

# User reference



### Cellset constant

The constant defined in the Cellset Constant can only be available to a cellset file and saved in this cellset file.

# **Cellset description**

It describes the usage, function, and other information of cellset file to facilitate the maintenance by developers.

# Cellset password

Set password for cellset file through this menu item.

# **Check points**

Display control point

# Check update

Check whether the current version is the latest version and necessity to update.

### **Console**

Check the log information of system background, in which there is some error information of operations to facilitate the user debug. For example, if Tool -> Options -> General - Takeover Console is not selected, then this menu will not appear.

### Console takeover

It sets whether write the running esCalc log to the console. If this property is not checked, then the Tool – Console menu will be unavailable. If checked, then user can open the console to review the system log information through the Tool –> **Console** menu.

Compared with DOS window, the console has the advantage of providing the relatively comprehensive logging information and not requiring the overwriting due to the too many

contents. In addition, the copy & paste is much more convenient.

### Visual indicator for related cells

A related cell is the cell in which the esCalc formula is starting with two equal signs "==". It is clearly indicated by a little blue triangle on its bottom right corner.

### Enable the direct edit in cell

This option is used to control the direct edit in cell. If the option is not checked, users are only allowed to edit the cell value from the property menu on the right side.

# Contents outflow cells is displayed

It indicates whether contents can overflow the cell display when they are too many to hold in the cell of the current size completely. If this property is checked, then the contents will extend and burst through the right side of the cell to display fully when the contents in cell cannot be displayed in the current cell. If this property is not checked, then the contents in the cell will be auto wrapped when the contents in cell cannot be displayed completely in original style. However, not selected this property, users may still need to resize the cell when lower part of contents are not displayed completely.

# Enclose object name in quotes

It indicates whether to use the quoted SQL.

# Logging of exceptions

It indicates that the error information will be printed out directly from the background window or written into the log file when encountering exceptions in the cellset file calculation. With this property is selected, error information will be written to the log file. Otherwise, error information will not be written to log file.

### The limit of database records

Query the maximum number of records in database, with -1 represents the infinite great.



# Log level

Logging level for background printout

The logging level can be set as OFF, ERROR, WARN, INFO, DEBUG, and ALL in the descending order of priority. If the logging level is OFF, then no logging information will be output. If the logging level is INFO, then only the information with the ERROR, WARN, INFO, and alike levels of priorities.

# Addressing path

Specify the relative path of some files referenced in the cellset. You can set multiple **addressing paths** separated with semicolon.

### **Batch size**

The maximum number of executions to commit to the database. If it is less than 1, then it will be regarded as one in handling.

# Qualify object with schema

To indicates whether any table name with model name heading the data table name, for example, dbo.employee

# Register forum account

It is for users to register with forum.

# Registration

By default, the installer is the free edition of esCalc. To run the other edition of esCalc, setting the registration code is required. For the difference between various editions and how to get registration code, please refer to the official website.

#### Scan

Type the registration code, and click **Scan** button to check the registration information. If the registration code is correct, then you can register through the **Register** button.



# Open file in other format

Create a new calculation cellset, and import data from text file, Excel file, or database, data network file, and data logic.

### TXT with header

The first row of text will be taken as header and placed in the row at level 0. The other row will be placed in the homorow at level 1.

### TXT without header

All rows in the text will be placed in the homorows at level 1.

### Excel with header

The first row of Excel file will be taken as header and placed in the rows at level 0. Other rows will be placed in the homorows at level 1.

If there are multiple sheets in the Excel files, then it will be imported automatically to multiple calculation cellset.

### Excel without header

In Excel file, all rows will be placed in the homorows at the level 1.

If multiple sheets exist in the Excel file, then it will be auto-imported to multiple calculation cellsets.

### Load from database

Retrieve a table or a query result of a SQL statement from a database to a cellset

# Copy

[File] - [Deplicate], Make a copy of the currently opened calculation cellset.

### Page setup

Set related properties of print and pagination.



### **Select Homocell**

Select out all homocells of specified cells in the current work scope, and you can act on the selected cells concurrently, for example, clear the cell value.

If the work scope is not set, then it will be regarded as selecting homocells in the whole cellset.

