

# Multi Entity Management for Microsoft Dynamics Business Central

# How-to setup Cross Environment replication



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## **Table of Contents**

| 1.1 | Setu        | JP GUIDE FOR CROSS ENVIRONMENT REPLICATION2                     |
|-----|-------------|---|
| 1.2 | Pref        | PARING THE SUBSCRIBER ENVIRONMENT2                              |
|     | 1.2.1       | INITIAL SETUP2  |
|     | 1.2.2       | MULTI-ENVIRONMENT SETUP   |
|     | 1.2.3       | SETUP WEB SERVICES  |
| 1.3 | Pref        | PARING THE PUBLISHER ENVIRONMENT AND ENTITY5                    |
|     | 1.3.1       | INITIAL SETUP   |
|     | 1.3.2       | PUBLISHING ENTITY SETUP   |
|     | 1.3.3       | Multi-environment Setup   |
|     | 1.3.4       | REPOSITORY LIST   |
|     | 1.3.5       | PUBLISH TO ENTITIES IN OTHER ENVIRONMENTS                       |
|     | 1.3.6       | REPLICATION SETUP9  |
| 1.4 | AUTH        | HENTICATION METHODS   |
|     | 1.4.1       | BASIC OR SERVICE-TO-SERVICE AUTHENTICATION                      |
|     | 1.4.2       | BASIC AUTHENTICATION – INITIAL SETUP                            |
|     | 1.4.3       | SERVICE-TO-SERVICE AUTHENTICATION – INITIAL SETUP               |
| 1.5 | Note        | ES ON CROSS DATABASE REPLICATION                                |
| 1.6 | Troi        | JBLESHOOTING  |
|     | 1.6.1       | PUBLISHER IS "C/SIDE" BASED AND THE SUBSCRIBER IS AL BASED.20   |
|     | 1.6.2       | BOTH PUBLISHER AND SUBSCRIBER ARE ONPREM DATABASES20            |
|     | 1.6.3<br>20 | THE SUBSCRIBER DATABASE IS SETUP WITH "WINDOWS AUTHENTICATION". |
|     | 1.6.4       | SOAP EXCEPTION BUSINESS CENTRAL 16                              |
|     | 1.6.5       | SOAP URL CONTAINING "DEFAULT" MORE THAN ONCE21                  |



## **1.1** Setup Guide for Cross Environment replication.

This Guide describe how to setup Multi Entity Management to publish data to Entities (Companies) located in separate environments/databases.

The term "Environment" is used to describe one or more Business Central environment(s) stored in at Business Central tenant.

The term "database" is used to describe an on-premises Business Central database.

The term "entity" is used to describe one or more companies in an environment/database.

This Guide will use the term "Environment" covering both environments (cloud) and databases (onprem).

## **1.2** Preparing the Subscriber Environment.

In the subscriber environment start the setup with the subscribing entity. After the preparation of the subscribing environment, all the publishing setups will be managed in the publisher environment with the Master data from the publisher entity.

The best practice is to create a Local Publisher entity in the subscribing environment. The Local Publisher in the Subscriber Environment will publish all data received from the Publishing Environment to the Subscribing Entities in the Subscriber Environment.

#### 1.2.1 Initial Setup

• Start Business Central with the Role "Master Data Manager".

| My Settings - LRN |                     | 2 | × |
|-------------------|---------------------|---|---|
| Role              | Master Data Manager |   |   |
| Company           | LOCAL Publisher     |   |   |

• Go to "About Multi Entity Management" page.

| Work Date: 1/22/2026                       | Ø 15                             | ÷ +         | 1             |           |                         |
|--|----------------------------------|-------------|---------------|-----------|-------------------------|
| About Mu                                   | lti Entity Man                   | agem        | ent           |           |                         |
| 📌 Create Template Setup                    | o Data 🛛 📌 Update Permission Set | s 🚦 License | 🔽 Replication | n 🖳 Adr   | min Tools               |
| Manufacturer                               |                                  |             |               |           |                         |
| Name ·····                                 | XtensionIT                       | Country     |               | Denmar    | k                       |
| Street                                     | Jernbanegade 1, 2                | E-mail      |               | info@xt   | ensionit.com            |
| City · · · · · · · · · · · · · · · · · · · | 5000 Odense C                    | Homepag     | ge            | https://v | www.xtensionit.com/     |
|  |                                  |             |               |           |                         |
| Product Version                            |                                  |             |               |           |                         |
| App-Version                                | 6.10.2.0                         | Replicatio  | on status:    | Enabled   |                         |
| Data-Version                               | 6.10.2.0                         |             |               |           |                         |
|  |                                  |             |               |           |                         |
| License Information                        | $\rangle$                        |             | 1             | 2/30/2024 | 0 of Unlimited companie |



- Activate the function: "Create Template Setup Data"
- For Microsoft Dynamics 365 Business Central, version 17 and below.
  - Activate the function: "Update Permissions Sets".

#### 1.2.2 Multi-environment Setup

• Go to the page "Multi-environment Setup".

| Dynamics 365 Busine | ss Central                 |                           |                              |                            |   |
|---------------------|----------------------------|---------------------------|------------------------------|----------------------------|---|
|                     | LOCAL Publis               | sher Master               | Data -> Busine               | ss Rules∨ Setu             | up Data $\lor$ Posting Groups Setup $\lor$ System Setup $\lor$ All Re   |
|                     | Actions<br>+ New > C       | General > Ch              | ange Setup                   | > Report Selection         | n > Multi Entity Management<br>II. Companies<br>& Replication List  |
|                     | Check Master Data          |                           |                              |                            | D<br>Replication Schema   |
|                     | Customers -<br>Blocked<br> | Vendors -<br>Blocked<br>O | Vendors - Pay<br>on Hold<br> | Resources -<br>Blocked<br> | External replication > 4 <sup>2</sup> Multi-environment Setup     O     O     Gubish to environment >     S     S |

• When the page "Multi-environment Setup" is opened, Multi Entity Management performs an automatic setup.

Please note that the "General" section, is only used, if the Subscriber Company, also acts as a Cross Database Publisher.

| Actions $\lor$ |                              |                       |  |
|----------------|------------------------------|-----------------------|--|
| General        |                              |                       |  |
| Publisher ID   | {c305cd06-69a9-4594-a0eb-fd4 | Publisher Description |  |
|                |                              |                       |  |
|                |                              |                       |  |

• After the page is shown on the screen, the initial setup has been done and the page can safely be closed again.

