

# Editing Table Data

Only in DbVisualizer Pro



This feature is only available in the Pro edition. In the Free edition, please execute the corresponding SQL in the [SQL Commander](#).

With the DbVisualizer Pro edition, you can edit table data in the **Data** tab grid; just click a cell value and edit. Edits are saved in a single database transaction which ensures that all or no changes are committed. The editing feature supports saving binary and large text data and it even presents common data formats in their respective viewers, such as image viewer, PDF, XML, HEX, etc.

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## Opening the Data tab

To open the **Data** tab for a table:

1. Locate the table in the **Databases** tab tree,
2. Double-click the table node to open its **Object View** tab,
3. Open the **Data** sub tab.

**Table: ACTOR** Actions...

Sakila H2 (dbvis)/Schemas/SAKILA/Tables/ACTOR

Info Columns **Data** Row Count Primary Key

Filter:

* 	ACTOR_ID	FIRST_NAME	LAST_NAME	LAST_UPDATE
1	1	PENELOPE	GUINNESS	2006-02-15 04:34:33
2	2	NICK	WAHLBERG	2006-02-15 04:34:33
3	3	ED	CHASE	2006-02-15 04:34:33
4	4	JENNIFER	DAVIS	2006-02-15 04:34:33
5	5	JOHNNY	LOLLOBRIGIDA	2006-02-15 04:34:33
6	6	BETTE	NICHOLSON	2006-02-15 04:34:33
7	7	GRACE	MOSTEL	2006-02-15 04:34:33
8	8	MATTHEW	JOHANSSON	2006-02-15 04:34:33
9	9	JOE	SWANK	2006-02-15 04:34:33
10	10	CHRISTIAN	GABLE	2006-02-15 04:34:33
11	11	ZERO	CAGE	2006-02-15 04:34:33
12	12	KARL	BERRY	2006-02-15 04:34:33
13	13	UMA	WOOD	2006-02-15 04:34:33
14	14	VIVIEN	BERGEN	2006-02-15 04:34:33
15	15	CUBA	OLIVIER	2006-02-15 04:34:33
16	16	FRED	COSTNER	2006-02-15 04:34:33
17	17	HELEN	VOIGHT	2006-02-15 04:34:33
18	18	DAN	TORN	2006-02-15 04:34:33
19	19	BOB	FAWCETT	2006-02-15 04:34:33
20	20	LUCILLE	TRACY	2006-02-15 04:34:33
21	21	KIRSTEN	PALTROW	2006-02-15 04:34:33

Max Rows:  Max Chars:  Format: <Select a Cell> 0.002/0.002 sec 200

94M of 768M

Each column width is automatically resized to match the column width, including the column header, by default. You can disable this behavior in the the Tool Properties dialog, in the **Grid** category under the General tab.

If **Auto Resize Column Widths** is enabled, the **Max Column Width** setting can be used to limit the column width so that an extremely wide column does not take up all space.

## Editing Data in the Grid

To edit a column value:

1. Select the column cell,
2. Type the new value, or double click to edit the current value,
3. Click the **Save** toolbar button to update the database.

You can also use the **Set Selected Cells** drop down menu to set a number of column values to things like null or the current date or time.

To add a new row:

1. Select the row above where you want to insert the new row,
2. Click the **Add Row** toolbar button,

3. Enter values for the columns,
4. Click the **Save** toolbar button to update the database.

To duplicate a row:

1. Select the row you want to duplicate,
2. Click the **Duplicate Row** toolbar button,
3. Edit at least the key column(s) value(s),
4. Click the **Save** toolbar button to update the database.

To delete one or more rows:

1. Select the rows to delete,
2. Click the **Delete Rows** toolbar button,
3. Click the **Save** toolbar button to update the database.

If you change your mind, you easily can undo edits:

1. Select the cell(s) you want to revert,
2. Click the **Undo** toolbar button.

Reverting all cells in a row that are marked as **Insert** or **Duplicate** removes the complete row from the grid while a **Delete** marked row is cleared from its delete state. Undoing updated cells simply reverts the changes to the original values.

