

TEAM DEVELOPER™

New & Changed Features

Product Version 7.4.3

Team Developer™: New & Changed Features

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SAL API

- SalObjCopy is modified to handle UDV's inherited from the same base class.
- xmllib.apl is modified to generate a Standalone XML document attribute only when its value is "yes". The default value is set to "no".

UX

- There are several changes to the DateTime picker control. Time Only mode does not display the Calendar dropdown button and its Date is always 1899-12-30. Date Only mode returns 00:00:00 as the time portion.
- The data start position for the Pie and Doughnut chart is changed to 12 O'clock from 3 O'clock.

CDK

- cdkOperation functional class and AddOperation function of cdkClass are included to the add Operation of the Web Service class. (cdk.apl).
- cdkItem.IsDefaultAttribute function is added to return TRUE if the value of specified attribute is Default.

Active Coding Assistant

- Modified Go Back (Ctrl+Shift+G) command behavior of moving current position to the position where the Go to Declaration (Ctrl+G) command executed. Previously, this command only worked once.

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SAL API

- SalMail is modified to connect to the SMTP server with Connect method. Previously, Connect method for SMTP did nothing and connected to the SMTP server every time when sending an email. With this change, you can keep the SMTP connection and send multiple emails without reconnecting to the SMTP server every time.
- SalStrCompress and SalStrCompressEx were modified to use ZLIB compression algorithm for 7.4.1 but this introduced big backward compatibility issue. Its default compression algorithm was reverted back to FIN to keep backward compatibility.

Report Builder

- Input Variables dialog has Up/Down buttons at the bottom but has no meaning if the variables are sorted by Name. These buttons will be disabled once the variables list is sorted.

Native Router

- To fix inserting a Unicode string into an NVARCHAR column, the Oracle router for 7.4.1 was modified to send string bind data to the DB as a Unicode string. This change introduced a performance degradation on several customer sites. To fix this performance issue, the functionality is modified as optional. You can enable it by setting BINDASNCHAR config variable to 'YES', or 'ON', or '1' in the [oragtwy] section of sql.ini. You don't need to enable it if the default charset of the ORACLE instance is UTF-8.

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IDE

- When "Exclude Comments" is checked, the Find and Find All dialogs now skip items within comments that start mid-line.

SAL API

- New SAL functions, SalFieldSetReadOnlyBkgdType and SalFieldGetReadOnlyBkgdType, are added to set/get read only background type for data field.
- Calling VisWinSetFlags for form windows with the WF_ExcludeFromMdiWinList flag now prevents the window from being added to the MDI tab list when the MDI Tabs property is set for the MDI main window. In addition, tabs are not added for windows that are not MDI child windows.
- New SAL function, SalGetVersionEx, is added to get full version information.
- New SAL function, SalStrCompressEx2, is added to support zlib compression algorithm. SalStrUncompress and SalStrUncompressEx support old and new compression algorithms.
- New SAL functions, SalAnchorSetScrollbarsEnabled and SalAnchorGetScrollbarsEnabled, are added.
Enable/disable scrollbars for forms and dialogs with anchoring enabled. By default with anchoring enabled, the user is prevented from resizing the window smaller than the minimum width and height. Setting this to TRUE allows the user to resize smaller than the minimum, with scrollbars added as needed.

When set to TRUE, controls that do not specify minimum width or height will use their initial values for width and height as the minimum values.

This setting applies to all windows and should be called in SAM_AppStartup before creating any windows.

- The behavior of SalDateConstruct with month value less than 1 or greater than 12 is changed. For example, SalDateConstruct(2021, 22, 7, 0, 0, 0) is same as SalDateConstruct(2022, 10, 7, 0, 0, 0).

