Webalo®

The User Experience Platform for the Industrial Internet

Webalo. 4.5 Release Notes

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Webalo 4.5 Release Notes

Webalo 4.5 – Key New Features:

1. Contextualized Dashboards

Webalo 4.5 introduces dynamic, interactive KPI and chart dashboards, driven by user inputs, with the capability to add parameters to the dashboards.

2. Save and Restore Workspace

Webalo end users can now save as many workspaces including content and layout as they would like. They can switch back and forth between workspaces at any given time.

3. Chart Enhancements

Webalo now provides wider charting capabilities including SPC control charts, Pareto, Timeline, and Horizontal bar charts.

4. Asset Model View - New Customization Mode on Desktop Client

A major new feature, the interactive Asset Model View allows users to browse and find the objects of interest and provides a list of operations presented with various visualization options for any selected asset.

Webalo 4.5 – Details

1. Contextualized Dashboards

Webalo 4.5 introduces dynamic, interactive KPI and chart dashboards, driven by user inputs.
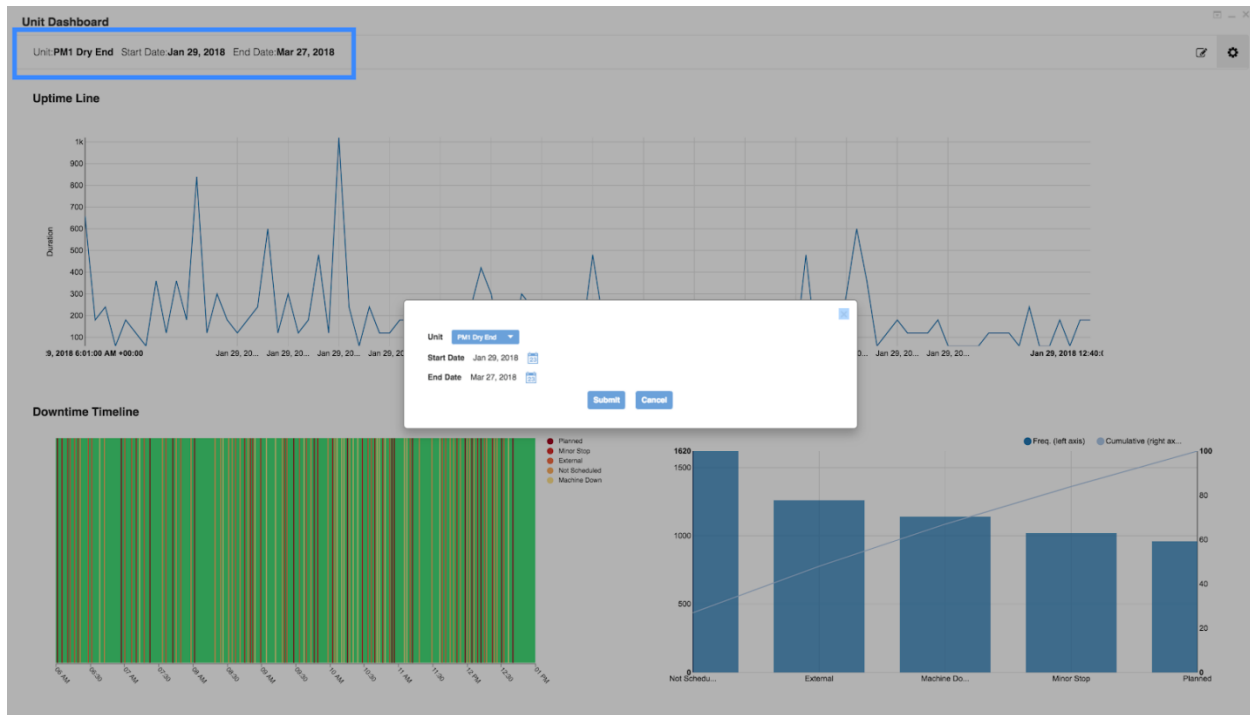
Webalo now provides the capability to add parameters to dashboards. Webalo dashboards include KPIs and charts added by the admin user. Dashboards that are created for manufacturing and production systems provide an embedded asset model and selectable time frames. Custom parameters can also be added to the dashboards by adding new parameters to the queries. Any chart that is built in a customer account and then published can be included in a dashboard along with the KPIs.

Multiple instances of the dashboard can be run with different user inputs.

Webalo 4.5 offers interactive dashboard features:

- Dynamic dashboards driven by user input: user inputs change the context on the entire dashboard, hence update the data. For instance, users can check the same dashboard for different plants, lines, and machines for different time ranges. All inputs can be edited in full screen mode.