## Copy/Paste

You can copy selected cell values with the **Copy Selection** right-click menu choice or the corresponding key binding (**Ctrl-C** or **Command-C** by default). The data on the clipboard may then be pasted either into DbVisualizer or any external application. The column and newline delimiter used for copy and paste operations in the grid editor are defined by the **Copy Grid Cells in CSV Format** settings in the **Grid** category in the Tool Properties dialog, under the General tab. The default setting are sufficient for most uses.

The grid editor supports pasting data from the major spreadsheet applications, such as Excel and OpenOffice. The grid editor supports pasting single data as well as block of data. Copy/paste of binary data is transparent between grids or in the same grid. Binary files may also be copied in an external application and pasted in a cell in DbVisualizer (target cell must be a binary type).

Copy from spreadsheet						Paste into DbVisualizer grid		
A single cell is copied						Paste into selected target cell		
	A	B	C	D		*  ACTOR_ID	FIRST_NAME	
1	1	PENELOPE	GUINNESS	2006-02-15 04:34:33	➔	1	1	PENELOPE
2	2	NICK	WAHLBERG	2006-02-15 04:34:33		2 	2	ED
3	3	ED	CHASE	2006-02-15 04:34:33		3	3	ED
4	4	JENNIFER	DAVIS	2006-02-15 04:34:33		4	4	JENNIFER
5	5	JOHNNY	LOLLOBRIGIDA	2006-02-15 04:34:33		5	5	JOHNNY
6	6	BETTE	NICHOLSON	2006-02-15 04:34:33		6	6	BETTE
7	7	GRACE	MOSTEL	2006-02-15 04:34:33		7	7	GRACE
8	8	MATTHEW	JOHANSSON	2006-02-15 04:34:33		8	8	MATTHEW
9	9	JOE	SWANK	2006-02-15 04:34:33		9	9	JOE

A single cell is copied

	A	B	C	D
1	1	PENELOPE	GUINNESS	2006-02-15 04:34:33
2	2	NICK	WAHLBERG	2006-02-15 04:34:33
3	3	ED	CHASE	2006-02-15 04:34:33
4	4	JENNIFER	DAVIS	2006-02-15 04:34:33
5	5	JOHNNY	LOLLOBRIGIDA	2006-02-15 04:34:33
6	6	BETTE	NICHOLSON	2006-02-15 04:34:33
7	7	GRACE	MOSTEL	2006-02-15 04:34:33
8	8	MATTHEW	JOHANSSON	2006-02-15 04:34:33
9	9	JOE	SWANK	2006-02-15 04:34:33

Paste and fill the single column target selection

*	KEY	ACTOR_ID	FIRST_NAME
1		1	PENELOPE
2	✂	2	ED
3	✂	3	ED
4	✂	4	ED
5	✂	5	ED
6		6	BETTE
7		7	GRACE
8		8	MATTHEW
9		9	JOE

Multiple cells in a single row is copied

	A	B	C	D
1	1	PENELOPE	GUINNESS	2006-02-15 04:34:33
2	2	NICK	WAHLBERG	2006-02-15 04:34:33
3	3	ED	CHASE	2006-02-15 04:34:33
4	4	JENNIFER	DAVIS	2006-02-15 04:34:33
5	5	JOHNNY	LOLLOBRIGIDA	2006-02-15 04:34:33
6	6	BETTE	NICHOLSON	2006-02-15 04:34:33
7	7	GRACE	MOSTEL	2006-02-15 04:34:33
8	8	MATTHEW	JOHANSSON	2006-02-15 04:34:33
9	9	JOE	SWANK	2006-02-15 04:34:33

Paste and fill the target selection

*	KEY	ACTOR_ID	FIRST_NAME
1		1	PENELOPE
2	✂	2	ED
3	✂	3	ED
4	✂	4	ED
5	✂	5	ED
6		6	BETTE
7		7	GRACE
8		8	MATTHEW
9		9	JOE

A block of cells is copied

	A	B	C	D
1	1	PENELOPE	GUINNESS	2006-02-15 04:34:33
2	2	NICK	WAHLBERG	2006-02-15 04:34:33
3	3	ED	CHASE	2006-02-15 04:34:33
4	4	JENNIFER	DAVIS	2006-02-15 04:34:33
5	5	JOHNNY	LOLLOBRIGIDA	2006-02-15 04:34:33
6	6	BETTE	NICHOLSON	2006-02-15 04:34:33
7	7	GRACE	MOSTEL	2006-02-15 04:34:33
8	8	MATTHEW	JOHANSSON	2006-02-15 04:34:33
9	9	JOE	SWANK	2006-02-15 04:34:33