#### 1.2.3 Setup Web services

• From "Subscribe from environment" open the page "Web Services".



| Dynamics 365 Business | Central                |                      |                          |                        |      |                    |           |   |            |                       |
|-----------------------|------------------------|----------------------|--------------------------|------------------------|------|--------------------|-----------|---|------------|-----------------------|
|                       | LOCAL Publis           | her Master           | Data -> Busines          | ss Rules∨ Setup        | Data | a∨ Posting G       | roups Set | up 🗸 System Setup 🗸 🛛 A                       | ll Reports |                       |
|                       | Actions<br>+ New > G   | eneral > Ch          | ange Setup               | Report Selection       |      | > Multi Entity N   | /lanagem  | ent   |            |                       |
|                       | Monitoring             |                      |                          |                        | _    | . 🚀 Replication Li | st        |   |            |                       |
|                       | Check Master Data      |                      |                          |                        |      | Replication So     | chema     |   |            |                       |
|                       | Customers -<br>Blocked | Vendors -<br>Blocked | Vendors - Pay<br>on Hold | Resources -<br>Blocked |      | External replic    | cation >  | Multi-environment Setup                       | - Changed  | Contacts -<br>Changed |
|                       | 0                      | 0                    | 0                        | 0                      |      | U                  | 0         | $\bigoplus$ Subscribe from environment $\geq$ | Web Se     | rvices                |
|                       | >                      | >                    | >                        | >                      |      |                    | >         | 45 Publish to environment                     |            | >                     |

- Add Codeunit 5397816 "XTEMEMSubscriber Data Service" to the list.
- In the field "Service Name", name the service. (Example: MemSubscriberService)
- Remove the checkmark in the "All tenants" field.
- Set a checkmark in the field "Published".
- Add Codeunit 5397819 "XTEMEM Subscr Mgt Svc Interf" to the list.
- In the field "Service Name", name the service. (Example: MemMangementService)
- Remove the checkmark in the "All tenants" field.
- Set a checkmark in the field "Published".

When publishing the two webservices, an URL is created in field "SOAP URL" for each webservice.

| D | ynamics 3 | 65 Bu         | siness Central  |        |                 |                               |                      |                |           |   | ß                       | م       | Q      | ۲   |
|---|-----------|---------------|-----------------|--------|-----------------|-------------------------------|----------------------|----------------|-----------|---|-------------------------|---------|--------|-----|
|   | ~         | Web           | Services        |        |                 |                               |                      |                |           |   | √ Saved                 |         | d      | ×   |
|   |           | Q             | 🗈 🛛 + New       | 🐼 Edit | : List 📋 Delete | S Reload More options         |                      |                |           |   |                         | Б       | 7      | =   |
|   |           |               | Object Type 🕇 🐨 |        | Object ID 🔻     | Object Name                   | Service Name 1       | All<br>Tenants | Published | OData V4 URL                                | SOAP URL                |         |        |     |
|   |           |               | Codeunit        |        | 5397819         | XTEMEM Subscr Mgt Svc Interf  | MemManagementService |                | 2         | https://go.microsoft.com/fwlink/?linkid=213 | http://mem-tst2-251w1:7 | 047/BC/ | WS/LOG | :AL |
|   |           | $\rightarrow$ | Codeunit        |        | 5397816         | XTEMEMSubscriber Data Service | MemSubscriberService | 0              |           | https://go.microsoft.com/fwlink/?linkid=213 | http://mem-tst2-251w1:7 | 047/BC/ | WS/LOG | :AL |
|   |           |               |                 |        |                 |                               |                      |                |           |   |                         |         |        |     |

• Activate both webservice URL to check that they are working.



## **1.3** Preparing the publisher environment and entity

The next step is preparing the publisher environment with the publishing entities to replicate data to the subscribing environment and entity. After the preparation the Master Data is ready for replication.

## 1.3.1 Initial Setup

• Start Business Central with the Role "Master Data Manager".

| My Settings - LRN |                     | 2 | $\times$ |
|-------------------|---------------------|---|----------|
| Role              | Master Data Manager |   |          |
| Company           | GLOBAL Publisher    |   |          |

#### Go to "About Multi Entity Management" page.

|                        | l È                               | +          | Û           |                             |
|------------------------|-----------------------------------|------------|-------------|-----------------------------|
| About Mu               | ılti Entity Mana                  | ageme      | ent         |                             |
| 🗳 Create Template Setu | p Data 🛛 🗱 Update Permission Sets | License    | Replication | Admin Tools                 |
| Manufacturer           |                                   |            |             |                             |
| Name ·····             | XtensionIT                        | Country -  |             | Denmark                     |
| Street                 | Jernbanegade 1, 2                 | E-mail · · |             | info@xtensionit.com         |
| City                   | 5000 Odense C                     | Homepag    | je ·····    | https://www.xtensionit.com/ |
|                        |                                   |            |             |                             |
| Product Version        |                                   |            |             |                             |
|                        |                                   |            |             |                             |
| App-Version            | 6.10.2.0                          | Replicatio | in status:  | Enabled                     |

- Activate the function: "Create Template Setup Data"
- For Microsoft Dynamics 365 Business Central, version 17 and below.
  - Activate the function: "Update Permissions Sets".

#### 1.3.2 Publishing entity setup

• Go to the "Replication Card" and do the "Publish" setup for the Publishing entity, so the entity is marked as "Publisher" in the Replication List page.



| Gener         | al >       |     |               |           |                    |        |                   |                             |                              |
|---------------|------------|-----|---------------|-----------|--------------------|--------|-------------------|-----------------------------|------------------------------|
| Publish       | 👫 New Lin  | e 🕏 | K Delete Line | ¤⊡ Fields | ය.<br>格 Associated | Tables | 🛃 Subscriber      | Companies                   | ¢ E                          |
|               | Table No.↑ |     | Table Name    |           |                    | N      | o. of Subscribers | No. of Associated<br>Tables | Added as<br>Associa<br>Table |
| $\rightarrow$ | 15         | ÷   | G/L Account   |           |                    |        | 0                 | 0                           |                              |
|               |            |     |               |           |                    |        |                   |                             |                              |
|               |            |     |               |           |                    |        |                   |                             |                              |
| Subsc         | ibe >      |     |               |           |                    |        |                   |                             |                              |
| Conco         | lidata     |     |               |           |                    |        |                   |                             |                              |
| Conso         | iluate /   |     |               |           |                    |        |                   |                             |                              |

## 1.3.3 Multi-environment Setup

• Go to the page "Multi-environment Setup".

| Dynamics 365 Business | Central                |                      |                          |                        |        |                  |          |  |
|-----------------------|------------------------|----------------------|--------------------------|------------------------|--------|------------------|----------|--|
|                       | GLOBAL Publ            | isher Mast           | er Data∨ Busir           | ness Rules 🗸 🛛 Set     | tup Da | ata ~ Posting    | Groups S | Setup∨ System Setup∨   All R               |
|                       | Actions<br>+ New > G   | ieneral > Ch         | ange Setup               | > Report Selection     |        | > Multi Entity N | /anagem  | ent  |
|                       | Monitoring             |                      |                          |                        |        | Companies        | st       |  |
|                       | Check Master Data      |                      |                          |                        | C      | Replication S    | hema     |  |
|                       | Customers -<br>Blocked | Vendors -<br>Blocked | Vendors - Pay<br>on Hold | Resources -<br>Blocked |        | External repli   | ation >  | Multi-environment Setup                    |
|                       | U                      | U                    | U                        | U                      |        | U                | U        | $\bigoplus$ Subscribe from environment $>$ |
|                       | >                      | >                    | >                        | >                      |        |                  | >        | ap Publish to environment                  |

• When the page "Multi-environment Setup" is opened, Multi Entity Management performs an automatic setup.



| Work Date: 1/22/2026  |                              | r +        | 1              | √ Saved          | Д | ď |
|-----------------------|------------------------------|------------|----------------|------------------|---|---|
| Cross Dat             | abase Setup                  |            |                |                  |   |   |
| Actions $\lor$        |                              |            |                |                  |   |   |
| General               |                              |            |                |                  |   |   |
| Publisher ID          | {36250414-fc97-441d-a1ed-fd5 | . Publishe | er Description | GLOBAL Publisher |   |   |
| Repository            |                              |            |                |                  |   |   |
| Repository ID         | {32f70a5d-1ed9-41ce-bf87-378 | . Reposito | ory Version Ti |                  |   |   |
| Last Repository Hashc |                              |            |                |                  |   |   |

• After the page is shown on the screen, the initial setup has been done and the page can safely be closed again.

