NUGM 2024

NOVOMOTION OUTBOUND -WHAT'S NEW & THE AUDITOR



Trey Miller NovoRoi Systems, LLC

NOVOMOTION – THE SQL DELIVERY PUMP

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The Schema Subroutine has been in the product for several releases. The power here is realized when using NovoMotion to build interactive interfaces.

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Collect Schema Matrix Audit Data is extremely useful to determine where troublesome data corruption, or bad data definition is creating an issue for delivery to SQL Server.

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Be Aware that the schema audit detail file (BCI.AUDIT) is comprehensive, with copies of both before, and after images of the UniData files delivered to SQL. 💀 NovoMotion Schema Editor - SA.MAP @ localhost:C:\ROI\LAB.MASTER - 🗆 🗙 File Edit Tools Help 🔲 🧀 🔚 🖬 🚺 Schema Options SQL Options Post Job Options U2 Primary Key Concat String (If clustered Key) SA Schema Map Schema Active Schema Description: Collect Schema Matrix Audit Data (Debug) Unidata File Name: SA Disable Active Update Trigger Check Disable Active Delete Trigger Check Execute Before Matrix V Execute After Matrix Schema Subroutine SUB.SA.NOVO.SCHEMA Data Required for Suppress Details SQL Default U2PrimaryKey Data Type Precision Scale SQL Column Primary Key U2 Dictionary Output Insert Character ~ 15 0 RecordID \checkmark \checkmark \checkmark Inv_So_Date Date ~ 20 0 Inv_So_Date \square Cust_Nbr Character ~ 6 0 Cust_Nbr ~ 19 0 Part Nbr Character Part Nbr ~ 8 0 Quantity Integer Quantity 2 ~ 16 Sales Numeric Sales хÞ ~ 16 2 Part Discount Numeric NovoMotion Schema Editor 2 Other_Discount Numeric ✓ 16 ~ 18 Numeric 2 Cost Warning: Creating Schema Audit Data can create extra records in the ~ 2 0 Record Type Character database, and affect performance. Remember to turn the Audit back ~ 3 0 off when debugging is complete. Fac_Code Character Ord_Type ~ 3 0 Character ~ 3 0 Ord Class Character OK h ~ 3 0 Sales_Div Character ~ 3 0 Sales Person Sales Person Character Ship_Name Character ~ 30 0 Ship Name \square Ship Country Character ~ 3 0 Ship_Country Ship State Character ~ 3 0 Ship_State ~ 3 \Box Sales Rep Code Character 0 Sales Rep Code < - >

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CLEAR-FILE BCI.AUDIT

DON'T forget to clear this out if for no other reason than you want it clean for the next use.

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When UniData file trigger state changes, email notification is sent.

These checkboxes will disable that notification for schema that is not used for triggering.

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Schema Record Loaded

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NovoRoi Systems, LLC

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Required prompts for Auditing features:

U2 Primary Key is necessary for Auditor to compare apples and apples.

Concatenation is usually the "*".

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Don't think Microsoft SQL Server is the end all and be all.

NovoMotion also supports MySQL and Postgre.

You can use those database DSN endpoints side-by-side with SQL.

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NovoMotion utilizes SQL Server stored procedures to manage insert, update, and delete of data delivery.

You can introduce your own procedure source.

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Post data delivery SQL job execution.

Utilized for syncing SQL Server Analysis Services data repositories and keeping them up to date.

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Skip the large BCI.SCHEMA selection dialogue box and go directly to a named schema that you know and love.

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If you aren't using the Template capabilities then you have to remember everything on the SQL Options tab on your own. Templates 'remember' ODBC DSN names, users and PWs.

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You do NOT need to run the LOAD.BCI.ACTION function from within Manage 2000 to control delivery of data to SQL.

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You do need to use exact syntax in the selection statement with proper case.

The SAMPLE keyword is boss!

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This will initiate a PHANTOM background task.

The task will martial its own data levels so not too much is entered into BCI.ACTION.

You will NOT burn an M2k license!

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Here's a REALLY useful one.

Ever wonder how to "Alter" the SQL data tables when you change schema without having to drop and reload EVERYTHING?

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	Ord_Type	Character	\sim	3	0	Ord_Type							
	Ord_Class	Character	\sim	3	0	Ord_Class							
	Sales_Div	Character	\sim	3	0	Sales_Div							
	Sales_Person	Character	\sim	3	0	Sales_Person							
	Ship_Name	Character	\sim	30	0	Ship_Name							
	Ship_Country	Character	\sim	3	0	Ship_Country							
	Ship_State	Character	\sim	3	0	Ship_State							
	Sales_Rep_Code	Character	\sim	3	0	Sales_Rep_Code							~
<													>
chema F	Record Loaded												:



You absolutely MUST choose the generate delta script option PRIOR to saving the template, but if you do then the alteration code is available to be executed directly on SQL.

