

## Changelog

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### v2.11.0 - 2020-08-27

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#### Added

- [Workflows] We added support for showing images in workflow markdown content based on field values using the `{{image|srcField}}` directive.

#### Changed

- [Workflows] Fields with JSON data in the shape of an array of objects will now be shown as a table when rendered in workflow content.

#### Fixed

- [Workflows] Arrays fields can now be used for selector elements on substeps with dynamically changing values and not only schema defined static values.
- [Workflows] When saving workflow fields in the background while a user continued editing the field those changes had sometimes been overwritten. We made sure your input is our first priority!
- [Workflows] After enabling interpolation for webhook URLs in the last release we now reduced validation on the URL to allow for more interpolation scenarios and made the body of the request optional to adjust for HTTP Get requests.
- [SSO] An edge case that caused users who are not part of the default organization introduced in the last release would not be able to sign in is now handled properly.
- [Permissions] Our permission policies prevented users with administrator or manager roles for a collection to delete permissions for resources in that collection. We adjusted the policies to reflect the expected behavior.
- [Deployment] Background workers now pick up custom certificates provided to a server installation as intended.

### v2.10.0 - 2020-08-13

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#### Added

- [Sign Up] We added a hint about joining existing organizations to sign up, so users do not create a new organization when they really mean to join an existing one.

- [Workflows] Via the new `report_summary` key on steps workflows can now specify how a step should be summarized in a report. Together with a new API endpoint for Workflow Runs the report can be retrieved to summarize the entire workflow execution.
- [Workflows] The webhook action now supports the interpolation of fields in the target URL enabling you to pass URL parameters to the request.
- [Organizations] Server administrators can now configure the server to allow user invites combined with single-sign-on. This means users can first log in via SSO and then easily join other organizations via the known invite mechanism. For this purpose, a setting was added to configure the default organization where users will first be added when signing in via SSO.

## Changed

- [Dashboards] The MultiState dashboard element no longer requires a command. It can now be used for enumerated channels that do not allow the user to actively change the value via a command.
- [Connectors] The Connector ports will now differentiate ports that are offline because the Connector Box is offline and ports that are online but detached. Offline ports are shown with greyed out icons and detached ports with red icons.
- [API v2] API endpoints for user authorizations granted via SSO providers now serialize additional attributes and use `expires_in` instead of `expires_at` to follow Oauth 2 standards.

## Fixed

- [Workflows] Steps are now correctly expanded when resuming a paused workflow after entering the execution view.
- [API v2] Measurements can be correctly serialized even if their related container (i.e. a task or dashboard) is already archived or deleted.

## v2.9.0 - 2020-07-30

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## Added

- [Workflow] Markdown content now supports the use of columns to give more structure to your content.
- [Workflow] Elements and buttons can now be referenced in the description of substeps and the context info pages of workflows. Combined with the new columns this allows for complex layouts with controls and visual elements that you already know from the dashboards.

- [User Management] When your server has single-sign-on (SSO) configured you can now still invite users to organizations once they have logged in at least once with your configured SSO provider.

## Changed

- [Connector] The port icon will now show in orange instead of green when a plug is connected to the respective USB port but no device is linked yet.

## Fixed

- [API] For the OpenAPI spec of API v2 collections of resources a wrongly nested data attribute has been removed from the schema.
- [API] We added the `relationship` and `links` attributes that the API provides to the respective schemas.
- [Workflow] Scanning devices that are not connected caused consecutive scans to fail. This has been fixed and a meaningful feedback message has been added.
- [Webhook] Webhook approvals are now validating for invalid host definitions that caused problems before.
- [Workflow] A problem with fields loading indefinitely on workflows with a lot of fields defined.
- [Workflow] Script fields shown on the workflow run page now correctly show their calculated value.

## v2.8.0 - 2020-07-16

### Added

- [Workflow] Add the ability to use barcode scanners to select a device. You can find and download the expected barcode inside each respective device settings page. We also support customized scanning behavior inside the workflow template definition.

### Changed

- [UI] Improved device select UI inside workflow execution, which should give better accessibility, especially when using tablet devices.

