

# Number Sequence

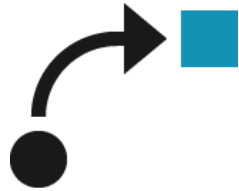
Dynamics 365 FastTrack  
Architecture Insights Series

Edison Lai



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# Agenda



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1. **What is Number Sequence**
  2. **Performance**
  3. **Maintenance and Monitoring**
  4. **Summary**



# Introduction

Organization administration > Number sequences > Number sequence

provide unique, user-friendly identifiers while maintaining a continuous or noncontinuous alphanumeric sequence.

Number sequence setup included:

- Scope
- Number Sequence Format
- Number Sequence References
- Setup
- Performance

[Number sequences](#) | [My view](#) 

Inve\_162 : Inve\_162

## Identification

## Scope parameters


Scope

Company

Company

[USMF](#)

## Segments

 Add  Remove  Move up  Move down

	Segment	Value	Length
	Alphanumeric		0
	Alphanumeric	#####	9

Format

#####

## References

### General

#### SETUP

In use

☒ Yes

Manual

☐ No

Stopped

☐ No

Continuous

☐ No

#### ALLOW USER CHANGES

To a lower number

☐ No

To a higher number

☐ No

#### NUMBER ALLOCATION

Smallest

Largest

Next

1

999999999

6119226

## Performance



Preallocation - You should increase the preallocation quantity according to your regulatory requirement for better performance.

The functionality preallocate numbers in NumberSequenceList for continuous number sequences and in memory of the computer for non-continuous sequences.

You can use the Preallocation functionality for continuous and non-continuous number sequences. You must specify how many numbers to preallocate.

# Performance

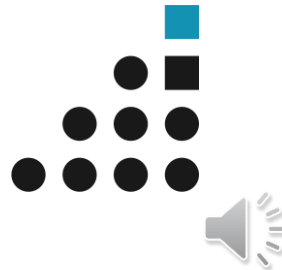
Organization administration > Number sequences > Number sequence

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- Most often the number sequence performance cause by incorrect setup
- Below statement is shown there are performance issue

```
SELECT TOP 1 A.NUMBERSEQUENCE, A.TXT, A.LATESTCLEANDATETIME, A.LATESTCLEANDATETIMETZID, A.LOWEST,  
A.HIGHEST, A.NEXTREC, A.BLOCKED, A.FORMAT, A.CONTINUOUS, A.CYCLIC, A.CLEANACCESS, A.INUSE, A.NOINCREMENT,  
A.CLEANINTERVAL, A.DEL_LATESTCLEANDATE, A.DEL_LATESTCLEANTIME, A.ALLOWCHANGEUP, A.ALLOWCHANGEDOWN,  
A.MANUAL, A.FETCHAHEADQTY, A.FETCHAHEAD, A.MODIFIEDTRANSACTIONID, A.RECVERSION, A.RECID  
FROM NUMBERSEQUENCETABLE A WITH ( UPDLOCK) WHERE ((DATAAREAID=@P1) AND (NUMBERSEQUENCE=@P2)) )
```

- **Continuous** and **non-continuous** number sequences



# Performance - What is Preallocation

Organization administration > Number sequences > Number sequence

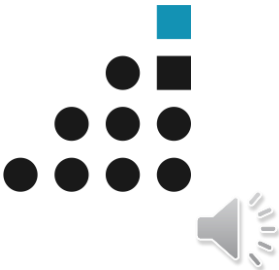
- What is Preallocation?
- Pre-allocation can't too less or too large
  - Wrong configuration:
    - Gain less performance improvement
    - Number sequence use very fast
  - Recommendation:
    - Suggest start from 25.
- Here is the sample of matrix (*You need find your own*)

A preallocation quantity value less than the recommended value of 5 may create performance issues with the system. Do you want to proceed?

Yes

No

Number sequence usage by 10 minutes	Quantity of numbers
< 1,000	100
1,000 – 40,000	500
>40,000	1000+



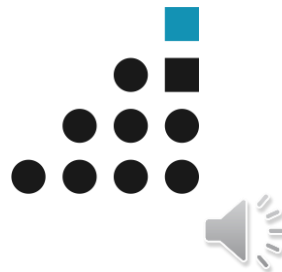
# Maintenance and Monitor

Organization administration > Number sequences > Number sequence

- Maintenance is important in Number Sequence.