🖳 NovoMotion Schema Editor - SA.MAP @ localhost:C:\ROI\LAB.MASTER – 🗆 🗙 File Edit Tools Help 🔲 📂 🔚 📑 🚺 Schema Options SQL Options Post Job Options SQL User SQL Server Type SQL File Name: dbo.SA Isa ODBC Database HEM SQL Password \sim SQL Procedure Name: 🖳 Alter Table Script \times Precision SQL Default U2PrimaryKey U2 Dictionary Data Type Sales Rep Code Character ~ 3 Execute on SQL SA_Obh_Join Character ~ 25 ~ 4 Inv_So_Yymm Character ALTER TABLE dbo.SA DROP COLUMN [Program Name]; 3 ALTER TABLE dbo.SA DROP COLUMN [Purch Um]; ~ 6 Sales Order Nbr Character ALTER TABLE dbo.SA ADD [User_Def_1] [varchar](20) NULL; ~ 20 Request_Date_Sql Date 5 ALTER TABLE dbo.SA ADD [User Def 2] [varchar] (20) NULL; ~ 7 Invoice_Nbr Character ~ 4 Line_Nbr Character Inv_Line_Nbr Character V 4 ~ 2 Item_Type Character Sell_Qty V 12 Integer ~ 3 Del_Nbr Character @Action Character ~ 1 ~ 20 Ship Date Date Sod_ID Variable Char... 🗸 10 Request Date Dw Date ~ 20 Tran Date Date ~ 20 User Def 1 Variable Char... v 20 User Def 2 Variable Char... V 20 . \sim < Row 31



SchemaRecordAudit.exe

- This executable program is designed to triangulate between the SQL server and the UniData Server.
- It can be installed almost anywhere on the network, as long as it can make connection to both the database servers.
- A workstation is not a bad place to start with development but ultimately it will work best on a server that is well provisioned for network tasks.
- You will want to make Windows command shell scripts to run the executable.
- The Windows Task Scheduler is a good way to automate Auditing tasks.



SchemaRecordAudit.exe -u "m2k-dev" -l ServiceAccountName -p "ServiceAccountPW" -a E:\ROI\SQL.TESTING -q "sqlTestServer" -d M2K_TESTING_WHSE -x -s CM.MAP -T

Parameter	Value	Description
	SchemaRecordAudit.exe	Audit executable. May need full path. If full path includes spaces, enclose the full path in quotation marks.
-u	"m2k-dev"	IP/DNS name for Unidata host. May need to be in quotation marks to handle special characters.
-]	ServiceAccountName	Unidata host user or login.
-p	"ServiceAccountPW"	Unidata host password. May need to be in quotation marks to handle special characters.
-a	E:\ROI\SUN.TESTING	Unidata account on host.
-q	"sqlTestServer"	SQL instance name. May need to be in quotation marks to handle special characters.
-d	M2K_TESTING_WHSE	SQL database name.
-X		Execute as SQL authentication. Get credentials from schema record and use that user. Leaving -x off will use trusted credentials (user that is executing EXE).
-S	CM.MAP	Name of schema being audited
-T		Trace option, pauses.

C:\Temp\SchemaRecordAudit 1.0.5024>schemarecordaudit.exe --help

Usage:

- -s, --schema... Input NovoMotion Schema to use for audit
- -u, --u2host... U2 System name or IP address
- -I, --u2user... U2 System user ID
- -a, --u2account... U2 System Account / Account Path
- -p, --u2password... U2 user password
- -q, --sqlhost... SQL Host Name / IP address
- -d, --sqldb... SQL Database
- -r, --ReportOnly[optional]... Only Report errors (take no action)
- -?, --Help[optional]... Display Commands Available
- -x, --UseSqlUser[optional]... Connect as SQL user from schema record
- -N, --NoDeletes[optional]... Do not remove deleted SQL records missing in U2
- -T, --Debug[optional]... Enable walking change by change with host trace records
- -w, --walkforward[optional]... use this field as transaction date to certify spans of time
- -z, --walkforwardidx[optional]... use this field as the indexed u2 transaction date to certify spans of time



NOVOMOTION

6.0

Multi Schema Delivery Architecture

- 5.0 and prior was 'Vertical' in addressing Schema on a particular UniData file (IPL for instance).
- 6.0 is 'Horizontal' in that it uses worker drones to manage all schema simultaneously on a file.
- Data delivery pacing item becomes the slowest single schema, instead of the aggregate of all schema.



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QUESTIONS?



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THANK YOU