### Copy

【Edit】-【Copy & Paste】-【Copy】,Copy the data from the specified cells to paste it to other positions of this cellset, other cellsets, or text files.

If selecting **Paste** and pasting to other positions or calculation cellsets, then the cell to copy must be the continuous cells in the same band at the same level. If selecting **Paste** option and paste it to other locations in the cell or other calculation cellset, then the copied cells must be the continuous cells in the same bands at the same level.

# Homocell copy

Copy all homocells of the specified cell in the current work scope. Users can copy the data in the homocell and paste them to the specified position of this cellset, to other calculation cellset, or to the text file

If not setting the work scope, then it will be regarded as the homocell copy of the whole cellset.

### **Paste**

It will paste the String and property of cells copied from the specified cell to the target cell in proper order. If any expression in the cell, then it will adjusted and pasted according to the Excel rule. Users can paste across cellsets.

The normal paste action does not support for the **homo-copy**.

# Homocell paste

Starting from the specified cell, paste the data to the cell one by one. If there are multiple data rows, then paste them to all homorows following the current row in proper order. If there is not enough homorows, then bands will be appended automatically to the last parent band according to the number of data rows. The homocell paste action has nothing to do with the settings in the work scope. To paste multiple columns of data to the insufficient columns in the Cellset section, a window will prompt the user to choose whether to add column.

The homo-paste action is to only paste the cell value instead of property.



# **Band paste**

Add new band before the currently selected band, and set the copied data into the band one by one. Only the cell value instead of the property will be copied.

Keep a record of the data copied for band pasting. They can be copied from cellset or external files, such as Txt, Excel, or database browser.

# Merge

The cell to merge must be contained in the bands of the row in which this cell is located. In addition, for all homocells of any row of cell to merge in this band, they must be also contained in the cell to merge.

### **Cell format**

Set the display format of cell content

# Tip

It describes the information in the cell.

If the mouse hovers above a cell with tips, then the tips set for the cell will appear next to the cell to which the mouse is pointing.

#### Clear value

Set the cell value of selected cell to blank.

When clearing the cell value, the cell value in the constant cell will be set as blank. No calculation will be performed any more, unless the formula is modified; The related calculation cell will be converted to the instant calculation cell immediately, and the cell value will be set to null. No calculation will be performed any more, unless the formula is modified.

You can also clear the selected chart by clearing the cell value.

### Clear formula

Clear the expression of selected cells.

When clearing the expression, different settings will lead to different result of operation. In the **Options** window, there is an option of **Auto clear cell value when clear expression.** If this option is checked, then the cell value clearing action will be performed when clearing the formula. Otherwise, the current cell value will be kept, and only clear the formula.



### Fix header

Fix the row above the selected cell as the top header, and the column on the left as the left header. When scrolling the scroll bar, these headers are fixed.

The upper header can only be the row at level 0 above the row at level 1.

### Zoom

It refers to the display scale of Grid section and Hierarchy section of the current calculation cellset.

# To top

Place the selected chart at the top level of all charts

### To bottom

Place the selected chart at the bottom level of all charts

# **Graph property**

For the inserted chart, set the type of statistics chart, data, graph property, display appearance, and other properties.

# Plot top n Categories

Sometimes, there are many data categories of statistics chart, and the chart is a bit too clustered, which results in a rather poor readability. Therefore, the best practice is to take the top categories to plot the chart. In case that the number of pie charts is great, and the categories are too many, then the pie chart suffers from the poorest readability.

When only using the top n categories to plot chart, to ensure the data integrity, the system will consolidate the remaining data to the "Others" as individual category to display.

# **Category**

Specify the cell in which any category is located. The cell value of homocell of this cell will be taken as the category of statistics chart. For example, if based on regional sales statistics, then the category is the cell where the region is located; if statistics is made on the basis of grade, then the



category is the cell where the grade is located.

#### Series

It specifies the cell in which a series is located. The cell value of homocell of this cell will be taken as the series of statistics chart. For example, to make statistics on the quarterly sales amount by region, the series is the cell where the quarter is located; to make statistics on the number of students in each class by grade, the series is the cell where the grade is located.

