Genesys Designer Help

Data Tables

4/9/2025

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Data Tables

A Data Table is similar to a spreadsheet. It is a two-dimensional array that is filled with values that can be read by a Designer application. Each data table has at least one key (primary key) column. The value of the key column is used to look up a row in the table.

Data Tables are useful if you want an application to refer to values that are stored outside of the application, or if you want an application to update values in a table without changing values in the application.

Clicking a Data Table opens it for editing. Hovering on it will let you choose whether to open it in **Edit** or view **Read-only** mode.

> ### Tip
>
> - If another user has a Data Table open for editing (locked), you can still open it for viewing in **Read-only** mode.
> - If you prefer to work on your Data Table in another program, such as Microsoft Excel, you can export the Data Table into a CSV file. See Exporting and Importing Data Tables.
> - You can create and modify Special Days and Business Hours directly from within a Data Table. The changes take effect when you save the table.

Recommendations and guidelines

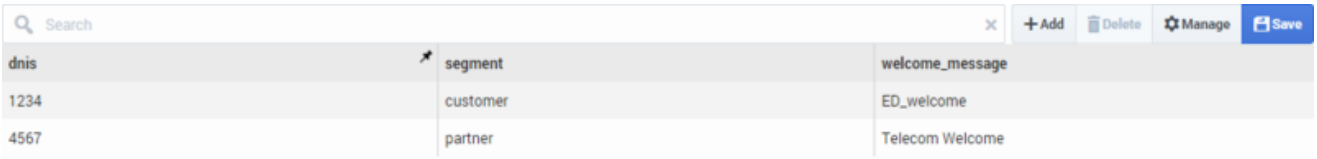
Here are some important things to keep in mind when working with data tables:

- Some browsers might display a script error or temporarily freeze when opening large Data Tables. This is normal, and you can let the script continue or wait for the browser to finish loading the data table.
- Limit the number of rows to 1000 and the total size of the data table to no more than 10,000 cells. If the number of rows is less than 1000, you can increase the number of columns until the 10,000 cell limit is reached. For example, a 200 row table can have up to 50 columns, and a 1000 row table can have a maximum of 10 columns.
- There are limits to how much data can be stored in a data table (a data table is not meant to be used as a full-scale database). Therefore, try to focus more on data that needs to be changed or updated frequently, or are critical to your business.
- Clearly categorize the data that you want to store. For example, if you are storing customer profiles, some various categories could be **Name**, **Address**, and **Phone**. Then you could set up **Name** and **Address** as a *string* data type and **Phone** as a *numeric* data type.
- Clearly define the lookup keys, as these are important for searching for (and locating) the relevant data.

- Note that you can't use a value of "0" (zero) in a numeric or integer key column (this returns a validation error).
- Take advantage of Designer's ability to let you carefully review and verify your changes before committing them to the data table.
- After a data table is published, you cannot change the data types of the existing columns. You can, however, still modify the schema of the data table and change the data types of columns that have not yet been published.

Adding a Data Table

To add a new Data Table, click **Add Data Table** and enter a name for the Data Table. For example, you can create a Data Table to segment customers based on a DNIS key.



After you click **OK**, Designer creates the Data Table and it appears in the Data Tables list.

Next, click your Data Table to open it. Designer prompts you to define a scheme for your new Data Table (for example, the names of columns for your table).

Click **Manage Schema** and configure the following options:

- **Column** - The name of a column to add to your Data Table. For this example, enter `dnis`.
- **Display Name** - Lets you customize how the column name is to be shown in the Data Table (this does not overwrite the actual **Column** value). For this example, enter `Dialed Number Identification Service`.
- **Key?** - If enabled, this column is a key column and is used to look up a row of values. For this example, enable this check box.
- **Data Type** - Specifies the type of value(s) that will be used by this column. Supported data types include **string**, **numeric**, **boolean**, **announcement**, **integer**, **datetime**, **datetimerange**, **skillexpression**, **timezone**, **businesshours**, and **specialdays**. For this example, select **numeric**. (When specifying integer values, the **numeric** data type does support integers, but data table lookups complete faster if you use the **integer** data type for these values.)
- **Description** - An optional description of the column.

Click **Add a column** and add two more columns: **segment** (type is string) and **welcome_message** (type is announcement). Do not enable the **Key?** check box.