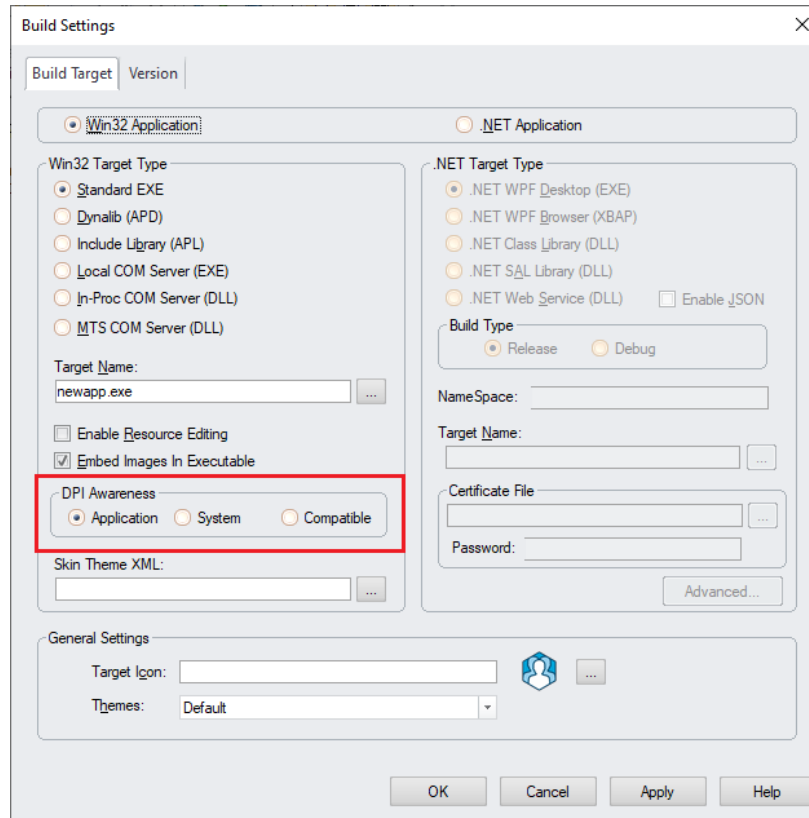
Report Builder

- ReportBuilder now saves the last window position and size of ReportBuilder MDI window so that ReportBuild MDI window will be opened next time with the same size and position.

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IDE

- Build Settings for Win32 Application now has the option, DPI Awareness, to disable DPI awareness (System) or keep backward compatibility with pre TD 7.0 release (Compatible) for standard executable. Windows automatically enlarge application based on current display scaling if this option is Application.
This is equivalent with setting "Disable_DPI_Awareness" custom version string to "YES" for System or "OLD" for Compatible.



- The Create Installer dialog is now enabled when the project target is Win32. An additional folder may be specified as a source for extra deployment files for both .NET and win32/x64 targets.
- The Git source control dialog now has a plus (+) button to create a new branch, and a dialog for selecting the source branch and new branch name.
- New option for FindAll dialog to search current view only.
- Added more search options to the Find All dialog.
 - Find Whole Words Only
 - Exclude Comments
 - Exclude Include Libraries
 - Results to Output Window

SAL API

- **Calendar control**
 - Boolean SalCalSetSelectedDates(hWnd, dtArr)
Set the selected dates for a date picker control from a Date/Time array.

hWnd	Window Handle. Name or handle of date picker control.
dtArr	Array containing dates to be selected in the date picker control.
- **Control Anchoring**
 - Boolean SalAnchorIsEnabled(hWnd)

Returns whether anchoring is enabled if hWnd is a form, form toolbar, dialog box, tabbar, or navigation bar; otherwise, returns false.

- Boolean SalAnchorGet(hWnd, nHorzAnchor, nVertAnchor)
Gets the horizontal and vertical anchor properties for the given hWnd. Returns TRUE if the properties exist, otherwise FALSE.
- Boolean SalAnchorChildInitScaling(hWndChild, bInitHorz , bInitVert)
Initializes the horizontal and vertical scale factors so that the control width or height maintains the same ratio to its parent container when resizing. Scaling is ignored when the child is anchored as "BOTH". When anchoring is set to "NONE", the control maintains its position relative to its parent as well as scaling its width or height.

Returns FALSE if the control does not support anchoring.

hWndChild Window Handle. The handle (or name) of a window.

bInitHorz Boolean. Whether to initialize horizontal scaling, FALSE disables.

bInitVert Boolean. Whether to initialize vertical scaling, FALSE disables.