Partition	DataAreaID	Text	Number Sequence	Annotated Format	Total Numbers Consumed	Remaining Numbers	Preallocation	Quantity of numbers
5637144576	alux	Inventory log	alux6	-1 LITFA -2 #####	1729032499	418451146	1	1250
5637144576	alux	LITFB	alux7	-1 LITFB -2 #####	1724787500	422696146	1	1250
5637144576	alux	Item_22	Item_22	0 SEUX -1 T -2 #####	1367648346	779835300	1	400
5637144576	alux	Printable Id	alux5	-1 PUPM -2 #####	1248851600	898632046	1	400
5637144576	alux	Item_2	Item_2	-1 BLUX -2 #####	1151215800	996267846	1	200
5637144576	alux	LITFC	alux8	-1 LITFC -2 #####	1108445000	1039038646	1	1250
5637144576	alux	Item_8	Item_8	-1 BLUX -2 #####	1000307100	1147176546	1	600
5637144576	alux	Item_10	Item_10	0 SEUX -1 -2 #####	948237533	1199238114	1	1250
5637144576	alux	Item_3	Item_3	0 SEUX -1 -2 #####	813295600	186704398	1	200
5637144576	alux	Item_14	Item_14	-1 BLUX -2 #####	414230800	1733252846	1	200
5637144576	alux	Item_20	Item_20	-1 BLUX -2 #####	412391800	1735091846	1	200
5637144576	alux	Item_5	Item_5	-1 BLUX -2 #####	23951140	2123532506	1	10
5637144576	alux	Inventory journal voucher numbers	Item_1	0 SEUX -1 -2 #####	19880760	980119238	1	20
5637144576	alux	Item_18	Item_18	0 SEUX -1 -2 #####	17225350	982774648	1	50
5637144576	alux	Item_01	Item_01	-1 BLUX -2 #####	15197589	2132286057	1	100
5637144576	alux	Item_30	Item_30	0 SEUX -1 -2 #####	14786519	985213479	1	100
5637144576	alux	Item_61	Item_61	0 SEUX -1 -2 #####	14718820	2122764826	1	50

- Number sequence should be part in the overall system maintenance plan
  - Check the number sequence in UI manually, Weekly or bi-weekly
  - Develop a report or batch job to retrieved and present the data regularly

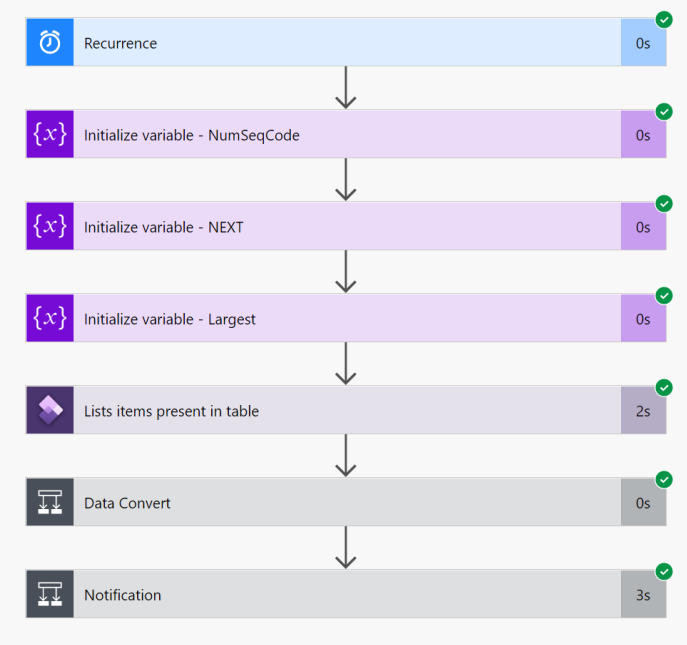


# Maintenance and Monitor

Organization administration > Number sequences > Number sequence

Integrated with Power automate

- Red alert if usage reach threshold
- Summary of Number sequence usage



[EXTERNAL] [NS Alert] Contoso Number Sequence Summary Report

SA Solutions Architect <sa@axsolutionsarchitecture.onmicrosoft.com>  
To Edison Lai

This sender sa@axsolutionsarchitecture.onmicrosoft.com is from outside your organization.  
If there are problems with how this message is displayed, click here to view it in a web browser.

Mon 11/7/2022 00:21

Hi there,

Please find the summary report of Number Sequence. Please DO NOT reply this mail.

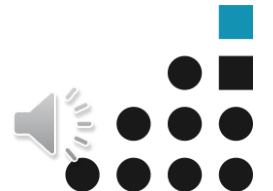
Sequence Code	Format	Largest	Next	Ratio
Adva_8	DEMF-#####	559999999	550000000	98.21%
Proj_35	#####	219999999	210000000	95.45%
Proj_754	DEMF-#####	219999999	210000000	95.45%
Proj_33	#####	209999999	200000000	95.24%
Proj_31	#####	199999999	190000000	95.00%
Proj_729	DEMF-#####	199999999	190000000	95.00%
Proj_28	#####	189999999	180000000	94.74%
Proj_26	#####	179999999	170000000	94.44%
Acco_14637	DEMF-#####	179999999	170000000	94.44%
Acco_14848	DEMF-#####	169999999	160000000	94.12%
Acco_25	#####	159999999	150000000	93.75%
Acco_24	#####	149999999	140000062	93.33%
Acco_23	#####	139999999	130000002	92.86%
Acco_34	PCH-#####	139999999	130000000	92.86%

# Summary

Organization administration > Number sequences > Number sequence

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- ✓ **Number sequence strategy**
- ✓ **Continuous and Non-Continuous**
  - ✓ **Should be non-continuous unless required**
  - ✓ **Use pre-allocation for non-continuous number sequences**
- ✓ **Review the Preallocation**
  - ✓ **Right configure and testing**
- ✓ **Review the Number sequence status regularly, the best to automate the monitoring**





Thank you