- <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.
- <u>KPI drill downs</u>: Users can drill down to related data by clicking any KPI tile on the dashboard.
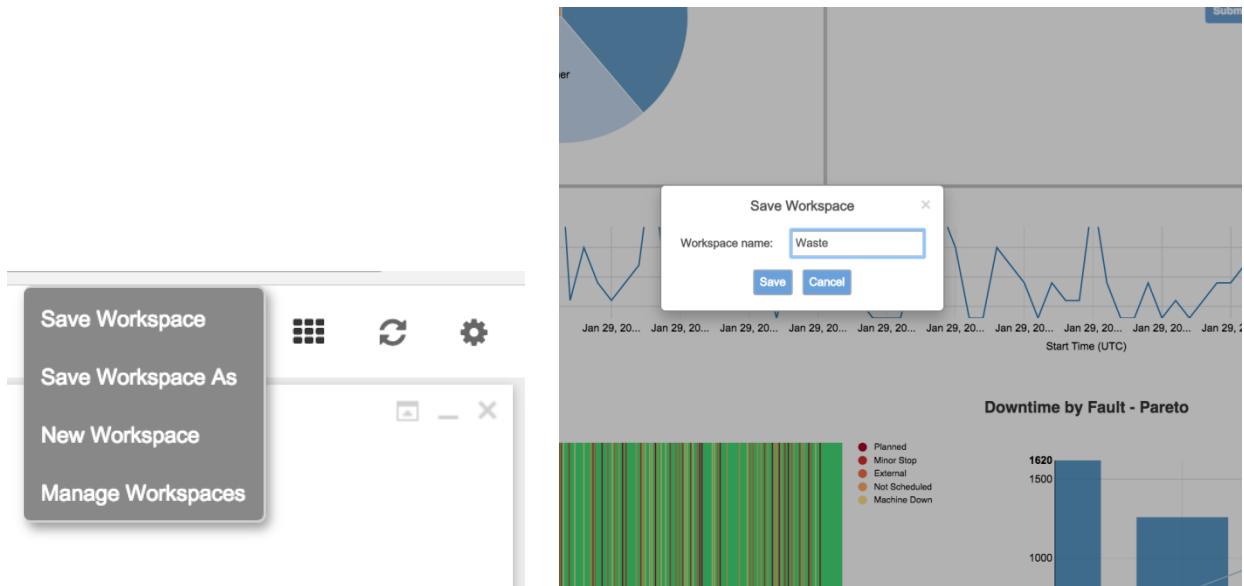

2. Save and Restore Workspace

Webalo 4.5 desktop client provides the ability to create workspaces/screens for different purposes. As an example, one workspace can be used for an overview of plant floor including high level charts and dashboards, a second workspace for downtime entry forms and for launching workflows to take action based on the machine status, and a third workspace can be created for Historian trending charts.

Workspaces can be created and formed by drag & dropping the items from the left navigation menu. All the panes on the workspace can be moved and resized.

Webalo end users can save as many workspaces including content and layout as they would like. They can switch back and forth between workspaces at any given time.
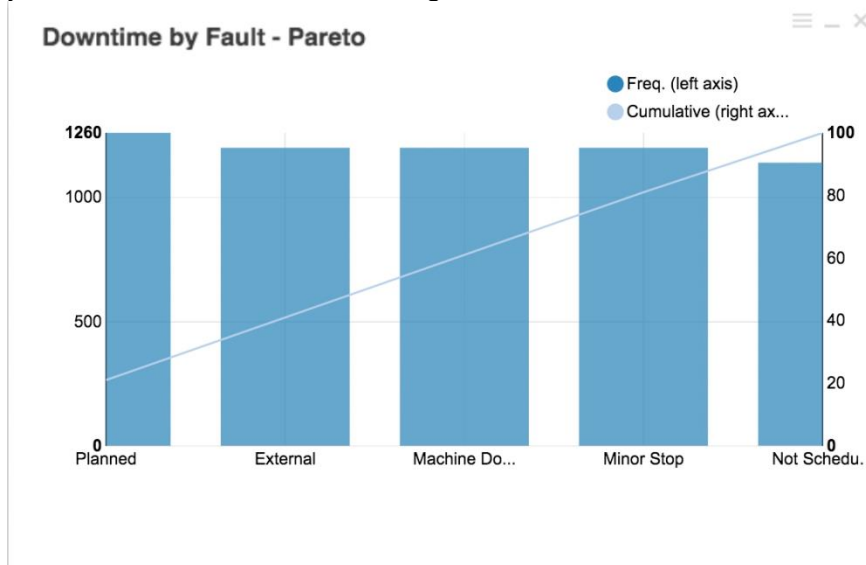
3. 4.5 Chart Enhancements

