REPLICATOR

Replication templates are similar to base templates but have a series of limitations:

- The template lines have only one level or indentation and cannot be related to each other; therefore, they do not form a complete entity.
- They cannot transform data; they only send or export information.
- They consist of a collection of simple entities where only fields and selection filters can be configured.
- They lack a user interface such as the Selector or Launcher.
- The replication template code cannot match any user template code, and vice versa.
- They allow both manual execution and execution through the job queue, with destination and scheduling information (days of the week) for automatic processes.
- They support three data transfer types to optimize mass data transfer (by record, table, or all in one package), and this setting applies to ALL template lines.
- The allowed operations are 'Insert-Modify,' 'Incremental Insert,' 'Only Insert,' and 'Only Modify.' They are especially useful for unattended, periodic data transfers (for creating and maintaining periodic master data).

ACCESS

You can access the list of replicator templates via Actions -> Templates -> Replicators or in the Replicator cue.



CREATING A REPLICATOR TEMPLATE

While in the **Replication Templates** list, select the **New** or **Edit** action.

OE Templates Replicator List					
@ ∽ ,	🖉 🐺 Edit List 🍵 Delete 🖉 Ed	it 💿 View 🥛 Export Data	Save File More options		
Code	Description	Submissions	Execute at Table Trigger Target	Order † Enabled	Folder
→ <u>ONLYATEST</u>	: TEST	By Table		0 🗹	REPLICATION

The template card consists of three sections:

GENERAL SECTION

Here, you fill in the global data for the template:

- 'Code': Main code or key of the template. Replicator and user template codes must be unique.
- **'Description':** An explanatory description of the template's purpose or any relevant text the user finds suitable.
- 'Operation': Template operations include 'Insert-Modify,' 'Incremental Insert,' 'Only Insert,' and 'Only Modify.' If lines exist, changing this field's value will prompt you to apply the new value to all detail lines.

IMPORTANT: The operation performed by the replicator depends on the submission type. For **Table** and **Record** submissions, the operations are based on each line. In the **All in One** package, the operation used is the one in the **Operation** field of the header or General Section.

- **'Table Trigger':** The default value for template lines. If lines are configured, you will be asked if you wish to change their values. Its function (in the lines) is to execute the standard Business Central code behind Insert and Modify processes (line operation field).
- 'Submissions': Packages the data to send by Record, Table, or All in One. The manager must determine the most system-efficient option based on the configured data selection. For the same table, one method may be preferable over another depending, for example, on which fields are sent (if sending images, sending by record might be more optimal than by table).
- 'Allow Job Queue Process': Enables a job queue process to execute the template.

- **'Execute at Target':** Attempts to execute or import data at the destination.
- 'Enabled': Activates or deactivates the template.
- 'Folder': You can create a new folder or use an existing one for organizational purposes.

LINES SECTION

- 'Target Table ID': The table number.
- 'Target Table Name': This field is auto-filled when a value is entered in the previous field and is not editable.
- 'Operation': The replication template operations include Insert-Modify, Incremental Insert, Only Insert, and Only Modify:
 - 'Insert-Modify': Inserts or modifies received data.
 - o **'Incremental-Insert':** Inserts a record whose primary key ends with an integer, reads the last record, and increments the numeric field to avoid collisions.
 - o **'Only Insert':** Only inserts new records at the destination, returning an error if the record already exists.
 - **'Only Modify':** Only modifies existing records at the destination, returning an error if the record doesn't exist.
- **'Table Trigger':** Only operates when data is received, triggering the events associated with table inserts and modifications. Another trigger is available in the **'Validate'** field in the column for field configuration.
- 'Key': The sorting key for data selection. If left blank, it will default to the primary key. Use Use Key in the Lines action bar to select a key, or Clear Key to remove the current key. Choosing the key that best matches your configured reading filters is recommended.
- 'Fields': Indicates the number of fields and provides access to configure them. For a replication template, only Order, Validate, and Enabled fields are available for editing. The configuration page actions are identical to those in base templates.
- 'Filters': Shows the number of filters configured and allows access to edit them. The configuration page actions are also identical to those of base templates.
- 'Enabled': Enables or disables line processing.