### **Value**

The chart value refers to the statistics to be presented by the chart. Given the cell in which any statistics is located, the cell value of homocell of this cell will be taken as the statistics value of the chart.

If the series is blank, then a category corresponds to a chart value. If not blank, then a series under a category corresponds to a chart value.

For example:

To present the sales amount in each region, the category is the cell where the region is located, and chart value is the cell where the sales amount is located. In this case, each region corresponds to a sales amount. If there are any more detailed and refined groupings under each region, then multiple sales amounts will exist for each region, and chart plotting will be performed according to the first sales amount under the corresponding region. Therefore, in this case, the cell of chart value should not be the cell in which the sales amount is located, but the cell in which the summarization of sales amounts of each region is located.

To present the quarterly sales amount of each region, the category is the cell where the region is located, and the series is the cell where the quarter is located, and the chart value is the cell where the sales amount is located. In this case, each quarter in each region corresponds to a sales amount.

# Curve type

When selecting curve diagram as the type of statistics chart, you can set the type of curve diagram. esCalc provides three types of curves, namely, Lagrange, Arekma, and cubic spline.

# **Border Style**

Type of border style of the full image zone

### **Border Width**

Thickness of border around the full image zone



### **Border Color**

Color of border around the full image zone

### **Has Shadow**

It sets the shadow of border around the full image zone

# **Background image**

It is the background image of statistics chart. You can specify the location of background image through the URL or file path.

### **Chart Title**

Title of statistics chart refers to the text title of statistics chart, usually displaying on the top of chart.

### X Axis Title

X Axis Title indicates the text title on the horizontal axis coordinates, usually displaying under the coordinate axes.

### **Y Axis Title**

Y Axis Title refers to the text title on the vertical axis. It is usually displayed on the left of coordinate axes, and capable to display horizontally or vertically.

### **Format**

The export of statistics chart supports for the four graph format, namely, JPG, GIF, PNG, and SVG.

# **Display Data**

The three options of data identification, with/without, statistics, percentage. The percentage option is only valid for the pie chart.



# Line Weight

It is the thickness settings of lines in the statistics line chart and dual axis line chart. The granular size of data point will change along with the thickness of line.

# **Style**

It is the type of line in the line chart and dual axis line chart.

# **Display Data Format**

To identify the data in the chart, the format of the data must be defined. For example, to display temperature in the chart, the data format can be set to ##  $\mathbb{C}$ .

# **Bar Or Column Space**

Spacing between columns of column chart or bar chart

# Min/Max/Y Lable Interval

Sometimes, the statistics value of chart is very great, while the difference between the category data and the series data is comparatively smaller. In order to clearly identify the difference between different categories and series, usually, a certain data area in the chart will be locally enlarged. Therefore, it is required to define the start value, end value and the label spacing of statistic values.

The three properties of start value, end value, and statistics value label spacing must be all set to take effect.

#### Unit

To set the unit of measurement of statistics vale, availability of zoom in/out, auto calculation, thousand, 10 thousand, million, 10 million, 100 million, billion, percentile, one thousandth, one ten-thousandth, millionth, and other options.

### Minimal Value Mark No.

It is the minimum number of scale of statistics value displayed on the number axis.



# **GridLine Style**

GridLine Style refers to the style of scale marks on the statistics chart. Users can choose to hide the scale mark.

# Space between Title and Figure

It is the space between graph area and title.

### X Lable Interval

It is the space between each category Axis label.

### **Mark Data**

They are the box and the round spot to indentify the data in the Line chart. This property is only valid when the type of statistics chart is the line chart. Once this property is set, there will be a mark point on the line corresponding to each category label.

### **Draw Line Trend**

It indicates whether to mark the tendency of prior and post data position change in the line chart.

### **Ignore Null**

It indicates whether to contain the band whose value is null in the statistics chart.

# **Overlap**

It indicates whether to display the latter value or label when the neighboring numeric values or labels are overlapped.



### **Cutted Pie**

It sets whether to separate a sector of the pie chart for display

### Gradient

It indicates the requirements on the color gradual change of graph.

