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Disaster prevention IoT system cloud side operation manual equipped with integral sensor

(Supplementary note) This cloud-side application was developed using the open source Grafana.

March 2024

Geophone Solutions

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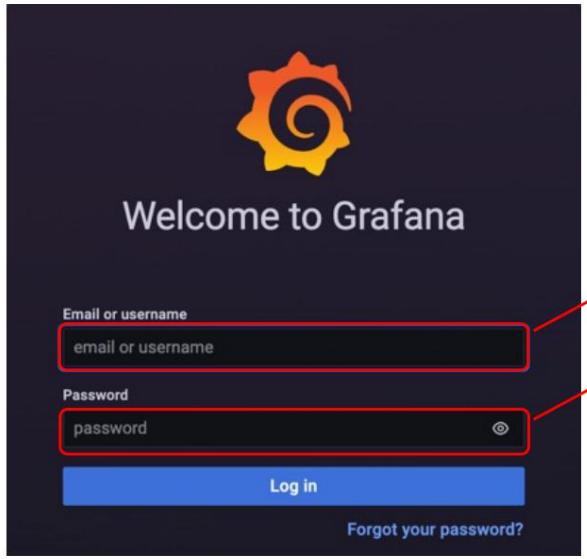
Web app URL and login screen

To log in, access the URL below using a web browser (Chrome, Safari, Microsoft Edge, etc.).
Grafana address (URL: http://corvac-http.tabrain.io:8000/grafana/login)



User ID — Email or username

password

*For user registration, please apply to the server administrator and receive a password.

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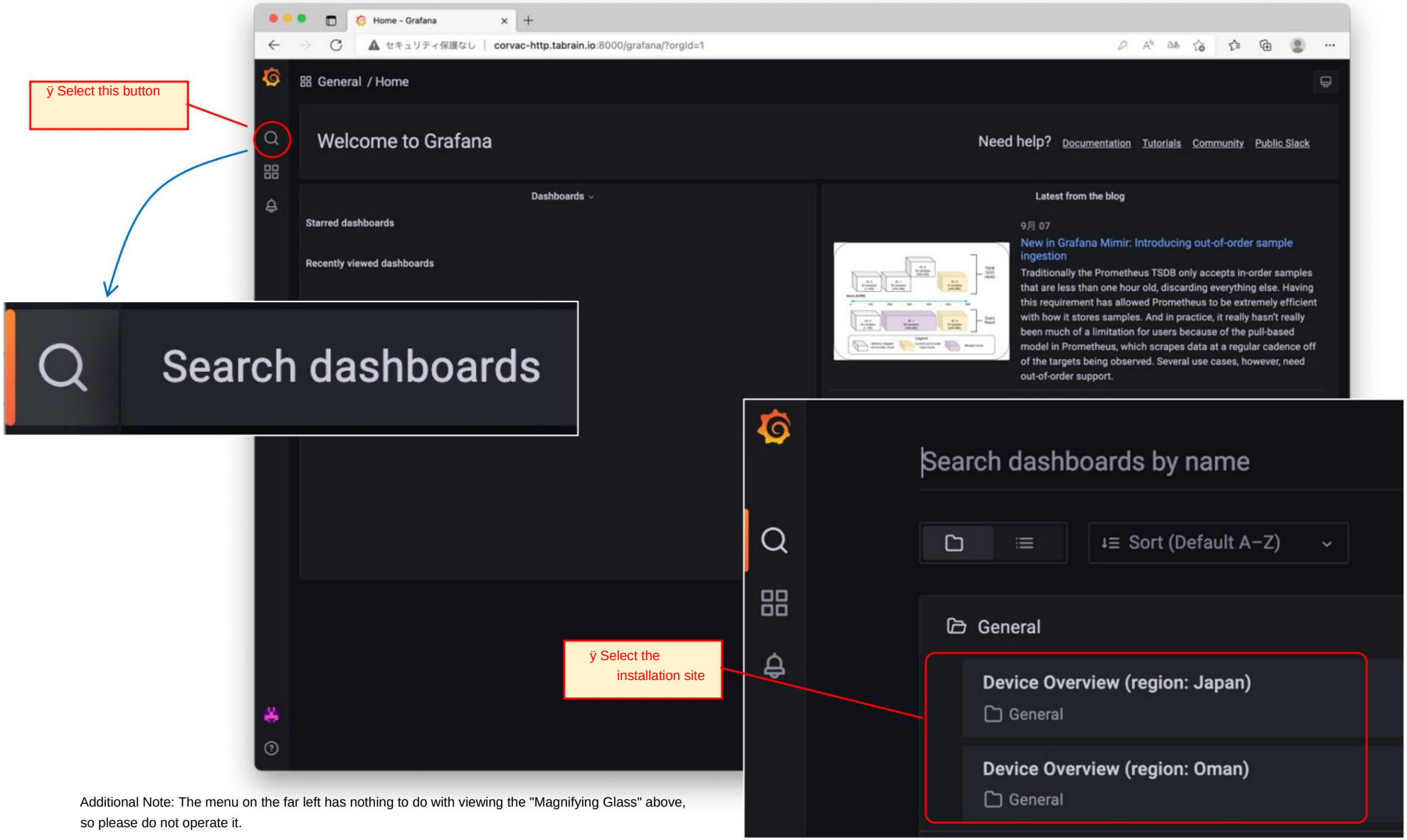
Flow from startup screen to viewing screen