OE Template Replicator 🖉 🖻 + 🖻 ONLYATEST								
🛢 Export Data 🛛 🗋 Sav	ve File	🚟 Get and Enable All Fields 📑	× Delete Obsolete Fields	More	e options			
General								
Code · · · · · · · · · · · · · · · · · · ·		ONLYATEST			Allow Job Queue Process	D		
Description · · · · · · ·		TEST			Execute at Target · · · · · · · · · · · · · · · ·	D		
Operation		Insert-Modify		~	Enabled · · · · · · · · · · · · · · · · · · ·	D		
Table Trigger					Folder	PLICATION		~
Submissions		By Table By Record		~				
Lines 	X [All in One	ar Key	By Table				ල් සි
Target Table ID		Target Table Name	Operation	Table Trigger	Кеу	Fields	Filters	Enabled
→ 18	÷	Customer	Only Insert			171	1	
7002		Sales Price	Insert-Modify			16	0	
7004		Sales Line Discount	Insert-Modify			11	0	
23		Vendor	Only Insert			146	0	
14		Location	Insert-Modify			57	0	
27		ltem	Insert-Modify			211	0	
7012		Purchase Price	Insert-Modify			9	0	
7014		Purchase Line Discount	Insert-Modify			9	0	

TARGETS (JOB QUEUE)

In this section, we define the replication targets and the days of the week for execution. Enter the **Tenant** code, **Company** name, select the desired days, and activate the **Enabled** field for the line to ensure it is selected by the process.

Tar	ge	ts (Job Queue) 📑	[®] New L	ine 🛛 🔁 Delete Line	ß								6 6
		Tenant Code 🕇 🛛 🗸		Company Name 🕇 🛛 🖡		Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Enabled 🔶
		SANDBOXDEV		CRONUS ES		<		~		~			
-	>	SANDBOXDEV2	:	My Company			~		~				✓

For the template to be operational in the Job Queue, the 'Allow Job Queue Process' field in the header must be enabled; otherwise, no automatic process will execute the template to export data to its targets.

The periodic execution of the replication template is driven by a scheduled task created during the installation of the Open Entity application. This Job's configuration determines how many times the replication templates will be processed for export on the configured days of the week for each template.

For more information on the job queue, you can refer to the official Microsoft Business Central 365 documentation and help pages.

Job Queue Ent	ries																
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Status	I	User ID	Object Type to Run	Object ID to Run	Object Caption to Run		Description				Job Queue Category Code	Priority	User Session Started	Earliest Start Date/Time	Sche	Recur Job	No. of Minutes between Runs
\rightarrow <u>Ready</u>	100	TOLO.S	Codeunit	72139596	NOW Export Replicatio	on (Job)	OE-Export	Automated	Replication Templates	s (Job).				13/08/2024 0:00			1440
Ready		TOLO.S	Codeunit	72139591	NOW Delete-Clear Enti	ities	OE-Delete	or Clear Ou	t the Entries of I/O fol	lders.		0		13/08/2024 0:00	1	V	1440
Ready		TOLO.S	Codeunit	72139586	NOW Entity Programm	ned (Job)	OE-Process	s Entities Qu	eued(Programmed).			0		13/08/2024 0:00	1		1440
Ready		TOLO.S	Codeunit	72139588	NOW AutoRenew Web	hooks	OE-Auto R	enew Webh	ooks Subscribed			0		13/08/2024 0:00	~	V	1440
Ready		TOLO.S	Codeunit	72139595	NOW Template Group	(Job)	OE-Run Au	itomated Te	mplate Groups (Job).			0		13/08/2024 0:00	~		1440

MANUAL EXPORT

By clicking on the 'Export Data' action, you will be prompted to select the Tenant and Company as the destination, and you will need to confirm your selection.



The action will run in 'Normal' mode, and you'll need to wait for it to complete. Once finished, you will be notified at the top of the page.

OE Template Replicator	Ø	Ŕ	+	1 III
ONLYATEST				
Notifications: 6 The action was executed correctly! The action was executed correctly! The action was executed	correctly!	The actior	n was exec	uted correctly! The action was executed correctly!

