The User Experience Platform for the Industrial Internet

Webalo 4.0 Release Notes



Webalo[®]

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About Webalo

Webalo is the User Experience Platform for the Enterprise - a no-code app generation platform focused on simplifying how applications are designed, developed and consumed.

Webalo automatically generates apps that provide personalized, dynamic persona-based, user experiences, that adapt to user requirements in real-time, directly from Predix service endpoints and other GE Digital industrial products, including Asset Performance Management (APM) and Brilliant Manufacturing Suite (BMS), as well as enterprise applications from vendors such as Microsoft, Oracle, SAP, Salesforce.com, ServiceNow, and even in-house custom applications.

Our apps are user focused, automatically generating mash-ups from multiple data sources to provide users with simple, personalized ways to visualize and respond to information through actionable notifications, real-time dashboards and bi-directional workflows, that help them make better, more informed decisions and improve their productivity.

Webalo is partnered with GE to enable digital transformation of industrial businesses in industries such as automotive, aviation, chemical, food & beverage, oil & gas, life sciences, power & utilities and other industrial manufacturing markets.

Webalo Core Features

No-code: Webalo apps are generated automatically through a simple step-by-step configuration process. We're targeting citizen developers, user departments, rapid app development projects that need to reduce time and expense and the dependency on specialist skills. With our patented technology - The User Proxy Server - Webalo generates user interface frames for multi-channel deployment.

Dynamic persona-based apps: Webalo apps meet the needs of individual users, who only see what they need to see to help them get their jobs done. See section <u>Desktop client with personalized multi-pane UA</u>.

Enterprise grade: Webalo is available, scalable and secure with cloud and behind the firewall deployment options.

Multiple data source connectors: Webalo connects to enterprise data, such as IBM, Oracle, Microsoft & SAP; GE data, including Predix, APM, BMS and ServiceMax; and other industrial data from vendors such as Rockwell, Siemens & Wonderware. Webalo has the ability to connect to any data source by using JDBC drivers and Web services (REST and SOAP).

User focused data-mashups: Webalo enables real-time, user-focused, on screen mash-ups of these data sources. See section <u>Data Mash-up with Mash-Up Builder</u>.

KPIs, Dashboards & Charts: Webalo offers a broad choice of visualization options, automatically generating KPIs, dashboards & charts, dynamically, from the data sources. See section Dynamic, interactive KPI and chart dashboards w/ user inputs.

Alerts & notifications: Webalo apps monitor the users' real-time environment and alert them to events and changes that they need to respond to. See section <u>Actionable notifications</u>.

Actionable & bi-directional: Webalo apps enable users to drill down into the data, launch workflows and business processes and allow users to enter, capture, store/forward, write and view data.

Multi-channel: Webalo apps run natively on Android & Apple smartphones and tablets as well as on Chrome, Firefox, Edge & Safari browsers on desktops and large screen displays.

Release Overview

Webalo 4.0 is introducing the new UX platform for Industrial Internet with interactive multi-pane desktop UA, updated modern look & feel, dynamic persona-based apps and user focused data mash-ups.

With new 4.0 charts, Webalo users will have more control over and be able to interact with the data.

End of Life Announcements

NA

Features

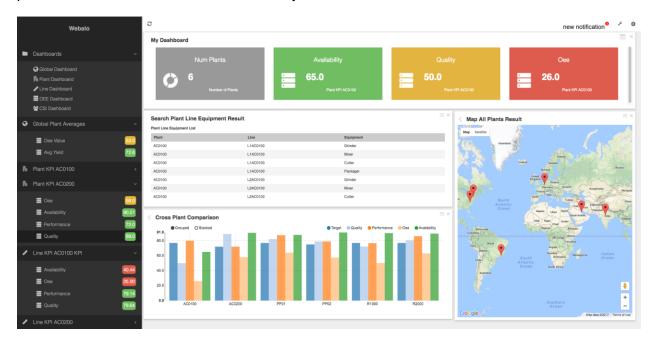
Major Enhancements

Desktop client with personalized multi-pane UA

New desktop client gives the users the ability to drag and drop the items from the left navigation menu to their workspace. Users can open multiple frames in the workspace including KPI and chart dashboards and apps.

All the panes on the workspace can be moved, resized, and closed. Also, dashboards can be maximized to show in full screen mode.

