



Presentazione Novità di Omnis Studio 10 – Firenze 20 Febbraio 2019

A system whose time has come

Learn about the highlights of Omnis Studio 10

New Method Editor

Free type method editor

The Method Editor in Omnis Studio 10 has been significantly enhanced, and now allows you to enter Omnis code directly into each command line in a method.

A new JavaScript Editor allows you to add or edit whole blocks of JavaScript code into client executed methods, and text for SQL statements

```
1  
2 Do iDataList.$load()  
3 If iDataList.$linecount>0  
4   Do iDataList.$sort()  
5  
6 end
```

- End critical block
- End export
- End For
- End If
- End import
- End print
- End print list

New Method Editor (2)

- Automatically opens Code Assistant when typing
- Type the first 2 or 3 letters to locate a command and type space to select the first of the list in the Code Assistant
- Ctrl-space to force the Code Assistant to open
- Multiple levels of Undo, and Redo
- You can set individual filters for the code assistant to hide i.e. old commands
- Construct Commands
If you enter a construct command using the Code Assistant, such as If, it will add the end construct command automatically, in this case, End If.
- Class Names
To enter a quoted class name, you can press Ctrl-Space when the caret is positioned after a double quote



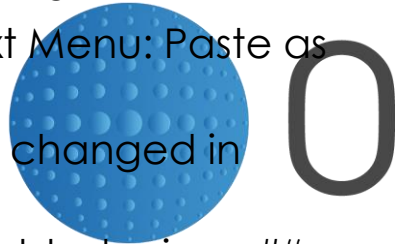
New Method Editor (3)

- Create variable dialog allows to determine the scope using prefixes as well as the type of variable using suffixes
- Editor Helper dialog
 - shows window for „working message“ and „queue keyboard“ commands
 - allows to modify JavaScript and SQL queries in a separate window
- Method Content Tips:
 - Tooltips are displayed when you hover the pointer or I-beam over a method name in the Method Editor
 - Hover over method names that are being called in your code
- Errors Menu allows to identify and fix errors (i.e. missing variable declaration)
- New Find Dialog for the method



New Method Editor (4)

- Double click selects the word
- Triple click selects the line
- Method Editor Context Menu: Paste as „Sta“ or „Text“
- Shortcuts can now be changed in \$prefs.\$keys
- Comments are now added using „#“, Inline comments use „##“
- Syntax Highlighting
- Variable context menus now include clipboard commands



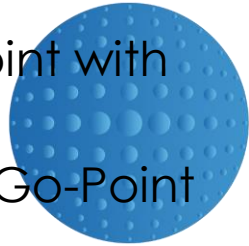
```
Do iList.$define(#S1,#S2)
# Set current list iList
# Build externals list
For lNum from 1 to 10000
  If mod(lNum,100)=2
    Do iList.$add(con("Line",iList.$linecount))
  Else
    Do iList.$add(con("Line",iList.$linecount))
  End If
End For

Calculate iRow as iList.1
```

Debugger

More in line with other debuggers

- Breakpoint is now set with a single click
- One-time breakpoint with Ctrl/Cmnd+click
- Shift-click sets the Go-Point



```
1 # Enter your initialization code here
2
3 Do iMapTypes.$define(iMapType)
4 Do iMapTypes.$add(kJSMaPTypeRoad
  eSatellite)
  eHybrid)
  eTerrain)
  1)
  tion,iLatLong,iLocationZoom)
  ices','52.22344629865449:1.4924045652151108',2)
  K','52.22344629865449:1.4924045652151108',16)
  rance','48.852353:2.3974963000000057',16)
  ermany','53.63778:10.015070000000037',16)
  kers','',0)
  (1)
  mLevel)
```

- Disable Breakpoint
- Clear Breakpoint
- Disable All Breakpoints
- Enable All Breakpoints
- Clear All Breakpoints
- Set Go Point
- From Line
- To Line

