Beginners Guide to the oneTRANSPORT Service Portal

http://service.onetransport.io/

Introduction

The oneTRANSPORT Data Marketplace provides a means for organisations to publish *Dynamic* data (ie regularly changing or real-time) and *Static* resource files (ie Asset location / Dataset models), for discovery and consumption by others. The primary means for publishing and consuming data through the platform is via open system APIs. The Portal is a web service that enables developers to engage with the oneTRANSPORT service via a web browser, both to interact with data directly and to access detailed documentation about the system APIs.

Access and log-in

The oneTRANSPORT Service Portal is by invitation on completion of subscription paperwork. In order to access the portal for the first time, registration must be completed via an email invitation sent to your registered email address. Please log-in via the right-hand window on all subsequent visits. ***Please do not share your log-in password with anyone.***

Each organisation's Administrator can create further accounts for every member of your organisation who wishes to use the service under the organisation's subscription. For any registration or log-in queries, please contact support@onetransport.io

Basic Concepts

The following concepts are central to the way that the oneTRANSPORT Data Marketplace services operates, and are taken from the oneM2M standards (www.oneM2M.org) to which oneTRANSPORT complies.

Apps

"Apps" in the Service Portal are a virtual representation of the external systems that are providing data to the marketplace, or consuming data from the marketplace, via the System API. You must create at least one App via the portal in order to upload or download data to/from the platform. Each new App is allocated a unique ID (called "AEID") and this ID is used when you upload and organise data in the service, and also when you discover and download data that other organisations have published.

Datasets

Data is grouped in Datasets. All data in a Dataset is associated with a single App. A Dataset contains one or more "distributions" of data, which can be either Containers of dynamic / live data or Collections of static resource files.

Containers (dynamic / live data)

Dynamic data that is uploaded to the platform is held in containers that are associated with a particular dataset. Containers can be created and organised in a similar manner to folders on a PC. Each Container is allocated a unique ID and property fields that hold information about container contents. A container can contain further containers or multiple specific instances of uploaded data, known as "Content Instances". Users create and organise containers and upload data into specific Content Instances via System APIs. Containers also define points in the data tree at which feed subscriptions can be created via the portal.

Collections (static data)

Static data files (that are uploaded or created by feed archiving) are held in the file store, and are grouped into collections. The collections are linked with a dataset. Users access files within collections via the portal or system APIs.

Dataset Licensing

Datasets are published with an associated license, which is chosen by the data owner and defines the usage terms granted to others wishing to access and use the data in that data set. Users wishing to access other organisations' data use the Service Portal to accept the terms of the data licence and fee structure (if any) for the dataset they want to access, before access is granted. License acceptance by a user is on behalf of their organisation, opening access to all within the organisation.

Getting Started

After logging in, users arrive at the "Data Catalogue" page. Users can navigate between the main pages using the labels at the very top of the web page :

- "oneM2M browser" : The Resource Tree Browser enables an Apps' datasets and their associated container structures to be navigated visually. When navigating down to specific content instances, the location of the source of the content instance data is plotted on a map if such location data is available
- "Data Catalogue" : Used to locate Datasets, view their basic properties, and view / accept data licenses for datasets shared by other organisations.
- "Credentials" : Used to create Apps, edit their basic properties, and to discover Apps created by other users in your organisation.
- "Users" : Services for Organisation Administrators to manage user accounts within their organisation, adding and removing users.
- "Reports" : Services for Organisation Administrators to view and manage data usage.
- "Help" : Documentation and FAQ pages
- "profile" : User account details can be viewed and amended.

Steps to view Published content

The oneTRANSPORT Service Portal enables users to browse and discover data sets and the latest data content that has been published by others.

Step 1 Select a published dataset.

