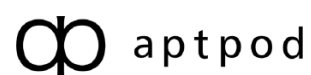


intdash

Web Console Applications Operation Manual

intdash My Page v3.2.0 / Meas Hub v1.5.0 / Media Explorer v1.0.0 / Edge Finder v2.6.0 /
Admin Console v1.2.0

2022Q1R1



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01 Introduction (Web Console Apps)

Important:

- This document is for general informational purposes only. Specifications in this document are subject to change without notice and are not guaranteed.
- Screenshots used in descriptions are examples. Some displays or procedures might differ depending on your environment and application version.

Note: Company names, service names, and product names mentioned in this document are generally registered trademarks or trademarks of their respective owners. Trademark symbols "™" and "®" are omitted in the text, figures, and tables.

Attention: This document has been translated using machine translation services and may contain inaccuracies and translation errors. Please also refer to the official version in Japanese.

1.1 Contents of this document

This document describes how to do the following:

- Manage your own edges
- Check the statuses of the edges
- Search and manage measurement data stored on the server
- Manage your user account information
- (For administrators) Manage all users and all edges in the intdash domain

Note: A user with the admin role is called an administrator.

These operations are performed using the following applications.

- **My Page**
 - Setting your user name, email address, password, display language, etc.
 - Creating edge accounts and changing edge account settings
- **Edge Finder**
 - Viewing all users in the domain
 - Checking real-time data traffic to the intdash server
- **Meas Hub**
 - Search and manage measurement data stored on the server
- **Admin Console** (Available only to administrators)
 - Managing all users and all edges in the intdash domain

Important: This document does not cover how to use the Visual M2M Data Visualizer to visualize time series data in a dashboard. See [Data Visualizer Operation Manual](#).

1.2 System requirements

The operations described in this document are performed on a web browser. The following environment is required.

- OS: Windows or macOS
- CPU: Intel 3rd Generation Core i5 and above
- Memory: 8GB or more
- Network: Internet connection
- Web browser: Google Chrome (latest version)

02 Domains, users, edges, and measurements in intdash

This chapter describes the main concepts used in intdash.

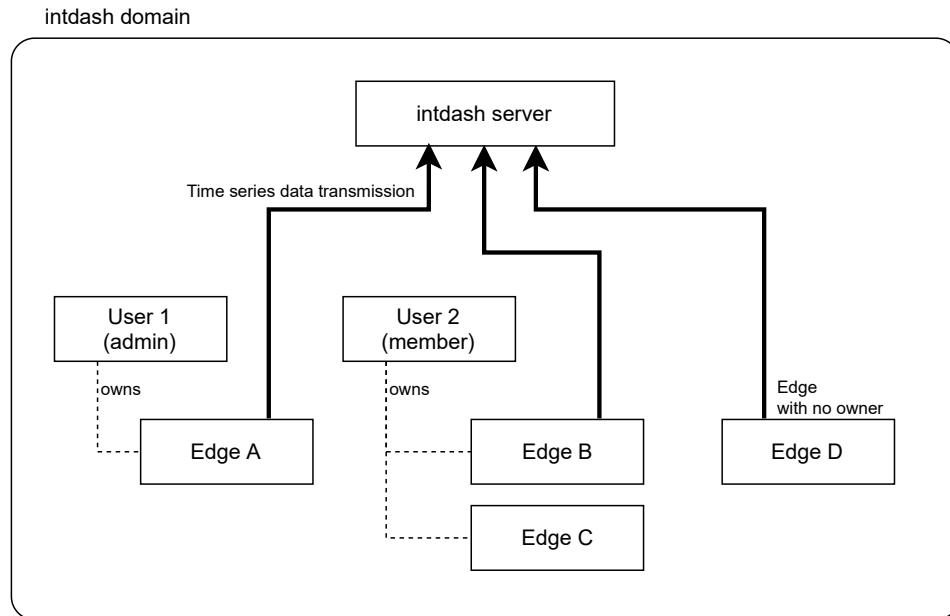


Fig. 1 Domain, user, edge

2.1 Domain (intdash domain)

A single intdash environment, centered around an intdash server, is called a domain (or intdash domain).

Only users and edges (devices that send and receive data) with accounts issued in that domain can connect to the intdash server.

The domain has at least one administrator user with the admin role.

2.2 Users and edges

There are "users" and "edges" as entities connected to intdash.

User

People who use intdash are called "users". Users mainly browse time series data using web applications and mobile applications.

Edge

Devices that use sensors to acquire data or are remotely controlled are called "edges". An edge sends and receives time series data to and from the intdash server.

A user who uses intdash need a "user account". Also, an edge requires an "edge account".

2.2.1 User account

- User accounts are created by the administrator of the intdash domain.
- User accounts are assigned roles such as "admin" and "member".
- Users with the admin role have the right to manage other users, such as creating and deleting user accounts. Normally, there are "admin" and "member" roles, but the available roles depend on the intdash domain.
- Users can create and own edge accounts.

2.2.2 Edge account

- Edge accounts are created by users who have permission to create edges. In general, users with the "member" role can create edge accounts.
- When a user creates an edge account, the user becomes the owner of that edge.
- The edge account owner and intdash domain administrators can edit and delete edge accounts.
- Administrator users can change the owner of the edge account. You can also leave the edge account unowned.

2.2.3 Different use of user and edge depending on the purpose

Basically, it is the "edge" that generates time series data and sends it to the intdash server. Also, objects that operate by receiving time-series data from the intdash server (such as remotely controlled robots) are also "edges".

"Users" view and download time-series data and manage edges. If you are in the same domain, you can also view data on edges that you do not own.

Applications or SDKs to be used	Account used for authentication (sign in)	Credentials to use
Web application. Data Visualizer, Meas Hub, Edge Finder, etc.	User	Username and password
Mobile application for browsing. Stream Video, Stream Monitor, VM2M Viewer	User	Username and password
Mobile application for measurement. intdash Motion	User	Username and password
intdash SDK for Python	User	API token, or username and password (username and password will be deprecated)
intdash Edge Agent, Terminal System	Edge	Client secret

Important:

- Sign in with your user account when using intdash Motion. However, since sending real-time data must be done as an edge, intdash Motion sends the data as an "edge with the same UUID as the logged-in user's UUID". If no edge account has the same UUID as the user, such an edge account will be created automatically. (UUID is an identifier that distinguishes accounts. You can check the UUID in My Page or Edge Finder.)
- Authenticate with a user account when using the intdash SDK for Python. Real-time data must be sent and received as an edge, so when creating upstream or downstream in Python code, specify which edge to behave as. See the intdash SDK for Python documentation for more information.

Attention: Supplement for those who used the previous versions of intdash

The meaning of "edge" is slightly different between the old intdash (up to version 2.4 of the My Page application) and the new intdash. Please note the following points.

The new intdash distinguishes between users (people) and edges (devices)

- In previous intdash, people and devices connected to intdash were indistinguishably called "edges".
- In new intdash, people who connect to intdash are called "users" and devices that connect to intdash are called "edges" to distinguish between people and devices.

The new intdash does not allow you to sign in to web applications with your "edge" account

- In the old version of intdash, a password was issued for edge accounts, and the edge name and password could be used to sign in to web applications.
- With new intdash, edge accounts are only for devices, so edge accounts are not expected to use web applications. As a result, no password is issued to your edge account and you cannot use your edge name and password to sign in to web applications.

In new intdash, the edge account is set up by the owner user

- Previously intdash allowed you to change the settings of the edge account itself by signing in to My Page using the edge account.
- In new intdash, change the edge account settings on the owner's My Page. Also, a user with the admin role can change the settings for all edge accounts in the domain.

2.3 Measurement

In intdash, a collection of time-series data points that share a certain base time is called a "measurement".

For example, the example in the figure below represents a measurement that started at 9:00:00 on September 1, 2020.

Measurement
Base time
2020-09-01 09:00:00

Data point

Elapsed timeData

0.10 sFloat115.0 (km/h)

Data point

Elapsed timeData

0.15 sFloat117.5 (km/h)

Data point

Elapsed timeData

0.15 sString1Hello

Data point

Elapsed timeData

0.30 sFloat119.5 (km/h)

...

Fig. 2 Concept of measurement

The start of measurement at 2020-09-01 09:00:00 is set as the base time. The speed is 15.0 km/h at 0.10 seconds from the base time, 17.5 km/h at 0.15 seconds, 19.5 km/h at 0.30 seconds, and so on. A collection of these series of data points with a single base time is a measurement.

Measurements always record information about the edge that sent the data (the edge where the measurement was performed). Therefore, applications such as Meas Hub can list the measurements sent from a specific edge.

Note: intdash manages time by breaking it down into a base time and the time elapsed from that base time. For more information, see [iSCP 1.0 Essentials](#).

03 Sign in to intdash

To use the intdash application, you need to sign in to intdash using your user account.

1. Open your URL in your web browser.

The URL is different for each intdash domain. If you have not received the URL, username and password, please contact your administrator.

2. When the sign in screen is displayed, enter your user name or registered email address and password.

Depending on your environment, the Tenant ID box may also appear on the sign in screen. In that case, enter the tenant ID specified by the administrator. If you leave the tenant ID blank, you will be logged in to the default tenant.

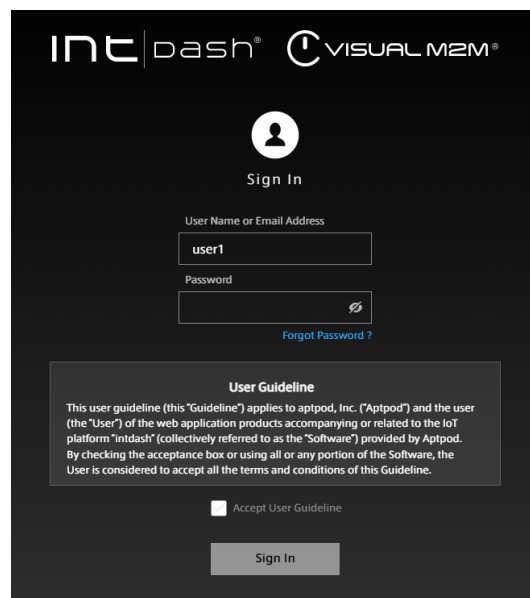


Fig. 3 Sign in to intdash

3. Accept the user guideline, and then click [Sign In].
4. From the list of applications, click the application you want to use.