Omnis Data File Migration

Get your data into SQL

- New tool to migrate an Omnis datafile (df1) into SQLite or PostgreSQL database.
- Adds foreign keys when internal relations are used
- Omnis DML Emulation

The screenshot shows the Omnis software interface. The 'Add-Ons' menu is open, highlighting 'Convert Data File to RDBMS...'. Below it, the 'Convert Omnis Data File to RDBMS' dialog box is displayed. The dialog box has the following fields and options:

- Select Omnis data file: C:\Users\andrewsmith\AppData\Local\OmnisSoftware\OS900-002\welcome\examples\books.df1
- Select database type: SQLite
- The following SQLite data file will be created, tables and indexes will be created, and data will be transferred. Depending on the size of the data file, this may take a while to complete.
- SQLite data file: C:\Users\andrewsmith\AppData\Local\OmnisSoftware\OS900-002\welcome\examples\boo

The dialog box also displays a table of the resulting SQL schema:

Table Name	Records	SQL	Index Name	SQL
fAccounts	0	create table 'faccounts'(id char(20), typ...	fAccounts (2 ind...	CREATE INDEX IF NOT EXISTS fAccou...
fBooks	19	create table 'fbooks'(BookTitle char(50)	fBooks (4 index...	CREATE INDEX IF NOT EXISTS fBooks...
fFeedBack	0	create table 'ffeedback'(fFeedBackNam...	fFeedBack (2 in...	CREATE INDEX IF NOT EXISTS fFeedB...
fHelp	0	create table 'fhelp'(Seq integer primary	fPupils (2 index...	CREATE INDEX IF NOT EXISTS fPupils...
fPupils	0	create table 'fpupils'(NAME char(50), Gt...	fTeachers (1 ind...	CREATE INDEX IF NOT EXISTS fTeache...
fResults	0	create table 'fresults'(SUBJECT integer,	fUsers (1 index)	CREATE INDEX IF NOT EXISTS fUsers...
fTeachers	0	create table 'fteachers'(StaffName char		
fUsers	0	create table 'fusers'(username char(50),		

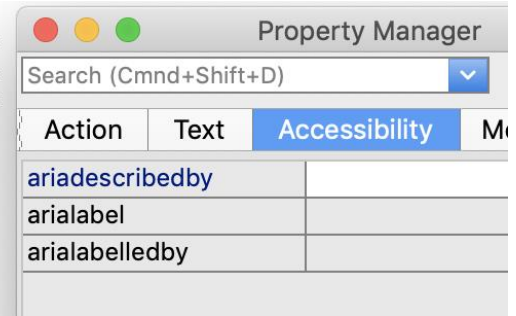
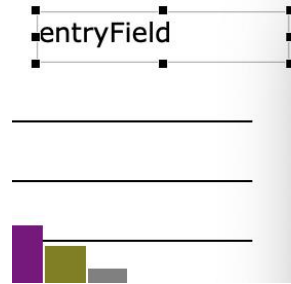
Accessibility

Make your app accessible for every user

Wikipedia says, “ Accessibility refers to the design of products, devices, services, or environments for people who experience disabilities.”

Web accessibility is **required by laws and policies** in some cases.

Therefore a comprehensive set of features has been added to support the Web Content Accessibility Guidelines (**WCAG 2.0**) to help to make your applications more accessible, primarily for people with disabilities



Accessibility

General field properties

\$ariallabel

the text for the aria label, which is used when a text label is not visible on the form. If there is a label for the control, use the \$ariallabelledby property instead

\$ariallabelledby

the name of a control to act as a label for this control; for example, you could enter the name a label object to link it to the control. A value in \$ariallabelledby will override the value in \$ariallabel

\$ariadescribedby

the name of a control used to describe this control: similar to \$ariallabelledby, but could be used to provide more information or a longer description about the control



Accessibility

Image based controls

You can assign an Alt text value to image-based controls, such as Picture and Activity, using the \$alttext property:

\$alttext

a short text to describe the appearance or function of an image, and equivalent to the “alt” attribute in HTML; this property is relevant for controls that contain an image or have a significant visual appearance, such as the Picture and Activity controls.