### Fixed

- [Connector] Fix various issue with port/device simulations
- [Dashboard] Fix broken scrolling behavior in some dashboard elements

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## v2.7.1 - 2020-07-02

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### Changed

- [Deployment] The installation and update routines have been improved. The output has been reformatted to print cleaner feedback on the progress and several checks have been added to ensure a functional installation. All checks print a visual feedback that can be used for documentation purposes.

### Fixed

- [UI] While we generally do everything we can to avoid them, unexpected errors in requests to the server should now give visual feedback in the frontend so you know something went wrong and you can try again or report the problem.
- [Dashboards] The Clock dashboard element now always shows the correct time after previous discrepancies with the minutes being shown.

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## v2.7.0 - 2020-06-18

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### Added

- [Workflows] We have added a new context info feature that allows you to show an extra vertical panel with static and dynamic information for the entire workflow or individual steps.
- [Workflows] Workflows now support selection from dynamic lists of values in selectors. They provide a user friendly interface to select a single item from a list of items stored in an array type field. The feature allows you to control the display of options in a fine grained manner to create just the interface needed for your workflow.
- [Workflows] The webhook action can now forward secure tokens to external applications that can eventually be used to fetch access or identity tokens of the user that initiated the action in a secure way. This allows developers to build integration middleware that has access to the Laboperator API and can act in the name of the user in a secure way even in single-sign-on (SSO) scenarios, where identity is provided by a third party.
- [Workflows] Images inserted in Markdown content can now be centered or sized to full width using URL parameters (i.e. `www.company.com/my_image.jpg?fullwidth`).
- [Workflows] Fields of type string can now be displayed as text areas for the entry of larger text inputs.
- [Workflows] References to fields now support two additional variants used like this: `{{myField|plain}}`. The plain variant will display the field value without the

background highlight which is handy for data display for example in tables. The title variant displays the title of the field instead of the value.

## Changed

- [Workflows] The display of tables used in Markdown content has been revisited for improved visuals.
- [Workflows] References to date time fields now display dates in a nicely formatted way instead of raw ISO strings.

## Fixed

- [Notifications] When individual users deactivate a custom notification they can now be sure that it is not delivered in-app nor by email.

## v2.6.1 - 2020-06-04

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### Changed

- [Administration] The administration page has been updated to be faster and more consistent with the rest of the application.

### Fixed

- [UI] A problem that caused wrong theme information to be applied for just a short moment when a notification first showed up.
- [Organisation] Improved handling of different image sizes when used as the logo for an organisation.
- [Notifications] A problem that caused specific custom notification rules for numeric condition values not to be applied correctly.

## v2.6.0 - 2020-05-21

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### Added

- [Organizations] We have added theming options for Organizations. Update the primary and secondary colors of the theme to reflect your brand identity.
- [API] Users can now be filtered by user id via API v2 allowing you to fetch a specific subset of users.

- [API] The entire audit trail of records is now available via API v2. Check the Versions section of the API docs for more details.

## Changed

- [API] API requests that use invalid filters will now be rejected with a 400 Bad Request error.
- [Workflows] Buttons in the header during the execution now give better visual feedback when they are disabled.

## Fixed

- [Workflows] A problem that could occur when resuming a workflow after it was paused that resulted in a frozen application.
- [UI] A problem that prevented some text fields having a capital 'F' entered.
- [Dashboards] When showing a Measurement on a Dashboard display elements now correctly show the last and not the first data point in the Measurement.
- [Workflows] A problem that prevented users from reviewing previously executed workflow steps when revisiting a Workflow Run after a logout.
- [Workflows] Workflow Runs can now be correctly searched in collections by their name.

## v2.5.0 - 2020-05-07

### Added

- [Organizations] We have added logos to organizations. Start customizing your Laboperator experience! More theme options are coming up.
- [Workflows] When dynamically adding steps to a workflow you can now enter required fields or map them to global fields. That's all that is needed to reuse highly flexible workflow step templates on the fly.

### Changed

- [UI] In several places toolbars received an upgrade to be more responsive on smaller screens. They will now optimize for the space available.
- [Workflows] At the end of a workflow run user is now asked if he wants to complete the workflow run or if he would like to add another step.

## Fixed

- [Workflows] We fixed the spacing on certain input elements which makes the whole field input page look nice and clean again.