The block is pasted into the selected region

*	KEY	ACTOR_ID	FIRST_NAME
1		1	PENELOPE
2	✂	2	ED
3	✂	3	JENNIFER
4	✂	4	JOHNNY
5	✂	5	BETTE
6	✂	6	GRACE
7		7	GRACE
8		8	MATTHEW
9		9	JOE

A block of cells is copied

	A	B	C	D
1	1	PENELOPE	GUINNESS	2006-02-15 04:34:33
2	2	NICK	WAHLBERG	2006-02-15 04:34:33
3	3	ED	CHASE	2006-02-15 04:34:33
4	4	JENNIFER	DAVIS	2006-02-15 04:34:33
5	5	JOHNNY	LOLLOBRIGIDA	2006-02-15 04:34:33
6	6	BETTE	NICHOLSON	2006-02-15 04:34:33
7	7	GRACE	MOSTEL	2006-02-15 04:34:33
8	8	MATTHEW	JOHANSSON	2006-02-15 04:34:33
9	9	JOE	SWANK	2006-02-15 04:34:33

The block cannot be pasted into a different num

*	ACTOR_ID	FIRST_NAME	LA
1	1	PENELOPE	G
2	2	NICK	W
3	3	ED	C
4			
5			
6			
7			
8			
9			

DbVisualizer - Notification Alert

 You have requested to pa  
Do you want to **Add Row**

## Updates and Deletes Must Match Only One Table Row

When you update or delete rows, DbVisualizer ensures that only one row in the table will be affected. This is to prevent changes in one row to silently affect data in other rows. DbVisualizer uses the following strategies to determine the uniqueness of the edited row:

1. Primary Key,
2. Unique Index,
3. Manually Selected Columns.

The Primary Key concept is widely used in databases to uniquely identify the key columns in tables. If the table has a primary key, DbVisualizer uses it. There are situations when primary keys are not supported by a database or when primary keys are supported but not used. If no primary key is defined, DbVisualizer checks if there is a unique index. If there are several unique indexes, DbVisualizer picks one of them. If there is no primary key or any unique indexes defined for the table, you need to manually choose what columns to use. The **Key Column Chooser** is automatically displayed if the key columns can't be determined automatically.

## Key Column(s) Chooser

Normally database tables have a primary key or at least one unique index. If this is the case, editing is no problem. If there is no way to uniquely identify rows in the table, you need to manually define what columns DbVisualizer should use. While saving the changes, DbVisualizer checks that there is a way to identify unique rows in the table. If it cannot be accomplished, the following window is displayed.

*	CITY_ID	CITY	COUNTRY_ID	LAST_UPDATE
488		488 Sokoto		69 2006-02-15 04:45:25
489		489 Songkhla		
490		490 Sorocaba		
491		491 Soshangu		
492		492 Sousse		
493		493 South Hill		
494		494 Southamp		
495		495 Southend		
496		496 Southport		
497		497 Springs		
498		498 Stara Zag		
499		499 Sterling H		
500		500 Stockport		
501		501 Sucre		
502		502 Suihua		
503		503 Sullana		
504		504 Sultanbey		
505		505 Sumqayit		
506		506 Sumy		
507		507 Sungai Pe		
508		508 Sunnyvale		

**Key Column(s) Chooser**

Select the column(s) that will be used to form the **where** clause for **update** and **delete** edits. This is used by DbVisualizer to ensure that only one row in the target database table will be affected by each edited row.  
(If there is a primary key or unique index for the table then the Key Column is automatically set).

Key Column	Column Name	Data Type
<input checked="" type="checkbox"/>	CITY_ID	SMALLINT
<input type="checkbox"/>	CITY	VARCHAR
<input type="checkbox"/>	COUNTRY_ID	SMALLINT
<input type="checkbox"/>	LAST_UPDATE	TIMESTAMP

The key column chooser can also be manually opened via the **Edit Table Data->Key Column Chooser** right-click menu choice.

If the database request to save the edits cannot uniquely identify the single row that should be changed, an error dialog is displayed and the editing state is kept for that row in the grid editor.