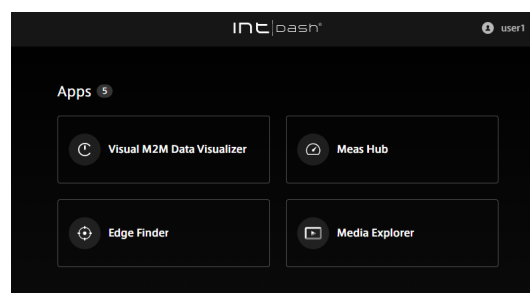


Fig. 4 Application list

The Admin Console for administrators does not appear in the list of applications. To open the Admin Console, go to <base URL>/admin/.


Note: If you sign in using the temporary password provided by the administrator, the screen for setting a new password will be displayed. Follow the instructions on the screen to set a new password.

The URL of each application is as follows. The base URL is different for each intdash domain. Please refer to the information provided by the administrator.

- My Page: <base_URL>/users/me/
- Edge Finder: <base_URL>/edges/
- Meas Hub: <base_URL>/measurements/
- Media Explorer: <base_URL>/media/
- Admin Console <base_URL>/admin/

For example, if the base URL of your intdash domain is <https://example.vm2m.jp>, the URL of each application will be as follows.

- My Page: <https://example.vm2m.jp/users/me/>
- Edge Finder: <https://example.vm2m.jp/edges/>
- Meas Hub: <https://example.vm2m.jp/measurements/>
- Media Explorer: <https://example.vm2m.jp/media/>
- Admin Console <https://example.vm2m.jp/admin/>

If you already have an intdash application open, you can also move to another application with the  button at the top right of the screen.

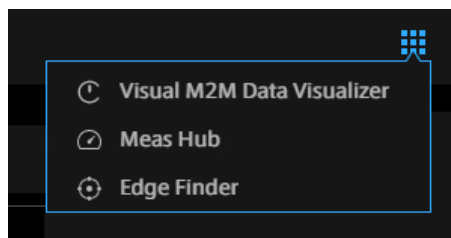



Fig. 5 Move to another application

04 Configure your user account - My Page

4.1 Check / set user information (name, email address, etc.)

To check or set your own user information, such as name and e-mail address, go to the User Information screen in My Page.

1. Open My Page (`<base_URL>/users/me/`).

If you already have the intdash application open, you can also go to My Page by clicking the  button at the top right of the screen.

2. Open [User Information].

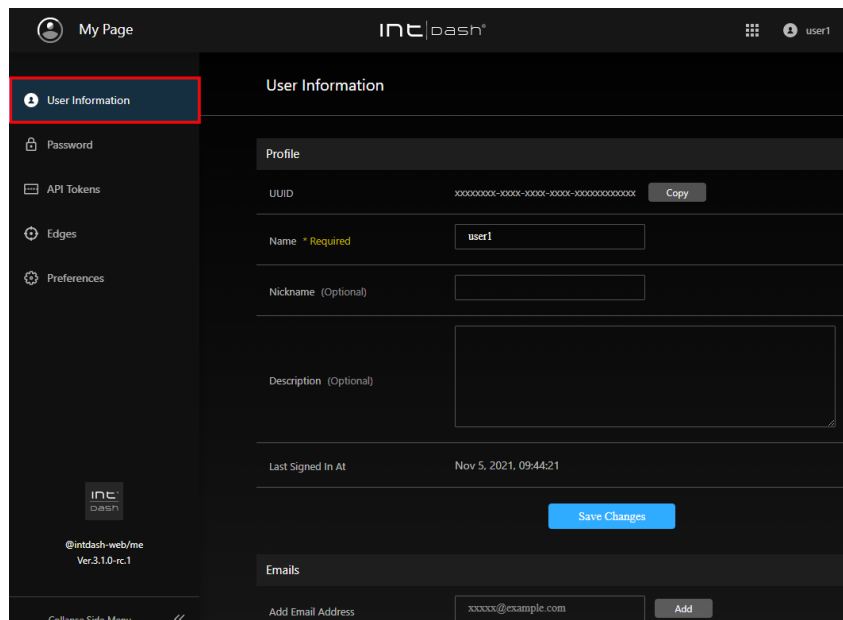


Fig. 6 User information

3. (To set the name, nickname, and description) Edit the user information, and then click [Save Changes].

Name

The name of the user. You can change it, but you cannot use a user name that is already in use in the intdash domain.

The name can contain alphanumeric characters (0-9, A-Z, a-z), hyphens (-), and underscores (_).

Nickname (optional)

You can give the user a descriptive display name.

Description (optional)

You can enter a description of the user.

4. (To set up a new e-mail address) To set up a new e-mail address, enter the e-mail address and click [Add].

A confirmation email will be sent to your email address. Open the confirmation email and click the URL to complete the verification.

Depending on the intdash domain, you may be able to register more than one email addresses for a single user account.

If you wish to cancel the registration of your e-mail address, click [Remove].

Note: If you have not confirmed your email address with a confirmation email, you will not be able to reset your password by yourself.
If you click [Resend Verification Email], you will be able to send the confirmation email again.

4.2 Change password

You can change your user account password on My Page.

1. Open My Page (`<base_URL>/users/me/`).
2. Open [Password].

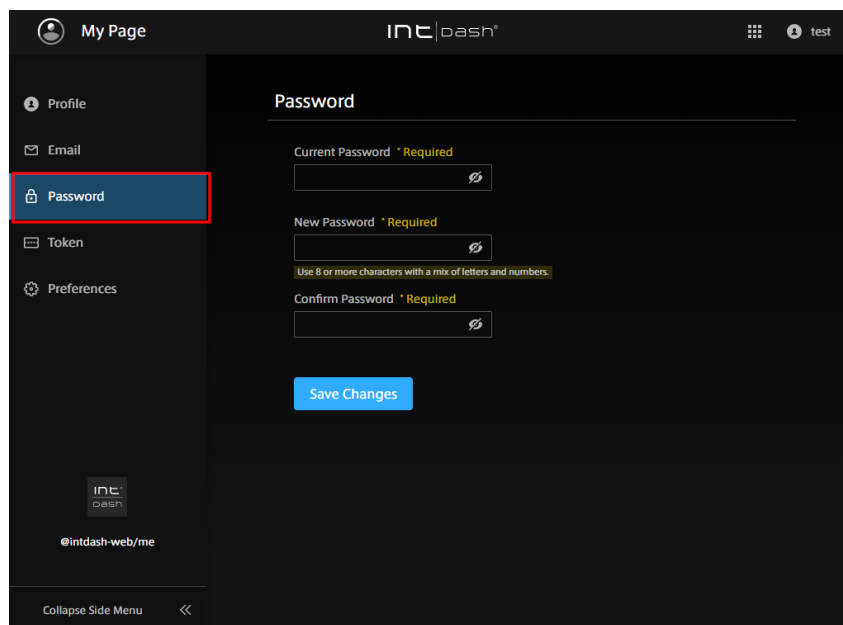



Fig. 7 Password

3. Enter your current and new passwords and click [Save Changes].

Hint: You can show or hide the password by clicking .

4.3 Create an API token

If you want to access the intdash API as a user with a program that uses the SDK, you will need an API token. The API token is created in the My Page of your user account.

Note: If you want to use the intdash API as an edge instead of a user, create an edge account and authenticate using the client secret. See [Create edge accounts](#) (p. 14) for more information.

1. Open My Page (`<base_URL>/users/me/`).

2. Open [API Tokens].

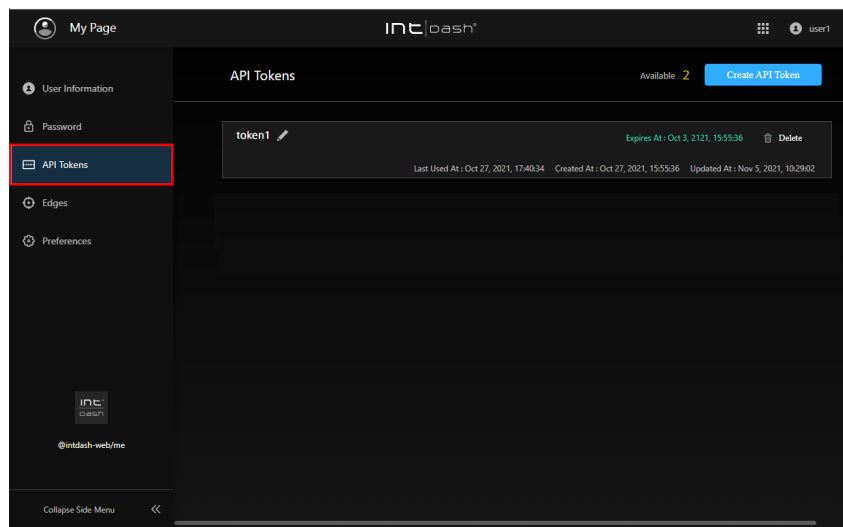


Fig. 8 API tokens

3. Click [Create API Token].
4. Enter a name to distinguish the token.
5. Enter the expiration date of the API token (optional).
6. Click [Create].
7. When the API token is displayed, click [Copy] to copy it to the clipboard.

Attention:

- API tokens are only displayed once when they are created.
- Do not let others know your API token.

Note: The expiration date of the API token will be displayed on the API Tokens screen, where you can rename or delete the token.

4.4 Create edge accounts

To connect devices to intdash, an edge account is required for each device. An edge account can be created in My Page.

Once you create an edge account, you will be issued an edge UUID and client secret, which you will need to set up on your device.

If you create an edge account in My Page, you will be the owner of that edge account.