Additional Note: The menu on the far left has nothing to do with viewing the "Magnifying Glass" above, so please do not operate it.

*The installation site is Hiroshima Oya Okawa in the upper row and Oman in the lower row.

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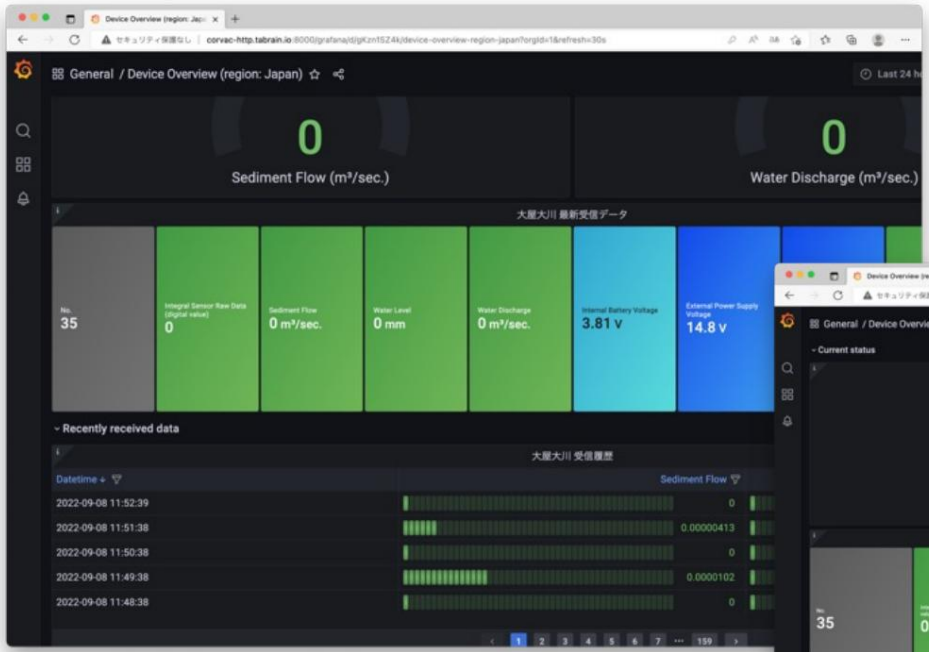
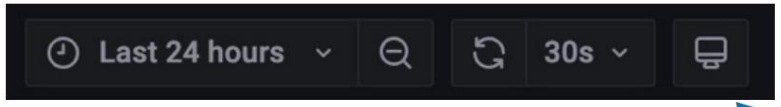
Initial screen when viewing