- SalTblSetTableFlags(): Added new table flag, TBL_Flag_ColSizeProportional, that allows proportionally spaced columns. When set to TRUE, all visible columns are the same width and spaced evenly within the grid or table, except for columns of type checkbox, radio button, or button. which retain their original widths.
- **Date time**
 - New SAL functions, SalDateAddDay and SalDateMonthEnd, are added. These are equivalent functions with DateAddDay and DateMonthEnd Report Builder formula.
- **Grid control, table window**
 - nRowCount = TblQueryRowCount(hWndTbl)
Returns the number of rows in a table or grid. This may cause all rows to be fetched, depending on the database.
hWndTbl Window Handle. The handle (or name) of a table window or grid.
 - SalGridDataExportEx() now set column width when exporting to Excel. You can also set column width and row height to fit its contents by specifying EXPORT_AutoFitColumns and/or EXPORT_AutoFitRows flag.
 - Boolean SalTblSwapRows(hWndTbl, nRow1, nRow2)
Swaps the position of one row with another in a table or grid.
hWndTbl Window Handle. The handle (or name) of a table window or grid.
nRow1 Number. The row number of first row to swap.
nRow2 Number. The row number of second row to swap.
- **MDI Windows**
 - The background image for the MDI windows can now be set using SalPicSetBinary, SalPicSetString, and SalPicSetImage using the value returned for a picture control by SalPicGetBinary, SalPicGetString, and SalPicGetImage respectively. SalPicSetHandle can now also be used to set the MDI background using a bitmap handle loaded from a dll.
The background image can be cleared by passing STRING_Null to SalPicSetString,

BINARY_Null to SalPicSetBinary, 0 to SalPicSetHandle, or by calling SalPicClear. For PNG format images, specify PIC_FormatPNG with SalPicGet/SetBinary and SalPicGet/SetString, or use SalPicGet/SetImage. For GIF or JPG format, specify PIC_FormatObject, or use SalPicGet/SetImage.

- **Menus**
 - SalMenuDelete() now allows deleting menu items that are defined in the outline.
 - Added SalScrollEnableCtxMenu() to enable or disable the context menu for descendant scroll bars.
 - Added SalMenuSetStatusText, SalMenuSetTipText, SalMenuGetStatusText, SalMenuGetTipText.
- **Notifications**
 - SalNotifyShowToast() can use a resource icon for the first parameter. Before, only a file name was possible.
 - SalNotifyClearToasts() is added to clear toast notifications shown in the Action Center.
- **Printing**
 - You can now specify RPT_PrintToPrinter option to nOptions argument for SalReportPrintToFile and SalReportPrintToFileEx to send the generated PDF to the default printer.
 - New print options, RPT_PrintDupVertical and RPT_PrintDupHorizontal, are added for SalReportPrint function to support duplex printing. You can specify either one with other print option such as RPT_PrintRange.
- **REST JSON**
 - SalJSON class library (SalJSON.apl) is now available to support more functionalities relating to JSON and REST API.
- **Ribbon bar**
 - Added SalRibbonAddItemEx.
SalRibbonAddItemEx allows the user to dynamically create items on a ribbon bar using picture binary or string for the item image. Instead of using the final item resource argument for SalRibbonAddItem, SalRibbonAddItemEx uses an argument that may be a string or binary variable. A numeric argument is used to indicate the image type contained in the string or binary variable or whether to load the image from a filename specified by the string variable.
 - Added SalRibbonSetItemImageEx.
SalRibbonSetItemImageEx displays a picture in a ribbon item from binary or file or from a specified filename. Similar to SalRibbonAddItemEx, a string or binary variable is passed, as well as a numeric argument to indicate the image type. The values for the image string or binary variable and the image type may be obtained by calling SalPicGetImage. If the string variable specifies a filename, then the image type should be specified as PIC_FormatFromFile.
- **Rich text control**
 - Added SalRTFSetReadOnly and SalRTFGetReadOnly.

