManager	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Not applicable	Not applicable	http://mem203demo2:7047/BC/...
→ Codeunit	5397816	XTEMEMSubscriber Data Service	MasterDataSubscriber	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Not applicable	Not applicable	http://mem203demo2:7047/BC/...

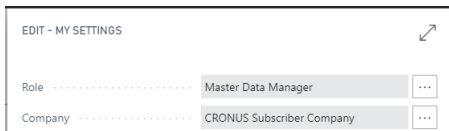
- Activate the two URL to check that they are working.

1.3 Setting up Publisher Database

Now we are preparing the Publisher Database with the Template Companies to transferring Data. After the preparation the Master Data is ready for replication.

1.3.1 Initial Setup

- Start Business Central with the Role “Master Data Manager”

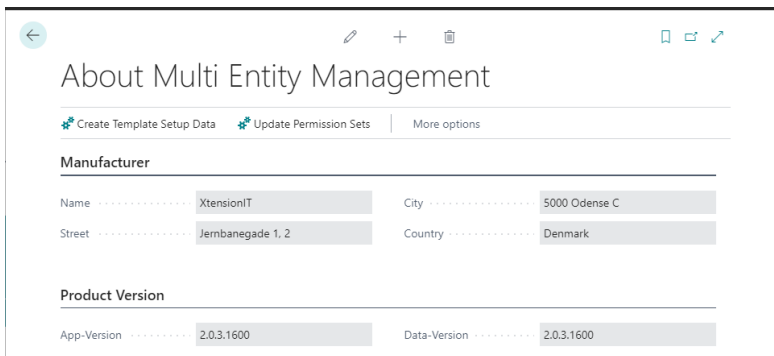


EDIT - MY SETTINGS

Role Master Data Manager

Company CRONUS Subscriber Company

- Go to “About Multi Entity Management” Page



About Multi Entity Management

Create Template Setup Data Update Permission Sets More options

Manufacturer

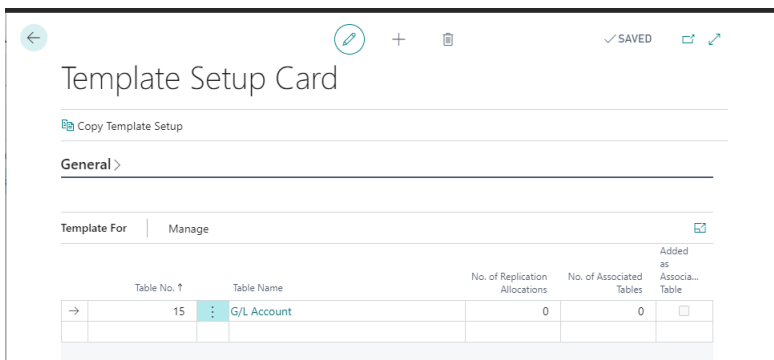
Name XtensionIT City 5000 Odense C

Street Jernbanegade 1. 2 Country Denmark

Product Version

App-Version 2.0.3.1600 Data-Version 2.0.3.1600

- Activate function “Create Template Setup Data”
- Activate function “Update Permissions Sets”
- Go to the “Template Company Setup” and do the “Template Setup” for your Publishing Company, so it is marked as a “Template Company”



Template Setup Card

Copy Template Setup

General

Template For Manage

Table No. ↑	Table Name	No. of Replication Allocations	No. of Associated Tables	Added as Associa... Table
→ 15	G/L Account	0	0	<input type="checkbox"/>

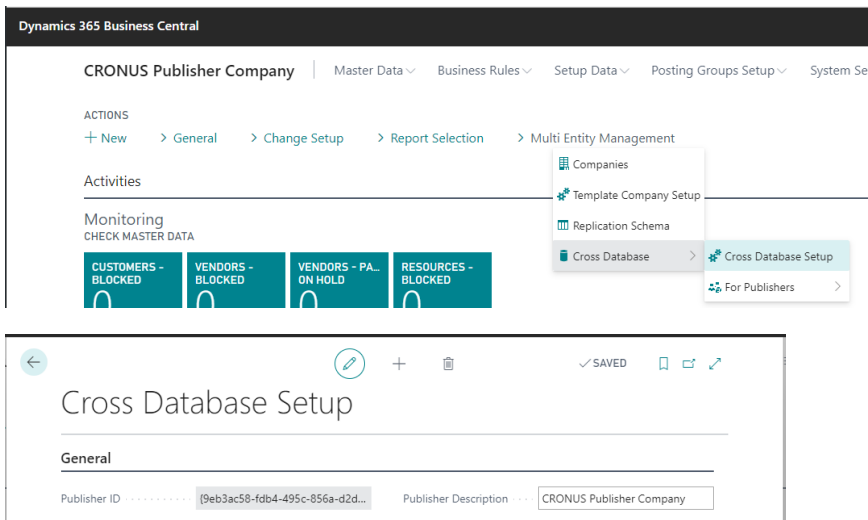
← TEMPLATE SETUP LIST | WORK DATE: 1/27/2022

Search Manage Edit Template Setup... Edit Replication Setup... Open in Excel ...