# **Transparent**

It sets whether the chart needs the transparency effect. This option is mainly aimed to the 3D chart.

### **Shadow**

Whether to mark shadow for the statistics chart.

### **Raised Border**

In the statistics charts like column chart, it sets their borders of statistics prominent.

# **Discard Other Category**

For details, please refer to "Plot top n Categories".

# Warning line

As for the column chart and line chart, it is allowed to set the alert line. When the statistics value is equal to or greater than the value of alert line, then the alert line will be marked with the defined color and the style of alert line. Users can add multiple alert lines, each one representing the name, alert vale, line, color, thickness, and other properties of the alert line.

### Canvas Color

Background color of full-sized image zone



# **Chart Background**

Set the background of graphic zone.

### **Axis Color**

Set the color for the axis line, legend border, column chart border, and leading-out line of pie chart.

### **Grid line Color**

Set the color of grid line. Only if the with grid line option is selected can you set the color for it.

# **Legend Position**

Set the position of legends on the statistics chart. There are five options available: top/down/left/right.

# Legend On serial

In the normal conditions, legends are drawn based on the series. But when it comes to the single series, the legend will be drawn according to series if this option is selected. Otherwise, the legend will be drawn according to the category axis.

# Left Margin/Right Margin/Top Margin/Bottom Margin

It sets the positions of statistics chart in the full image zone.

# **Tick Length**

It sets the length of scale on the coordinate axes.

### 3D width

It sets the percent of the width of 3D axes out of that of series.



# **Category Gap**

It sets the percent of the category spacing out of the width of series.

# **Series Gap**

It sets the percent of the series spacing out of the series depth, and is only valid to the 3D column chart.

### Pie Rotation

Set the percent of the vertical axis of pie chart out of the length of horizontal axis.

# Pie Height

Set the percent of the height of pie chart out of the radius.

# **Font Setting**

Settings include the title, horizontal axis, ordinate axis title, label, font, color, size, and angle of rotation properties.

# Append sub row

Add a sub row for the current row. If the current row have got any sub row, then the former sub row will be demoted a level to become the sub row of the newly-added sub row.

### Dismantle master row

Remove the master row having slave row but not the sub row. The sub row of the current row will be promoted to that of its parent row.

### Insert slave row

Add the slave row of the current row before it.



# Append slave row

After the current row, the slave row of the current row will be added to all descendent row of the current row. All descendent rows of the current row will be converted to the descendent row of the new slave row.

### Remove slave row

Delete the slave row along with its descendant row. Once the master row is deleted, the next slave row will take its place as the master row.

# Dup slave row

Copy the current row and its descendent row, and add them before the current row as the slave row of the current row.

# Move slave row up

Move up the slave row and its descendent row, and spanning over the bands of its parent row is not allowed.

### Move slave row down

Move down slave row and its descendent row, and spanning over the bands of its parent row is not allowed.

# Set/Cancel master cell

Set the cell as master cell or remove the settings of master cell.

### Insert column

Insert a column before the selected column. The property of cells in each row of the new column is the same to that of the selected column. When selecting multiple columns at the same time, multiple columns will be inserted at the same time.



### Remove column

Remove the selected column. If multiple columns are selected, then they will be removed at the same time.

# Append column

Append one column after all columns. The properties of cells in each row of the new column are the same to the selected column. If multiple columns are selected at the same time, then multiple columns will be appended concurrently.

#### Column shift left

Shift a selected column to the left by one column. Keep the original property of each cell in the column unchanged. As a result, the column width will still remain the same.

# Column shift right

Shift a selected column to the right by one column. Keep the original property of each cell in the column unchanged. As a result, the column width will still remain the same.

#### Insert cell before

Insert a blank cell at the position where the selected cell is located, and move the cells on the right of this row rightward by one cell from this blank cell. Same operations will be applied on all homorows of the current row. If there is any value in the last cell of a certain row of these homorows, then a blank column will be added to the end of cellset, and then move every cell rightward.

#### Insert cell behind

Insert a blank cell on the right of the selected cell, and move the cell on the right in this row rightward by one cell, starting from the cell immediate next to it on the right. The same operations will be conducted on all homorows of the current row. If there is any value in the last cell of a certain row in these homorows, then firstly a blank column will be appended to the end of the cellset, and then move each cell rightward.