1. Open My Page (`<base_URL>/users/me/`).
2. Open [Edges].

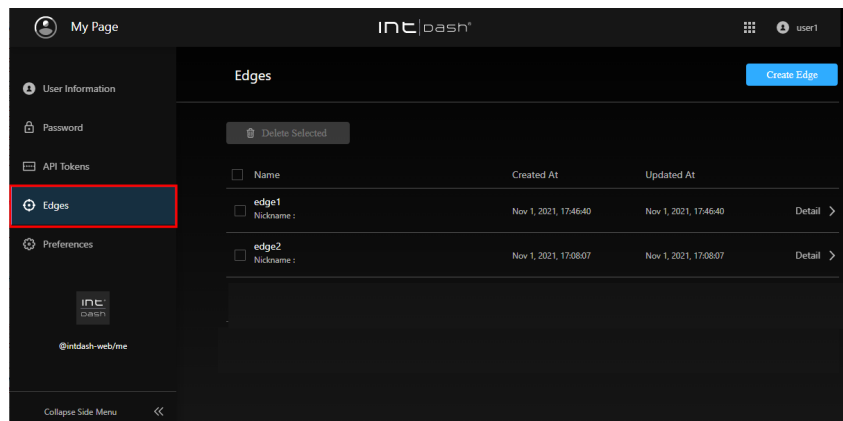


Fig. 9 Edges

3. Click [Create Edge].
4. Give the edge a name to distinguish it (nickname and description are optional).
The name can contain alphanumeric characters (0-9, A-Z, a-z), hyphens (-), and underscores (_). You cannot use an edge name that is already in use in the intdash domain.
5. Click [Create].
6. Once the edge UUID and client secret are issued, copy them and set them on the device you are going to connect to intdash.

Attention:

- The client secret is displayed only once.
- Do not let anyone else know your client secret.

Note: When you send data using the iOS application intdash Motion, an edge account with the same name as your user name (or in some cases "<username>_edge") is automatically created and the data is sent using that edge account.

4.5 Change edge account settings / Delete edge account

The owner of the edge account can change the edge settings in My Page. You can also delete the edge account.

1. Open My Page (<base_URL>/users/me/).
2. Open [Edges].

The list of edges you own is displayed.

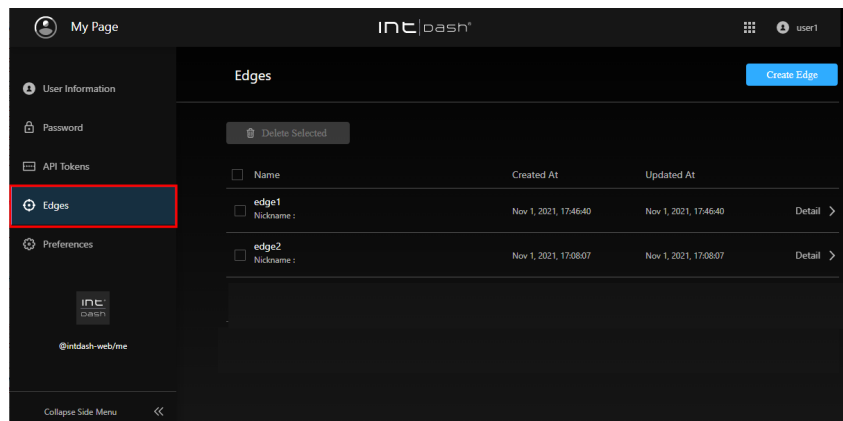


Fig. 10 Edges

3. Click [Details].

- The details of the edge will be displayed. Edit the name and nickname, and click [Save Changes].
- If you want to delete the edge account, click [Delete].

Note: Select edge accounts in the edge list and click [Delete Selected] to delete them all at once.

4.6 Change the display language and time zone of your web application

You can change the language and the time zone used in the intdash web applications.

Note: This setting only affects multilingual applications. This setting is saved in your local PC's web browser, so you will need to set it again if you use another web browser.

1. Open My Page (`<base_URL>/users/me/`).
2. Open [Preferences].

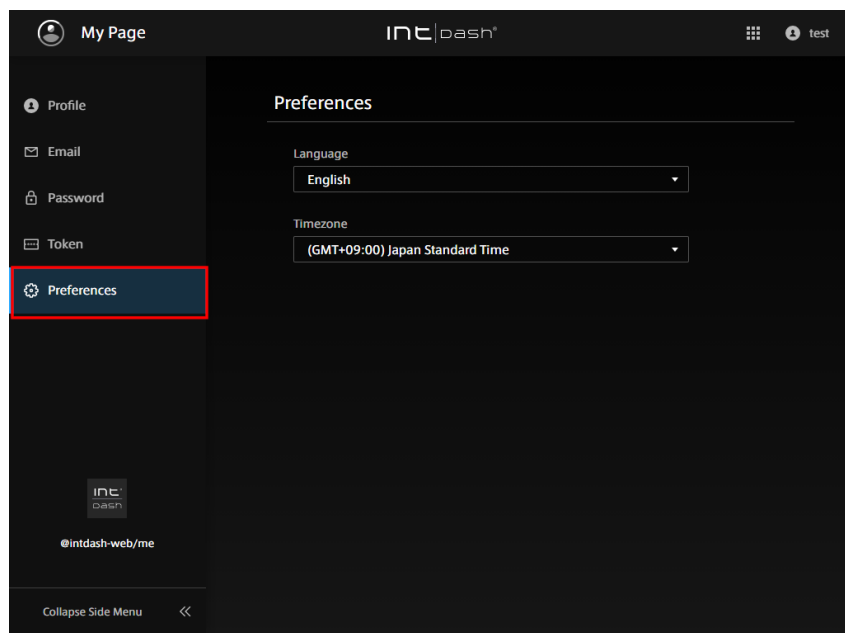



Fig. 11 Preferences

3. Select your language and time zone.

05 View edge status - Edge Finder

5.1 View the list of edges

Use the Edge Finder to see if an edge is online or to see real-time data being transmitted from the edge to the intdash server.

Open Edge Finder (`<base_URL>/edges/`). If you already have an intdash application open, you can also go to the Edge Finder with the  button at the top right of the screen.

The edge list can be reordered and filtered. See [View the list of edges](#) (p. 18) for more information.

Note: When you send data using the iOS application intdash Motion, an edge account with the same name as your user name (or in some cases "<username>_edge") is automatically created and the data is sent using that edge account.

The items displayed in the edge list screen are as follows.

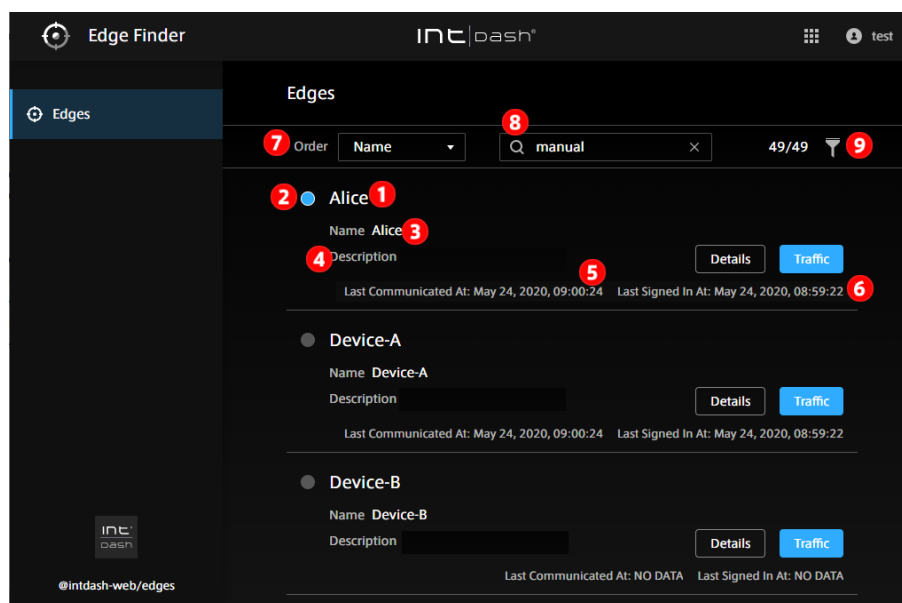





Fig. 12 Edge list

- 1 Edge name (nickname if the edge has a nickname)
- 2 Connection status ( blue: online,  gray: offline)
- 3 Edge name
- 4 Description
- 5 Date and time this edge last communicated with the intdash server
- 6 Date and time when this edge last signed in to intdash
- 7 Change the order
- 8 Search by string (You can search by UUID, name, nickname, or description. You can search by AND condition by separating keywords with spaces.
- 9 Filter by type or connection status ()

Hint: The connection status is determined by the presence or absence of communication with intdash. It may take about 15 seconds for the latest connection status to be reflected on the screen.

Hint: When you change the order, search for a string, or specify a filter, the URL of the current list is displayed in the address bar of the web browser. By bookmarking this URL, you can view the list using the same search criteria.

5.2 Check traffic

Click [Traffic] in the Edge Finder to view the data being transmitted from the edge to the intdash server in real time.

Note:

- Only the data timestamp, ID, type, channel, count, and some payload can be seen here.
- Use this function when you want to check the communication between the edge and the intdash server. For data visualization, use Visual M2M Data Visualizer.




5.2.1 Edge traffic screen

Timestamp	ID	Type	CH	Count	Payload
17:44:28.256	Acceleratic	General S	1	835	{"id": "0x0001", "dat:
17:44:28.256	Gravity	General S	1	835	{"id": "0x0003", "dat:
17:44:28.256	Rotation R	General S	1	835	{"id": "0x0004", "dat:
17:44:28.256	Orientation	General S	1	835	{"id": "0x0005", "dat:
17:44:28.256	Acceleratic	General S	1	835	{"id": "0x0002", "dat:
17:43:26.930	GeoLocatic	General S	1	27	{"id": "0x0009", "dat:
17:44:28.056	GeoLocatic	General S	1	8	{"id": "0x0006", "dat:
17:44:28.056	GeoLocatic	General S	1	8	{"id": "0x0007", "dat:
17:44:28.056	GeoLocatic	General S	1	8	{"id": "0x000A", "dat:
17:44:28.056	GeoLocatic	General S	1	8	{"id": "0x0008", "dat:

Fig. 13 Traffic screen

- 1 Time (time on the local PC using the browser)
- 2 The number of data received from this edge per second (increment of "Count" per second)
- 3 The amount of payload received from this edge per second
- 4 Measurement start time
- 5 Data content

Hint:

- The "Count" on the traffic screen is the number of data received after the display starts.
- You can sort the list by ID, type, or channel.
- You can filter by data ID, type, or channel by clicking . You can search by AND condition by separating keywords with spaces.
- You can pause and play by clicking  / .