## Editing Multiple Rows

The grid editor supports editing multiple rows and saving all changes in one database transaction. Edited rows are indicated with an icon in the row header:

-  Cell(s) in the row has been edited
-  Row is new
-  Row is duplicated from another row
-  Row is marked for deletion (edit is not allowed)

## Data Type checking

When leaving an edited cell, the new value is validated with the data type for the column. If there is an error, the following dialog is displayed.

* ID	RENTAL_ID	RENTAL_DATE	INVENTORY_ID	CUSTOMER_ID	RETURN_DATE	STAFF_ID	LAST_UPDATE
446	447	2005-05-27 18:57:02		3890	133 2005-06-05 18:38:02		1 2006-02-15 21:30:53
447	448	2005-05-27 19:03:08		2671	247 2005-06-03 20:28:08		2 2006-02-15 21:30:53
448	449	2005-05-27 19:13:15		2469	172 2005-06-04 01:08:15		2 2006-02-15 21:30:53
449	450	2005-05-27 19:18:54		1343	247 2005-06-05 23:52:54		1 2006-02-15 21:30:53
450	451	2005/05/27 19:27:54		205	87 2005-05-29 01:07:54		2 2006-02-15 21:30:53
451	452	2005-05-27 19:30:33		2993	127 2005-05-30 20:53:33		2 2006-02-15 21:30:53
452	453	2005-05-27 19:33:12		1000	127 2005-05-30 20:53:33		1 2006-02-15 21:30:53
453	454	2005-05-27 19:35:51		1000	127 2005-05-30 20:53:33		1 2006-02-15 21:30:53
454	455	2005-05-27 19:38:30		1000	127 2005-05-30 20:53:33		2 2006-02-15 21:30:53
455	456	2005-05-27 19:41:09		1000	127 2005-05-30 20:53:33		1 2006-02-15 21:30:53
456	457	2005-05-27 19:43:48		1000	127 2005-05-30 20:53:33		2 2006-02-15 21:30:53
457	458	2005-05-27 19:46:27		1000	127 2005-05-30 20:53:33		1 2006-02-15 21:30:53
458	459	2005-05-27 19:49:06		1000	127 2005-05-30 20:53:33		1 2006-02-15 21:30:53
459	460	2005-05-27 19:51:45		1000	127 2005-05-30 20:53:33		1 2006-02-15 21:30:53
460	461	2005-05-27 19:54:24		1000	127 2005-05-30 20:53:33		1 2006-02-15 21:30:53
461	462	2005-05-27 20:10:36	2314		364 2005-06-03 21:12:36		2 2006-02-15 21:30:53
462	463	2005-05-27 20:11:47	826		21 2005-06-04 21:18:47		1 2006-02-15 21:30:53

DbVisualizer - Notification Alert

The entered value doesn't match the format for the column.

Value: "2005/05/27 19:27:54"

Valid Format: yyyy-MM-dd HH:mm:ss or 'now' for current timestamp

Correct the value or press ESC key to revert the edit.

### New Line and Carriage Return

If a cell in the grid editor or form editor contains new line, carriage return or tab characters, these are not visually represented in the grid. Instead a warning will be displayed whenever you try to edit such value:

* ID	ADDRESS_ID	ADDRESS	ADDRESS2	DISTRICT	CITY
425	426	1661 Abha Drive		Tamil Nadu	
426	427	1557 Cape Coral Parkway		Hubei	
427	428				
428	429				
429	430				
430	431				
431	432				
432	433				
433	434				
434	435				
435	436				
436	437	1766 Almirante Brown Street		KwaZulu-Natal	
437	438	596 Huixquilucan Place		Nampula	

Formatting Characters in Cell

The data in this cell contains formatting characters (newline, carriage return or tab). It is **not recommended** to edit this data in the inline editor as it may remove any formatting characters. Instead you should use the multi-row **Cell Editor**.