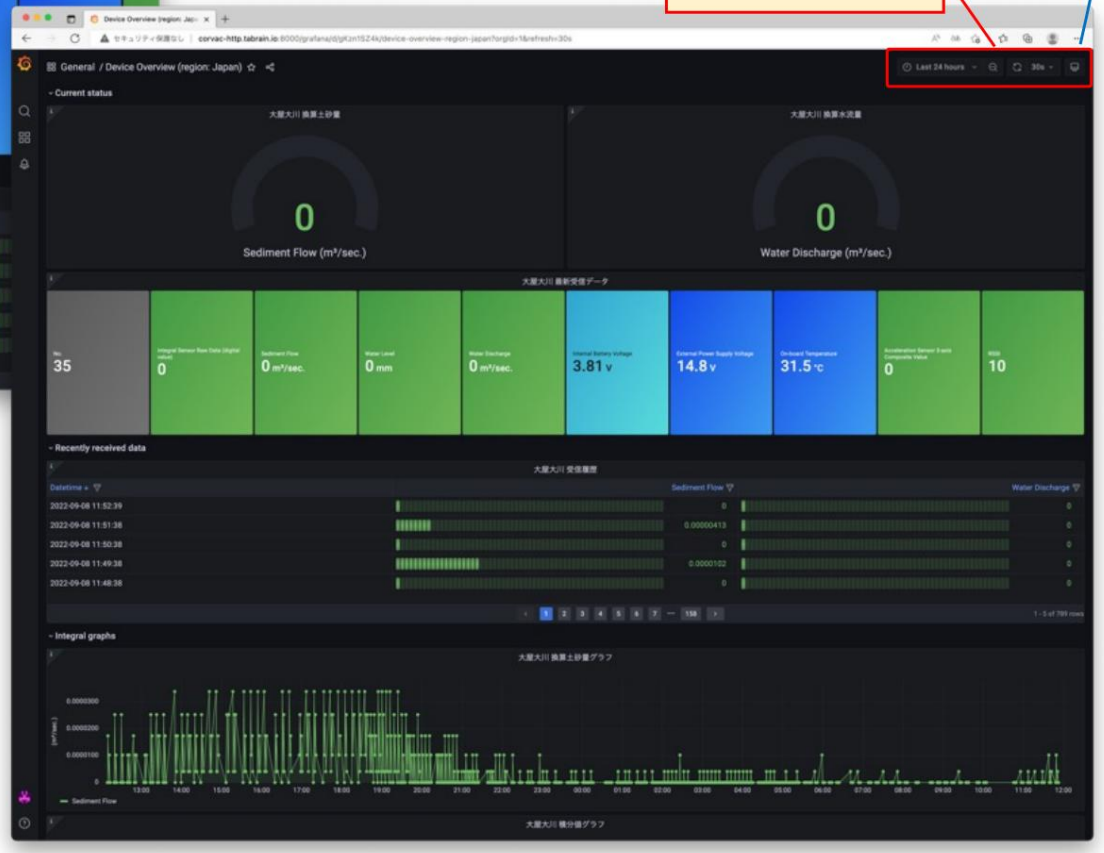
*The initial viewing screen may be partially displayed with the top right corner cut off as shown above. Scroll to display the time setting menu at the top right corner. (You can also view it on your smartphone, but due to the small display area, we omit the explanation here.)

Time range setting menu (explained in “Supplement” below)



*The entire viewing screen will be displayed when the menu at the top right corner is displayed as shown above.

Display period/switching time settings



*The display time interval on the initial screen is set to the past 24 hours from the current time.

