



MAIN FEATURE TAB

Data Chain

A cascade analysis that shows how rows connect to the rest of the database through foreign keys — and builds the exact, safe script to delete or detach them.

Pro tier. The Data Chain tab is a Pro feature; on Base it is replaced by the Pro tab, which describes it and how to unlock it.

Who

WHO IT IS FOR

Developers and DBAs who need to delete a record and everything that legitimately hangs off it, without violating foreign keys or leaving orphans.

What

WHAT IT DOES

Pick a table and an optional WHERE clause, preview the Candidate Rows (optionally selecting specific ones), then View Data Chain analyses every foreign-key link with its level, execution order, and affected row count. For each link choose Skip, Del, Null, or a Set Value; required foreign keys must be deleted. Build Script ... generates the T-SQL — wrapped in a transaction with per-step row-count checks that roll back on a mismatch — and opens it in a Query window for review, without running anything. View Rows and View Chained Rows open the affected records, foreign-key cycles are marked with a [△](#), links that cannot be scripted are flagged, and Show Log records every script actually executed.

When

WHEN TO USE IT

Use it for cascade deletes, test-data teardown, or GDPR-style record removal — any time “delete this and all of its children, in the right order” would otherwise be traced by hand.

Where

WHERE TO FIND IT

The Data Chain tab is on the top tab bar of the database window; right-click it to open it in its own window. The Table, Where, Limit, and Timeout boxes, Use No Lock, View Data Chain, Show Log, and the camera and tip icons run along the top. The Candidate Rows grid and the Data Chain Results grid are separated by a draggable splitter, and Hide Empty Tables, Build Script ..., View Chained Rows, Skip 0 Rows, and the status line with its copy icon sit at the bottom.

Why

WHY IT MATTERS

It removes the guesswork — and the danger — of manual cascade deletion, giving you the precise deletion order and impact in seconds instead of hours.

SCREENSHOT

McSaver Search — Data Chain

Database Info — AdventureWorks2019: 4

Searcher

Rating

Analyze

Investigate

Data Chain

Orphans

Broken SQL

Comments

Table Editor ...

Query ...

Finder ...

Table: Address (Person)

Where: WHERE clause...

Limit: 100

Timeout: 120

☒ Use No Lock

View Data Chain

Possible Candidates: 100

Show Log

Candidate Rows									
#	AddressID	AddressLine1	AddressLine2	City	StateProvinceID	PostalCode	SpatialLocation	rowguid	ModifiedDate
1	15733	7588 Deerfield Dr	#36	Palo Alto	9	94303	POINT (-122.214891815914 3...	2a616054-5c61-491d-aa56-6...	9/6/2013 12:00:00 AM
2	15734	539 Rolling Green Circle		Sooke	7	V0	POINT (-123.916864282061 4...	3f7952b0-0b3d-4f84-b189-32...	3/17/2012 12:00:00 AM
3	15735	81, cours Mirabeau		Paris	161	75012	POINT (2.27668241004802 4...	77672343-e801-4bd5-92a7-b...	12/21/2013 10:09:29 AM
4	15736	6093 Midway Ct.		Hawthorne	64	4171	POINT (152.865678182475 -2...	577e089b-1af3-4ffe-9fd3-a2...	12/9/2013 12:00:00 AM
5	15737	5890 Yosemite Circle		Hawthorne	64	4171	POINT (153.217726905634 -2...	35e3e609-8f60-4072-3617-3f...	2/6/2014 12:00:00 AM
6	15738	844, rue Basse-du-Rocher		Paris	161	75017	POINT (2.30764363006416 4...	14ee228d-b75e-422e-81c6-5...	12/21/2013 10:09:29 AM
7	15739	7228 Sierra Ridge	Unit A309	North Sydney	50	2055	POINT (151.221616268872 -3...	e1e4872f-0131-4241-aa61-25...	9/4/2013 12:00:00 AM
8	15740	3575 Tulip St		N. Vancouver	7	V7L 4J4	POINT (-123.248996736813 4...	01de2889-a5dd-4e92-bfa9-ea...	7/29/2013 12:00:00 AM
9	15741	5070 Via Alta		Oregon City	58	97045	POINT (-122.46670851431 45...	5c56fe45-4029-47ea-b5ff-eb4...	4/20/2014 12:00:00 AM
10	15742	Heiderplatz 662		Salzgitter	19	38231	POINT (0 0)	92881f10-c177-4aa4-b789-71...	6/8/2014 12:00:00 AM
11	15743	332 Laguna Niguel		Seaford	77	3198	POINT (145.083394980255 -3...	0e195a2f-ba45-434a-8481-4c...	11/10/2012 12:00:00 AM
12	15744	1185 Laguna St		Tacoma	79	98403	POINT (-122.603414974578 4...	2d510sec-9951-48d5-b515-4...	6/29/2014 12:00:00 AM
13	15745	2934 Treat Blvd		Grossmont	9	91941	POINT (-116.969317647428 3...	c4ff732-d776-48d7-abe1-ce7...	5/28/2014 12:00:00 AM
14	15746	9302 Blue Ridge		Lynnwood	79	98036	POINT (-122.349574037605 4...	0a65e7d6-b6ba-4618-93c6-2...	3/3/2014 12:00:00 AM
15	15747	123, rue de Cambrai		Lille	145	59000	POINT (3.07364095630126 5...	4f4acc84-34de-4551-8714-ee...	12/21/2013 10:09:29 AM
16	15748	3519 Woodruff Lane		Burbank	9	91502	POINT (-118.451694432341 3...	6e460761-a229-4227-943c-d...	4/12/2014 12:00:00 AM
17	15749	584 Blue Circle		Portland	58	97205	POINT (-122.833976139302 4...	cca0c3b1-9f58-4f5d-91ea-eae...	5/22/2014 12:00:00 AM
18	15750	2103 Baldwin Dr		Liverpool	14	L4 4HB	POINT (-2.97188475407706 5...	256fa07a-e849-462c-b50e-bb...	9/19/2013 12:00:00 AM
19	15751	8153 Shoe St.		Port Hammond	7	V6B 3P7	POINT (-123.074240393706 4...	b52d426a-698b-4715-85bf-cb...	4/4/2014 12:00:00 AM
20	15752	5030 Race Ct		Manassville	79	98270	POINT (-122.123517979597 4...	df52a14d-e1d0-427e-9643-c6...	3/31/2014 12:00:00 AM
21	15753	2853 Rollinghill Way		Chula Vista	9	91910	POINT (-117.040907536625 3...	4927ae5-5767-4724-b093-60...	8/7/2013 12:00:00 AM
22	15754	1061 Carzino Ct		Bracknell	14	RG12 8TB	POINT (0.755761962104532...	67ec4738-884f-435e-8175-ff...	8/13/2011 12:00:00 AM