## 1.3.4 Repository List

• Go to the "Repository List"

| Dynamics 365 Busines | s Central                          |                      |                          |                        |                             |   |                                      |
|----------------------|------------------------------------|----------------------|--------------------------|------------------------|-----------------------------|---|--------------------------------------|
|                      | GLOBAL Publ                        | l <b>isher</b> Mast  | er Data ∨ Busir          | ness Rules 🗸 🦷 Setu    | ip Data -> Posting Groups S | Setup $\vee$ System Setup $\vee$        | All Reports 📔 🚍                      |
|                      | Actions<br>+ New > 0<br>Monitoring | General → Ch         | ange Setup               | > Report Selection     | > Multi Entity Managem      | ent                                     |                                      |
|                      | Check Master Data                  |                      |                          |                        | D<br>Replication Schema     |   |                                      |
|                      | Customers -<br>Blocked             | Vendors -<br>Blocked | Vendors - Pay<br>on Hold | Resources -<br>Blocked | External replication >      | Multi-environment Setup                 | - Changed Contacts -<br>Changed      |
|                      | 0                                  | 0                    | 0                        | 0                      | 0 0                         | $\oplus$ Subscribe from environment $>$ | 0                                    |
|                      | →                                  | →                    | →<br>→                   | →                      | → →                         | a Publish to environment                | <b>≱<sup>#</sup> Entity list</b>     |
|                      |                                    |                      |                          |                        |                             |   | <b>#<sup>#</sup></b> Repository List |

• Create a CODE and Description for the Repository that contains information about the tables and fields from the subscribing environment.

| General       |                            |                   |  |
|---------------|----------------------------|-------------------|--|
| Code          | ENV1-ENT1                  | Hashcode          |  |
| Description   | Environment 1 / Entity 1   | Version Timestamp |  |
| Repository ID | {0000000-0000-0000-0000-00 |                   |  |

## 1.3.5 Publish to entities in other environments

• Go to the "Entity List"



| Dynamics 365 Business Central                    |                           |                               |                             |   |  |                               |
|--|---------------------------|-------------------------------|-----------------------------|---|--|-------------------------------|
| GLOBAL Pub                                       | lisher Mas                | ter Data∨ Busi                | ness Rules∨ Set             | up Data Posting Groups  | Setup -> System Setup ->                                     | All Reports 🛛 🔤               |
| Actions<br>+ New > 0<br>Monitoring               | General > Cl              | nange Setup                   | > Report Selection          | > Multi Entity Managen  | nent   |                               |
| Check Master Data<br>Customers -<br>Blocked<br>> | Vendors -<br>Blocked<br>O | Vendors - Pay<br>on Hold<br>> | Resources -<br>Blocked<br>) | Replication Dat     Replication Schema     External replication >     O     >     > | Subscribe from environment >     &, Publish to environment > | Changed Contacts -<br>Changed |

- Insert "Code", "Description" to identify the Subscribing Entity and Environment
- Insert the "Repository Code" for the Environment where the Entity belong

| $\leftarrow$ | Subscriber Company | List   Work Date: 1/3 | 22/2026            |        |                             | 0 0           | 2        |
|--------------|--------------------|-----------------------|--------------------|--------|-----------------------------|---------------|----------|
|              | Р 🖸 🕂 м            | ew 😨 Edit List        | 🗊 Delete 🛛 🖉 Edit  | ⊙ View | Sectivate Replication       | 18 T          | ≡        |
|              | Code 1             | Description           | Repository<br>Code | Acti   | Subscription Webservice URL | Management We | bservice |
|              | ENT01              | Company 1             | ENV1-ENT1          |        |                             |               |          |
|              |                    |                       |                    |        |                             |               |          |

 Go to the Subscribing Environment and Entity and find the SOAP URL's for "Subscriptions" and "Management"

| Dynami | cs 365   | 5 Busir      | ness C      | entral     |                          |              |                                 |          |                             |        |                       |               |                  |                |            |                      |                                 |         | ß                       | Q             | Q        | ۲        | ?        |
|--------|----------|--------------|-------------|------------|--------------------------|--------------|---------------------------------|----------|-----------------------------|--------|-----------------------|---------------|------------------|----------------|------------|----------------------|---------------------------------|---------|-------------------------|---------------|----------|----------|----------|
| (      | 5        | Subscrib     | ber Co      | mpany Lis  | t   Work Date:           | 1/22/2026    |                                 |          |                             |        |                       |               |                  |                |            |                      |                                 |         |                         | Π             | e,       | »K       |          |
|        |          | , م          | D           | + Nev      | Edit Lis                 | t 🗐 Delete   | 🖉 Edit                          | View     | Sectivate Replication       | 🍗 Dea  | activate Replication  | Transfer Fiel | d Mapping        | 😵 Connectio    | in 🛛 🕵 Cli | ear Target Company k | d More options                  |         |                         | ß             | $\nabla$ | =        |          |
|        |          | Cod          | se↑<br>1T01 |            | Description<br>Company 1 |              | Repository<br>Code<br>ENV1-ENT1 | Acti     | Subscription Webservice URL |        | Management Webservice | URL R         | est Endpoint Url |                | Target     | Company Target Co    | mpany Id<br>00-0000-0000-0000-0 | Deb     | Tenant Id               |               |          | Au<br>Me |          |
|        | € ^<br>← | rbejde)<br>C | ¢۵<br>۵     |            | 😫 Web Senio              | nem-tst2-251 | × +<br>v1/BC/?compa             | ny=LOCA  | L%20Publisher&page=810      | 8dc=08 | &bookmark=38_rCYAA    | CURQAAAAF7    | TQBIAG0ATQBI     | hAG4AYQ8nA     | GUAĐQBIA   | G4AdABTAGUAcgB2/     | (GirAYwBI                       |         | <i>P</i> A <sup>k</sup> | <u>ث</u>      | Φ        | £        | -<br>@ 9 |
| Ľ      | Dyn      | amics        | 365 B       | b Services | Central                  |              |                                 |          |                             |        |                       |               |                  |                |            |                      |                                 |         |                         | Eà<br>√ Saveo | مر<br>1  | ہ<br>ם ۵ | 0<br>1 × |
|        |          |              | Ş           | 0          | + New                    | Edit List    | 🗎 Delete                        | 🖸 Reload | More options                |        |                       |               |                  |                |            | $\sim$               |                                 |         |                         |               |          | 6 1      | 7 ≡      |
|        |          |              |             | Object     | Type † 🐨                 |              | Object ID 🔻                     | Object N | ame                         |        | Service Name †        |               |                  | All<br>Tenants | Published  | OData V4 URL         |                                 | SOA     | IP URL                  |               |          |          |          |
|        |          |              | -           | > Codeu    | init                     | 1            | 5397819                         | XTEMEN   | A Subscr Mgt Svc Interf     |        | MemManagemer          | tService      |                  |                |            | https://go.microso   | ft.com/fwlink/?linkid=2         | 13 http | p://mem-tst             | 2-251w1:      | 7047/B   | c/ws/L   | OCAL     |
|        |          |              |             | Codeu      | init                     |              | 5397816                         | XTEMEN   | ASubscriber Data Service    |        | MemSubscriberS        | rvice         |                  |                |            | https://go.microso   | ft.com/fwlink/?linkid=2         | 13 http | p://mem-tst             | 2-251w1:      | 7047/B   | C/WS/L   | OCAL     |