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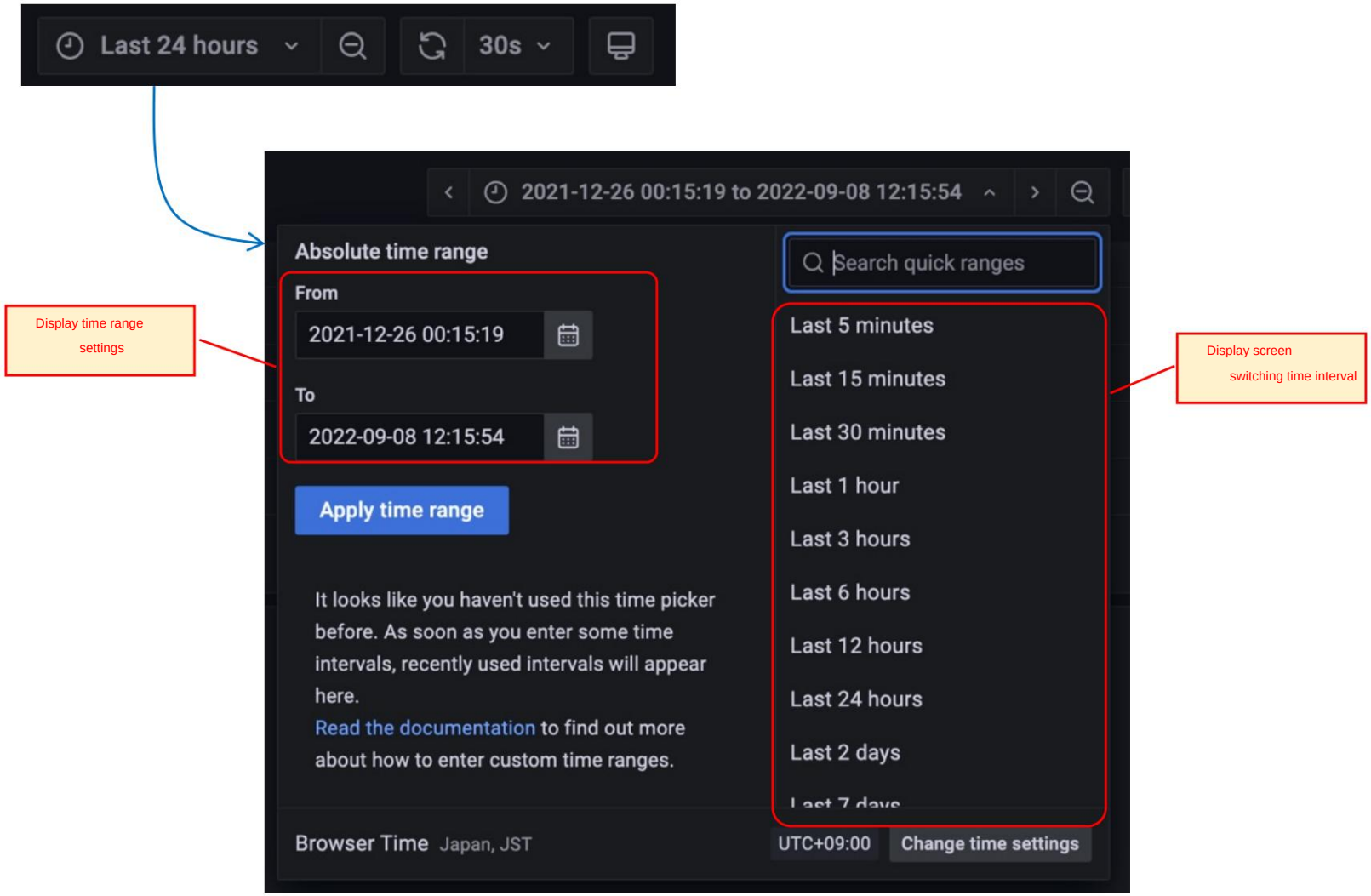
Settings for viewing display period, etc.



``Supplementary note'' For information on this setting, please refer to the ``Supplementary explanation'' below.