- **Tab control**
 - Boolean `SalTabPageHasChild(hWndPage, hWndChild)`
Determines whether the given tab page contains the given control.
 - `hWndPage` Window handle of the tab page control. This may be obtained by `SalTabPageWindow` or `SalGetFirstChild/SalGetNextChild`.
 - `hWndChild` Window handle of the control to test if it is contained by the given page.
 - Boolean `SalTabsPageEnabled(hWnd, nPageIndex)`
`SalTabsPageEnabled` determines whether a tab page is enabled.
 - `hWnd` Window handle of the tab control.
 - `nPageIndex` Number. Index of a tab page.
Returns TRUE if the page is enabled, otherwise FALSE.
- **User defined variables**
 - Boolean `SalObjCopy(Reference objFrom, Reference objTo)`
Added `SalObjCopy`, which allows copying the values of all instance variables from one UDV object to another. Both variables must be declared with the same functional class.
- **Visual Toolchest**
 - Added a new method to `VT cListView`, `SetItemFont`, that allows setting the font for an existing list view item when `ViewDetails` is used.
- **Window zooming**
 - New SAL function, `SalZoomWindow`, is added to zoom all TD windows. Another new SAL function, `SalGetZoom`, is also added to get current zoom scale.

SAL Language

- Added a new statement, `ForEach`, that executes a loop that assigns a variable from array elements in succession.
The `ForEach` statement has two variations:
 - `ForEach var in varArr`
 - `ForEach var in varArr using nIdx`
where the `var` variable and `varArr` array are of the same type, or an allowed UDV assignment.
The first form uses an internal index, which always starts at the first array index. This simpler form may be used in most situations, but cannot be used in recursive functions. It should be avoided in functions that can be called from both main and background threads. Both `var` and `varArr` must be declared somewhere within the application in order to be referenced by the `ForEach` statement.
The second form includes a 'using' clause that specifies an index declared as a local variable in the calling function. This form should be used in recursive functions and in functions that can be called from both the background thread and the main thread. The value of `nIdx` may be set by the developer before the `ForEach` statement to start the

iteration at that index, or set to less than or equal to the array minimum to start from the first element.

When the 'using' clause is specified, both var and nIdx should be declared as local variables in the calling function. The varArr array may be declared at any program scope.

- The new Continue statement causes the While or Loop statement to be executed but does not increment any loop variables.
- You can now rethrow an SQL error in a .NET DLL.

UX

- Control anchoring enhancements
 - Control anchoring is now available for .NET applications.
 - Control anchoring is now available for tool bars.
 - Anchoring is now allowed for tab bars that have the "Tile to Parent" attribute set to Yes.
 - Added Anchor Maximum Width and Anchor Maximum Height attributes to container windows that have the Anchoring Enabled attribute. The Anchor Maximum Width and Height attributes cause the child controls in the container window to stop resizing and re-positioning when the container size exceeds the maximum, but do not prevent the resizing.
Forms and dialogs that have Anchoring Enabled set to Yes no longer have scrollbars added when the size is adjusted smaller.
- Added "RibbonBar Enabled" attribute to form window class, table window class, grid window class, and MDI window class.
The ribbon bar now follows the model used by menu bars: The menu bar used by a form at runtime is the first non-empty menu found when searching up the inheritance tree. This search action also applies to ribbon bars.
- Rich text control added language specific ctrl-key accelerators for bold, italic, and underline. The default accelerators:

ctrl+B Bold
ctrl+I Italic
ctrl+U Underline

German:

ctrl+F Bold
ctrl+K Italic
ctrl+U Underline

Spanish:

ctrl+N Bold
ctrl+I Italic
ctrl+S Underline

French:

ctrl+G Bold
ctrl+I Italic
ctrl+S Underline

- Prevent showing default tooltip (cell content string) when FALSE is returned from SAM_DisplayToolTip.
- Touch screen scrolling is improved.
- Enable vertical and horizontal scroll when RTC control is set to disabled.

Report Builder

- Report Builder now support break groups up to 16. Previously, only 8 break groups are supported. If more than 8 break groups are defined, the saved Report Builder file cannot be opened by previous releases.
- Conditional display for picture controls is now available.
- PNG image transparency is honored in reports.
- Image EXIF data is respected for correct image rotation.

Messaging - Events

- Added a new SAM message to the rich text control, SAM_RTFPaste.
 - wParam is 0 if the clipboard does not contain rich text formatted data or 1 if it does.
 - lParam not used
- Return value:
- 0 to cancel the operation.
 - 1 to paste as plain text.
 - any other value to paste as RTF or default