Copy the values to the "Subscriber Company Line"

| Sub           | scriber Comp | any Lis | t   Work Date: 1/2 | 2/2026   |                    |      |                             |       |                     |            |     |
|---------------|--------------|---------|--------------------|----------|--------------------|------|-----------------------------|-------|---------------------|------------|-----|
| م             |              | + Nev   | v 🚯 Edit List      | 📋 Delete | 🖉 Edit             |      | Sectivate Replication       | 🏷 Dea | ctivate Replication | 🖹 Transfer | Fie |
|               | Code ↑       |         | Description        |          | Repository<br>Code | Acti | Subscription Webservice URL |       | Management Webserv  | rice URL   | F   |
| $\rightarrow$ | ENT01        | ÷       | Company 1          |          | ENV1-ENT1          |      | http://mem-tst2-251w1:      | 7047/ | http://mem-tst2-25  | 51w1:7047/ |     |

• Choose the Authentication Methods



- Basic Authentication/Web Access Key: Insert User/Id and Password/Key. The field "Tenant Id" is left empty, without any value. (See section 1.4 about how to setup authentication)
- Service-to-Service (Client Credentials): Insert **Tenant Id**, User/**Id** and Password/**Key**. (See section 1.4 about how to setup authentication)

| $\leftarrow$ | Subs          | scriber Comp | any Lis | st   Work Date: 1/2 | 2/2026        |               |             |                   |                          |            |          |                    |                |            |                |                | √ Saved | Д | <u>م</u> |  |
|--------------|---------------|--------------|---------|---------------------|---------------|---------------|-------------|-------------------|--------------------------|------------|----------|--------------------|----------------|------------|----------------|----------------|---------|---|----------|--|
|              | Q             |              | + Nev   | w 💀 Edit List       | 📋 Delete      | 🖉 Edit 💿      | View 🍤 Acti | ivate Replication | o Deactivate Replication | 🖪 Transfer | Field Ma | pping 😵 Connection | 🕵 Clear Target | Company Id | Actions $\lor$ | Related $\lor$ |         | Ŀ | ⊽ ≡      |  |
|              | 5             | Bind-to Sub  | scribe  | r 🕴 Release-f       | rom Subscribe | r 🛛 🐻 Get Re  | epository 5 | Reset Token       |                          |            |          |                    |                |            |                |                |         |   | 疗        |  |
|              |               |              |         |                     |               |               |             |                   |                          |            |          |                    | Auth.          |            |                |                |         |   | Timeout  |  |
|              |               | Code 1       |         | Management Webs     | ervice URL    | Rest Endpoint | t Url       | Target Compar     | ny Target Company Id     |            | Deb      | Tenant Id          | Method         | User/Id    | P              | assword/Key    |         |   | (ms)     |  |
|              | $\rightarrow$ | ENT01        |         | http://mem-tst2-    | 251w1:7047/.  |               |             |                   | {0000000-0000-0          |            |          |                    | Web Acces      | LRN        |                | •••••          |         |   | 100000   |  |
|              |               |              |         |                     |               |               |             |                   |                          |            |          |                    |                |            |                |                |         |   |          |  |

• Run the function "Bind-to Subscriber" and get the confirmation box.



• Run the function "Get Repository" and get the confirmation box.



## 1.3.6 Replication Setup

- It is now time to do the Cross Environment 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.



| Subsci        | riber Replication Setup | Work Date: 1/   | 22/2026                                     |          |                           | (  | Ø)  | Ŀ      | +          | iii           |                      |                 |               |           | ~              | Saved 🔲 🖬 🦼        |
|---------------|-------------------------|---|---|----------|---------------------------|--|-----|--------|------------|---------------|----------------------|-----------------|---------------|-----------|----------------|--------------------|
| EN            | T01                     |   |   |          |                           |  |     |        |            |               |                      |                 |               |           |                |                    |
| <b>9</b> A    | Activate Replication    | o Deactivate Re   | eplication                                  | 🖪 Trans  | sfer Field Mapping 🛛 😵 🤇  | onnection  |     |        |            |               |                      |                 |               |           |                |                    |
| Sene          | eral                    |   |   |          |                           |  |     |        |            |               |                      |                 |               |           |                |                    |
| ode           |                         |   |   | ENT01    |                           |  |     |        | Published  | Mapping Ve    | rsion · · · · ·      |                 |               |           |                | 0                  |
| lescri        | iption                  |   |   | Compar   | ny 1                      |  |     |        | Actual M   | pping Versio  | n                    |                 |               |           |                | 1                  |
|               |                         |   |   |          |                           |  |     |        |            |               |                      |                 |               |           |                |                    |
| epe           | ndent on 🗦 🕅 Ne         | ew Line 🛛 🗮 D   | elete Line                                  | 🐓 Initia | al Sending 🛛 🍄 Full Table | Sync 🔹 Filtered Table Sync   | c 🛃 | Update | Field List |               |                      |                 |               |           |                | <i>É</i> 2         |
|               |                         | Table N   | No. 1                                       | т        | able Name                 |  |     |        |            | Template      | Company Name         | t î             |               | Subscribe | Custom Records | Mapping incomplete |
| $\rightarrow$ |                         |   | 15  |          | G/L Account               |  |     |        |            | GLOBAL        | Publisher            |                 |               |           |                |                    |
|               |                         |   |   |          |                           |  |     |        |            |               |                      |                 |               |           |                |                    |
|               |                         |   |   |          |                           |  |     |        |            |               |                      |                 |               |           |                |                    |
|               |                         |   |   |          |                           |  |     |        |            |               |                      |                 |               |           |                |                    |
| ield          | Mapping                 |   |   |          |                           |  |     |        |            |               |                      |                 |               |           |                | é 2                |
|               | From Field No. †        | From  | Field Name                                  |          | To Field No               | . To Field Name  |     |        |            | No<br>Mapping | Use Default<br>Value | Adjust<br>Value | Default Value |           |                | Field Mapping      |
|               |                         |   |   |          |                           | 1 No.  |     |        |            |               |                      |                 |               |           |                | 0                  |
|               | 1                       | 1 No.   |   |          |                           |  |     |        |            |               |                      |                 |               |           |                |                    |
|               | 1                       | 1 No.<br>2 Nam  | ne  |          |                           | 2 Name   |     |        |            |               |                      |                 |               |           |                | 0                  |
|               | 1                       | 1 No.<br>2 Nam<br>3 Sear  | ne<br>rch Name                              |          |                           | 2 Name<br>3 Search Name  |     |        |            |               |                      |                 |               |           |                | 0                  |
|               | 1<br>2<br>3<br>4        | 1 No.<br>2 Nam<br>3 Sear<br>4 Acco  | ne<br>rch Name<br>ount Type                 |          |                           | 2 Name<br>3 Search Name<br>4 Account Type                              |     |        |            |               |                      |                 |               |           |                | 0<br>0<br>0        |
|               | 1<br>2<br>3<br>4<br>6   | No.         No.           2         Nam           3         Sear           4         According           5         Glob | ne<br>rch Name<br>ount Type<br>oal Dimensio | n 1 Code | 8                         | 2 Name<br>3 Search Name<br>4 Account Type<br>6 Global Dimension 1 Code | 2   |        |            |               |                      |                 |               |           |                | 0<br>0<br>0        |