### Remove active cell

Remove the selected cell and its homocell. The cell on the right will move leftward to make up the blank. A blank cell will be appended to the end of this row and its homorow, while the cell in the non-homorows will not be affected. After removing the current cell, the number of columns in the calculation cellset will not be affect.

### Remove left cell

Remove the cell on the left of the current position and its homocells. Starting from the cell on the immediate right to the current cell, move all cells leftward to fill up the blank. This row and its homorow will be appended with a blank cell at the end of it, while the cell in the non-homorow will not be affected. After removing the cell on the left, the number of columns in the calculation cellset will not be affected.

### Move cell left

For the homocells in a same range, move the cell to the left, swap its position with its homocell on the left, and keep the original property of cell unchanged.

# Move cell right

For the homocells in a same range, move the cell to the right, swap its position with its homocell on the right, and keep the original property of cell unchanged.

# Move cell up

For the homocells in a same range, move the cell up, swap its position with its homocell above, and keep the original property of cell unchanged.

### Move cell down

For the homocells in a same range, move the cell down, swap its position with its homocell below, and keep the original property of cell unchanged.

# **Insert graph**

Insert a chart to the current calculation cellset, and present the data in the calculation cellset



through the statistic chart. Multiple charts can be inserted into one calculation cellset file.

### Add sub band

For all parent row having any sub row, Add a blank band that is homo to its sub row.

### **Insert band**

Before the current band, add the blank homo-band of it.

# **Append band**

After the current band, add the blank homo-band of it.

# **Dup band**

Copy the selection bands and insert.

### Remove band

Remove the selected band.

# Merge band

It is to perform the homo-merge action on the sub bands of several continuous bands and only keep the first master band.

# Move band up

Move up the selected bands, and spanning over the band of its parent row is allowed.

### Move band down

Move the selected band down, and spanning over the band of its parent row is allowed.



### Hide band

Hide the selected band.

### Show band

Display the hidden band in the band in which the selected row is located.

### Homocell insert

Insert the blank cell at the position where the selected cell is located. Then, move down the former cell value of homocells starting from this blank cell in the work scope in proper order. After the work scope, a new homoband will be inserted, and in its homocell place the original value of the last homocell in the work scope. When operating, the selected cell must be in the same band and they must be the continuous cells at the same level.

### Homocell delete

Delete the value of selected cell, and move up the former cell value of homocell following it in the work scope one by one. The cell selected when operating must be the continuous cell at the same level and in the same band.

# Copy to homocell

Copy the value in the selected cell to other homocells in the work scope. The cell selected when operating must be the continuous cell at the same level in a same band.

### Recalculate cellset

If the **Auto-calculate Cellset** option on the **Option** menu is not checked, then start the calculation on the instant calculation cell and related calculation cell through the **Recalculate Cellset** instruction. Otherwise, no auto calculation will be performed. The instant calculation cell will be calculated for only one time. The related calculation cell will be recalculated each time the instruction is calculating.

### Expand

Select several cells whose values are set, copy them to band according to their value for



several times, split the cell value of set to each band, and homocell will be expanded synchronously.

#### Locate

Cursor will be located in the homocell meeting specific conditions.

### All select

If selecting all, then all homocells meeting the conditions will be selected. Otherwise, only one cell will be selected, and the cursor will move to the first homocell meeting the condition.

#### Locate

If the circular locating is not set, then the locating will stop once the homocell in the highest or lowest position is reached in the direction of locating. Otherwise, locating will be carried on circularly.

#### **Filter**

It is to specify a cell value to filter at its parent level.

The filter operation will judge the data in all homocells, and remove or hide the bands where the homocells not meeting the conditions are located.

#### Distinct

It aims to a certain cell value at parent level to perform the distinct action.

### Sort

It aims to some cell values to sort at the parent level.

### Group

It specifies a certain cell to perform the equal group and newly add the grouping level. The rows at the grouping level are the newly added rows. Various properties of every cell are all the initial properties. In the grouping row and the cell in the same column to the selected cell, set the grouping value in it, and this cell will be set as the master cell.