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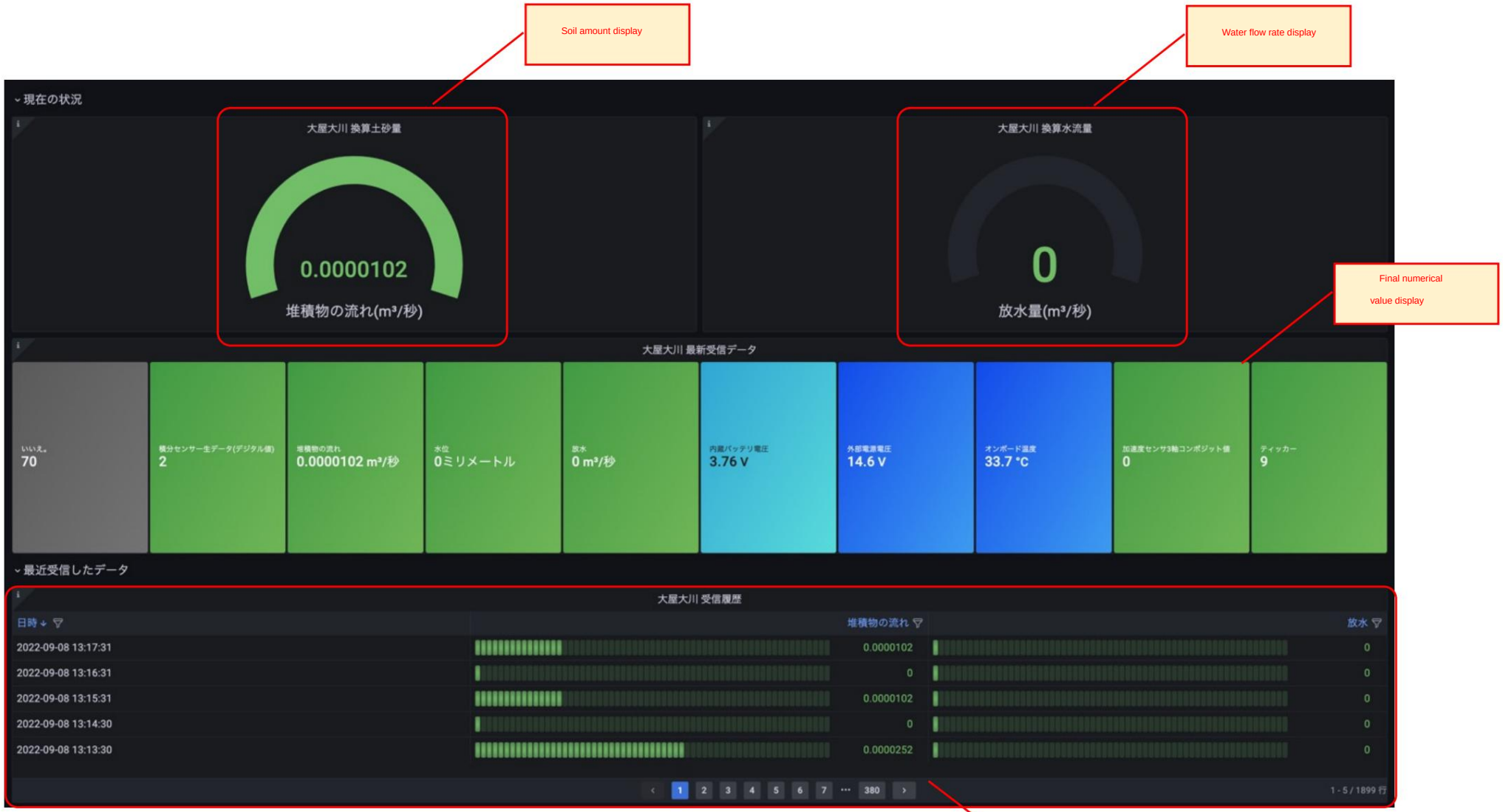
Viewed graph screen display explanation (1) Overall overview



*The displayed screen has been converted into Japanese.