• Use the function "Transfer Field Mapping", to transfer the records to the "Subscriber Company"

|  | 'E: 1/27/2022                       | ) + 🖻                      | √ SAVE           |              |
|--|-------------------------------------|----------------------------|------------------|--------------|
| SUBCOMP                                    | 01                                  |                            |                  |              |
| 🐻 Get Repository 🛛 🖹 Tra                   | insfer Field Mapping 🛛 🖪 Bind       | to Publisher 🏻 🍤 Activ     | ate Subscription |              |
| General                                    |                                     |                            |                  |              |
| Code · · · · · · · · · · · · · · · · · · · | SUBCOMP01                           | Published Mappi            | ng V             | 0            |
| Description                                | Subscriber Company 01               | Actual Mapping             | /ersi            | 1            |
| Active                                     |                                     |                            |                  |              |
| Dependend on<br>Dependend on∨              | The field mapping is so<br>company. | uccessfully transmitted to | the subscriber   | ustom Mappi  |
| Table No. ↑                                |                                     |                            | Re               | acords incom |
| → 15                                       |                                     |                            | ок               |              |
|  |                                     |                            | <b>UN</b>        |              |

• Use the function "Activate Subscription" to automate the replication

| $\leftarrow$ | TEMPLATE SETUP LIST                   |                            |                    |                      |          |                     |                    |                         |                            |
|--------------|---------------------------------------|----------------------------|--------------------|----------------------|----------|---------------------|--------------------|-------------------------|----------------------------|
|              | 🔎 Search Manage 🥻 Edit Template Setup | 🖪 Edit Replication Setup   | Open in Excel      | More op              | otions   |                     |                    |                         | \ ≣                        |
|              | Company Name                          | Replication Schema<br>Name | Business Unit Code | Reporting<br>Company | Consolid | Template<br>Company | Dependi<br>Company | Subscriber<br>available | Data<br>Subscrip<br>active |
|              | CRONUS International Ltd.             | :                          |                    |                      |          |                     |                    |                         |                            |
|              | CRONUS Subscriber Company             | :                          |                    |                      |          |                     |                    |                         |                            |



## **1.4** Authentication methods.

There is different requirement to the authentication's methods used, when replicating data across different version of Business Central Environments/Databases and NAV Databases.

#### 1.4.1 Basic or Service-to-Service Authentication.

When Master Data is replicated between different Environments or Databases there is a requirement for either Basic or Service-2-Service Authentication to validate the communication.

When a Business Central Environment is part of the replication, Service-2-Service Authentication is required. See the table below.

| Publisher                            | Subscriber                      | Authentication     |
|--------------------------------------|---------------------------------|--------------------|
| Business Central (SaaS)              | Business Central (SaaS)         | Service-to-Service |
| Business Central (SaaS)              | Business Central (On premises)  | Service-to-Service |
|                                      | From BC version 18 or later. *) |                    |
| Business Central (SaaS)              | Business Central (On premises)  | Basic              |
|                                      | Up to BC version 17. *)         |                    |
| Business Central (SaaS)              | Microsoft Dynamics NAV          | Basic              |
|                                      |                                 |                    |
| BC On-premises (BC 18.0 or later) *) | Business Central (SaaS)         | Service-to-Service |
| BC On-premises (up to BC 17.0)       | Business Central (SaaS)         | Not possible       |
| BC On-premises                       | Business Central (On premises)  | Basic              |
| BC On-premises                       | Microsoft Dynamics NAV          | Basic              |
|                                      |                                 |                    |
| Microsoft Dynamics NAV               | Business Central (SaaS)         | Not possible       |
| Microsoft Dynamics NAV               | Business Central (On premises)  | Basic              |
| Microsoft Dynamics NAV               | Microsoft Dynamics NAV          | Basic              |

\*) For running the Service-2-Service Authentication on Business Central on-premises versions 18 and 19, these versions must be updated to BC 18.11 and BC 19.5 or newer.

More details can be found with the Microsoft Learn link:

https://learn.microsoft.com/en-us/dynamics365/business-central/devitpro/administration/automation-apis-using-s2s-authentication

#### 1.4.2 Basic Authentication – Initial setup

To enable the Basic Authentication methods, create a User assigned both the "Business Central Password Authentication" and a "Web Service Access Key" in the subscriber environment/database.



| User Ca            | rd              |                               |              |                             |                              |         |
|--------------------|-----------------|-------------------------------|--------------|-----------------------------|------------------------------|---------|
| 😘 ACS Setup        | 🏚 Change Passw  | ord 🛛 🖶 Effective Permissions | 🖃 Send Email | More options                |                              |         |
| General            |                 |                               |              |                             | Shc                          | ow more |
| User Name          |                 | LRN                           |              | Microsoft 365               |                              |         |
| Full Name          |                 |                               |              | Authentication Email        |                              |         |
| License Type 🕠     |                 | Full User                     | ~            | Application ID              |                              |         |
| Status             |                 | Enabled                       | ~            | Authentication Status       | Disabled                     |         |
| Expiry Date        |                 |                               |              | Web Service                 |                              |         |
| Contact Email      |                 |                               |              | Web Service Access Key      | 7Mqxuk/o6NmxRZT/xbweZVDNnU72 |         |
| Windows Au         | thenticat.on>   |                               |              |                             |                              |         |
| Access Contr       | rol Service Aut | • •ntication >                |              |                             | Dis                          | abled   |
| Business Cer       | ntral Password  | Authentication                |              |                             |                              |         |
| Password · · · · · |                 | •••••                         |              | User must change password a |                              |         |
| User Group I       | Memberships >   |                               |              |                             |                              |         |
| User Permiss       | ion Sets >      |                               |              |                             |                              |         |

**Note:** If the Business Central subscriber environment/database is setup with Windows Authentication, there must be created an extra Service Tier, to handle the Webservice access with Business Central Password Authentication.



#### 1.4.3 Service-to-Service Authentication – Initial Setup

If the replication setup requires the service-to-service authentication, there are two steps to do.