Click the line on the traffic screen to display the traffic of that data ID.

5.2.2 Traffic screen by data ID

On the traffic screen by data ID, up to 50 most recent time-series data of that ID are displayed.

You can view the payload details by opening the details screen.

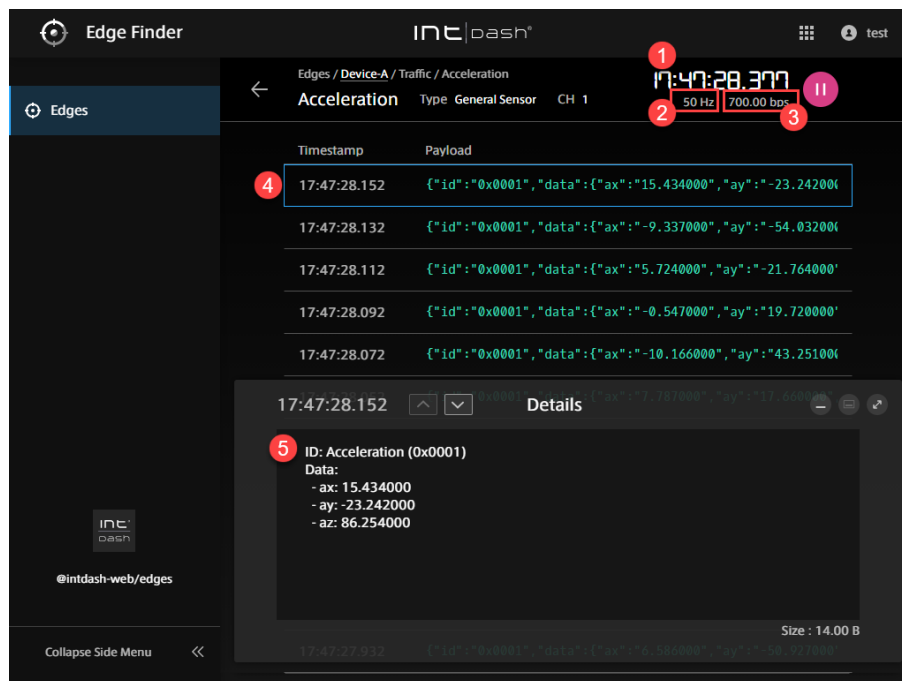


Fig. 14 Payload details

- 1 Time (time on the local PC using the browser)
- 2 The number of data received from this edge per second (increment of "Count" per second)
- 3 The amount of payload received from this edge per second
- 4 Data content
- 5 Details

Hint: The display of the detail screen depends on the data type.

- If the data includes latitude and longitude, a map will be displayed.

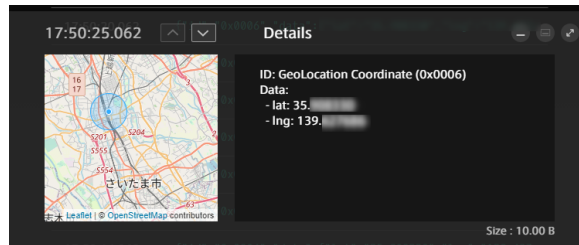


Fig. 15 Latitude and longitude

- If the data type is JPEG, the image will be displayed.

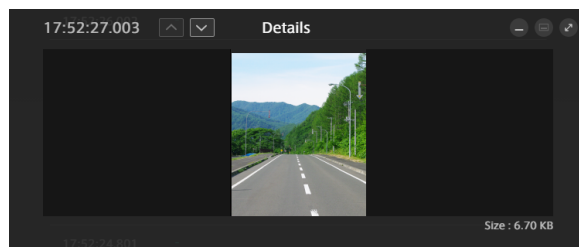


Fig. 16 JPEG

- If the data type is General Sensor, numbers are displayed.

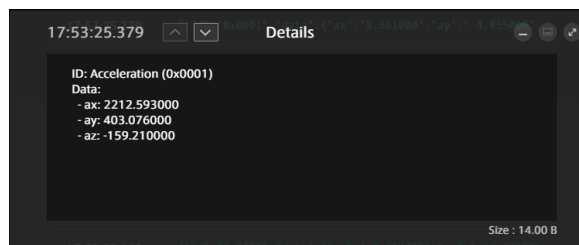


Fig. 17 General Sensor


- For other data types, binary data is displayed as 0s and 1s.



Fig. 18 Binary representation

06 Manage measurement data - Meas Hub

6.1 Display the list of measurements

In a web browser, open the Meas Hub application (`<base_URL>/measurements/`). If you already have an intdash application open, you can also go to Meas Hub by clicking the  button at the top right of the screen.

The list of measurements stored in intdash is displayed. A measurement is a collection of a series of time series data points acquired at an edge.

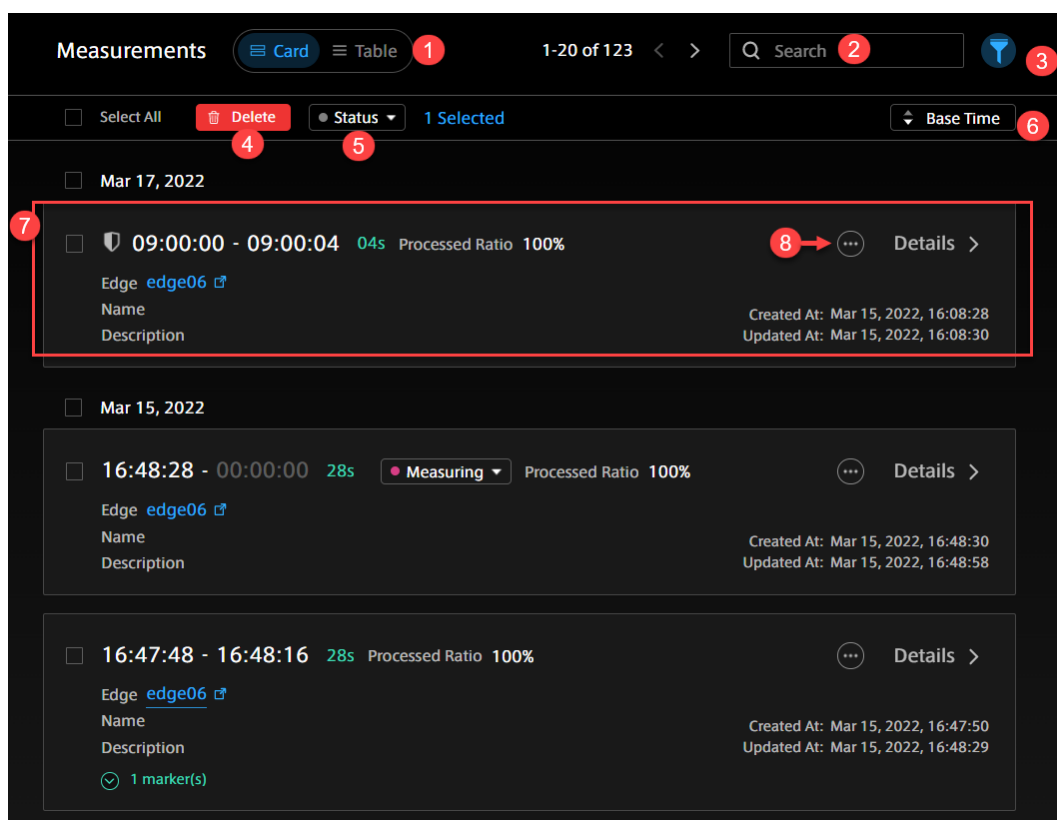


Fig. 19 Measurement list (card type display)

- 1 Switch display format
- 2 Search box (Search using the measurement name or description string. See [Find measurement](#) (p. 23).)
- 3 Filter (Set conditions to narrow your search. See [Find measurement](#) (p. 23).)
- 4 Delete (Move the selected measurement to the Trash. See [Delete the measurement](#) (p. 32).)
- 5 Change status (Changes the status of the selected measurement)
- 6 Switch between ascending order and descending order according to the base time
- 7 Measurement details (see [Check the measurement details](#) (p. 24) for each item; see [Display a list of markers included in the measurement](#) (p. 26) for markers.)
- 8 Links to other applications (displayed only in some environments)

Hint: By bookmarking the URL of the list screen or detail screen with a web browser, you can quickly access the same information from the next time.

- When you change the order, search, or specify a filter on the list screen, the URL of the current list is displayed in the address bar of the web browser. By bookmarking this URL, you can display the list with the same conditions next time.
- The UUID of the measurement or marker is used for the URL of the individual measurement or marker page. For example, the details screen for the measurement UII ID "ca3a...7964" looks like <base_URL>/measurements/ca3a ... 7964.

6.2 Find measurement

On the search list screen, you can narrow down the measurement by using the search box and filter.

Search box (🔍)

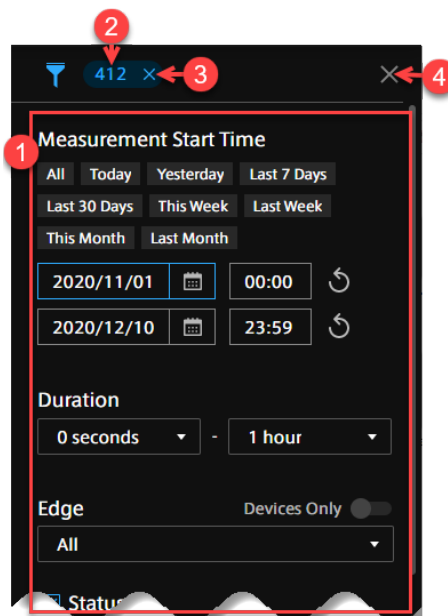
You can search for the following.

- Measurement UUID, name, description
- Measurement marker UUID, name, description, tag key, tag value
- Edge UUID, name, nickname, description

You can search by AND condition by separating keywords with spaces. The search is not case sensitive.

