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Warning: This documentation is for a pre-release version of pgAdmin 4

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Exclusion Constraint Dialog

Use the *Exclusion constraint* dialog to define or modify the behavior of an exclusion constraint. An exclusion constraint guarantees that if any two rows are compared on the specified column or expression (using the specified operator), at least one of the operator comparisons will return false or null.

The *Exclusion constraint* dialog organizes the development of an exclusion constraint through the following dialog tabs: *General*, *Definition*, and *Columns*. The *SQL* tab displays the SQL code generated by dialog selections.

The screenshot shows the 'Create - Exclusion constraint' dialog box with the 'General' tab selected. The 'Name' field contains 'ex_c_orders'. The 'Comment' field is empty. At the bottom, there are buttons for 'Cancel', 'Reset', and 'Save', along with information and help icons.

Use the fields in the *General* tab to identify the exclusion constraint:

- Use the *Name* field to provide a descriptive name for the exclusion constraint. The name will be displayed in the *pgAdmin* tree control.

Click the *Definition* tab to continue.

The screenshot shows the 'Create - Exclusion constraint' dialog box with the 'Definition' tab selected. The 'Tablespace' dropdown is set to 'pg_default'. The 'Access method' dropdown is set to 'btree'. The 'Fill factor' field is empty. The 'Deferrable?' and 'Deferred?' checkboxes are both set to 'No'. The 'Constraint' field is empty. At the bottom, there are buttons for 'Cancel', 'Reset', and 'Save', along with information and help icons.

Use the fields in the *Definition* tab to define the exclusion constraint:

- Use the drop-down listbox next to *Tablespace* to select the tablespace in which the index associated with the exclude constraint will reside.

- Use the drop-down listbox next to *Access method* to specify the type of index that will be used when implementing the exclusion constraint:

- Select *gist* to specify a GiST index.
 - Select *spgist* to specify a space-partitioned GiST index.
 - Select *btree* to specify a B-tree index.
 - Select *hash* to specify a hash index.
- Use the *Fill Factor* field to specify a fill factor for the table and associated index. The fill factor is a percentage between 10 and 100. 100 (complete packing) is the default.
- Move the *Deferrable?* switch to the *Yes* position to specify that the timing of the constraint is deferrable, and can be postponed until the end of the statement. The default is *No*.
- If enabled, move the *Deferred?* switch to the *Yes* position to specify the timing of the constraint is deferred to the end of the statement. The default is *No*.
- Use the *Constraint* field to provide a condition that a row must satisfy to be included in the table.

Click the *Columns* tab to continue.

The screenshot shows the 'Create - Exclusion constraint' dialog box with the 'Columns' tab selected. The dialog has four tabs: General, Definition, Columns, and SQL. The 'Columns' tab is active, showing a table with the following columns: Column, Operator class, DESC, NULLs order, and Operator. The 'Column' column has a dropdown menu showing 'o_ord...'. The 'Operator class' column has a dropdown menu showing 'varchar_ops'. The 'DESC' column has a dropdown menu showing 'ASC'. The 'NULLs order' column has a dropdown menu showing 'FIRST'. The 'Operator' column has a dropdown menu showing '<'. Below the table, there is a section labeled 'Include columns' with a text input field containing 'x_o_custkey'. At the bottom, there are buttons for 'Cancel', 'Reset', and 'Save'.

Use the fields in the *Columns* tab to specify the column(s) to which the constraint applies. Use the drop-down listbox next to *Column* to select a column and click the *Add* icon (+) to provide details of the action on the column:

- The *Column* field is populated with the selection made in the *Column* drop-down listbox.

- If applicable, use the drop-down listbox in the *Operator class* to specify the operator class that will be used by the index for the column.
- Move the *DESC* switch to *DESC* to specify a descending sort order. The default is *ASC* which specifies an ascending sort order.
- Use the *NULLs order* column to specify the placement of NULL values (when sorted). Specify *FIRST* or *LAST*.
- Use the drop-down list next to *Operator* to specify a comparison or conditional operator.

Use *Include columns* field to specify columns for *INCLUDE* clause of the constraint. This option is available in Postgres 11 and later.

Click the *SQL* tab to continue.

Your entries in the *Exclusion Constraint* dialog generate a SQL command (see an example below). Use the *SQL* tab for review; revisit or switch tabs to make any changes to the SQL command.

Example ¶

The following is an example of the sql command generated by user selections in the *Exclusion Constraint* dialog:



The example shown demonstrates creating an exclusion constraint named *exclude_department* that restricts additions to the *dept* table to those additions that are not equal to the value of the *deptno* column. The constraint uses a btree index.

- Click the *Info* button (i) to access online help.
- Click the *Save* button to save work.
- Click the *Cancel* button to exit without saving work.
- Click the *Reset* button to restore configuration parameters.