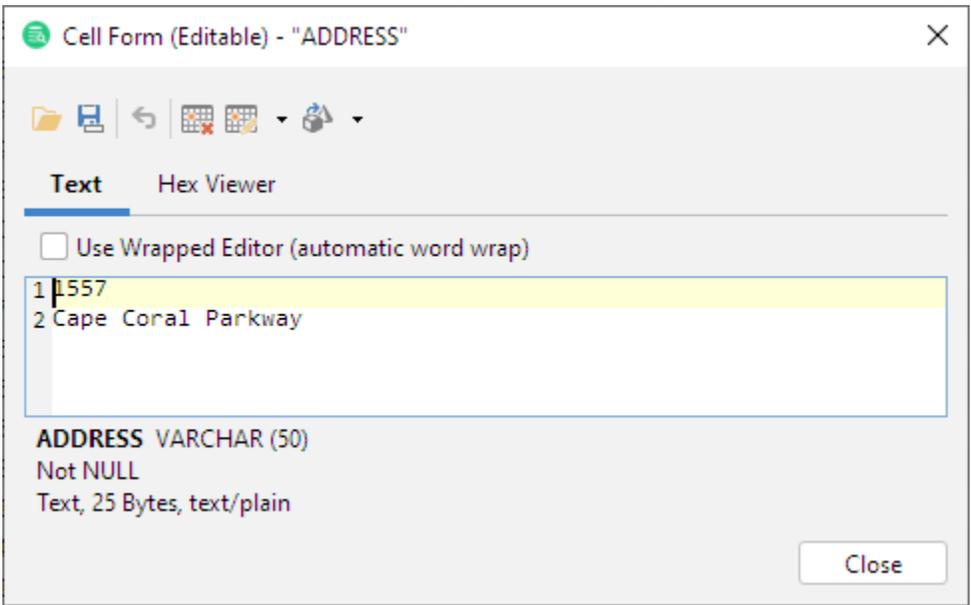
Do not show this message again

You may choose to edit the value in the [Cell Editor](#), which we recommend, as the control characters will then be preserved. Alternatively, you can edit the value in the grid anyway but you then risk losing the control characters.

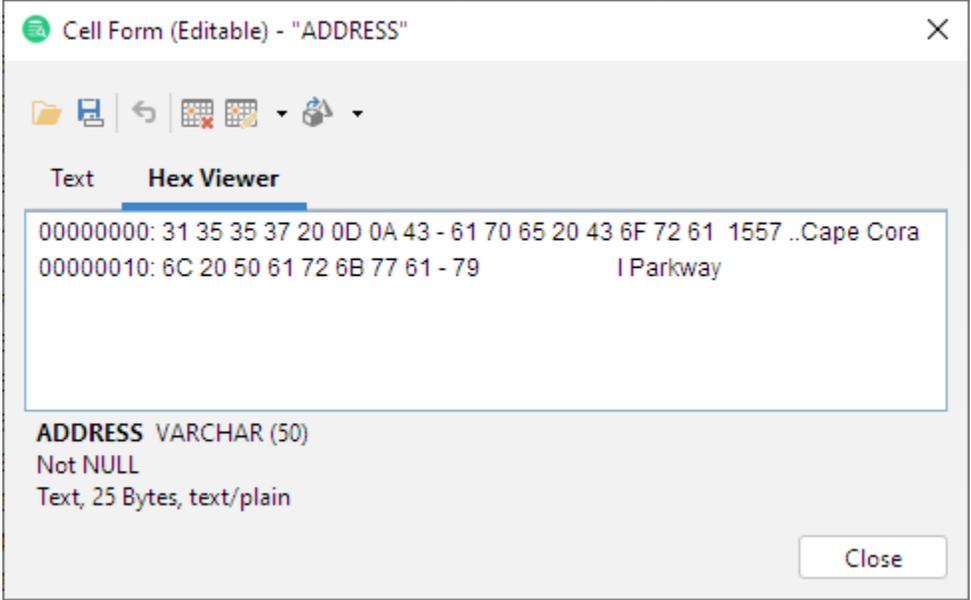
### Using the Cell Editor/Viewer

The **Cell Editor/Viewer** is available in the right-click menu (**Edit Cell in Window** or **View Cell in Window** if the data is read-only) and on the toolbar for all grids in DbVisualizer. It presents the data for a single cell (column in a row) in a window. If the data is of a recognized type, it is presented by a corresponding editor that allows you to view, edit and/or format the content, and also to save or load the data to/from a file.