Company Name	Replication Schema Name	Business Unit Code	Rep... Com...	Con...	Tem... Com...	Dep... Com...
CRONUS International Ltd.	:		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CRONUS Publisher Company			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

1.3.2 Cross Database Setup

- Go to the “Cross Database Setup”



Dynamics 365 Business Central

CRONUS Publisher Company | Master Data | Business Rules | Setup Data | Posting Groups Setup | System Se

ACTIONS
+ New > General > Change Setup > Report Selection > Multi Entity Management

Activities

Monitoring
CHECK MASTER DATA

CUSTOMERS - BLOCKED VENDORS - BLOCKED VENDORS - PA... ON HOLD RESOURCES - BLOCKED

Companies
Template Company Setup
Replication Schema
Cross Database > Cross Database Setup
For Publishers >

← Cross Database Setup

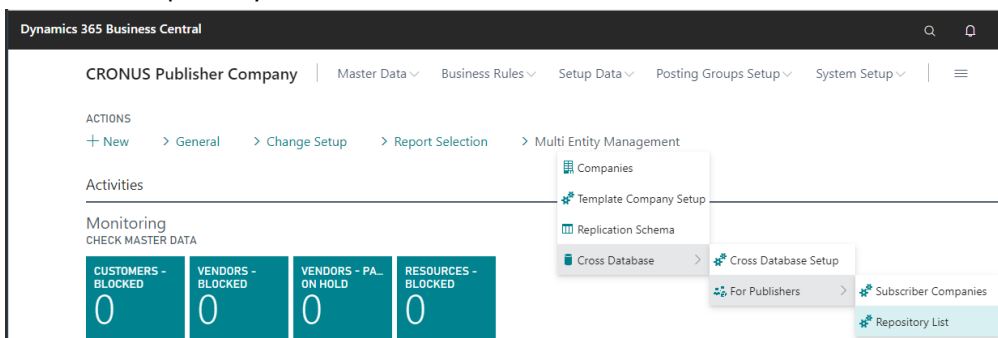
General

Publisher ID (9eb3ac58-fdb4-495c-856a-d2d... Publisher Description ... CRONUS Publisher Company

- The field “Publisher Description” is filled with a proper name.

1.3.3 Repository List

- Go to the “Repository List”



Dynamics 365 Business Central

CRONUS Publisher Company | Master Data | Business Rules | Setup Data | Posting Groups Setup | System Setup | ≡

ACTIONS
+ New > General > Change Setup > Report Selection > Multi Entity Management

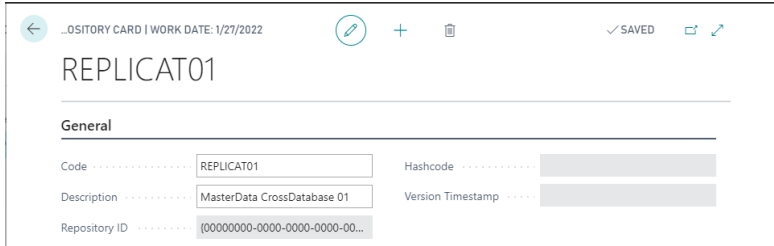
Activities

Monitoring
CHECK MASTER DATA

CUSTOMERS - BLOCKED VENDORS - BLOCKED VENDORS - PA... ON HOLD RESOURCES - BLOCKED

Companies
Template Company Setup
Replication Schema
Cross Database > Cross Database Setup
For Publishers > Subscriber Companies
Repository List