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Viewing graph screen display explanation (2) Amount of soil + water flow

Integral graph Upper row: Converted soil amount Lower row: Integral value

*Unit: Converted soil volume m3/sec Integral value None

Water pressure graph Upper row: Converted water flow rate Lower row: Water level

*Unit: Water flow rate m3/sec Water level mm

*The displayed screen has been converted into Japanese.

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Viewed graph screen display explanation (3) Others

Acceleration composite value

*Unit: G

Battery voltage Upper row: External battery Lower row: Internal battery

*Unit: mV

temperature on board

*Unit: degrees

Radio field strength

*Unit: None If this value is a, -113+2*a (dB) <The larger the number, the better the radio wave condition>

*The displayed screen has been converted into Japanese.

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Supplement: Time range control

1) Time range control

Grafana visualization, for dashboards, panels, and alerts
provides several ways to manage the time range of data that is displayed.
This page shows supported time units and relative ranges, common time
Controls, dashboard-wide time settings, and panel-specific times
Let's explain the settings.

Time units and relative ranges

The following time units are supported: s (seconds), m (minutes), h (hours), d (day), w (week), M (month), Q (3 months), y (year)

You can use the minus operator to go back in time compared to the present.

If you want to display the entire duration of the unit (day, week, month, etc.), add it at the end. accounting period
To display , use and time units. /<time unit>fQ (fiscal quarter)fy (fiscal year)

The plus operator allows you to move forward in time relative to the present. For example, this
You can use this feature to explore future predictive data.
Here are some examples:

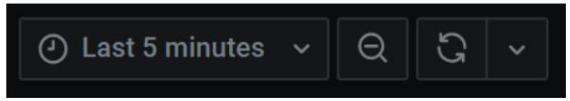
relative time control		Start time:	End time:
Last 5 minutes	now -5m		now
The day so far	Last day now/d	This	now
This week	week now/w		now/w
This week so far	now /w this month now/M		now
This month			now/M
This month so far	now/M		now
Previous Month	Previous month now-1M/M	now-1M/M	
This year so far	now/Y now/Y		now
This Year	last year		now/Y
Previous fiscal year	now-1y/fy	now-1y/fy	

Note on Grafana Warnings

For Grafana alerts, the following syntax is not currently supported:
now + n for the current timestamp.
This is an absolute timestamp, so "from the start of n to the end of n"
now-1n/n.

2) General time range control

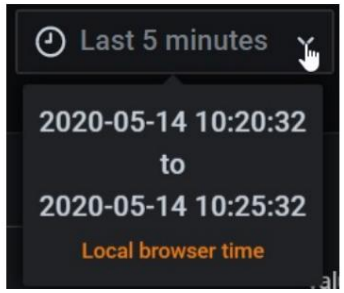
Common user interface for dashboard and panel time controls
(UI).



The option definitions are:

current time range

The current time range (also known as the time picker) displays the dashboard you are viewing.
Or the time range currently displayed in the panel will be displayed.



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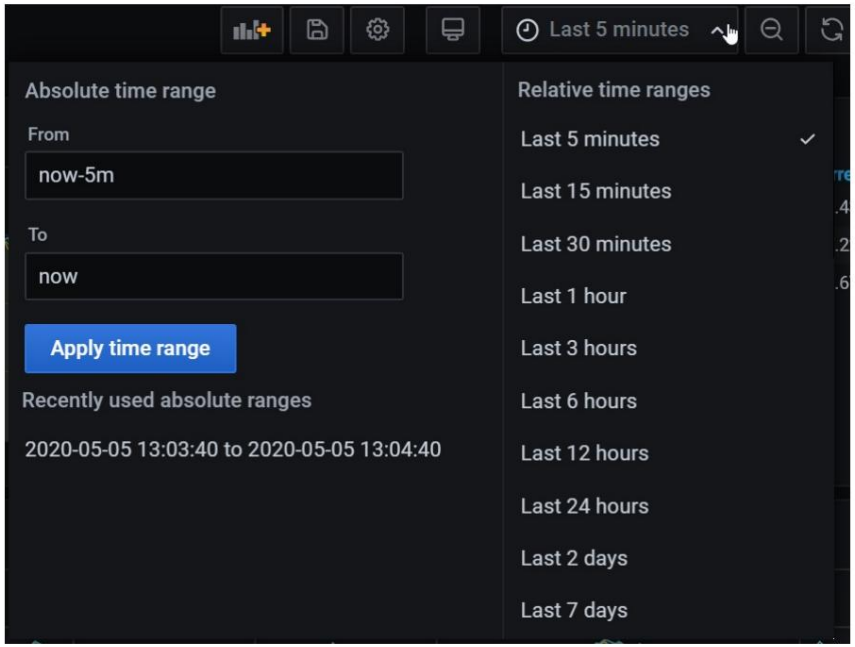
Click the current time range to change the time range. You can change the current time using a relative time range, such as the last 15 minutes, or an absolute time range, such as. 2020-05-14 00:00:00 to 2020-05-15 23:59:59