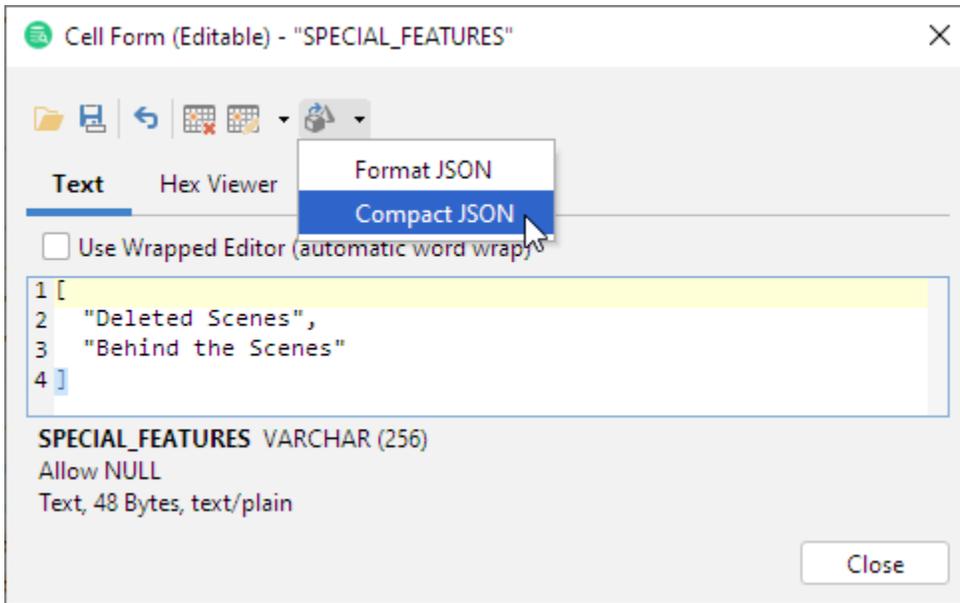
The **Text Editor** can be used for viewing and editing textual data, including JSON and XML. It does not offer any syntax coloring or validation; it is a plain text editor.



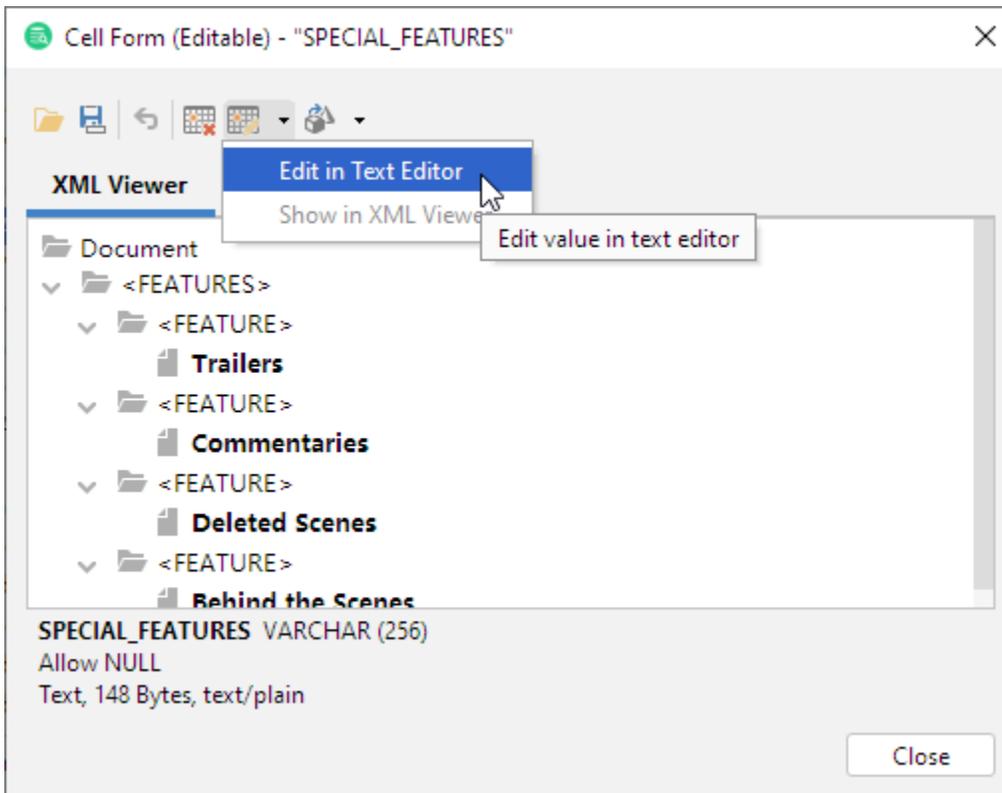
The Hex Viewer shows the content in hexadecimal format.