With 4.5, Webalo now provides wider charting capabilities including SPC control charts, Pareto, Timeline, and Horizontal bar charts.
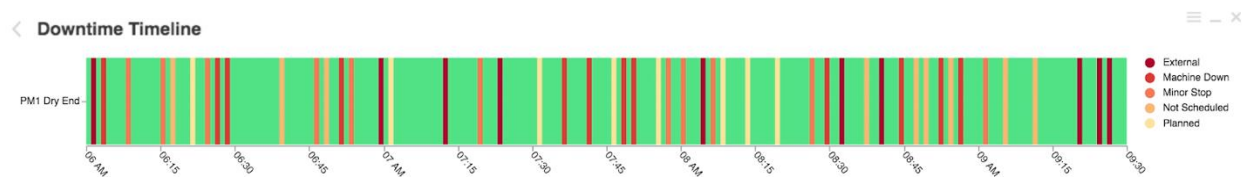
SPC Control charts: An SPC Chart is a type of chart which is used to analyze the variance in data, to look for trends which may indicate variance outside of what is expected from the past values. It's basically a line chart with horizontal lines at some critical points called "control limits" plus a line at the mean of the data. Often aggregation is needed to convert a large number of points down to a more manageable number.

Via Webalo config screen, users define the aggregation count, enter control limits manually or leave them to the system to be calculated with the standard deviation entered.

Pareto Charts: A Pareto chart is a type of chart that contains both bars and a line graph, where individual values are represented in descending order by bars, and the cumulative total is represented by the line. This type of charting is very useful when analyzing data about the frequency of problems or causes in a process, when there are many problems or causes and

you want to focus on the most significant.

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Timeline charts: The timeline chart allows users to see the changes of the statuses of a particular asset within a given timeframe. There are 3 series fixed dimensions: "Start Time," "End Time," and "Event label."

Interactive charts: Users can filter the data or choose to hide some of the legends quickly.

Real-time charts: Charts can refresh the data output periodically as long as they stay open on the user screen.

Chart configuration: Webalo continues to improve the chart configuration experience.

- Users can add labels to x and y axes.
- Chart workflow and advanced options are grouped separately to eliminate the clutter on the main config screen.

4. *Asset Model View- New Customization Mode on Desktop Client*

Webalo introduces a major feature, a major first step into Webalo's unique new automated 'Connect & Deploy' approach, eliminating "Configure" altogether by tighter integration to Industrial systems.

Asset Model View provides a set of operations to allow users to build their screens by saving/editing visualizations and dashboards for subsequent use.

Webalo automatically generates the Asset Model via the REST endpoint, and displays a hierarchical view of the asset model. Hierarchical models can also be added manually in JSON format into AW. Multiple asset models can be added and displayed.

The Interactive model view allows users to browse and find the objects of interest and provides a list of operations (initially via the REST API), presented with various visualization options for any selected asset.