When done, click **OK**. You have created a Data Table with a key column of **dnis** and value columns of **segment** and **welcome_message**. Click **Add** to add a row in your Data Table. You can now click the cells under each column to enter values.

Once you have created a Data Table, you can place a Data Table block in an application.

Editing Data Tables

You can change the value of a table cell by clicking on it. As soon as you start editing a cell, the row is automatically selected and the updated text is in blue.

If you expand an updated row, the original values (crossed-out) are shown below the modified cells. This lets you compare the new value to the one that was previously saved.

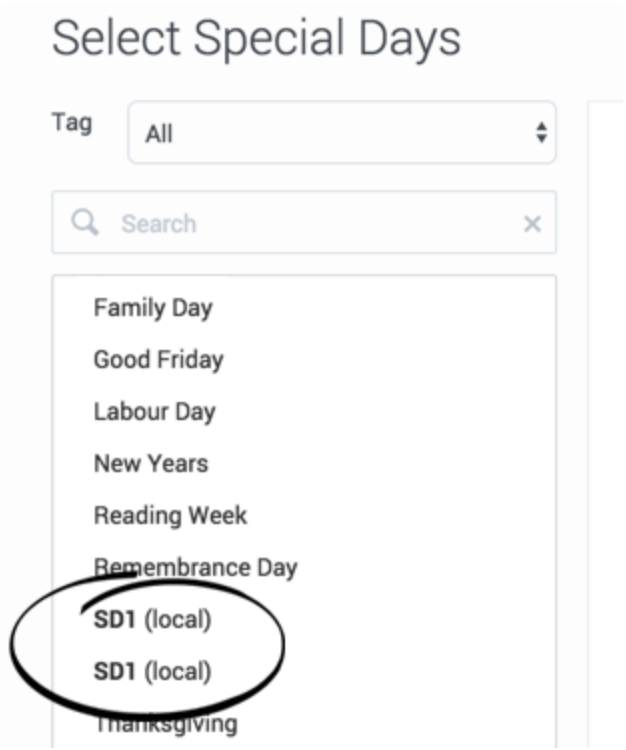
Tip

Looking for something specific in the Data Table?

- Each column has a search box you can use to look for a specific item. As soon as you start typing, Designer hides all other rows except for the ones that contain matches to what you have entered.
- At the bottom of the page, there is a **Row Count** box you can use to jump directly to a specific row number.

You can also create and modify Special Days and Business Hours directly from within a Data Table. The changes take effect when you save the table.

Note that if you add new Business Hours or Special Days to a data table (for example, you click a cell under a Special Days column and the Select Special Days picker opens), the new business object is *local* only to that data table — that is, it won't show up in the *global* Special Days list and be available to other data tables. Local business objects are in **bold** and have (local) beside them.



Adding and Removing Rows

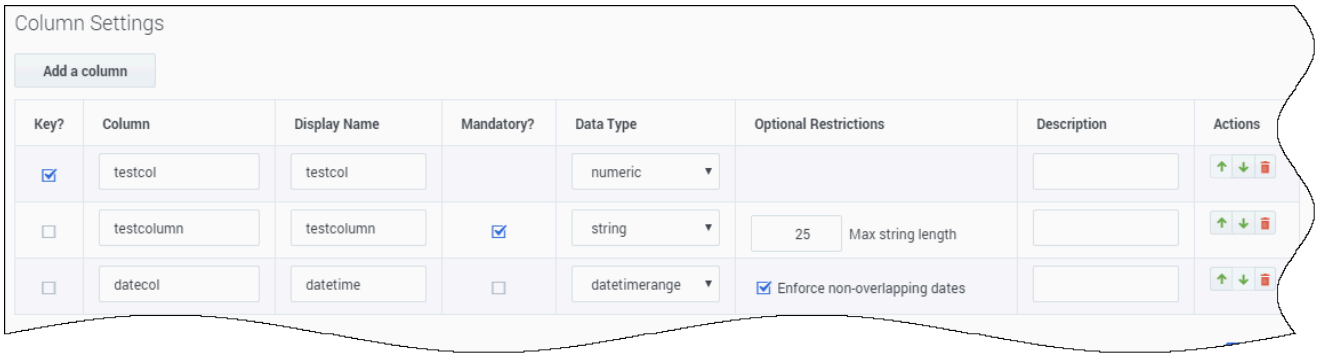
To add a row, click **Add Row**. To remove a row, select it and click **Mark For Deletion**. Any rows that you mark for deletion are removed the next time you save the table.