To turn on the multi-pane web UA load the current web UA and then press the context menu button and choose Settings. Put a checkmark in the Use Multi-Panel Workspace and then press Back. You will then need to refresh your browser to access the new UA.



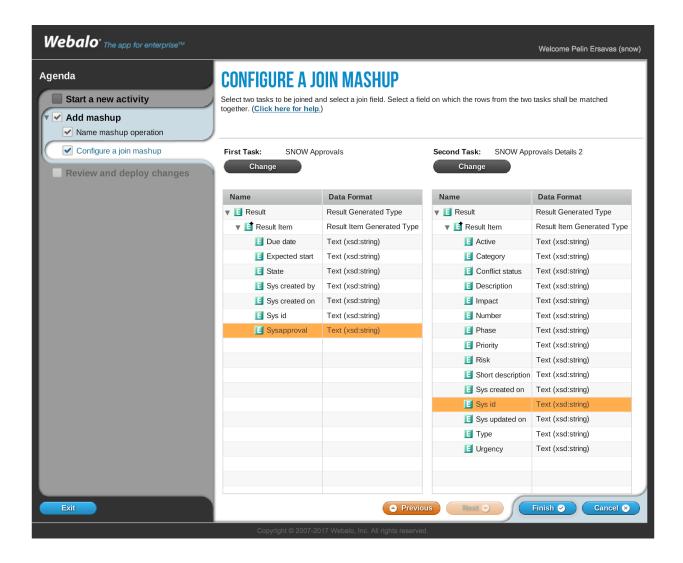
Data Mash-up with Mash-Up Builder

Webalo 4.0 is a powerful, new desktop client that supports a first of its kind data "mash-up" capability enabling workers to view and interact with multiple data streams within a single environment. For example, a plant manager could view incoming orders against component inventory and worker schedules to quickly determine which jobs to put into production and then immediately initiate the manufacturing process. It's a powerful advance that allows full workspace customization and provides users with the ability to accomplish all of their tasks from within the Webalo platform.

Webalo provides data compositions from multiple data sources in various ways. Before Webalo 4.0, data compositions were done by related tasks; task output screens show one set of data from a single source at a time, and each result can drill down to selected data details from different data sources.

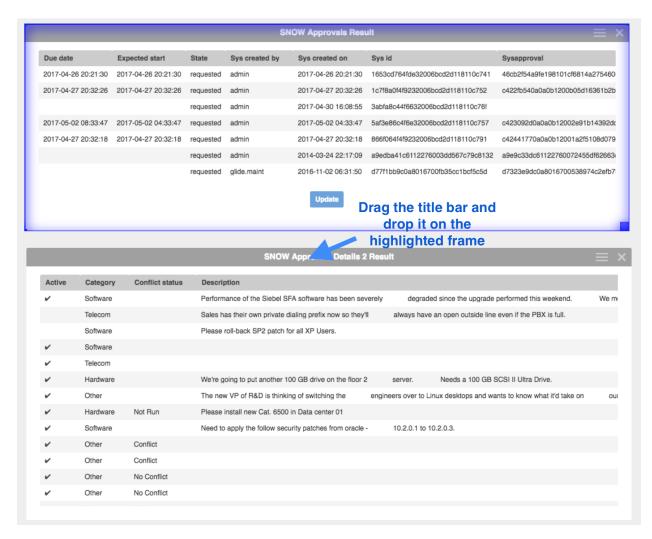
Now that Webalo 4.0 offers multi-pane UA, users can open multiple result sets on the workspace.

Webalo 4.0 goes beyond showing the separate frames in one workspace, it has the capability to compose data from disparate data sources and present them on the same screen. Composition configuration is done on administrative website (AW) by identifying the related data in between result sets.



Data from multiple sources, on the end-user interface, is represented either on separate views or on a composite view. End-users can mashup multiple data views into one by drag and dropping one view onto another.

To access the Mashup Builder, log into your Administrative Website, click on Connect to your Applications and Data > Mashups.