- 1) Register an application in your Azure Active Directory tenant for authenticating API call against Business Central
- 2) Grant access for that application in Business Central

#### 1.4.3.1 Register application in Azure Active Directory (ADD)

To register an application in Azure Active Directory, do the following steps

• Open the Azure Portal, https://portal.azure.com



- Go to Azure Active Directory
- Select App registrations and + New registration.

| Home > XtensionIT ApS XtensionIT ApS   App | pregistrations 🖈 …  | × |
|--|---|---|
| Azure Active Directory                     | 🙋 + New registration 🖶 Endpoints 🤌 Troubleshooting 🖒 Refresh 🞍 Download 🖼 Preview features   🖗 Got feedback?  |   |
| Enterprise applications     Devices        | All applications Owned applications Deleted applications  |   |
| App registrations                          | P Start typing a display name or application (client) ID to filter these r <sup>+</sup> <sup>+</sup> <sup>+</sup> <sup>+</sup> <sup>+</sup> <sup>−</sup> <sup>+</sup> |   |

When creating the App registration select the following options



| Home > XtensionIT ApS   App registrations >  |          |
|--|----------|
| Register an application  | $\times$ |
| 5  |          |
| * Name   |          |
| The user-facing display name for this application (this can be changed later).   |          |
| MEM Cross Database Renlication   |          |
| mem cross sources represent  |          |
| Supported account types  |          |
| Who can use this application or access this API?   |          |
| Accounts in this organizational directory only (XtensionIT ApS only - Single tenant)   |          |
| Accounts in any organizational directory (Any Azure AD directory - Multitenant)  |          |
| O Accounts in any organizational directory (Any Azure AD directory - Multitenant) and personal Microsoft accounts (e.g. Skype, Xbox)                 |          |
| O Personal Microsoft accounts only   |          |
| Help me choose   |          |
|  |          |
| Redirect URI (optional)  |          |
| We'll return the authentication response to this URI after successfully authenticating the user. Providing this now is optional and it can be        |          |
| Charge rate, put a value is require to most aumentuation scenarios.  |          |
| Web 3 V https://businesscentral.dynamics.com/OAuthLanding.htm 4 V  |          |
|  |          |
| Register an app you're working on here. Integrate gallery apps and other apps from outside your organization by adding from Enterprise applications. |          |
| By proceeding, your gree to the Microsoft Platform Policies 🖻  |          |
| Register   |          |
|  |          |
|  |          |

- Name: A suitable name
- Supported account type: Accounts in any organizational directory (Any Azure AD directory Multitenant)
- Redirect URI (optional): Web + https://businesscentral.dynamics.com/OAuthLanding.htm
- Register with the **Register** button

The App registration is now created but requires permissions setup.

• Go to API permissions

| Home > XtensionIT ApS   App registrat   | ions > MEM Cross Database Rep<br>se Replication   AP  |                                      | of configured permissions should itatus  |   |                        |
|---|---|--------------------------------------|--|---|------------------------|
|   | 🕐 Refresh 🕴 🖗 Got feed  | lback?                               |  |   |                        |
| <ul> <li>Overview</li> <li>Quickstart</li> <li>Integration assistant</li> <li>Manage</li> </ul> | Configured permissions<br>Applications are authorized to or<br>include all the permissions the a<br>3<br>+ Add a permission ✓ G | call APIs when t<br>application need | ney are granted permissions by users,<br>is, Learn more about permissions and<br>sent for XtensionIT ApS | /admins as part of the consent process. The list of config<br>d consent | red permissions should |
| Branding & properties   | API / Permissions name  | Туре                                 | Description  | Admin consent req Status  |                        |
| Authentication  | ✓ Microsoft Graph (1)   |                                      |  |   |                        |
| 📍 Certificates & secrets  | User.Read   | Delegated                            | Sign in and read user profile  | No  |                        |
| Token configuration   |   |                                      |  |   |                        |
| <ul> <li>API permissions</li> </ul>   | To view and manage permission   | ns and user con:                     | sent, try Enterprise applications.   |   |                        |
| 🙆 Expose an API   |   |                                      |  |   |                        |

• Select + Add a permission to open the Request API permissions page





• Select Dynamics 365 Business Central

| Home > XtensionIT ApS   App registration                                       | e Replicatic  | Request API permissions   | ×   |
|--|---|---|---|
| Search     «      Gverview     Quickstart     Integration assistant Manane     | Configured perr<br>Applications are aut<br>include all the perm | <ul> <li>C All APIs</li> <li>Dynamics 365 Business Central</li> <li>https://dynamics.microsoft.com/business-central/overview/ Docs c*</li> <li>What type of permissions does your application require?</li> <li>Delegated permissions</li> <li>Your application needs to access the API as the signed-in user.</li> </ul> | ssions<br>uns as a background service or daemon without a |
| Branding & properties  | API / Permissions   | Select permissions  | expand all  |
| Certificates & secrets   | User.Read   | Start typing a permission to filter these results     Permission  | Admin consent required                                    |
| Token configuration     API permissions     Expose an API     App roles        | To view and manage  | Other permissions     App_access ①     Access according to the an illcation's permissions in Dynamics 365 Business Ce     API (t)   | ntral Yes   |
| Owners     Roles and administrators     Manifest     Support + Troubleshooting |   | API.ReadWrite.All  Full access to web services API Automation   | Yes   |
| <ul> <li>Troubleshooting</li> <li>New support request</li> </ul>               |   | Automation.ReadWrifz All  Full access to automation Add permissions Discard Discard   | Ves .   |

- Select Application permissions
- Select API.ReadWrite.All
- Register with the Add permissions button
- Then Grant admin consent for your organization



| Home > XtensionIT ApS   App registra | tions > MEM Cross Database Re  | plication                             |  |  |                                       |  |  |
|--------------------------------------|--|---------------------------------------|--|--|---------------------------------------|--|--|
| <sub></sub>                          | se Replication   AP  | l permiss                             | ions 🖈 …   |  | ×                                     |  |  |
| ₽ Search «                           | 🕐 Refresh   🗖 Got feed   | lback?                                |  |  |                                       |  |  |
| 4 Overview                           | A You are editing permission   | n(s) to your applic                   | ation, users will have to consent even if t                                  | hey've already done so previously.                 |                                       |  |  |
| 📣 Quickstart                         |  |                                       |  |  |                                       |  |  |
| 💉 Integration assistant              | Configured permissions   |                                       |  |  |                                       |  |  |
| Manage                               | Applications are authorized to<br>include all the permissions the  | call APIs when th<br>application need | ey are granted permissions by users/<br>s. Learn more abilit permissions and | admins as part of the consent process. The consent | list of configured permissions should |  |  |
| Branding & properties                |  | rant admin.cons                       | ent for VtensionIT Ans   |  |                                       |  |  |
| Authentication                       | with the set of the set |                                       |  |  |                                       |  |  |
| 📍 Certificates & secrets             | API / Permissions name   | Туре                                  | Description  | Admin consent req                                  | Status                                |  |  |
| Token configuration                  | ✓ Dynamics 365 Business Cent   | al                                    |  |  |                                       |  |  |
| API permissions                      | API.ReadWrite.All  | Application                           | Full access to web services API  | Yes  | A Not granted for Xtensio ***         |  |  |
| Δ Expose an ΔPI                      | ✓ Microsoft Graph (1)  |                                       |  |  | •••                                   |  |  |
| App roles                            | User.Read  | Delegated                             | Sign in and read user profile  | No   | ***                                   |  |  |
| A Owners                             |  |                                       |  |  |                                       |  |  |
| 8 Roles and administrators           | To view and manage permission  | ns and user cons                      | ent, try Enterprise applications.  |  |                                       |  |  |

• When the Consent is granted, the Status must be marked with a Green Check

| 💉 Integration assistant  | Configured permissions  |                                     |   |  |                                  | anfigured permissions should  s Granted for XtensionIT •••• |
|--------------------------|---|-------------------------------------|---|--|----------------------------------|---|
| Manage                   | Applications are authorized to c<br>include all the permissions the a | all APIs when th<br>pplication need | ey are granted permissions by users/a<br>ls. Learn more about permissions and | admins as part of the consent process. The li<br>consent | ist of configured permissions sh | nould   |
| Branding & properties    |   |                                     | ant for VenningT And  |  |                                  |   |
| Authentication           | - Add a permission V G  | ant aumin cons                      | ent for Atension i Aps  |  |                                  |   |
| 📍 Certificates & secrets | API / Permissions name  | Туре                                | Description   | Admin consent req  | Status                           |   |
| Token configuration      | ✓ Dynamics 365 Business Centra  | al -                                |   |  |                                  | •••   |
| API permissions          | API.ReadWrite.All   | Application                         | Full access to web services API   | Yes  | Granted for XtensionIT           | •••   |

After the permissions setup we must create the "Client secret".