Changing Column Settings

To make changes to the columns, click **Column Settings**. You can add new columns, or update the properties of existing columns. For example, you can update the **Display Name** of a column, indicate if it is mandatory, or specify any **Optional Restrictions** for that particular data type, such as a maximum string length (for **string**) or whether to enforce non-overlapping dates (for **datetimerange**).

Use the options under **Actions** to change a column's position in the grid or delete it.

> ### Important
> If you change the data type of a column, make sure that after saving the data table, you refresh or reload the page before entering or editing any cell values. Otherwise, the cell values under the modified columns might not display correctly. **After a data table is published, you cannot change the data types of the existing columns.** You can, however, still modify the schema of the data table and change the data types of columns that have not yet been published.



Reviewing Your Changes

At the bottom of the data table, a color-coded counter keeps track of the number of rows you have added, modified, or marked for deletion.

To view only the rows that were added, changed, or marked for deletion, check the **Show Modified Rows Only** box. Uncheck it to go back to editing mode.

You can also review changes to local business objects by clicking **Display Business Object Diffs** and selecting **Business Hours** or **Special Days**. You can then select an item from the list to view the original version side-by-side with the revised version. On the original version, edited properties are highlighted in red to indicate edits and deletions. On the revised version, edited properties are highlighted in green to indicate edits and additions.

Saving and Publishing

When you are ready to commit your changes, click **Save Table**.

> ### Important
> Make sure to review your changes! After you click **Save Table**, the changes can't be undone.

When you save the data table, Designer validates your changes and lets you know if there are any errors. Canceling discards all unsaved changes and restores the table back to its previously-saved state.

> ### Tip
> When saving a data table, you might see some of the values (particularly for Business Hours or Special Days) suddenly change to "N/A". This is just temporary, and the correct values will appear after the save operation completes.

Saving a data table only preserves the changes you have made. To activate the changes in the live production environment, click **Publish**. After you publish the data table, the applications that reference it have access to the latest changes.

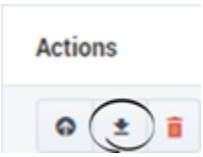
Exporting and Importing Data Tables

You might prefer to use another program, such as Microsoft Excel, to edit Data Table values. If so, you can export a Data Table from Designer into a CSV file that can be edited in Excel. When you are done, you can import the edited CSV file into Designer.

> ### Warning
> When importing the edited CSV file, do not change the schema (structure) of the data table in Designer. The data table schema must remain unchanged between the export and the subsequent import. Otherwise, the import will fail.

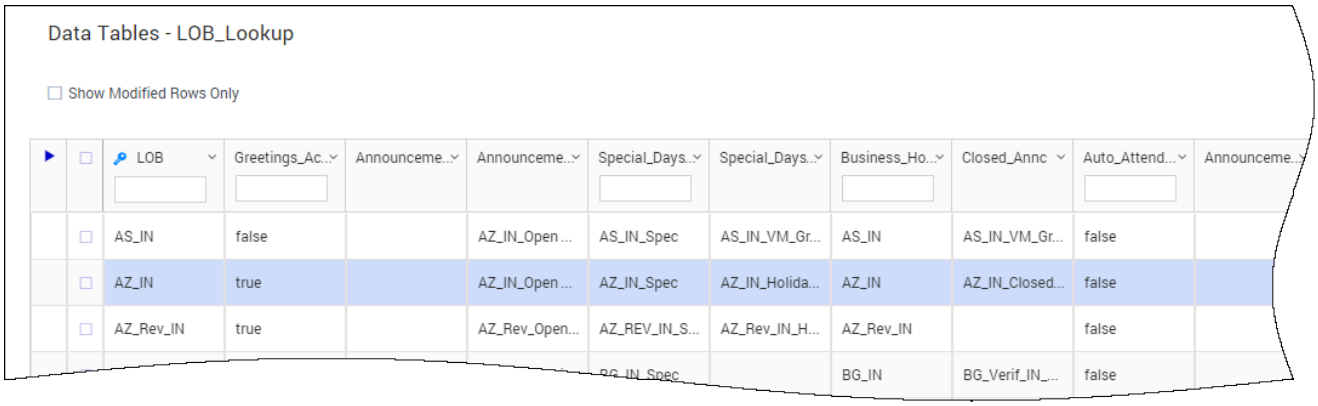
Export

Click **Export** in the **Actions** column to export a Data Table from Designer into a CSV file.