## v2.4.1 - 2020-04-23

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### Added

- [Workflows] Webhook actions have been improved with more response processing capabilities. JSON responses can now be flexibly mapped to fields and thereby used in the workflow.

### Changed

- [Workflow] References to steps and fields in the flow definition are now validated upon upload. Misspelled identifiers or references that haven't been cleaned up will be flagged during the upload and not cause problems during the workflow run.
- [UI] We unified some styling across workflows and dashboard elements so highlights of focused elements are more consistent.

### Removed

- [Support] Due to a change in our support portal we removed the form to submit tickets directly from the app. Instead, you will be forwarded to our support page where you can submit tickets and find additional information that might already answer your questions.

### Fixed

- [Workflows] A problem with workflows temporarily still being shown to a user when they were deleted by another user.
- [Exports] A regression causing exports to fail. Exports of measurements and dashboard elements now work again as expected.
- [Resources] Archived resources that did not show correctly for user's who did not have access to the resource before it was archived will now correctly be listed in collections.
- [Resources] Under specific circumstances items in a collection were not sorted correctly and the total page count was off. Everything should be in order now.

- [Workflows] Pausing and resuming a workflow correctly adds the user to audit trail entries.

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## v2.4.0 - 2020-04-09

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### Added

- [Workflows] We have added comments to workflows. You can now comment on workflow steps to collaborate with others, to leave yourself a note, or to add to your documentation.
- [Workflows] Workflows can now make use of dashboard elements. This opens up a whole range of applications from showing camera images to rendering graphs and tables right inside the workflow steps.

### Changed

- [Dashboards] Dashboards have received several styling improvements including better headers and highlighting for easier configuration.

### Removed

- [Users] We dropped the temporary language setting from the More menu. As it was only temporary it caused confusion. Changing the language remains available in the user's profile settings.

### Fixed

- [Dashboards] We fixed a problem with the DeviceChannelTable element that caused data not to show when the device had not been visited before.
- [Workflows] We revisited archiving Workflow (Step) Templates. We now prevent archived or deleted templates from breaking your existing Workflow Runs that rely on them.
- [Workflows] Active Workflow Runs will now be paused when they are archived. This helps to prevent stale Workflow Runs to remain in the system.

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## v2.3.0 - 2020-03-26

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### Added



- [Workflows] As dynamic as your work. Workflows can now be modified on the go. Add, reorder and remove workflow steps to adapt your workflow while you're at it.
- [Workflows] To make the most of adding workflow steps dynamically you can also start a workflow run without a template now.
- [Dashboards] You can now copy your existing dashboards instead of starting from scratch when creating new custom dashboards.

## Fixed

- [Workflows] A problem with timer fields that were edited by the user.
- [UI] Minor improvements of different animations and label positioning.

## v2.2.0 - 2020-03-12

### Added

- [Dashboards] We added two new dashboard elements! A simple clock element to see the current time on your dashboard at a glance and a Webpage element that lets you render other web content right on your dashboard.

### Fixed

- [Connectors] After the last update there was a problem related to re-connecting previously connected devices.
- [Dashboards] When adding the status channel to existing dashboard elements this could cause an unexpected forbidden error. We've made sure you can use all the channels you have access to properly.
- [Devices] For some devices the details of the command history could not be opened. This is fixed now making the entire history of commands sent to a device accessible from the device dashboards context panel.
- [UI] After the first introduction of the Laboperator UI theme we've now fine-tuned some of the settings related to icons and colors.
- [UI] Improved styles of previously overflowing select options.
- [UI] Users will now also receive live updates for archived resources. So if another user restores a resource this will be immediately reflected on your screen.
- [Workflows] The onFieldUpdate trigger was only working when defined on a step. It will now also work as expected when defined on individual substeps.

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## v2.1.1 - 2020-02-27

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### Changed

- The limit on the number of channels that can be used in the DeviceChannelTable dashboard element was raised from 10 to 25 channels allowing you to get an even better overview of more data from more devices in a single dashboard element.
- Until now many dashboard elements showed the latest available data no matter if the device was online or not. We've updated various dashboard elements to not show any data unless the device is online and the data is up-to-date.