Accessibility

Page panes and Landmarks

So-called “Landmark Roles” in standard accessibility guidelines allow you to identify different areas of a form to allow screen readers to describe the structure of the page to end users. You can define Landmarks in your Omnis JavaScript remote forms using Page panes and by assigning the appropriate value to a new \$landmark property for each pane: the options for the new property correspond to the same keywords used for landmarks in the accessibility guidelines (Main, Navigation, Banner).

\$landmark

specifies a role to make the page pane an ARIA landmark region, a kLandmark... constant with kLandmarkNone as the default.

Accessibility

Label controls

You can link a Label control to a specific Edit control, or you can tag a label as one of the HTML header types, using the following properties:

\$labelfor

links a label to a control. If you use this with some controls such as the Edit control, the linked control will get the focus if the label is clicked. It can be used in addition to \$arialabelledby.



\$tagtype

can be used to set a label's HTML tag type to one of the header types (<h1> etc.) which would allow the end user to navigate to different sections of a form: the default value is kJSLabelTypeLabel, which is a standard untagged label, and the other values include H1 to H6 for the header types.

Accessibility

Miscellaneous

Control text

If a control has some text assigned (e.g. a button), the screen reader will read out the text by default, therefore it is not always necessary to assign the ARIA properties to describe such controls. For example, the text for a Button control will be read by the screen reader, if no ARIA properties are specified, however the value in `$text` will be overridden if you specify `$arialabel` or `$arialabelledby`.



Content tips

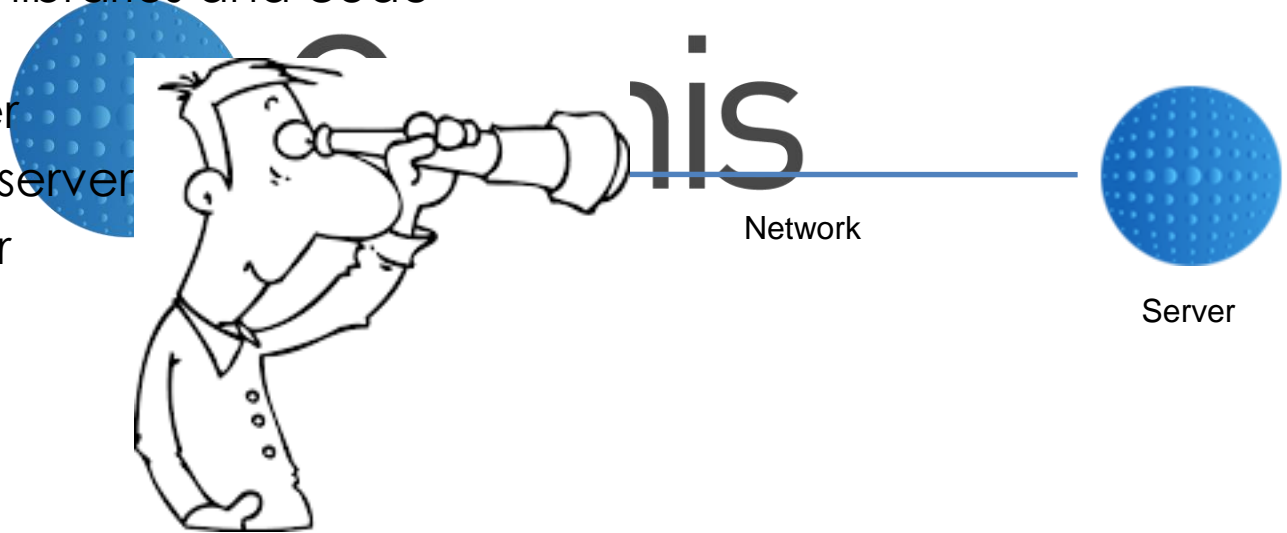
The Edit control has the `$.::contenttip` property which is a text string which is displayed in the edit field when it is empty and before the end user has entered any text. This can be used in addition to the ARIA label properties, to help label the edit controls on your forms: note it is good practice to add labels to all the edit controls on your form to help with accessibility, so do not rely solely on content tips to describe edit controls.