Below is a sample Data Table, its generated CSV file, and the CSV file in Microsoft Excel.

Data Table



CSV File

Here is how the row that is highlighted above would appear in the exported CSV file:

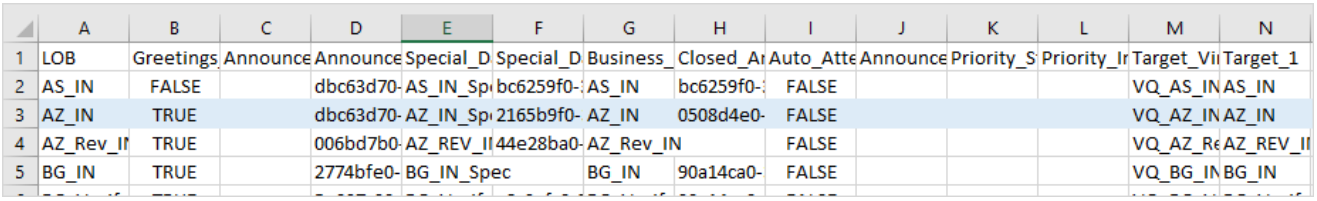
```
AZ_IN,true,,dbc63d70-37d6-11e6-a888-e53edc8cf09b,AZ_IN_Spec,2165b9f0-37d7-11e6-a888-e53edc8cf09b,AZ_IN,0508d4e0-37d7-11e6-a888-e53edc8cf09b,false,,,,VQ_AZ_IN,AZ_IN,30,AZ_IN,30,,,true,EstimatedWaitTime,78e070d0-37d7-11e6-a888-e53edc8cf09b,a38864a0-37d7-11e6-a888-e53edc8cf09b,,true,false,,Arizona_IN_transaction,e5ffb100-37d5-11e6-a888-e53edc8cf09b
```

Note that some of the items are represented by their resource ID and not their actual name. For example, the audio resource *AZ_IN_Open Greeting* appears as "dbc63d70-37d6-11e6-a888-e53edc8cf09b". This ensures that the correct resource is being referenced (names of resources can be changed, but their assigned resource IDs always remain the same).

> **Tip**
>
> Items in CSV files are separated (or delimited) by commas. If you need to use a comma within a value (such as for the text in a script dialog) you must enclose it in double-quotes (","").

Data Table in Microsoft Excel

Here is how the CSV file appears when viewed in a program like Microsoft Excel:



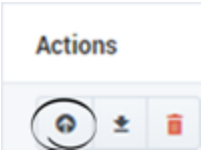
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	LOB	Greetings	Announce	Announce	Special_D	Special_D	Business_	Closed_Ar	Auto_Atte	Announce	Priority_S	Priority_Ir	Target_Vi	Target_1
2	AS_IN	FALSE		dbc63d70-	AS_IN_Sp	bc6259f0-	AS_IN	bc6259f0-	FALSE				VQ_AS_IN	AS_IN
3	AZ_IN	TRUE		dbc63d70-	AZ_IN_Sp	2165b9f0-	AZ_IN	0508d4e0-	FALSE				VQ_AZ_IN	AZ_IN
4	AZ_Rev_I	TRUE		006bd7b0-	AZ_REV_I	44e28ba0-	AZ_Rev_IN		FALSE				VQ_AZ_Re	AZ_REV_I
5	BG_IN	TRUE		2774bfe0-	BG_IN_Spec		BG_IN	90a14ca0-	FALSE				VQ_BG_IN	BG_IN

After you have edited the CSV file, you can import it into Designer.

> **Tip**
>
> While you can edit any item listed in the CSV file, it is more practical to edit items referenced by resource IDs from within the actual data table.

Import

Click **Import** in the **Actions** column to import a CSV file into a data table.



Important

- Import is disabled for data tables that contain **menu** data types. If you do not see the **Import** icon in the **Actions** column for a data table, it indicates that the data table is using the **menu** data type.
- If you are importing a CSV file into an empty data table, Designer designates the first column as the key column.
- If you are importing a CSV file into a populated data table, you must ensure the CSV file and the data table use the same table headers. If the headers do not match, Designer displays an error.