Limitations

In addition to only being available in the Multi-Pane UA, the following limitations are also in place:

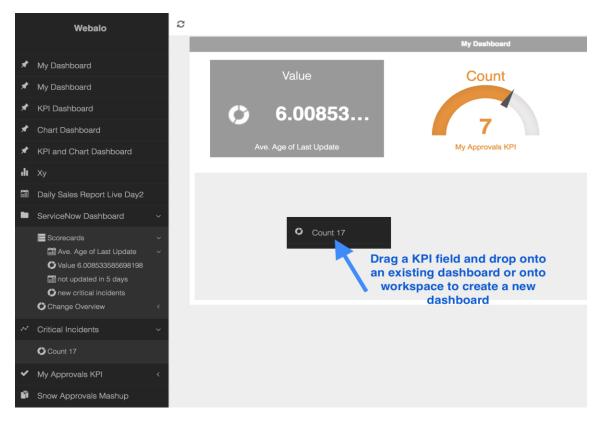
- Constituent tasks cannot have any input needed during invocation.
- Only a 2 task (constituent tasks) join is allowed and performed on a single field.
- Constituent tasks must have a tabular output which can be deeper than 1st level in their corresponding output schemas.

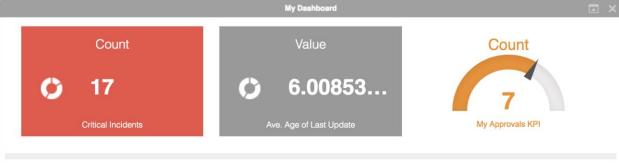
Dynamic, interactive KPI and chart dashboards that support runtime inputs.

Webalo has recently launched the feature to have pre-configured charts show up on dashboards. Any chart that is built in your account and then published can be included in a dashboard along with KPIs.

Webalo 4.0 offers a new feature with our dashboards:

 <u>Drag and drop KPIs</u>: domain administrators can select KPIs from the left navigation menu on the desktop client to add to an existing dashboard or onto workspace to create a new dashboard.





• KPI drill downs: Users can drill down to related data or tasks by clicking any KPI tile on the dashboard.

4.0 Charts

Webalo charts are now using a new, updated charting library.

<u>Interactive charts</u>: Users can filter the data or choose to hide data by clicking them in the legend.

Real-time charts: Charts can refresh periodically.

<u>Chart configuration</u>: Webalo has drastically improved the chart building screen for all chart types. These improvements have made chart building even easier.

Actionable notifications

Desktop and iOS push notifications: You can now set a KPI to send a notification if a certain threshold is crossed. Desktop notifications can then launch subsequent apps that allow for the end user to take action on the notification.

Other Enhancements

Highlighted table cells

Webalo has added a new feature for rule based coloring of table cell content. This feature allows Webalo admins to select a numeric table column in the AW and to specify a color and a condition for the field. On the Webalo client, depending on the condition the user sees the specified color.

Product Invento	ry Result		=
Products			
	Name	Available	List Price
Sp	ort-100 Helmet, Red	887904	\$34.99
Spor	t-100 Helmet, Black	974268	\$34.99
Mou	ntain Bike Socks, M	33840	\$9.50
Mod	untain Bike Socks, L	9504	\$9.50
Spo	ort-100 Helmet, Blue	667440	\$34.99
	AWC Logo Cap	974016	\$8.99
Long-Sl	eeve Logo Jersey, S	61776	\$49.99
Long-Sle	eeve Logo Jersey, M	219240	\$49.99
Long-SI	eeve Logo Jersey, L	353160	\$49.99

Features delivered prior to 4.0

REST connector input and output customizations

If you have a RESTful web service application that takes an input parameter (as delimited by the \$\$ in the relative URL and the request body) you can now edit the inputs.

Each input can then be rearranged in order on the input screen or assigned a Built-in Data format (date, time, integer etc.) or a Custom data format (drop downs, and linking purposes) which will help create a more robust application.

You can exercise the same query with different inputs to cover all possible result sets. You can also configure the result set by reformatting, relabeling, hiding, or re-ordering. You can assign KPIs and actionable notifications very easily.

DB multi result set configuration support

If you have a query or stored procedure that returns multiple result sets, you have the option to select which result set you would like to display in the Webalo client interface for that task.

You can use "Duplicate DB task" feature below to be able to quickly duplicate the task to configure the other dataset.

Map view

We now offer the ability to produce a map view of any table with latitude and longitudinal coordinates.

Dependent drop downs

Now, in your DB apps you can have dynamic drop downs (pulled directly from a field in a DB) that are also dependent on one another.

Fixes

Native client connection performance fixes Offline task invocation bug fix on iOS