- Create a new CODE and Description



..OSITORY CARD | WORK DATE: 1/27/2022

REPLICAT01

General

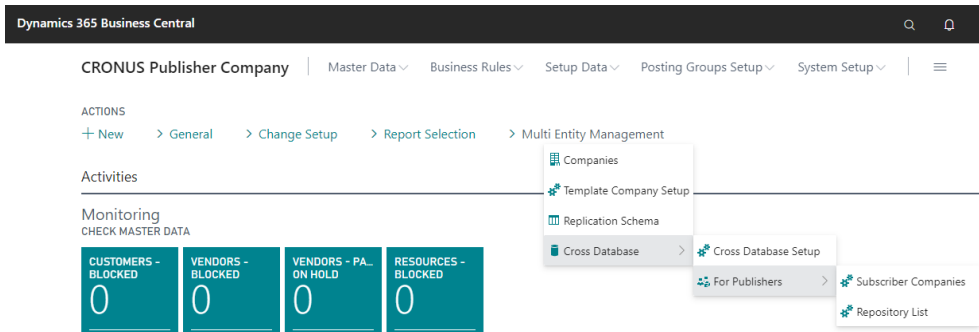
Code REPLICAT01 Hashcode [REDACTED]

Description MasterData CrossDatabase 01 Version Timestamp [REDACTED]

Repository ID (00000000-0000-0000-0000-00...)

1.3.4 Subscriber Companies

- Go to the “Subscriber Companies”



Dynamics 365 Business Central

CRONUS Publisher Company | Master Data > Business Rules > Setup Data > Posting Groups Setup > System Setup > Multi Entity Management

ACTIONS
+ New > General > Change Setup > Report Selection > Multi Entity Management

Activities

Monitoring
CHECK MASTER DATA

CUSTOMERS - BLOCKED: 0

VENDORS - BLOCKED: 0

VENDORS - PA... ON HOLD: 0

RESOURCES - BLOCKED: 0

Navigation path:
Companies
Template Company Setup
Replication Schema
Cross Database > Cross Database Setup
For Publishers > Subscriber Companies
Repository List

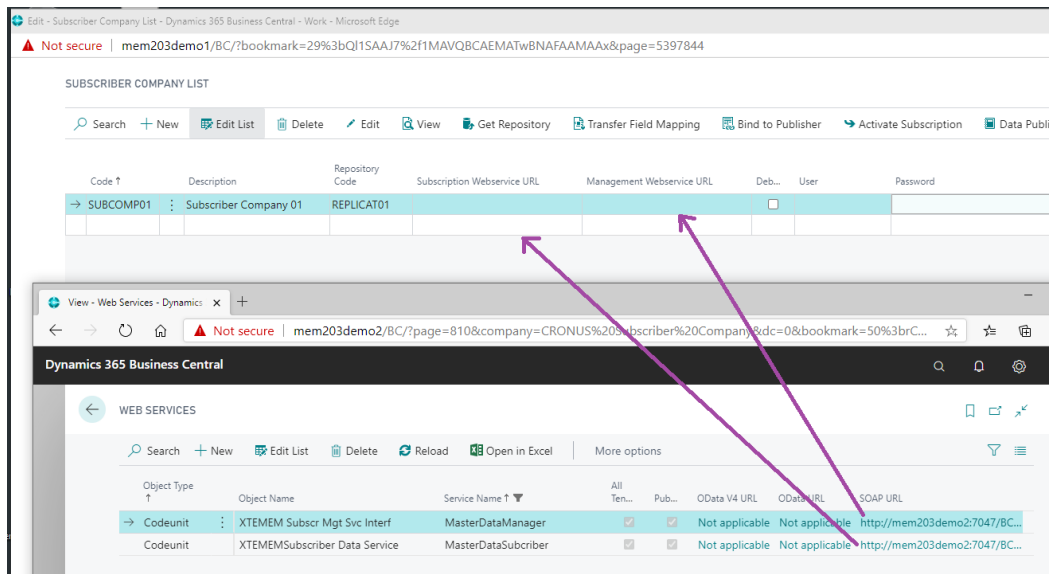
- Insert “Code”, “Description” and “Repository Code”

SUBSCRIBER COMPANY LIST

Search + New Edit List Delete Edit View Get Repository Transfer Field Ma

Code ↑	Description	Repository Code	Subscription Webservice URL	Management Websi
→ SUBCOMP01	Subscriber Company 01	REPLICAT01		

- Open the Subscriber Company and find the SOAP URL’s for “Subscriptions” and “Management”