Remote Debugging

Debug your clients library

Remote Debugging allows you to debug and test your Omnis libraries and code located on

- a remote server
- Multithreaded server
- Headless server
- Omnis runtime



Remote Debugging

Remote Debug Server

Configured using `remote_debug_server_config.json` in the `clientserver/server/remotedebug` folder

Start and stop debug server

`$modes.$dotoolmethod(kEnvToolBrowser,184)` toggles state of debug server

```
{
  "debugPort": 8080,
  "serverPfx": "server.pfx",
  "pfxPassPhrase": "xxxxxx",
  "ca": ["server_cert.pem"],
  "requestCert": true,
  "rejectUnauthorized": true,
  "userName": "password_is_myPassword",
  "hashedPassword":
    "AAGGoAAAABBEkknQUIeHQHu1slyWxISAAAIIHw9kvCVF4t
    E//SMpbSGVD/RKJLekoR7TITvZVy3MbkJ",
  "startRemoteDebugServerAtStartup": true,
  "pauseAtStartupUntilDebuggerClientStartsExecution": false
}
```


Remote Debugging

Remote Debug Properties allow access

`$lib.name.$remotedebug` must be set to `kTrue`

`$tasks.name.$remotedebug` must be set to `kTrue`

or for JavaScript client:

<http://127.0.0.1:5981/jshtml/NewRemoteForm.htm?omnisRemoteDebug=1>



Remote Debugging

Remote Debug Client

A new tool in the browser tree

Remote Debug Client

Similar to the VCS, you configure Remote Debug Client sessions

- The IP address of the server
- The debug port
- Secure connection parameters

To open a session to a Remote Debug Server, select the Open Session hyperlink



Remote Debugging

Remote Debug Client (2)

After opening a session

The browser displays a list of remotely debuggable libraries

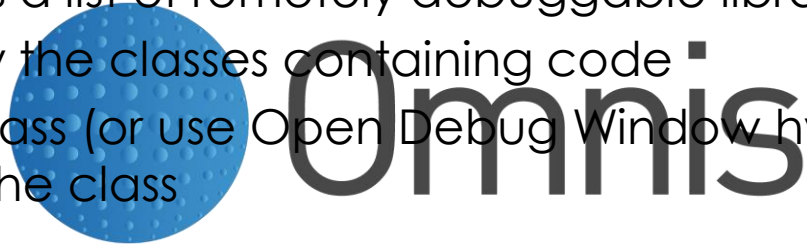
Double click to view the classes containing code

Double click on a class (or use [Open Debug Window](#) hyperlink) to display a debug window for the class

This is a read-only interface

Similar to the method editor and local debugger

Use the debug window to set breakpoints, view code etc.



Remote Debugging

Remote Debug Client (3)

The server has a number of execution contexts. There is a separate execution context for

- The main thread
- Each open remote task

Each execution context has at most one open debug window

- When execution suspends and a debug window is required
- If there is already a debug window associated with the execution context, execution suspends in that window
- Otherwise, the client opens or re-uses a debug window, associates it with the execution context, and execution suspends in that window



New and enhanced Worker

Objects

A number of new worker objects has been added to execute external tasks asynchronously.

- JavaScript Worker Object for executing JavaScript methods inside node.js
- POP3 Worker Object
- CRYPTO Worker Object
- HASH Worker Object
- FTP Worker Object



New components

For remote forms and window classes

- There is a new **Toolbar control** for remote forms
- Round button control for windows
- a new external component **iCalendar** for managing calendar events in remote forms (also window classes)
- several of the other JavaScript components have been enhanced





Omnis Studio 10

The smarter way of App development





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GERMANY	15 February	MEXICO	11 March
BENELUX & SCANDINAVIA	19 February	GERMANY	19 March
ITALY	20 February		

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