• Go to Certificates & secrets

| P Search  | ≪ ♀ Got feedback?  |   |  |   |
|---|--|---|--|---|
| Overview     Quickstart     Integration assistant Manage                                | Credentials enable confidenti<br>scheme). For a higher level of<br>Ce tificates (0) Client : | al applications to identify themselv<br>assurance, we recommend using a<br>3<br>secrets (0) Federated credent<br>intine uses to preve its identity with | es to the authentication serv<br>certificate (instead of a clier<br>ials (0) | ice when receiving tokens at a web addressable location (using an HTTP:<br>t secret) as a credential. |
| Branding & properties     Authentication     Certificates & secrets     2               | + New client secret  | ication uses to prove its identity wi   | ien requesting a token. Also   | can de referied to as application passificit.   |
| <ul> <li>Token configuration</li> <li>API permissions</li> <li>Expose an API</li> </ul> | Description<br>No client secrets have been   | Expires created for this application.   | Value 🛈  | Secret ID   |

• Select + New client secret to open the Add a client secret page



| Home > XtensionIT ApS   App registratio | ns > MEM Cross Database Replication<br>e Replication   Certificates & secrets |             | ×                     |        |
|---|---|-------------|-----------------------|--------|
| •                                       |   | Description | MEM CDB key           |        |
| ₽ Search «                              | ₽ Got feedback?   | Expires     | Recommended: 6 months | $\sim$ |
| Overview                                | Credentials enable confidential applications to identify themselves           |             | Recommended: 6 months |        |
| 🍊 Quickstart                            | scheme). For a higher level of assurance, we recommend using a ce             |             | 3 months              | ×      |
| 🚀 Integration assistant                 |   |             | Litent secret         |        |
| Manage                                  | Certificates (0) Client secrets (0) Federated credential:                     |             | 18 months             |        |
| 🔤 Branding & properties                 | A secret string that the application uses to prove its identity when          |             | 24 months             | X      |
| Authentication                          | Now client corret   |             | Custom                |        |
| 📍 Certificates & secrets                |   |             |                       |        |
| Token configuration                     | Description Expires   |             |                       |        |
| -> API permissions                      | No client secrets have been created for this application.                     |             |                       |        |
| Expose an API                           |   |             |                       |        |
| App roles                               |   |             |                       |        |
| A Owners                                |   |             |                       |        |
| & Roles and administrators              |   |             |                       |        |
| 0 Manifest                              |   |             |                       |        |
| Support + Troubleshooting               |   |             |                       |        |
| Troubleshooting                         |   |             |                       |        |
| New support request                     |   |             |                       |        |
|   |   | Add Cancel  |                       |        |

- o Give the Client Secret Key a proper description
- Select the lifetime of the Client Secret Key
- Register with the **Add** button
- Store the Value and Secret ID of the "Client secret" a safe place. It is not possible to restore the value again.

| Home > XtensionIT ApS   App registration   | ons > MEM Cross Database Replication<br>Se Replication   Certificates | & secrets               | x                              |                                      | ×      |
|--|---|-------------------------|--------------------------------|--------------------------------------|--------|
| ₽ Search «   | 🖗 Got feedback?   |                         |                                |                                      |        |
| Overview   |   |                         |                                |                                      |        |
| 📣 Quickstart   | $\bigcirc$ Got a second to give us some feedback? $\rightarrow$       |                         |                                |                                      | ×      |
| 💉 Integration assistant  |   |                         |                                |                                      |        |
| Integration assistant     Credentials enable confidential applications to identify themselves to the authentication service when receiving tokens at a web addressable location (using an HTT     scheme). For a higher level of assurance, we recommend using a certificate (instead of a client secret) as a credential. |   |                         |                                | ang an HTTPS                         |        |
| Branding & properties  |   |                         |                                | / /                                  |        |
| Authentication   | earch   |                         |                                |                                      |        |
| Certificates & secrets   | A secret string that the application uses to pro                      | ove its identity when r | equesting a token. Also can be | referred to as application password. |        |
| Token configuration  |   |                         |                                |                                      |        |
| <ul> <li>API permissions</li> </ul>  | + New client secret   |                         |                                |                                      |        |
| Expose an API  | Description   | Expires                 | Value 🛈                        | Secret ID                            |        |
| K App roles  | MEM CDB key   | 9/26/2024               | mTJ                            | WQ6 🗅 ac4 b                          | 4e 🗈 📋 |

#### 1.4.3.2 Grant access in Business Central

The Business Central Environment that receives/subscribe data from a publisher Environment / Database must be setup to receive data and grant access.

• Go to Multi Entity Management > Cross Database > Cross Database Setup



| Home > XtensionIT ApS   App registrations    | ; >  |
|--|--|
| MEM Cross Database                           | Replication 🖈 …  |
| ✓ Search «                                   | Delete   |
| - Overview                                   | Got a second? We would love your feedback on Microsoft identity platform (prev |
| 🗳 Quickstart                                 |  |
| 💉 Integration assistant                      | ∧ Essentials   |
| Manage                                       | Display name : <u>MEM Cross Database Replication</u>                           |
| Branding & properties                        | Application (client) ID : bcae9335-3040-4a2b-a4ee-fb303                        |
| Authentication                               | Object ID : 8582cd4f-20f1-45e2-87e6-28ebe                                      |
| 📍 Certificates & secrets                     | Directory (tenant) ID : dd/1932c-e885-4b61-aa3b-8c392                          |
| Token configuration                          |  |
|  |  |
| $\leftarrow$                                 | (2) 12 + 11 ✓ Saved □ 12 2   |
| Cross Database S                             | etun   |
|  | etup   |
| treate AAD App.                              |  |
| General >                                    |  |
|  |  |
| Repository >                                 |  |
| API  |  |
| API Client Id · · · · · · { {bcae9335-3040-4 | a2b-a4ee-fb302 API User  |
| API Application                              |  |

- Insert the Application (client) ID into the API Client Id field in the API section at the Cross Database Setup page.
- Go to the Azure Active Directory Applications page and create a new application with +New



| <u></u> | Azure Active Directory Application Card |                                 |            | ß | +         | <b>İ</b>            | √ Saved                                 | d | , <sup>4</sup> |
|---------|---|---------------------------------|------------|---|-----------|---------------------|---|---|----------------|
|         | MEM CDB Replication                     |                                 | $\bigcirc$ |   |           |                     |   |   |                |
|         | 🖋 Grant Consent                         |                                 |            | / |           |                     |   |   |                |
|         | General                                 |                                 |            |   |           |                     |   | _ |                |
|         | Client ID (bcae93                       | 35-3040-4a2b-a4ee-fb303d9d0721} |            |   | Extension | ı                   |   |   |                |
|         | Description MEM C                       | DB Replication                  |            |   | App ID    |                     | {0000000-0000-0000-00000000000000000000 |   | •              |
|         | State Disable                           | d                               |            | ~ | App Nam   | e · · · · · · · · · |   |   |                |
|         | Contact Information                     |                                 |            |   | User info | rmation             |   |   |                |
|         |   |                                 |            |   | User ID   |                     | {b0d6434a-01a9-4257-85fb-0d72e6af0ca6}  |   |                |
|         |   |                                 |            |   | User Nam  | ie · · · · · · ·    | MEM CDB REPLICATION                     |   |                |
|         |   |                                 |            |   |           |                     |   |   |                |
|         | User Groups >                           |                                 |            |   |           |                     |   |   | _              |
|         |   |                                 |            |   |           |                     |   |   |                |