### Fixed

- The WorkflowRun API v2 now properly supports pagination and sorting.
- The formatting of units on the DeviceChannelTable was broken after recent improvements to the formatting of large numerical values. Now things are looking better than ever!
- Under certain circumstances updating a user's role in an organization wasn't possible. Promoting administrators now always works as expected.

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## v2.1.0 - 2020-02-13

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### Added

- Customers can now use Single-Sign-On functionality with IAM services that support the [OpenID](#) standards. How this can be configured can be found in the installation manual.

### Changed

- Where select fields used to show all resources of a specific type a user has access to (e.g. all devices) they now only show records after the user has entered a search term. This will in the short term ensure smooth user experience. We'll soon bring back a default selection of relevant resources in the current context of the application.
- The Workflow Run API endpoints can now also return the workflow template of the run.

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## v2.0.0 - 2020-01-30

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## Added

- We are introducing Collections! An entirely new way to organize, share, search your resources.
- On top we include Workflows as a beta feature. As an organization Administrator you can [enable the feature on the administration page](#).
- Server administrators can disable signup and invite functionality for the entire server. This is useful when the server is used in combination with a central Identity Access Management (IAM) service.
- When a user leaves an organization his resources will now be properly transferred to an administrator to ensure no access to resources is lost.
- The API v2 endpoints for Devices, Jobs, Samples, and Tasks now support filtering by custom attributes.
- New drivers or driver updates for Kern PLJ, Vacuubrand DCP 3000, Vacuubrand CVC 3000, Büchi b-545.

## Changed

- The UI got a brand new look as cubuslab has been rebranded to [Laboperator](#)! You can read the whole [story on our blog](#).

## Fixed

- We eliminated a problem in the database setup routines that prevented some installation to take advantage of several performance optimizations. Any affected installations will now see quite the boost for anything related to instrument data lookups.

## v1.16.1 - 2019-11-07

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### Added

- The API v2 data point endpoints have received an upgrade with full support for sorting, pagination, and filtering.
- Also for API v2, we've added basic documentation on the generic parameters fields, sort, page and filter including some basic usage examples. Stay tuned, there is more to come before the stable release.

### Fixed

- Real-time updates on installations with multiple organizations are now more reliable.
- The channel select input could cause problems when clicking on the checkbox (as is intuitive) instead of the label. That's fixed now!

## v1.16.0 - 2019-11-07

### Added

- Devices can now store textual information in data points. Most notably this affects the status that every device has. Now you can track its history and know when the device was online in the past.
- Custom notifications (More => Notification Settings) allow users to define custom conditions to receive notification for instrument events. Get notified when your freezer sends temperatures above -5 °C!
- The new Channel Table Element displays channels as columns and one row per device.
- The new Separator Element can render empty space, vertical and horizontal lines as well as headers to structure your dashboard content.
- The new Content Element can render static rich content so you can add formatted text, images, lists and more to your dashboard. How about some instructions for your colleagues?
- All element types can now render custom titles, featuring custom colors and size.
- Dashboards feature more options to change the grid of the dashboard to your needs. Change the number of columns, the row height and whether all elements should automatically fill empty space or allow for gaps.
- Indicator elements still show the last available data, but will now show as greyed out when a device is in a state that will not produce up to date data (like being offline).
- New Device Types Integra Viaflo, S+H Autodosage, PreSens EOM Sensor, and Mettler Toledo XPR.
- A whole set of new API v2 endpoints was added. Check the API documentation for more details!
- Filtering on API v2 now supports operators. You can now send requests like `/api/v2/devices?filter[devices][created_at][gt]=2019-11-01` to find devices created after a specific date. This opens a ton of possibilities for API integrations!
- Empty dashboards now feature a hint and instructions to add some first elements.

### Changed

- Mettler Toledo devices have a new driver version available with improved error handling and command response handling.

- As the Device status is now stored as a data point changes to the device status no longer trigger a device version in the audit trail.
- In API v2 Task error attribute now serialized as null when there is no error.
- For local installation, we now allow non-authenticated SMTP servers and configurable "from" addresses as well as better means to test custom SMTP setups.
- The channel selection component now uses a dialog with a more readable representation of the selected channels.
- The jobs index page is now showing the most recent jobs at the top.
- The use of the sample field on weighing and generic measurement tasks is now optional.