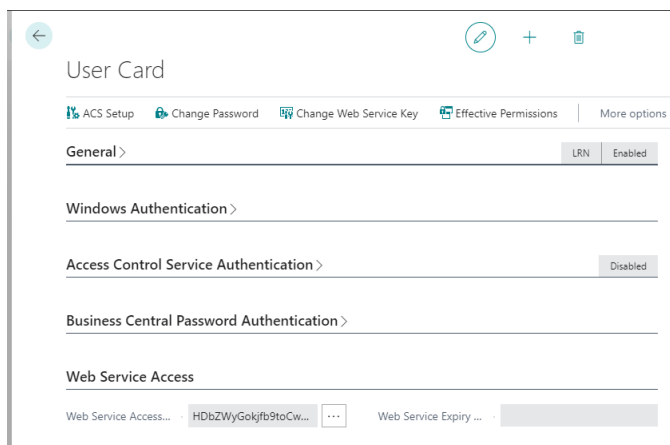


Copy the values to the “Subscriber Company Line”

SUBSCRIBER COMPANY LIST

Code ↑	Description	Repository Code	Subscription Webservice URL	Management Webservice URL	Deb...	User	Password
→ SUBCOMP01	Subscriber Company 01	REPLICAT01			<input type="checkbox"/>		

- Open the Subscriber Company. Open the User Card, for the User that are assigned to handle the “Web Services”.
- Copy the “Web Service Access Key”



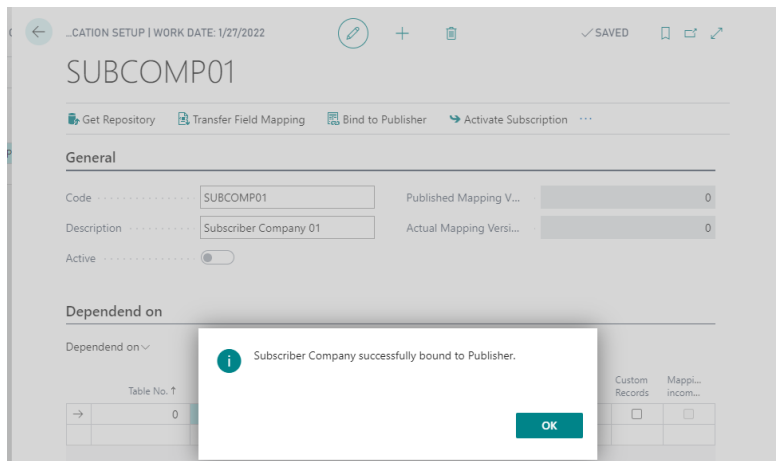
- Go to the “Publisher Company” and insert the “User Name” and “Web Service Access Key” into the fields “User” and “Password”
- Set the field “Timeout (ms)” to 100000

SUBSCRIBER COMPANY LIST

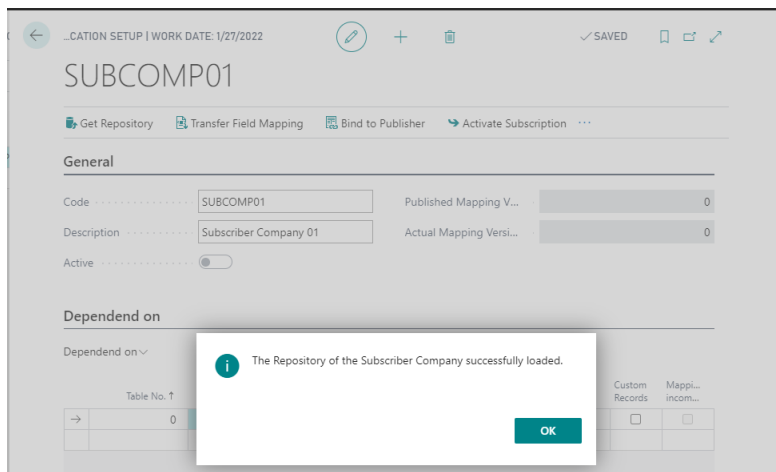
Search + New Edit List Delete Edit View Get Repository Transfer Field Mapping Bind to Publisher Activate Subscription Data Publishing Log

Code ↑	Description	Repository Code	Subscription Webservice URL	Management Webservice URL	Deb...	User	Password	Timeout (ms)
SUBCOMP01	Subscriber Company 01	REPLICAT01	http://mem203demo2/BC/?runi...	http://mem203demo2/BC/?runi...	<input type="checkbox"/>	LRN	*****	100000

- Set the field “Timeout (ms)” to 100000
- At the “Publisher Company”, Open the “Subscriber Companies” Page
- Run the function “Bind to Publisher”



- Run the function “Get Repository”



1.3.5 Replication Setup

- It is now time to do the Cross Database Replication setup
- Go to the “Subscriber Companies List” and open the Page Card.
- Do the Replication Setup in the “Dependent on” section, and set Checkmark in the “Subscribe” field.