Filter (🏠)

You can narrow down the measurement by conditions such as the measurement start date and time, the measurement length, and the type of base time selected. You can search by AND condition by separating keywords with spaces. See [Check the measurement details](#) (p. 24) for the meaning of status, protection, etc. See [Check/change the base time of measurement](#) (p. 26) for base times and [Display a list of markers included in the measurement](#) (p. 26) for markers.



1 Filter conditions

2 Number of measurements that match the current filter conditions

- 3 Remove filters
- 4 Close the filter setting screen

Note:

- Searching and filtering is done only for the data that has been loaded into the browser. If you want to display or search for all measurements on the server, set [Number of Measurements Loaded into the Browser] to [Unlimited] in [Preferences] of Meas Hub.
- Measurements in the trash are not subject to search or filtering.

6.3 Check the measurement details

Click [Details] of each measurement in the measurement list to display the measurement details.

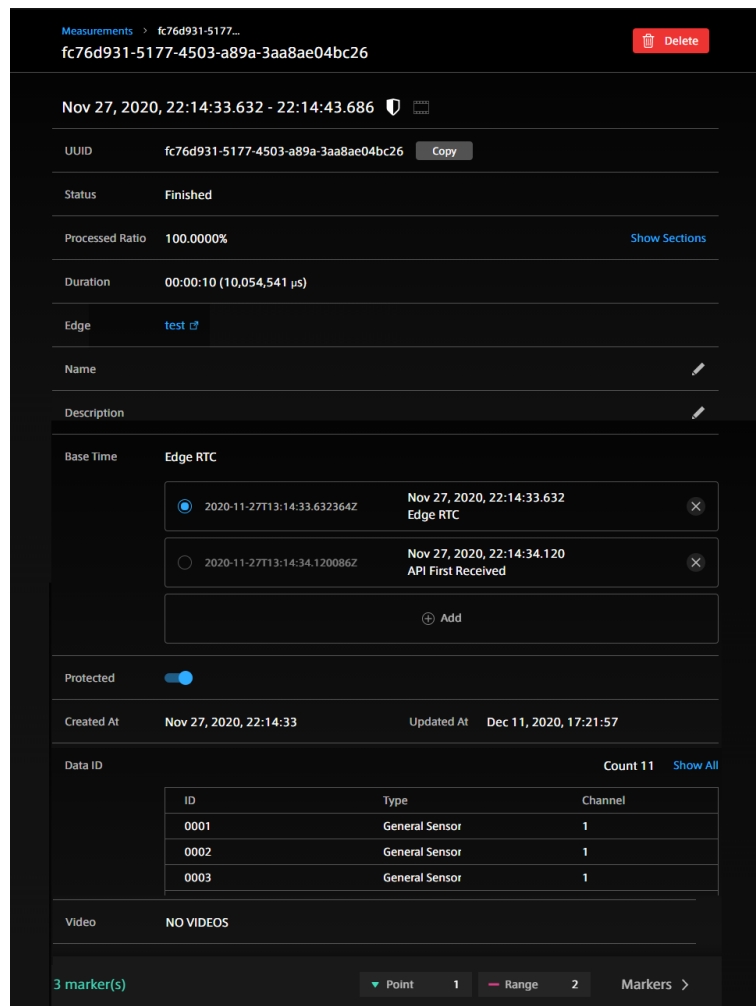



Fig. 20 Measurement details

Measurement including video ()

Indicates that the measurement includes H.264 video.

Protected measurement ()

Indicates that this measurement is protected. Protected measurements cannot be moved to the Trash. Use the [Protected] switch on this screen to turn protection on/off.

Delete (🗑️)

Move this measurement to the Trash. See [Delete the measurement](#) (p. 32).

Links to other applications (🔗) (Displayed only in some environments.)

View this measurement in other applications.

UUID

This is the unique ID given to this measurement.

Status

The following three statuses are available.

- Measuring (sending data to the server in real time)
- Resending (sending data that was not sent in real time to the server)
- Finished (other than the above)

If a measurement is in progress or being resent, it can be terminated by clicking the status display on Meas Hub.

Processed Ratio

Measurements are sent to the server in units called "sections". The processed ratio is the percentage of sections that have been processed (for example, stored) on the server.

Show Sections

The section details are displayed. You can see which sections are unprocessed.

Duration

The length of the measurement.

Edge

The name of the edge that performed the measurement. Click to see the edge information in the Edge Finder. If you see "GHOST EDGE" as the name of an edge, it means that the information for that edge does not exist (for example, the edge was deleted).

Name

You can give the measurement a descriptive name.

Description

You can add a description to the measurement.

Base Time

You can select which time to use as the base time (measurement start time). See [Check/change the base time of measurement](#) (p. 26) for more information on base times.

Protected

You can protect your measurements. Protected measurements cannot be moved to the Trash.

Created At

The date and time the measurement was created on the server.

Updated At

The date and time when the measurement information was last updated.

Data ID

Displays a list of data IDs of time series data points included in this measurement. You can see what kind of data is included in the measurement. For more information on IDs, types, and channels, see [iSCP 1.0 Essentials](#).

Video

If this measurement contains a video in H.264 format, you can play or download the video. See [Play/download H.264 video](#) (p. 31) for more information.

6.4 Check/change the base time of measurement

The "base time" of measurement in intdash is the start time of measurement. intdash allows a measurement to have multiple base times, and you can change which one to use at any time.

The measurement details screen shows the base time currently in use. You can also select, add, edit, and delete a base time. If you change the base time to be used, the start, end, and markers for that measurement will all be displayed based on the new base time.

The types of base time are as follows.

Edge RTC

The time based on the edge real-time clock (RTC).

NTP The time based on the edge side clock synchronized with the NTP server.

GPS The time based on the edge side clock synchronized with GPS.

API First Received

The time when this measurement was first received on the server side.

Manual

The time set manually. If you click [Add] and manually set a new base time, the type of this new base time will be Manual. Only the base time of the Manual type can be edited.

For more information on measurements and base times, see [iSCP 1.0 Essentials](#).

6.5 Display a list of markers included in the measurement

Click [Markers] on the measurement details screen to display a list of markers set for that measurement.

You can add a marker to a specific time point or a specific time range in your measurements. A marker attached to a specific time point is called a "point marker", and a marker attached to a specific time range is called a "range marker". By attaching a marker to the measurement, it is possible to perform operation only on that specific point or range.

Note: Markers cannot be added on the Meas Hub. Markers are created on the edge side at the time of measurement, or added using other tools such as the intdash SDK.

Markers can be given a description or a tag with a key-value pair.

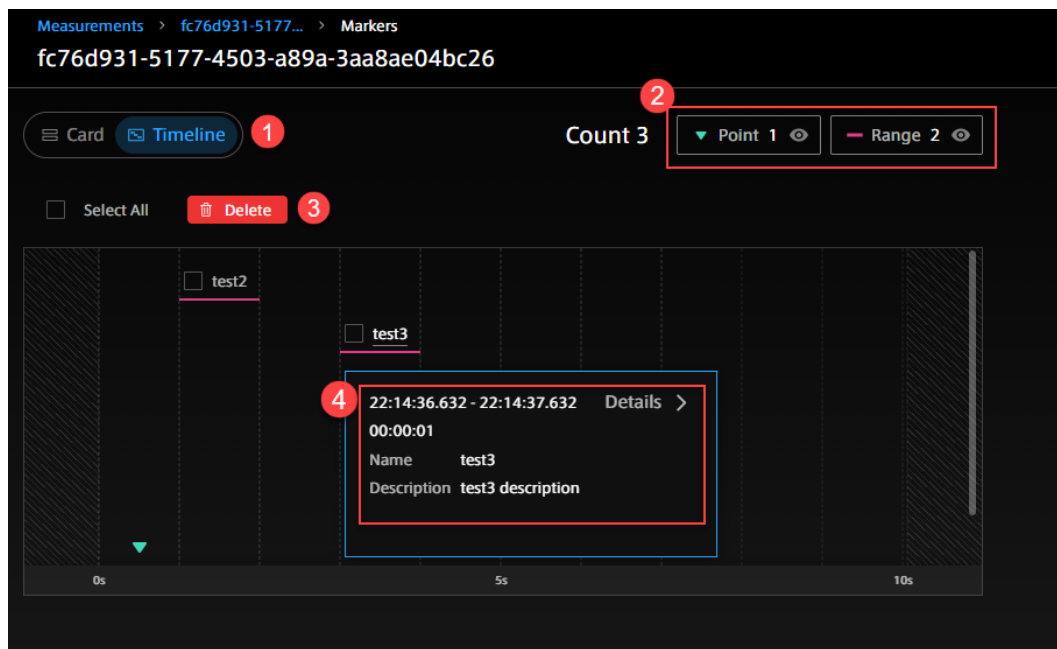


Fig. 21 Marker list (example of timeline type display)

- ❶ Switch display format
- ❷ Show/hide
- ❸ Delete selected marker
- ❹ Marker details (see [Check the details of a marker](#) (p. 28) for each item.)

6.6 Check the details of a marker

Click [Details] of each marker on the marker list screen to display the marker details.

The screenshot displays the 'Marker details' page for a marker named 'test3'. At the top, there is a breadcrumb trail: 'Measurements > fc76d931-5177... > Markers > test3'. A red 'Delete' button is in the top right corner. Below the breadcrumb, the marker name 'test3' is shown. The time range for the marker is 'Nov 27, 2020, 22:14:36.632 - 22:14:37.632'. A timeline visualization shows the marker's duration as a red bar. Below the timeline, the marker's details are listed: UUID (d4c5f292-460c-4cd1-8d4a-6004dce180ad), Duration (00:00:01 (1,000,000 μs)), Edge (test), Name (test3), and Description (test3 description). The Tag field has a 'Key * Required' input and a 'Value (Optional)' input. The 'Created At' and 'Created By' fields are also visible. The 'Created At' field shows 'Nov 27, 2020, 22:17:15' and the 'Created By' field shows 'edge1'. The 'Updated At' and 'Updated By' fields are also visible. The 'Updated At' field shows 'Nov 27, 2020, 22:17:15' and the 'Updated By' field shows 'edge1'. A 'Save' button is located at the bottom right of the form.