You can check the export results in the application's **Outbox** (or the **Inbox** at the destination).

In this case, errors occurred when attempting to replicate **Customer** and **Vendor** data using the **'Only Insert'** operation because the records already existed. However, the process continued, and the remaining data was successfully replicated using the **'Insert-Modify'** operation.

OE Entity Export	ts List																			ן אר גער
Ø⊳ , ⊘	D	+ + 1	New Manag	e 🛛 🔒 Save Fi	le 🗎 De	elete All 🛛 🔀 Clear	r All (Entity field)	🔳 Card	🖪 Grid 📲	Archive 🚺 Ma	nual Export	🕄 Refresh 🛛 🔝 Take	to Garage.	🗟 View B	Exports	🛕 Viev	v Others		¢ 7	'≣
Source Template		Targ Tem	Date	Time	Action	Operation	Run Type	Sen User	Sender Company	Target Company	Perspective	Tenant Code Source	Tenant Code Target	Use- Cre Equi	Table Trig	Run	Pro	Success	Err	rors
ONLYATEST			12/08/2024	3: 1 4:31	Export	Insert-Modify	Normal	TOLO	CRONUS ES	CRONUS ES	Source	NOMADSERVICES	SANDBOX.	🗆			~	5		0
<u>ONLYATEST</u>	÷		12/08/2024	3:14:30	Export	Only Insert	Normal	TOLO	CRONUS ES	CRONUS ES	Source	NOMADSERVICES	SANDBOX.	🗆				1		<u>5</u>
ONLYATEST			12/08/2024	3:14:32	Export	Only Insert	Normal	TOLO	CRONUS ES	CRONUS ES	Source	NOMADSERVICES	SANDBOX.	🗆		V	~	1		6
ONLYATEST			12/08/2024	3:14:40	Export	Insert-Modify	Normal	TOLO	CRONUS ES	CRONUS ES	Source	NOMADSERVICES	SANDBOX.	🗆		V	V	81		0
ONLYATEST			12/08/2024	3:14:31	Export	Insert-Modify	Normal	TOLO	CRONUS ES	CRONUS ES	Source	NOMADSERVICES	SANDBOX.	🗆		V	~	9		0
ONLYATEST			12/08/2024	3:14:33	Export	Insert-Modify	Normal	TOLO	CRONUS ES	CRONUS ES	Source	NOMADSERVICES	SANDBOX.	🗆		V	V	9		0
4																				F
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Record ID						Action	Suc	cess	Error Code	+			Erro	or Descriptio	on					
Customer: 100	00					Insert			DB:Record	dExists			Erro	or code: 8	5132273					
Customer: 200	00				÷	Insert			DB:Record	dExists			Erro	or code: 8	5132273					
Customer: 300	00					Insert			DB:Record	fÉxists			Erre	or code: 8	5132273					
Customer: 400	00					Insert			DB:Record	dExists			Erre	or code: 8	5132273					
Customer: 500	00					Insert			DB:Record	dExists			Erre	or code: 8	5132273					
NOW Log Ope	erations	<u>s: {DB6A</u>	BC10-84B9-45	FC-B464-345	÷	Modify														

REMAINING ACTIONS

The remaining actions in the replication template card work similarly to those in user templates:

- 'Get and Enable All Fields' will insert all fields from all Table lines.
- 'Delete Obsolete Fields' will delete any obsolete or non-existent fields.

Additionally, for the 'Save-File' action, ALL DATA PROCESSED IN THE TEMPLATE is saved (regardless of the Submissions field value) and is stored in the numeric format of the tables and fields.