..CATION SETUP | WORK DATE: 1/27/2022

SUBCOMP01

Get Repository Transfer Field Mapping Bind to Publisher Activate Subscription ...

General

Code SUBCOMP01 Published Mapping V... 0

Description Subscriber Company 01 Actual Mapping Versi... 1

Active

Depend on

Depend on v

Table No. ↑	Table Name	Template Company Name ↑	Subsc...	Custom Records	Mappi... incom...
→ 15	G/L Account	CRONUS Publisher Co...	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Field Mapping

Field Mapping

From Field No. ↑	From Field Name	To Field No.	To Field Name	No. Ma...	Use Def... Value	Default Value
→ 1	No.	1	No.	<input type="checkbox"/>	<input type="checkbox"/>	
2	Name	2	Name	<input type="checkbox"/>	<input type="checkbox"/>	
3	Search Name	3	Search Name	<input type="checkbox"/>	<input type="checkbox"/>	
4	Account Type	4	Account Type	<input type="checkbox"/>	<input type="checkbox"/>	
6	Global Dimension	6	Global Dimension	<input type="checkbox"/>	<input type="checkbox"/>	

- Use the function “Transfer Field Mapping”, to transfer the records to the “Subscriber Company”

..CATION SETUP | WORK DATE: 1/27/2022

SUBCOMP01

Get Repository Transfer Field Mapping Bind to Publisher Activate Subscription ...

General

Code SUBCOMP01 Published Mapping V... 0

Description Subscriber Company 01 Actual Mapping Versi... 1

Active

Depend on

Depend on v

Table No. ↑	Table Name	Template Company Name ↑	Subsc...	Custom Records	Mappi... incom...
→ 15	G/L Account	CRONUS Publisher Co...	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

i The field mapping is successfully transmitted to the subscriber company.

OK

- Use the function “Activate Subscription” to automate the replication

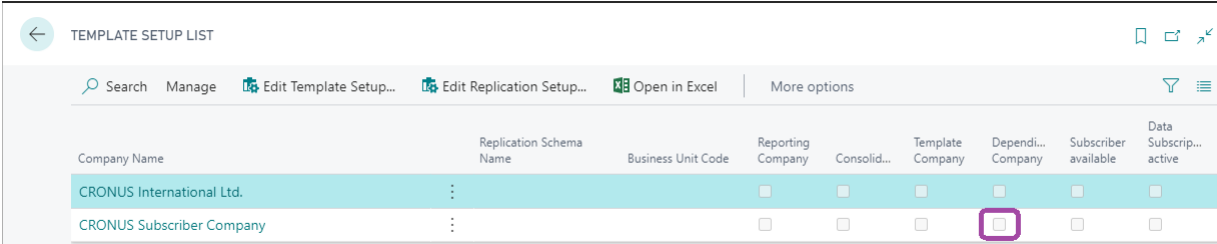
TEMPLATE SETUP LIST

Search Manage Edit Template Setup... Edit Replication Setup... Open in Excel More options

Company Name	Replication Schema Name	Business Unit Code	Reporting Company	Consolid...	Template Company	Dependi... Company	Subscriber available	Data Subscrip... active
CRONUS International Ltd.	:	:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CRONUS Subscriber Company	:	:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1.4 Notes on Cross Database replication

Please be aware, when using Cross Database replication between Databases through SOAP Web Services, The Subscriber Database will not be able to show which Companies that are Dependent Companies.



Company Name	Replication Schema Name	Business Unit Code	Reporting Company	Consolid...	Template Company	Depend... Company	Subscriber available	Data Subscrip... active
CRONUS International Ltd.	:		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CRONUS Subscriber Company	:		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

On the other hand, the Publisher Database, will show which if Cross Database replication is available

1.5 Troubleshooting

- IF the Publisher Database is “C/SIDE” based and the Subscriber Database is AL based. The “Content Encoding” must be removed from Codeunit “Subscription Web Request Mgt.”

Disable the line:

```
// HttpWebRequest.Headers.Add('Content-Encoding','gzip, deflate');
```

- OnPrem Databases both Publisher and Subscriber, must have the following added to “Service Tier Configuration”.
 - Set Checkmark in “Use NTLM Authentication”
 - Set the field “Max Message Size” to minimum 5120