Fig. 22 Marker details (example of a range marker)

Delete (🗑️)

Delete this marker.

Links to other applications (🔗) (Displayed only in some environments.)

View this measurement in other applications.

Marker time(or marker start and marker end)

For point markers, the marker time is displayed. For range markers, the marker start and marker end are displayed.

UUID

The unique ID given to this marker.

Edge

The name of the edge that performed the measurement. Click to go to Edge Finder.

Name

You can give the marker a descriptive name.

Description

You can add a description to the marker.

Tag Markers can be tagged with key-value pairs.

Created At

The date and time when the marker was created.

Created By

The name of the edge that created the marker. Click to go to Edge Finder.

Updated At

The date and time when the marker was last updated.

Updated By

The name of the edge that updated the marker. Click to go to Edge Finder.

Note: If you see "GHOST EDGE" as the name of an edge, it means that the information for that edge does not exist (for example, the edge was deleted).

6.7 Upload a CSV file to create a measurement

You can upload a CSV file to create measurement data on intdash.

One CSV file is converted into one measurement. Measurement is a set of data from the start to the end of measurement.

6.7.1 CSV file format and how data is stored in intdash

The CSV file uploaded to intdash must meet the following conditions.

- Must be encoded in UTF-8. If you use an encoding other than UTF-8, multibyte characters such as Japanese may be garbled.
- The first row (header row) stores the name of each column as a character string (these names are used as data IDs).
- The first column (timestamp column) should store time stamps.
 - The name of the timestamp column in the header row must be `time`.
 - The time stamp must follow RFC 3339.
- Data must be stored in the format of numerical values or character strings in the second and subsequent rows and the second and subsequent columns (data area).

Header for timestamps: "time"

	A	B	C	D
1	time	DATA_1	DATA_2	DATA_3
2	2022-03-14T00:00:00.123456789Z	1	0.1	str1
3	2022-03-14T00:00:01.123456789Z	2	0.2	str2
4	2022-03-14T00:00:02.123456789Z	3	0.3	str3
5	2022-03-14T00:00:03.123456789Z	4	0.4	str4
6	2022-03-14T00:00:04.123456789Z	5	0.5	str5
7				

Timestamps (RFC 3339)

Headers (Data ID)

Data (Data points)

Fig. 23 Contents of CSV file (example)

The data in each cell in the data area is stored in intdash as one data point. In the above example, since the data in 3 columns exists at 5 time stamps, they are stored as a total of 15 data points.

Each data point is given type information according to the notation in the CSV file.

- Data expressed as integers are treated as Ints (integer type)
- Data expressed as decimal values are treated as Floats (floating point type)
- Data expressed as character strings are treated as Strings (character string type)

In the above example, the data ID "DATA_1" is treated as Int, the data ID "DATA_2" is treated as Float, and the data ID "DATA_3" is treated as String.

Also, the channel will automatically be 1.

6.7.2 Upload CSV file

1. Click [Measurement Uploads] on the Meas Hub side menu.
2. Click [Create Measurement from CSV] and select which edge the data is from.

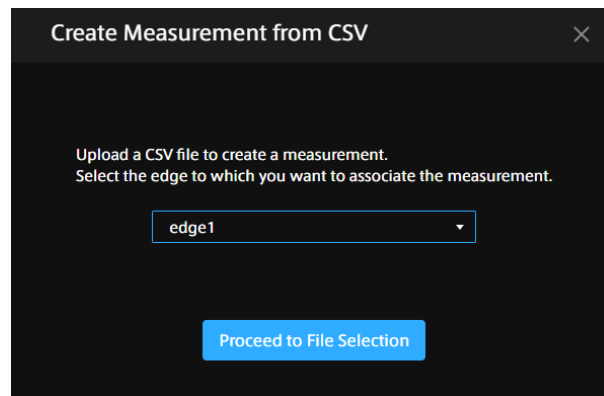


Fig. 24 Select an edge

3. Click [Proceed to File Selection], select a CSV file and upload it.
When the CSV file has been sent successfully, the new file will be displayed in the file list.
Please wait for a while until the status of the uploaded file becomes "Succeeded".

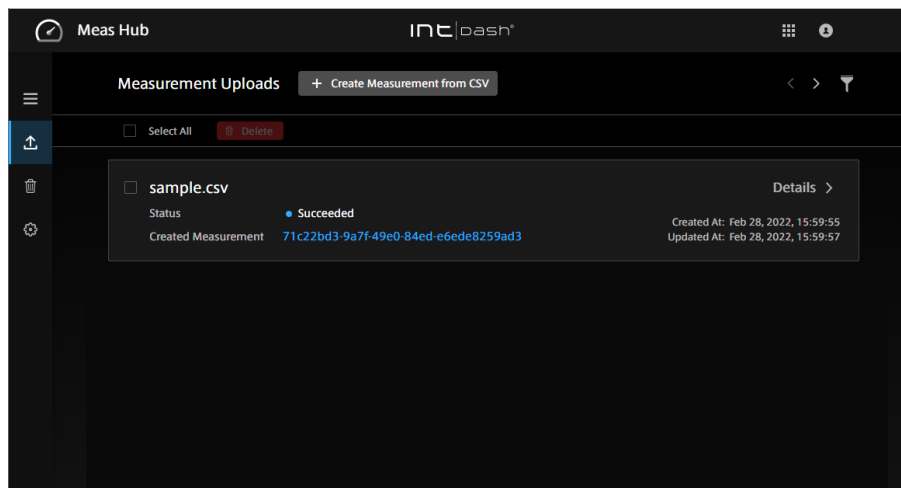


Fig. 25 List of uploaded files

If you have failed to create a measurement, click [Details] and check the "Conversion Result".

Note: If you upload a file with the same name multiple times on the same day, a random string will be added to the file names (eg WXeiMUYkBU_sample.csv).

4. The UUID of the measurement created by uploading is displayed in "Created Measurement". Click to go to the measurement details screen.

Attention: If you see a message "Upload to the server has failed. Please try again.", upload the file again. If you get the same message again, there may be no space on the server to store the CSV file (usually the CSV file storage area is 10GB).

If the intdash server you are using is operated by aptpod, please contact us to expand the storage. If the server is operated by you, please expand the storage by yourself.

Deleting uploads on the "Measurement Uploads" screen in Meas Hub will not increase free space.

Note: Selecting a measurement upload in the list and clicking [Delete] will delete information about that upload. The measurement itself created by the upload will not be deleted.

6.8 Play/download H.264 video

Note: Also refer to [Manage video data - Media Explorer](#) (p. 34) for information on managing and downloading videos in Media Explorer.

If the measurement includes video in H.264 format, the video will be displayed in the measurement details screen (video in M-JPEG format will not be displayed).

[Offset] is the time between the start of the measurement and the start of the video.

A video in H.264 format can be downloaded as an MP4 file by clicking [MP4]. Note that the video will not contain audio.

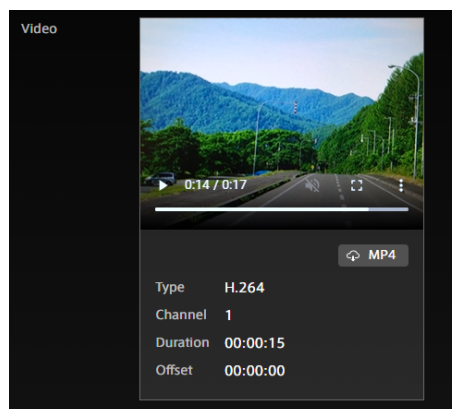


Fig. 26 H.264 video

Note: When playing a downloaded MP4 file with Windows Media Player, the play position cannot be changed with the seek bar. You can use the seek bar if you play it in a web browser such as Chrome.

6.9 Delete the measurement

To move a measurement to the Trash, select the measurement in the measurement list and click [Delete], or click [Delete] on the measurement details screen. Measurements moved to the Trash will be automatically deleted after 24 hours.

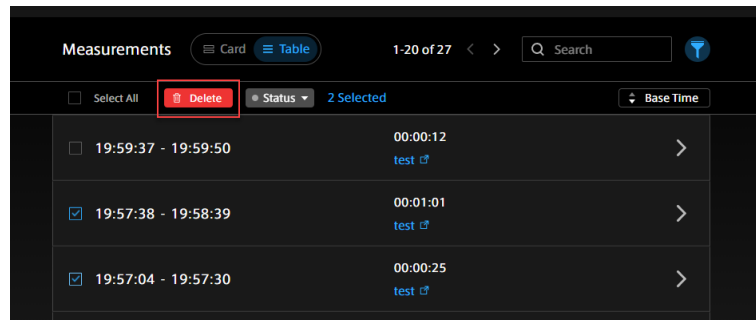



Fig. 27 Delete measurement

Click  (Trash) from the menu on the left side of the screen to display a list of measurements in the trash.

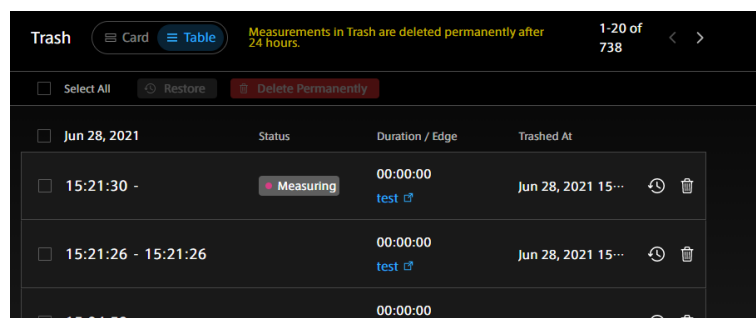



Fig. 28 List of measurements in the trash

Click on the measurement's  (Restore) to restore the measurement.

You can click  (Delete Permanently) to permanently delete the measurement without waiting for it to be automatically deleted.

You can restore or permanently delete measurements in bulk by selecting multiple measurements and then clicking [Restore] or [Delete Permanently] at the top of the window.

6.10 Change the display preferences of the Meas Hub application

Meas Hub preference settings are made in [Preferences].

The following items can be configured.

These settings are saved in the web browser, so they will not be applied to the Meas Hub application opened in another web browser.