The JSON Formatter can transform the JSON structure to a human readable multi-line format (sometimes called "pretty printed") or to a compact single line format where insignificant whitespace is trimmed. The formatting will fail if the text does not comply with JSON syntax.

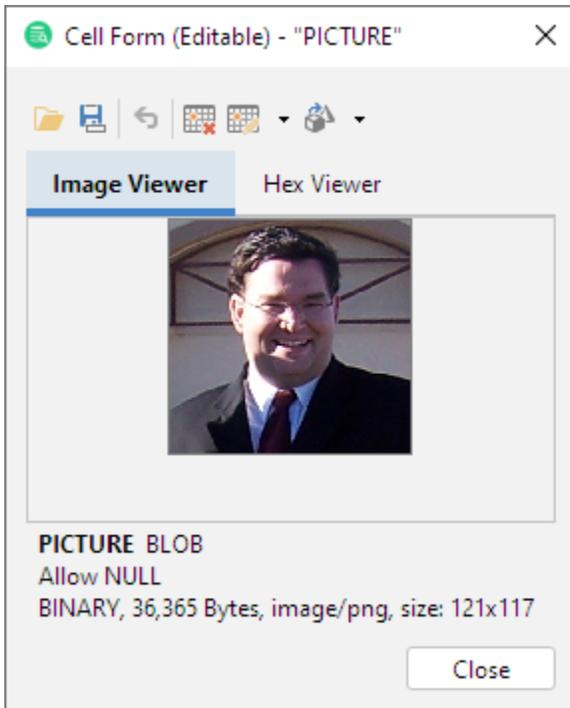


The **XML Viewer** is shown if the cell value is recognized as well-formed XML, or if you manually select to open the XML Viewer (which, for obvious reasons, may fail). The viewer presents data in a structured way but does not allow editing; you need to switch to the **Text Editor** to edit.



The **Image Viewer** displays full size images for binary data that conforms to a supported image format:

- GIF (Graphics Interchange Format)
- JPG/JPEG (Joint Photographic Experts Group)
- PNG (Portable Networks Graphics)
- TIFF (Tagged Image File Format)
- BMP (Bitmap Image File)
- PDF (Portable Document Format)



Opening the Cell Viewer for binary data will automatically render the content if a supported image type or if a PDF document.

## Using the Form Editor/Viewer

The **Row Viewer** is available in the right-click menu (**Browse/Edit Row in Window**) for all grids in DbVisualizer. It is used to either browse or edit information and to present binary data in viewers.

The **Row Editor** adds editing capability to the form viewer. This editor is useful when inserting new rows and when it is important to get a more balanced and transposed overview of all the data.

The form editor transpose or "rotate" the data in one row and presents it as a vertical form with the column name as a label. All edits made in the form editor are reflected in the grid with the edited state icon being updated along with new values. Saving edits in the database is always done with the Save button in the grid editor toolbar, just as for data edited directly in the grid.

Open the form editor via the **Edit Row in Window** right-click menu choice, via the corresponding button in the toolbar or by double-clicking the row number header.

* 1	STAFF_ID	FIRST_NAME	LAST_NAME	ADDRESS_ID	PICTURE	EMAIL
1	1	Mike	Hillyer		3 BINARY, 36,365 Bytes	Mike.Hillyer@sakilastat
2	2	Jon	Stephens		4 (null)	Jon.Stephens@sakilastat

The same row looks like this in the row form window:

Row Form (Editable) [X]

Key	Name	Value
	<b>STAFF_ID</b>	1
	<b>FIRST_NAME</b>	Mike
	<b>LAST_NAME</b>	Hillyer
	<b>ADDRESS_ID</b>	3
	<b>PICTURE</b>	 BINARY, 36,365 Bytes, image/png
	<b>EMAIL</b>	Mike.Hillyer@sakilastaff.com
	<b>STORE_ID</b>	1
	<b>ACTIVE</b>	true
	<b>USERNAME</b>	Mike
	<b>PASSWORD</b>	8cb2237d0679ca88db6464eac60da96345513964
	<b>LAST_UPDATE</b>	2006-02-15 03:57:16
	<b>BACKUP_ID</b>	2

Format: <Select a Cell>

Close

The **Key** field contains an icon for primary key columns and the **Name** field corresponds to the column name in the grid. None of **Key** or the **Name** fields can be edited. You can edit the values in the form in the same way as you edit values in the grid editor.