Data Chain Results									
Ord	Lvl	Parent Table	Table	Columns	Affected	Skip	Del	Null	Set Value
1	3	Address (Person)	[Person].[BusinessEntityAddress]	AddressID	19614	☐	☒	☐	value...
2	3	SalesOrderHeader (Sales)	[Sales].[SalesOrderDetail]	SalesOrderID	121317	☐	☒	☐	value...
3	3	SalesOrderHeader (Sales)	[Sales].[SalesOrderHeaderSalesReason]	SalesOrderID	27647	☐	☒	☐	value...
4	2	Address (Person)	[Sales].[SalesOrderHeader]	BillToAddressID	31465	☐	☒	☐	value...
5	2	Address (Person)	[Sales].[SalesOrderHeader]	ShipToAddressID	31465	☐	☒	☐	value...
6	1		[Person].[Address]		19614	☐	☒	☐	value...

☐ Hide Empty Tables

Build Script ...

View Chained Rows

☒ Skip 0 Rows

Chain analysis complete — 6 dependencies found across 5 tables, 251122 rows affected

Data Chain in McSaver Search



Tip of the Day 48 tips

Every Tip of the Day for this tab — open them in the app from the lightbulb icon.

- VALUE

Data Chain eliminates the guesswork of manual cascade deletion — instead of tracing foreign keys by hand across dozens of tables, you get the exact deletion order and affected row counts in seconds.
- OVERVIEW

The Data Chain tool analyzes foreign key dependencies to determine the correct deletion order for database rows, then builds a safe delete/update script for you.
- ACTION

Pick a table from the Table dropdown, optionally type a WHERE clause, then click "View Data Chain" to analyze its foreign key dependencies.
- ACTION

The Limit box caps how many candidate rows are previewed — the box turns gold when more rows match than the limit allows.

SELECTION	Tap rows in the top "Candidate Rows" grid to select them — the chain analysis is then narrowed to just those rows by primary key.
CONCEPT	Required foreign keys (non-nullable) mean dependent rows MUST be deleted first — they cannot be set to NULL.
CONCEPT	Optional foreign keys (nullable) let you set the FK column to NULL instead of deleting the dependent row.
COLUMN	The "Lvl" column shows dependency depth — higher levels are deeper dependencies and are processed before shallower ones.
COLUMN	The "Ord" column gives the execution order — deepest dependencies are deleted first to satisfy foreign key constraints.
COLUMN	The "Affected" column shows how many rows in each dependent table would be impacted by your deletion.
VISUAL	An orange-red "Affected" count flags a required (non-nullable) foreign key with data that must be removed before the parent can be deleted.
VISUAL	Chain result rows are shaded by dependency level so you can see the depth structure at a glance.
COLUMN	Check "Skip" to exclude a table entirely from the generated script — no DELETE or SET NULL is emitted for it.
COLUMN	Check "Del" to generate a DELETE for that table; required FKs default to Del since their column cannot be nulled.
COLUMN	Check "Null" to SET NULL on the FK column instead of deleting — this cell is grayed out and disabled for required FKs.
COLUMN	Type a value in the "Set Value" box to replace the FK with a specific value instead of deleting or nulling; string values are auto-quoted, and hovering shows the FK constraint name.
FILTER	Enable "Hide Empty Tables" to focus only on tables that actually have affected rows in the chain.
ACTION	"Build Script ..." generates the full T-SQL without running it and opens it in a Query window for review before you execute anything.
SAFETY	The generated script always wraps everything in a transaction with SET XACT_ABORT and per-step row-count checks that RAISERROR and roll back if the affected count differs from what was expected.
FILTER	Click any chain results header (Ord, Lvl, Table, Columns, and so on) to open the filter/sort popup; an active filter or sort is marked with a glyph on that header.
FILTER	Click a column header in the top Candidate Rows grid to filter or sort the preview without changing your row selection.
NAVIGATION	Drag the purple splitter bar between the Candidate Rows and Data Chain Results panels to resize them.