# Sort before group

It indicates to sort by the specified cell value, and then group. Otherwise, for those neighboring bands with the same specified cell value, only group them to a same group. If the work scope is specified, then only sort in the work scope and the work scope for the grouping operation is still the whole cellset.

# Regroup

According to the specified cell value, delete the parent level of this cell, union the descendent row of each parent row, and then group. Use the structure of former parent level to generate the grouping band. When regrouping, the group value of parent row will not be set automatically, and the master cell of the former parent row will not be changed. Users need to modify it manually.

# Align

It aims to a certain value to align by specified constant sequence. For multi-level sequence, use the master cell value to categorize.

# Align sequence

When defining the single-level align sequence, each member takes one row.

When defining the multi-level align sequence, use the Tab to separate the settings between two levels, and each member takes one row.

### **Bottom level**

When setting multi-level align sequence, select the lowest level of align sequence used during the align operation.

# Align with sequence

It indicates that the band at the selected level will be sorted by the align sequence. If any sub band in the band, then the sub band will be moved along with it.



### Retain all band

It will place the bands whose selected cell values are not in the align sequence to the tailing position. Otherwise, these bands will be removed.

# Complete with sequence

If any blank group, then create a new null band to fill the blank. Otherwise, this blank group will not appear.

# Join

It is to join the homocell values of multiple cells at the same level, including the master cell, with the master cell of the target band, and fill into the specified cell area of the target band. Categorize by the master cell value at parent level of both cells.

# Union(Multi-level union)

Select band and copy it to the target band area of the homo-structure (include sub band), merge according to the value of master cell, and categorize according to the value of master cell at parent levels of both parties.

### **Union all**

The selected band, including all sub-bands, will all be copied to the position following the target band.

### Union

According to the judgment on the master cell at multi-levels, only copy those not in the target band area.

#### Annex

Paste the continuous slave rows and its descendent rows of a band to the cellset to become the new row at level 0.



### Cellset code table

The code table is a TSeq comprising two column: the first column contains the code value, and the second column is the display value, separated with TAB between the two columns. If the property of code table is set for a certain cell, then this cell will go through the process of converting from the code value to display value according to the code table when displaying.

It is only available and saved in this cellset file.

#### Environment code table

Usage of global code table differs from that of the local code table. The difference is that the environment code table is shared in the whole calculation cellset.

# Without having to connect the official website

With this control point, users are not required to connect to the official website. Otherwise, the IDE will not be launched if disconnected to the official website.

### For full control

It is the highest level of access in esCalc. Users with this access can perform any actions on the cellset file.

For the cellset opened with a password of this level of access, any password can be nullified or reset by users with a password of the corresponding level.

If the password is blank, then the coded lock at this level will be in the unlocked state.

# For editing

It is a relatively high level of access in esCalc. Besides the permission to write and fill, users can perform additional actions on the band in the cellset. However, they can neither change the band structure, nor modify the cell property.

For the cellset opened with a password at this level of access, any password at a level equal or lower than it can be nullified or reset by users with a password of the corresponding level.

If the password is blank, then the coded lock at this level will be in the unlocked state.

### For fill in

It is the relatively low level of access in esCalc. Besides the permission to browse, users can modify or delete the cell values.



For the cellset opened with a password at this level of access, any password at a level equal or lower than it can be nullified or reset by users with a password at the corresponding level.

If the password is blank, then the coded lock at this level will be in the unlocked state.

### For view

It is the lowest level of access in esCalc. Users with this access can view the cellset description and cell tips, but they cannot modify these data. With the permission to browse, users can calculate the cellset, and check the result in each cell and the style of presentation of each cell. However, they cannot view any property in the cell.

The access of this level is the lowest level. Therefore, for the cellset opened with a password at this level of access, users can only nullify or rest the password at this level of access.

When the password is blank, then the coded lock at this level is in unlocked state.

### **Validation**

If users have the permission to fill in or edit, then they are all allowed to edit the cell values. To steer clear from such situation of unacceptable data input, the input checking expression can be set in the cell to prompt the relevant text warnings on entering the unacceptable cell values.