Number of Measurements Loaded into the Browser

Measurements up to the number specified here are loaded into the browser, starting with the measurement with the latest base time.

For example, if you set to load 1000 items, up to 1000 items will be loaded into the web browser in order of newest to oldest.

If the page takes a long time to load, you may save time by reducing this value.

Note:

- Sorting, searching, and filtering of the list is done only for measurements that have already been loaded into the web browser.
- Measurements without a base time are treated as old data (base time 1970-01-01 00:00 UTC) and will have a lower priority for loading.

Results per Page

Set the number of measurements displayed on one page of the measurement list screen. If the page takes a long time to load, you may save time by reducing this value.

Display of Markers in Measurement List

When turned on, the list of markers is expanded in the measurement list screen.

Note: The display language and time zone can be set in [Preferences] (<base_URL>/edges/me/preferences) on My Page, not in Meas Hub. The settings are applied to Meas Hub.


07 Manage video data - Media Explorer

You can use Media Explorer to list the videos stored on your server. You can also play videos and convert them to MP4 or JPEG.

Note: There are other ways to view videos retrieved with intdash.

- To play videos on a dashboard as time series data, see the [Data Visualizer Operation Manual](#).
- See [Play/download H.264 video](#) (p. 31) for a simple way to play videos in Meas Hub (H.264 only).

7.1 Display video data

1. Open Media Explorer (<base_URL>/media/). If you already have an intdash application open, you can also go to Media Explorer by clicking the  button at the top right of the screen.

A list of videos stored on the intdash server and automatically converted to streaming format is displayed.

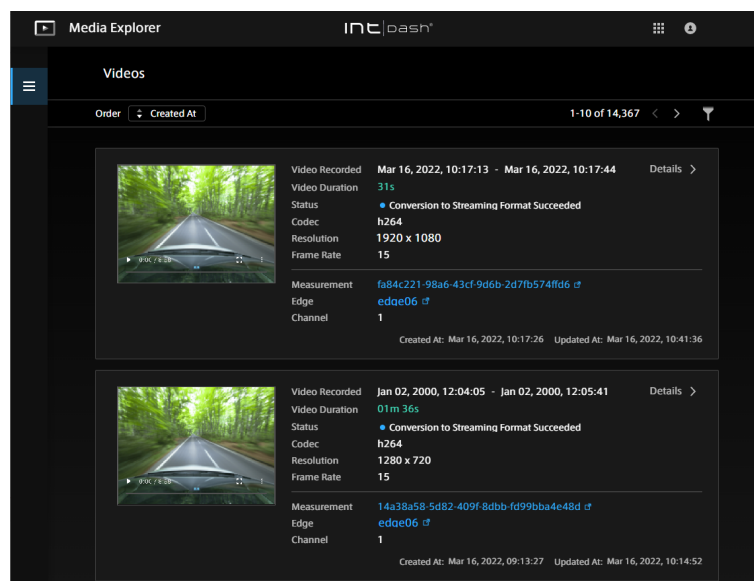




Fig. 29 Video list

In the video list, you can sort by the base time of measurement. You can also display only the videos in a specific measurement by clicking  and entering the measurement UUID.

Note: In the Meas Hub application, you can directly open the list of videos for that measurement by clicking  and selecting Media Explorer.

If the video has already been converted to JPEG or MP4, you will see a link "intdash.jpg" or "intdash.mp4", which you can click to download. See [Download videos in MP4 / JPEG format](#) (p. 36) for more information.

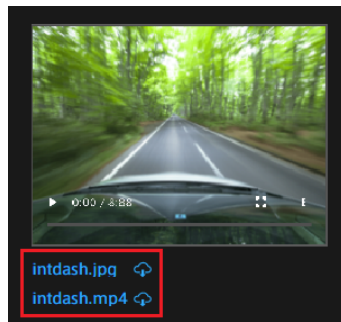


Fig. 30 Download converted JPEG or MP4

2. Click [Details] to see the details of the video.

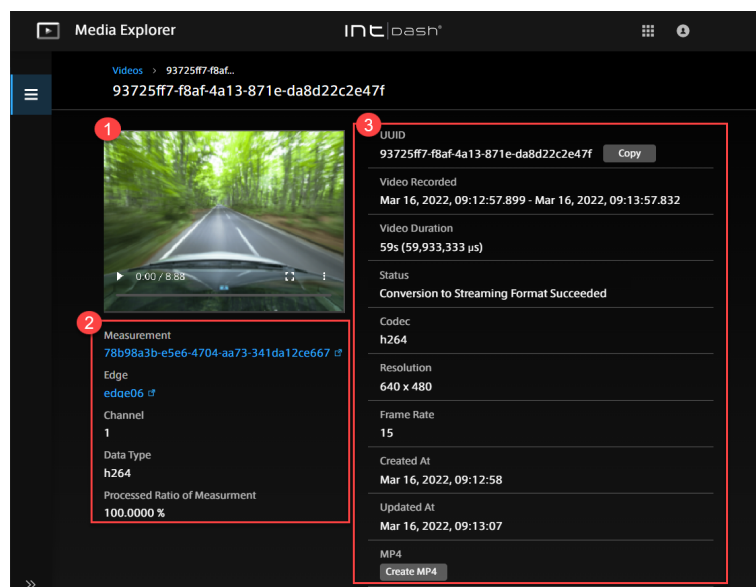


Fig. 31 Video details

1 Video

2 Details of the measurement

3 Video details

UUID

UUID of the video (not the UUID of the measurement)

Video Recorded

Start time and end time of the video (it does not match the start and end of the measurement)

Video Duration

Video length

Status

The videos contained in measurements are automatically converted to streaming format when saved on the intdash server. The conversion status is displayed.

Codec

Video codec

Resolution

Video resolution (width x height)

Frame Rate

Video frame rate (FPS)

Created At

The time when the video data was created on the server

Updated At

The time when the video data on the server was updated

MP4 / JPEG

You can convert this video to MP4 or JPEG. See [Download videos in MP4 / JPEG format](#) (p. 36) for more information.

7.2 Download videos in MP4 / JPEG format

You can convert the video to MP4 or JPEG format and download it.

The resolution and frame rate of MP4 and JPEG are the same as the original data. When converted to JPEG, a file is created for each frame. For example, a 10-second video at 15 FPS will create 150 JPEG files.

1. Click [Details] for the video in Media Explorer.
2. Click [Create MP4] or [Create JPEG].

After a while, the video will be converted to MP4 or JPEG and saved on the server.

3. Click [Download MP4] or [Download JPEG].

The converted files are stored on the server, so you can download them as many times as you like. If converted to JPEG, it will be downloaded as a zip file containing multiple files.

The JPEG zip file contains the JPEG files, video.json (information about the video), and jpeg.json (information about the JPEG data).

The file name of the JPEG file is "<serial number>_<elapsed time from the start of the video (microseconds)>.jpeg". Example:

```
1_0.jpg
2_66728.jpeg
3_133456.jpeg
4_200184.jpeg
5_266912.jpeg
...
```

For example, "2_66728.jpeg" indicates the second frame, 66728 microseconds after the start of the video.

Click [Delete] of MP4 / JPEG to delete the converted MP4 / JPEG data from the server.

08 (For administrators) Manage users and edges - Admin Console

8.1 Display a list of users (for administrators)

Open the Admin Console (<base_URL>/admin/).

Note: Admin Console does not appear in the application list, so use the URL to access it.

The list of users is displayed.

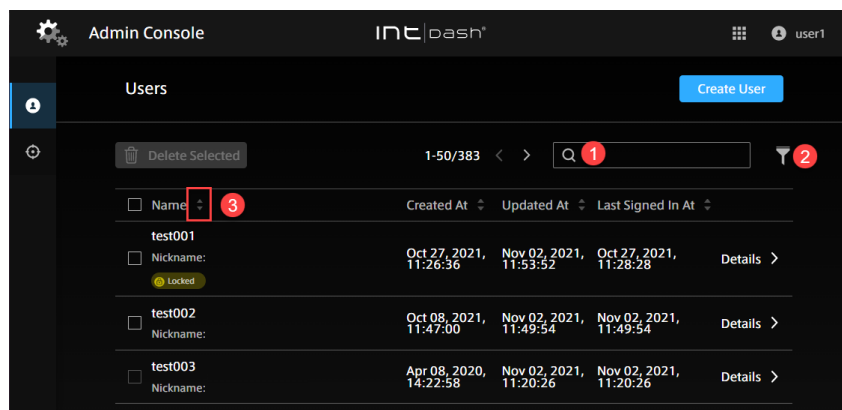


Fig. 32 List of users

- 1 Search by name (partial match)
- 2 Filter by activation status, lock status, password status
- 3 Sort by a field

8.2 Create a user account (for administrators)

Administrators can create user accounts in the Admin Console.

1. Open the user list (<base_URL>/admin/users) in the Admin Console.
2. Click [Create User].

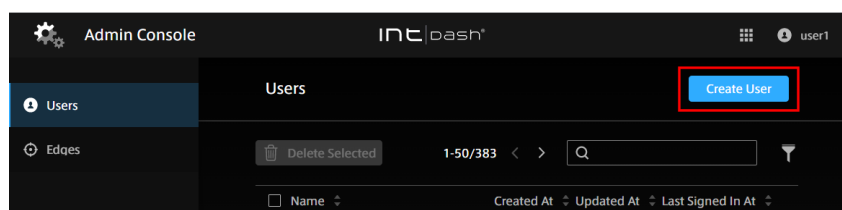


Fig. 33 Create a user

3. Set the name and roles.

- The name can contain alphanumeric characters (0-9, A-Z, a-z), hyphens (-), and underscores (_).
- You cannot use a user name that is already in use in the intdash domain.
- Select a role, such as administrator or member. The available roles vary depending on the intdash domain.
- Multiple roles can be set for a single user account.
- Roles set when the user account is created cannot be changed in the Admin Console.
- Other settings are optional.

6. Click [Create].

When the temporary password is displayed, click [Copy] to copy it to the clipboard.

7. Inform the user of the sign-in URL, username, and temporary password in a secure manner. The user will be prompted to set a new password the first time they sign in.

8.3 Check/change user information (for administrators)

Note: See [Configure your user account - My Page](#) (p. 12) for how general users can see their information.