## Fixed

- Certain circumstances in API v1 and v2 errors could lead to redirect loops. You'll now always get correct JSON responses when something goes wrong.
- A problem causing some broken navigation links when visiting a user profile page.
- Password reset and account unlock emails on servers with route based tenants had broken links.
- As broken translation in Weighing task error messages.
- Ensuring that we release devices after a task finished, failed or aborted.
- A problem with real-time updates in the frontend.

## v1.15.0 - 2019-08-02

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### Added

- Webhooks can now be passed custom headers so third party push integrations can realise different scenarios from basic authentication to passing meta data

### Fixed

- The stirring task will now properly handle temporarily turning a stirrer off during a run
- A problem with invitations links has been fixed that only affected instances using tenant routing in combination with subdomain sensitive installations

## v1.14.5 - 2019-07-05

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## Added

- New Device Type: 2mag Stirring Hotplate 6

## Changed

- The Legato 100 now shows infused volume and infused time
- We improved the rotation setpoint behavior of the IKA Eurostar devices

## v1.14.4 - 2019-06-21

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### Added

- Task plots now only show relevant interpolation options
- For webcams different resolutions can now be configured using the driver options

### Changed

- Temperature control tasks only uses rounded set value to increase compatibility with different device types
- Improvements to various device types

### Fixed

- Axis labels of plot previews were cut off for larger values, now they always have enough space
- A problem with measurements of tasks that could not be safed should no longer occur
- The BinaryState element had switched labels, they'll now show correctly

## v1.14.3 - 2019-06-10

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### Added

- Task's plot editors now validate the input

### Changed

- The color range used on dashboards has been altered to exclude very light colors, that were hard to see on the white background

## Fixed

- Tabs that are running in the background will no longer freeze, when a lot of channels are active
- Measurements of temperature control tasks are now properly linked
- Notifications now use user email, when there is no name in the profile
- Measurements started from the context panel of dashboards sometimes did not show up without refreshing
- Improved handling of several edge cases of task parameters
- Improved loaders on dashboards
- Sort order in export files was not correct when including channels from different instruments

## v1.14.2 - 2019-05-24

### Added

- Novus FieldLogger with universal channels (no particular unit)
- Novus FieldLogger with only temperature channels
- Device Driver API v2
- Download OpenAPI docs using OAuth authentication

### Changed

- Invalid API v2 parameters (values or keys) will no longer be ignored, but return errors instead

### Fixed

- A problem that could cause the jobs index page to crash
- Timestamp on measurement start is now correct
- Export files containing UTC timestamps and are labeled correctly
- Several missing or wrong translations
- Timeouts on attachment downloads

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## v1.14.1 - 2019-03-05

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### Changed

- Allow adding comments for measurements at any time, not only while measurement is running

### Fixed

- Measurements were not correctly loaded after comments were added
- When users logged out, pages in other tab of the same browser were not correctly reset
- The port console did not show log entries

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## v1.14.0 - 2019-03-04

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### New Device Types

- Mitutoyo Thickness Measurement device
- Lauda RT and Lauda XT
- Mettler Toledo XPE
- 2mag Stirring Hotplate 6

### Added

- Allow manual comments (text, tags) for measurements at specific data points

### Changed

- Remove passive flag from certain balances
- Use Mettler Toledo SICS protocol for certain balances which had a passive mode only

### Fixed

- Edge and IE, the API docs were not correctly loaded
- On the server administration page, the features were not sorted and got shuffled after each page visit
- NumberInput not reflecting the current value when opening a device



- Sharing a device with a team got improved
- Prevent crashing dashboards due to faulty elements
- Remove prefix for missing translations

## **v1.13.1 - 2019-02-08**

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### **Changed**

- No changes visible to users

## **v1.13.0 - 2019-02-07**

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### **Added**

- API v2 data points endpoints

### **Changed**

- API v2 docs improvements

## **v1.12.0 - 2019-01-23**

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### **Added**

- Export measurements and jobs from the app

### **Changed**

- Updated API v2 documentation

## **v1.11.0 - 2019-01-07**

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### **Added**

- Synchronized exports

## Fixed

- Fixes a problem with connectors not being able to connect