- View and browse the asset tree in desktop client
- List of operations linked to asset hierarchy
- Visualization configuration on an operation
- Setting default visualization on domain
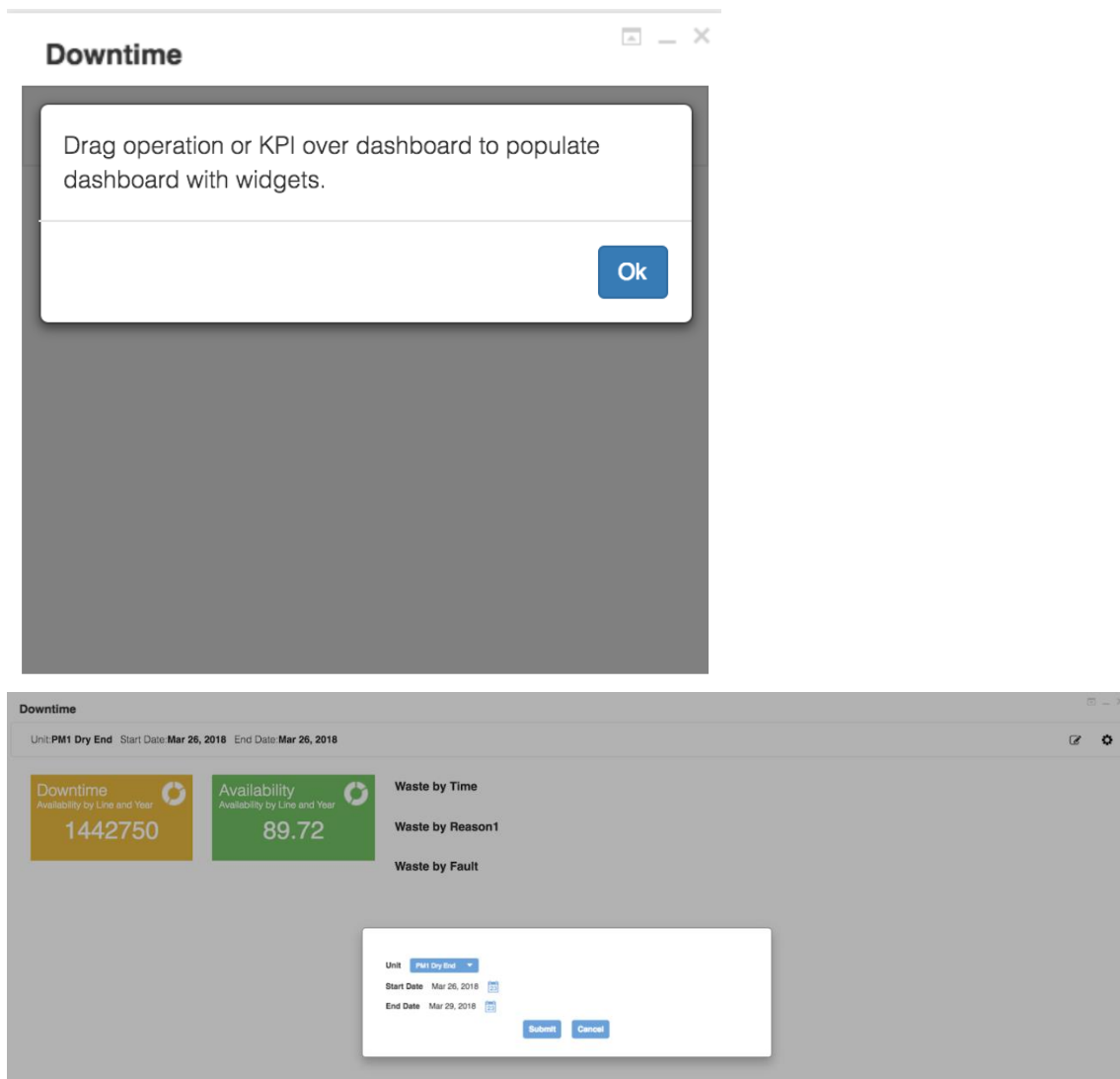- Saving/Renaming/Deleting visualizations into/from "My tasks" in home screen

Contextualized Asset Dashboard

By using Asset Model, users can generate new contextualized dashboards. The new dashboard will appear in the Home Screen and an empty dashboard panel will be shown in workspace, waiting for the user to drag an operation from the Asset Model tab.

Limitations

Works with Industrial systems' REST APIs.

Webalo 4.5 – additional features

Actionable email notifications

In addition to desktop client and iOS push notifications, users can now set a KPI to send an email notification to selected recipients if a certain threshold is crossed. Notifications can then launch subsequent apps that allow for the end user to take action on the notification.

KPI improvements

- KPI formatting: KPI labels and values can be formatted as they would like to be displayed.
- KPI order selection; Users have the option to use the last value in the column for the KPI value, but the default will remain the first value.

REST connector input and output customizations

If users have a RESTful web service application that takes an input parameter (as delimited by the $$ in the relative URL and the request body) they can now link the inputs to use profile or session properties.

Desktop Layout

Users can choose the option to hide the views by minimizing the frames. They can re-open the current result by clicking on the item on the left navigation menu.

Fixes in Webalo 4.5
- Webalo Gateway - Webalo server connection performance improvements
- Improvements to keep formatting for query updates
- Timezone setting fixes for database queries

About Webalo

Webalo is the User Experience Platform for the Industrial Internet - 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 GE Digital industrial products, including Predix APM, Predix OPM, Manufacturing Solutions and Predix ServiceMax, as well as enterprise applications from vendors such as IBM, Microsoft, Oracle, SAP, Salesforce.com, ServiceNow, and even in-house custom applications.

Webalo 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.

What does Webalo do?
Webalo increases workforce productivity across industries, providing the app generation infrastructure for companies wanting to transform into User First™ organizations. This allows every user to have easy access to just the information they need, on any device. Webalo's no-

code, enterprise-grade platform enables industrial companies to easily generate custom apps with personalized user experiences, generated directly from their enterprise data sources and are rapidly deployed to users' desktops, tablets and smartphones.

Webalo Core Features

No-code: Webalo apps are generated automatically through a simple step-by-step configuration process. Target users are 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 in order to get their jobs done.

Enterprise grade: Webalo offers a cloud-based app with high availability, scalability and security   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 mashups of these data sources.

KPIs, Dashboards & Charts: Webalo offers a broad choice of visualization options, automatically generating KPIs, dashboards & charts, dynamically, directly from the data sources.

Alerts & notifications: Webalo apps monitor the users' real-time environment and alerts them to events and changes that they need to respond to.

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-platform: 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.