Relative Time

Range Select a relative time range from the Relative Time Range list. You can filter the list using the input fields at the top. Here are some examples of time ranges:

Last 30
minutes Last
12 hours
Last 7 days
Last
2 years
Yesterday
The day before yesterday
This day last week So far
today So far this week So far this month

Absolute Time

Range You set the absolute time range in one of two ways: ÿ Enter values in the "Start" and "End" fields. Enter exact time values or relative values (such as) and click Apply Time Range. now-24h ÿClick the "Start" or "End" field. Grafana displays your calendar. Click the day you want to use as the current time range, then click Apply Time Range. This section also displays recently used absolute ranges.

Zoom Out (Cmd + Z or Ctrl + Z) Click the Zoom Out icon to display a wider time range in the dashboard or panel visualization.

Zoom in (applicable only to graph visualizations) Click and drag to select the time range within the visualization that you want to displa

Refresh Dashboard

Click the Refresh Dashboard icon to immediately run all queries on the dashboard and refresh visualizations. Grafana cancels any pending requests when a new update is triggered. By default, Grafana does not automatically update dashboards. Queries run on their own schedule according to your panel settings. However, if you want to update the dashboard regularly, click the down arrow next to the Refresh Dashboard icon and select the refresh interval.

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Dashboard time settings Time settings are saved per dashboard. To change time zone and fiscal year settings from the time range control, click the Change Time Settings button. For more advanced time settings, click the Dashboard Settings (gear) icon at the top of the UI. Then go to the Time Options section on the General tab. **- Time Zone** - Specify the local time zone of the service or system you are monitoring. This is useful when monitoring systems or services that operate across multiple time zones. Default - The time zone selected by default for the user profile, team, or organization will be used. If no time zone is specified for the user profile, the team the user is a member of, or the organization, Grafana uses the browser's local time.•Local browser time - The time zone configured for the viewing user's browser is used. This is usually the same time zone that is set on your computer. - Standard ISO 8601 time zone (including UTC).•Auto-**update** - Customize the options displayed in relative time and the auto-update options. Entries are separated by commas and accept any valid time unit. **- Late now** - Enter a time delay to override the time. Use this option to accommodate known delays in data aggregation and avoid null values. Hide now **time picker** - select this option if you do not want Grafana to display the time picker.

Panel time overrides and timeshifts [Query Options] allows you to override the relative time range of individual panels to be different from what is selected in the time picker in the top right dashboard. This allows you to view metrics from different periods or days at the same time.

Controlling time range using URL You can control the time range of a dashboard by specifying the following query parameter in the dashboard URL. from- defines the lower bound of a time range specified in ms epoch or relative time to- defines the upper bound of a time range specified in ms epoch or relative time time and - defines a time range from to . Both parameters must be specified in ms. For example, a time range of 10 seconds from 1499999995000 to 1500000005000 time.windowtime-time.window/ 2time+time.window/2?time=1500000000000&tim e.window=10000