ACTION	Right-click a chain row and choose "View Rows" to open the actual affected rows in a detail grid, narrowed by any candidates you have selected.
SELECTION	The chain row right-click menu also offers "Select All" and "Clear Selection" for the visible chain results.
PERFORMANCE	"Use No Lock" is on by default and adds WITH (NOLOCK) to candidate and analysis queries so reads don't block on busy tables.
CLARIFICATION	Column header tooltips in the Candidate Rows grid show each column's database description (MS_Description) when one is defined.
FEATURE	The camera icon captures a screenshot of the Data Chain panel to an image file and opens its folder for you.
FEATURE	The "Show Log" button in the top toolbar opens the Data Chain execution log — a running record of every cascade delete/update script you actually ran against the database, kept verbatim so each script's "-- Delete from ... (Level N, FK: ...)" comments are preserved.
CLARIFICATION	Each execution-log entry is timestamped and marked as succeeded or failed, and includes the server's PRINT output listing the rows affected per table; right-click the "Show Log" button to copy the log file's path to the clipboard.
LAYOUT	The Candidate Rows and Data Chain Results grids keep their column headers pinned in view while you scroll through the rows.
FEATURE	The "View Rows" detail grid now has a "View SQL" icon that opens the exact SELECT statement that produced those rows.
CLARIFICATION	In the "View Rows" detail grid, SQL NULLs display as "(null)" and hovering any cell reveals its complete, untruncated value.
PERFORMANCE	Clicking a Candidate Rows or chain-results header pops a quick spinner while the column is grouped off the UI thread, keeping the panel responsive until the filter/sort popup appears.
PERFORMANCE	On a high-cardinality column, the filter/sort popup lists only the top 120 values for the current sort, while filtering, Select All, and the distribution chart still cover every value.
VISUAL	The popup's chart plots the first 60 values in the list's current sort order to stay readable, flagging the cap with a yellow "Showing first N of M values" notice and an info icon.
FEATURE	Click "View Chained Rows" beside Build Script to open one window with a tab per chain row that isn't skipped, each holding the SELECT for that link's affected records, narrowed by your selected candidates.
PERFORMANCE	In the View Chained Rows window, a tab with 1,000 affected rows or fewer runs itself when you first show it; larger ones wait for you to press Execute and then load 50 rows at a time.
FILTER	"Skip 0 Rows" (on by default) keeps View Chained Rows from opening tabs for links with no affected records; unlike Hide Empty Tables it only decides which tabs open and leaves the grid alone.
FILTER	Ticking "Hide Empty Tables" also ticks "Skip 0 Rows", but clearing it leaves Skip 0 Rows as it was.

PERFORMANCE The Timeout box beside Limit sets the seconds allowed for each statement this tab runs — every chain COUNT, View Rows, and the View Chained Rows tabs; the default is 120, and 0 waits indefinitely.

TECHNIQUE If the analysis times out on a small table, its chain probably reaches a large history table — raise the Timeout box and click "View Data Chain" again.

PERFORMANCE While the analysis runs, the status line counts the links checked so far and names the table just counted, so a long analysis is easy to tell apart from a hung one.

VISUAL A  beside a Lvl number marks a table in a foreign-key cycle; the status line lists every circular table, and hovering the Lvl cell explains why those tables can't be ordered against each other, so the script may still fail there.

SAFETY Build Script marks any chain link it cannot script with a "-- NOT HANDLED" comment, and the status line names those tables so you know the chain isn't fully covered.

CONCEPT A table that references itself never gets a DELETE, because one statement reaches only one level of the hierarchy — tick Null or enter a Set Value for that link instead.

CLARIFICATION If you change the candidate selection after analysing, View Rows and View Chained Rows warn that the rows and counts belong to the old selection — click "View Data Chain" again to update them.

ACTION Right-click a Candidate Rows column header to pick a display format for a numeric or date column; a  marker on the header shows that a format is applied.

ACTION Click the  icon beside the status line to copy the status text shown there, including any error message, to the clipboard.