• Insert the Application (client) ID into the Client ID at the Azure Active Directory Application Card



| Code 1     Name     Code 1   Name    Code 1   Name    D365 ADMINISTRATOR   Code 1   D365 Basic ISV   D365 Basic ISV   D365 Basic ISV   D365 Premium Business Access   D365 Premium Business Access   D365 Pull ACCESs   Dynamics 365 Full access     Diase Full Access     Diase Full Access     Dynamics 365 Full access <th></th> <th>MEM_CrossDat</th> <th>کر abase_Subscriber</th> <th>р ф</th> <th>۲</th> <th></th> |   |                                | MEM_CrossDat   | کر abase_Subscriber     | р ф                         | ۲                    |               |                |                |                  |        |      |                |  |
|--|---|--------------------------------|----------------|-------------------------|-----------------------------|----------------------|---------------|----------------|----------------|------------------|--------|------|----------------|--|
| $\leftarrow$   | Azure Ac                                | tive Directory Application Car | rd             |                         |                             | $\bigcirc$           | ¢ +           | Û              |                |                  | √ Save | ed 🗖 | , <sup>L</sup> |  |
|  | MEN                                     | 1 CDB Replicat                 | ion            |                         |                             | $\bigcirc$           |               |                |                |                  |        |      |                |  |
|  | 🗚 Grant                                 | Consent                        |                |                         |                             |                      |               |                |                |                  |        |      |                |  |
|  | Genera                                  | al >                           |                |                         |                             |                      |               |                |                |                  |        |      |                |  |
|  | User Gr                                 | oups Manage                    |                |                         |                             |                      |               |                |                |                  |        | ß    | 3              |  |
|  |   | Code 1                         |                |                         | Name                        |                      |               |                |                | Company Name †   |        |      |                |  |
|  | Code 1<br>→ D365 ADMINISTRATOR          |                                |                |                         | Create and set up companies |                      |               |                |                | CRONUS UK Ltd.   |        |      |                |  |
|  | → D365 ADMINISTRATOR<br>D365 AUTOMATION |                                |                | Dynamics 365 Automation |                             |                      |               |                | CRONUS UK Ltd. |                  |        |      |                |  |
|  |   | D365 BASIC ISV                 |                |                         | D365 Basic ISV Access       |                      |               | CRONUS UK Ltd. |                |                  |        |      |                |  |
|  |   | D365 BUS PREMIUM               |                |                         | D365 Premium E              | Business Acces       | s             |                |                | CRONUS UK Ltd.   |        |      |                |  |
|  |   | D365 EXTENSION MGT             |                |                         | Dynamics 365 E              | Extension management |               |                | CRONUS UK Ltd. |                  |        |      |                |  |
|  |   | D365 FULL ACCESS               |                |                         | Dynamics 365 Fu             | ull access           |               |                |                | CRONUS UK Ltd.   |        |      |                |  |
| ,  |   |                                |                |                         |                             |                      |               |                |                |                  |        |      |                |  |
|  |   |                                |                |                         |                             |                      |               |                |                |                  |        |      |                |  |
|  | User Pe                                 | rmission Sets Mana             | ige            |                         |                             |                      |               |                |                |                  |        | ¢ I  | 2              |  |
|  | Pe                                      | ermission Set ↑                | Description    |                         | Company ↑                   |                      | Extension Nam | e              |                | Permission Scope |        |      |                |  |
|  | х                                       | Grant Consent                  | MEM User       |                         |                             |                      | Multi Entity  | Management by  | XtensionIT     | System           |        |      |                |  |
|  | x                                       |                                | MEM Basic      |                         |                             |                      | Multi Entity  | Management by  | XtensionIT     | System           |        |      |                |  |
|  | x                                       |                                | MEM Data Manag | er                      |                             |                      | Multi Entity  | Management by  | XtensionIT     | System           |        |      |                |  |
|  |   |                                |                |                         |                             |                      |               |                |                |                  |        |      | *              |  |

• Insert the User Groups and User Permissions Sets

| User Groups        | Jser Permissions Sets |  |  |  |  |
|--------------------|-----------------------|--|--|--|--|
|                    |                       |  |  |  |  |
| D365 ADMINISTRATOR | XTEMEM BASE           |  |  |  |  |
| D365 AUTOMATION    | XTEMEM BASIC          |  |  |  |  |
| D365 BASIC ISV     | XTEMEM MDSETUP        |  |  |  |  |
| D365 BUS PREMIUM   |                       |  |  |  |  |
| D365 EXTENSION MGT |                       |  |  |  |  |
| D365 FULL ACCESS   |                       |  |  |  |  |



## **1.5** Notes on Cross Database replication

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

| $\leftarrow$ | TEMPLATE SETUP LIST                |                               |                    |                      |          |                     |                    |                         |                            |
|--------------|------------------------------------|-------------------------------|--------------------|----------------------|----------|---------------------|--------------------|-------------------------|----------------------------|
|              | 🔎 Search Manage 📑 Edit Template Se | etup 🚺 Edit Replication Setup | Open in Excel      | More op              | ∑ ≣      |                     |                    |                         |                            |
|              | Company Name                       | Replication Schema<br>Name    | Business Unit Code | Reporting<br>Company | Consolid | Template<br>Company | Dependi<br>Company | Subscriber<br>available | Data<br>Subscrip<br>active |
|              | CRONUS International Ltd.          | ÷                             |                    |                      |          |                     |                    |                         |                            |
|              | CRONUS Subscriber Company          | :                             |                    |                      |          |                     |                    |                         |                            |

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

## **1.6 Troubleshooting**

#### 1.6.1 Publisher is "C/SIDE" based and the Subscriber is AL based.

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');

#### 1.6.2 Both Publisher and Subscriber are OnPrem databases.

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

#### 1.6.3 The Subscriber Database is setup with "Windows Authentication".

- Setup one Service Tier to handle all users with Windows Authentication.
- Setup another Service Tier to handle the Webservice access with NavUserPassword.



## 1.6.4 SOAP Exception Business Central 16

- The Cross Database Replication suddenly stop working.
  - o 2 example of error messages



• Solution: Restart of the instance.

## 1.6.5 SOAP URL containing "default" more than once.

- The automatic created SOAP URL contains "default" more than once
  - Example of incorrect url

http://<environment\_name><mark>-default</mark>:7047/BC/WS/DE Subscriber Master/Codeunit/MemSubDataService?tenant=<mark><environment\_name>-</mark>default

• Solution change the above url to

http://<environment\_name>:7047/BC/WS/DE Subscriber Master/Codeunit/MemSubDataService?tenant=default