The form viewer presents images as thumbnails. The size of these is controlled by the **Image Thumbnail Size** setting in the Tool Properties dialog, in the **General / Form Viewer** category under the **General** tab. To see the original size of an image, open the cell in the cell viewer either by selecting **Edit in Cell Window** in the grid right-click menu, the toolbar button or by double-clicking on the image.

If you want numbers to be right-aligned in the viewer/editor, enable **Right Aligned Numbers** in the **Tool Properties** dialog, in the **Form Viewer** category under the **General** tab.

## Preview Changes

You may preview the SQL statements that will be executed when choosing to **Save** the edits via the **Edit Table Data->SQL Preview** right-click menu choice.

* ADDRESS_ID	ADDRESS	ADDRESS2	DISTRICT	CITY_ID	POSTAL_CODE	PHONE	LOCATION
404	405 530 Lausanne Lane		Texas	135	11067	775235029633	POINT (-96.8
405	406 454 Patiala Lane		Fukushima	276	13496	794553031307	POINT (140.:
406	407 1346 Mysore Drive		Bretagne	92	61507	516647474029	POINT (-4.48
407	408 990 Etawah Loop		Tamil Nadu	564	79940	206169448769	POINT (76.9:
408	409 1266 Laredo Parkway		Saitama	381	7664	1483365694	POINT (139.:
409	410 88 Nagaon Manor		Buenos Aires	524	8688	770461480405	POINT (-59.1
410	411 264 Bhimavaram Manor						POINT (0 0)
411	412 1639 Saarbrücken Drive						POINT (27.2:
412	413 692 Amroha Drive						POINT (80.0:
413	414 1936 Lapu-Lapu Parkway						POINT (0 0)
414	415 432 Garden Grove Street						POINT (-79.4
415	416 1445 Carmen Parkway						POINT (107.:
416	417 791 Salinas Street						POINT (75.9:
417	418 126 Acua Parkway						POINT (88.2:
418	419 397 Sunnyvale Avenue						POINT (-100
419	420 992 Klerksdorp Loop						POINT (5.38:
420	421 966 Arecibo Loop						POINT (67.7
421	422 289 Santo Andr Manor						POINT (0 0)
422	423 437 Chunggo Drive						POINT (-70.6
423	424 1948 Bayugan Parkway						POINT (87.5
424	425 1866 al-Qatif Avenue		California	155	89420	546793516940	POINT (-118

```

SQL Preview
This is a preview of the SQL that will be executed when the table data edit(s) are saved.
1 UPDATE "SAKILA"."ADDRESS" SET "CITY_ID" = 381 WHERE "ADDRESS_ID" = 409;
2 UPDATE "SAKILA"."ADDRESS" SET "ADDRESS" = '1639 Saarbrücken Drive' WHERE
Close

```

The listed SQL statements may not be 100% identical to what is sent to the database, as the save process uses variable binding to pass values to the database.

## View and edit Binary/BLOB and CLOB Data

Due to the nature of binary/BLOB and CLOB data, cells of these types can only be fully modified and viewed in the [Cell Editor](#) (there is partial support in the [Form Editor](#) to view image data and to load from file).

In the grid, Binary/BLOB and CLOB data is by default presented by an icon and the size of the value. You can select another presentation format in the **Tools Properties** dialog, in the **General/Data Formats** category under the General tab. Selecting **By Value** results in performance penalties and the memory consumption increases dramatically.

In the same Tool Properties category, you can also specify how to handle **Copy/Paste and Drag and Drop** when pasting binary data in a target component that doesn't support binary data.

Editing binary data can be done by importing from a file or via the text editor in the [Cell Editor](#). You can also copy the file in the operating system's file browser and paste it into a BLOB/CLOB cell.

Binary data in DbVisualizer is the generic term for several common binary database types:

- LONGVARBINARY
- BINARY
- VARBINARY
- BLOB