1. Click [Details] of the user you want to see. The following information is displayed.

Password

The password status for this user account is displayed. There are 2 types of status as below.

Status	Description
Temporary	The administrator has created a temporary password. Waiting for the user to set a new password on My Page.
Not Temporary	A password has been set by the user.

If you want to reissue a password, see [Reissue a password \(for administrators\)](#) (p. 39).

UUID

A user-specific ID automatically assigned by intdash. The UUID cannot be changed.

Name

The name of the user. You cannot use a user name that is already in use in the intdash domain.

Nickname (optional)

You can give the user a descriptive nickname.

Description (optional)

You can enter a description of the user.

Enabled

You can enable or disable this user. If disabled, this user will not be able to sign in.

Even if a user account is disabled, the edge accounts owned by that user can still be used. To disable an edge account, delete that edge account.

Created At

The date and time when this user was created.

Updated At

The date and time when this user was updated.

Emails

The email addresses registered for this user account and the registration statuses. There are three types of status as follows.

Status	Description
Unregistered	The email address is not registered. Users can sign in using the user name and password even if their email address is not registered.
Not Verified	The email address is registered but not verified. To verify the email address, the user needs to send a confirmation email to themselves by clicking a button on My Page.
Verified	The e-mail address has been registered and verified.

Roles

Set roles such as administrator (admin) and general user (member). The available roles vary depending on the domain.

Attention: Roles set when the user account is created cannot be changed in the Admin Console.

API tokens

Displays API tokens issued for this user account. See [Create API tokens for a user \(for administrators\)](#) (p. 40) for issuing API tokens.

2. If you want to change the settings, edit them and click [Save changes].

8.4 Delete a user account (for administrators)

1. Open the user list (<base_URL>/admin/users) in the Admin Console.
2. Click [Details] for the user.
3. Click [Delete].

When a user account is deleted, the edge account owned by that user will have no owner. The administrator can set a new owner in the edge account details screen. See [Check/change edge information \(for administrators\)](#) (p. 42) for more information.

Hint: If you want to delete multiple user accounts at once, select the check box of the target users and click [Delete Selected] at the top of the screen.

8.5 Reissue a password (for administrators)

1. Open the user list (<base_URL>/admin/users) in the Admin Console.
2. Click [Details] for the user account for which you want to issue a password.
3. Click [Reset Password].
4. Click [Reset] to reset the password.

The current password will be invalidated and a temporary password will be created. You can copy it to the clipboard by clicking [Copy].

5. Notify the user of the temporary password in a secure manner.

When the user signs in, they will be prompted to set a new password for themselves.

Note: Please note that the temporary password has an expiration date.

8.6 Unlock the password (for administrators)

If you try to sign in to intdash and enter a wrong password more than a certain number of times, the password will be locked. The administrator can unlock the password.

1. Open the user list (<base_URL>/admin/users/) in the Admin Console.
2. Click [Details] for the user account you want to unlock the password for.
3. Click [Unlock].

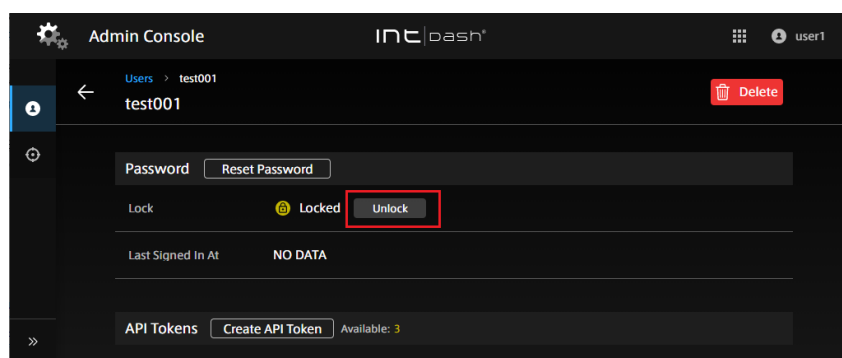


Fig. 34 Unlock a password

8.7 Create API tokens for a user (for administrators)

Note: See [Create an API token](#) (p. 13) for information on how a general user can create their own API token.

If you want to access the intdash API as a user using a program with the intdash SDK, you will need an API token. Administrators can create API tokens.

1. Open the user list (<base_URL>/admin/users/) in the Admin Console.
2. Click [Details] for the user account for which you want to create tokens.
3. Click [Create API Token].
4. Enter a name to distinguish the API tokens (setting the expiration date is optional).
5. Click [Create].
6. Click [Copy] to copy the API token and notify the user in a secure way.

Note:

- The API token is displayed only once at the time of creation.
- The user account details screen will show the statuses of the API tokens that have been created.
- There is a limit to the number of tokens per user. If "Available" is 0, tokens cannot be created.
- Users can create their API tokens in My Page.

8.8 Display the list of edges (for administrators)

Note: For information for general users, please see below.

- [Change edge account settings / Delete edge account](#) (p. 15)
- [View the list of edges](#) (p. 18)

When you open the Admin Console, you will see a list of edges.

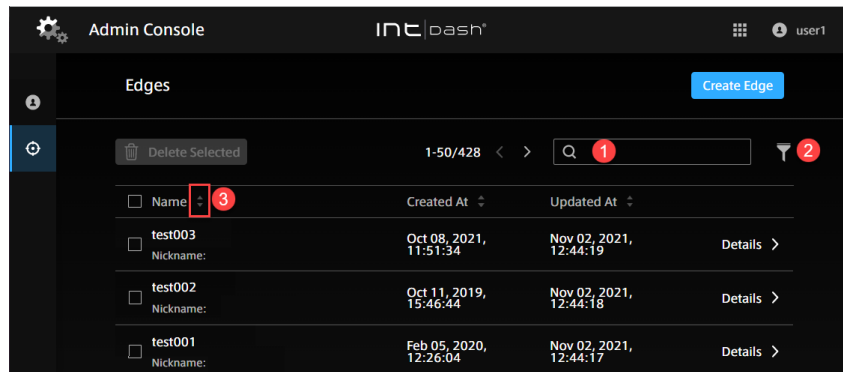


Fig. 35 List of edges

- 1 Search by name (partial match)
- 2 Filter (filtering is not possible in the current version)
- 3 Sort by a field

8.9 Create an edge account (for administrators)

Note: See [Create edge accounts](#) (p. 14) for how a general user can create their own edge account.

Administrators can create edge accounts in the Admin Console. When you create an edge account, you will be issued a UUID for that edge and a client secret for authentication.

1. Open the edge list (`<base_URL>/admin/edges`) in the Admin Console.
2. Click [Create Edge].

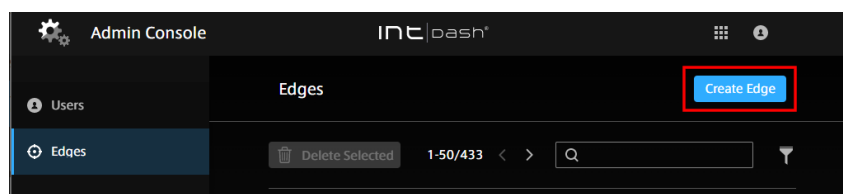


Fig. 36 Create an edge

3. Set a name.
 - The name can contain alphanumeric characters (0-9, A-Z, a-z), hyphens (-), and underscores (_).
 - You cannot use an edge name that is already in use in the intdash domain.

- Other settings are optional.
6. Click [Create].
 7. The UUID of the edge and the client secret will be displayed. Copy them.

Attention: The client secret is displayed only once.

Note: When you create an edge account in the Admin Console, the edge account has no owner. The owner can be set later. The name and display name can also be changed later. See [Check/change edge information \(for administrators\)](#) (p. 42) for more information.

8.10 Check/change edge information (for administrators)

Note: See [Change edge account settings / Delete edge account](#) (p. 15) for information on how general users can see information about their edges.

1. Click [Details] for the edge you want to see. The following information is displayed.

UUID

An edge-specific ID automatically assigned by intdash. The UUID cannot be changed.

Name

The name of the edge. You cannot use an edge name that is already in use in the intdash domain.

Nickname (optional)

You can give the edge a descriptive nickname.

Description (optional)

You can enter a description for the edge.

Created At

The date and time when this edge was created.

Updated At

The date and time when this edge was updated.

Owned By

The owner of this edge. The owner can change the name and nickname of the edge in My Page.

2. If you want to change the settings, edit them and click [Save changes].

Note: If you click [x] to delete the owner and save the changes, the edge will have no owner.

8.11 Delete an edge account (for administrators)

Note: See [Change edge account settings / Delete edge account](#) (p. 15) for how general users can delete their edges.

1. Open the edge list (<base_URL>/admin/edges) in the Admin Console.
2. Click [Details] for the edge.
3. Click [Delete].

Hint: If you want to delete multiple edge accounts at once, select the check box of the edge accounts and click [Delete Selected] at the top of the screen.

09 Troubleshooting / Frequently asked questions

I cannot sign in.

Make sure that the user name or the email address registered with intdash is correct.

The password may be temporarily invalid. Check with your administrator.

The user account may have been deleted or temporarily disabled. Check with your administrator.

If you enter the wrong password more than a certain number of times, you will not be able to sign in with the password. In this case, "Password is locked for security" is displayed and you cannot sign in. Ask your administrator to unlock your password.

I forgot my password

If you have already registered your e-mail address, click [Forgot Password ?] on the sign in screen and enter your registered e-mail address. An email will be sent to you to reset your password.

If you have not registered your e-mail address or your e-mail address is unconfirmed, please ask the administrator to reissue your password.

The administrator can reset the password in the Admin Console. Once you receive the temporary password from the administrator, sign in and follow the on-screen instructions to set a new password.

Users and edges do not appear in the list.

Make sure that no filter is applied. See [Display a list of users \(for administrators\)](#) (p. 37) or [Display the list of edges \(for administrators\)](#) (p. 41) for more information.

10 Contact us

If you have any questions or inconveniences, please contact us using the contact information below.

aptpod, Inc.

- Email address (customer support) VM2M-support@aptpod.co.jp
- Website <https://www.aptpod.co.jp/en/>