ONLYATEST12_08_24 32827.xml ⊠	
1 xml version="1.0" encoding="UTF-8" standalone="no"?	
2	
3 🕀 <table:t18 xmlns:table="Customer"></table:t18>	
177 🕀 <table:t18 xmlns:table="Customer"></table:t18>	
351 🕀 <table:t18 xmlns:table="Customer"></table:t18>	
525 🕀 <table:t18 xmlns:table="Customer"></table:t18>	
699 🖶 <table:t18 xmlns:table="Customer"></table:t18>	
873 🖶 <table:t7002 xmlns:table="Sales Price"></table:t7002>	
891 🕀 <table:t7002 xmlns:table="Sales Price"></table:t7002>	
909 🖶 <table:t7002 xmlns:table="Sales Price"></table:t7002>	
927 🖶 <table:t7002 xmlns:table="Sales Price"></table:t7002>	
945 🕀 <table:t7004 xmlns:table="Sales Line Discount"></table:t7004>	
958 🕀 <table:t7004 xmlns:table="Sales Line Discount"></table:t7004>	
971 🕀 <table:t7004 xmlns:table="Sales Line Discount"></table:t7004>	
984 🕀 <table:t7004 xmlns:table="Sales Line Discount"></table:t7004>	
997 🕀 <table:t7004 xmlns:table="Sales Line Discount"></table:t7004>	
1010 🕀 <table:t7004 xmlns:table="Sales Line Discount"></table:t7004>	
1023 🕀 <table:t7004 xmlns:table="Sales Line Discount"></table:t7004>	
1036 🕀 <table:t7004 xmlns:table="Sales Line Discount"></table:t7004>	
1049 🕀 <table:t23 xmlns:table="Vendor"></table:t23>	
1198 🕀 <table:t23 xmlns:table="Vendor"></table:t23>	
1347 🕀 <table:t23 xmlns:table="Vendor"></table:t23>	
1496 🕀 <table:t23 xmlns:table="Vendor"></table:t23>	
1645 🕀 <table:t23 xmlns:table="Vendor"></table:t23>	
1794 🕀 <table:t23 xmlns:table="Vendor"></table:t23>	
1943 🕀 <table:t14 xmlns:table="Location"></table:t14>	
2002 🕀 <table:t14 xmlns:table="Location"></table:t14>	
2061 🕀 <table:t14 xmlns:table="Location"></table:t14>	
2120 🕀 <table:t14 xmlns:table="Location"></table:t14>	
2179 🕀 <table:t14 xmlns:table="Location"></table:t14>	
2238 🕀 <table:t14 xmlns:table="Location"></table:t14>	
2297 🕀 <table:t14 xmlns:table="Location"></table:t14>	
2356 🖶 <table:t14 xmlns:table="Location"></table:t14>	
2415 📮 <table:t27 xmlns:table="Item"></table:t27>	
2416 <f1>1896-S</f1>	
2417 <f2></f2>	
2418 <f3>Escritorio ATENAS</f3>	
2419 <f4>ESCRITORIO ATENAS</f4>	
2420 <f5></f5>	
2421 <f6>false</f6>	
2422 <f8>UDS</f8>	
2423 <f9>0</f9>	
2424 <f10>Inventory</f10>	
2425 <f11>MERCADERÍA</f11>	
2426 <f12></f12>	
2427 <f14></f14>	
2428 <f15>true</f15>	

ONLY	ATEST12_08_24 32827.xml 🗵
1	xml version="1.0" encoding="UTF-8" standalone="no"?
2 [<root></root>
	<table:t18 xmlns:table="Customer"></table:t18>
177 [<table:t18 xmlns:table="Customer"></table:t18>
351	<table:t18 xmlns:table="Customer"></table:t18>
525 [<table:t18 xmlns:table="Customer"></table:t18>
699 [<table:t18 xmlns:table="Customer"></table:t18>
700	<f1>50000</f1>
701	<f2>Relecloud</f2>
702	<f3>RELECLOUD</f3>
703	<f4></f4>
704	<f5>Occam Court, 1</f5>
705	<f6>Surrey</f6>
706	<f7>Boadilla del Monte</f7>
707	<f8>Diego Echevarria</f8>
708	<f9></f9>
709	<f10></f10>
710	<f11></f11>
711	<f12></f12>
712	<f14></f14>
713	<f15>INTL</f15>
714	<f16></f16>
715	<f17>MEDIO</f17>
716	<f18></f18>
717	<f19>0</f19>
718	<f20>5</f20>