Login and Go to “Data Catalogue” tab and ‘Browse full catalogue’,

Select a dataset by name to view the `Dataset details`

Step 2. Review the dataset license and pricing

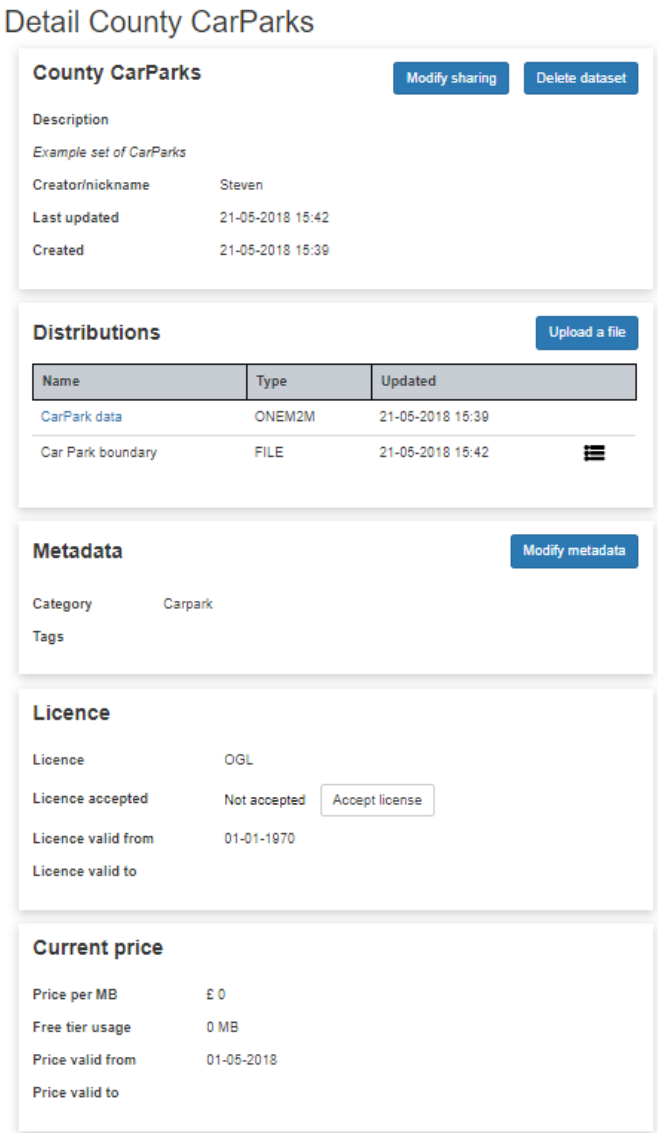
Viewing of Data content is gated by license acceptance. Only after license acceptance will charges for paid datasets start accruing on consumption. License acceptance opens dataset access to all the organisation’s users.

Step 3. Access data

Dataset distributions contain any combination of static (File) data and live (oneM2M)

Select ‘☰’ to view static data file collections and view list of downloadable files

Select ‘name’ to view live data containers in the “oneM2M browser”

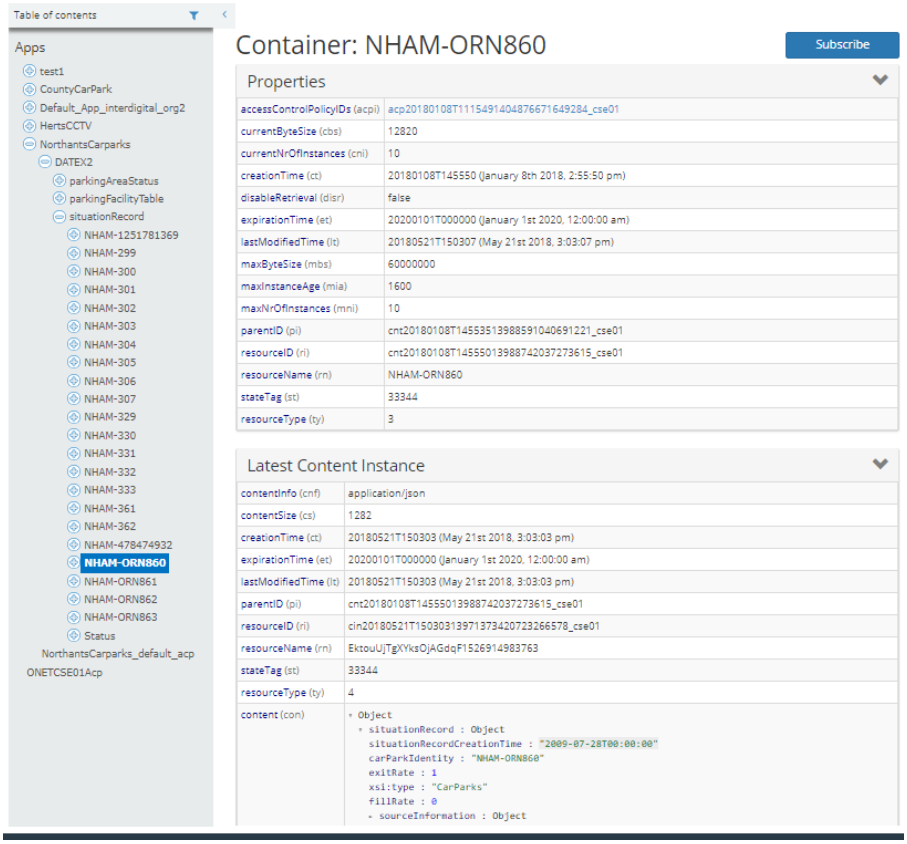


Step 4. View live data in the oneM2M Browser.

Click on the next to dataset (app) in the left side of the Browser Tab to expand.

Navigate into containers by clicking on them. Properties of Containers are displayed on the right, together with a button for Subscribing to those Containers.

The last data instance of the container is shown on right, down the page along with details on how to make System API calls to read, subscribe and unsubscribe to individual containers.



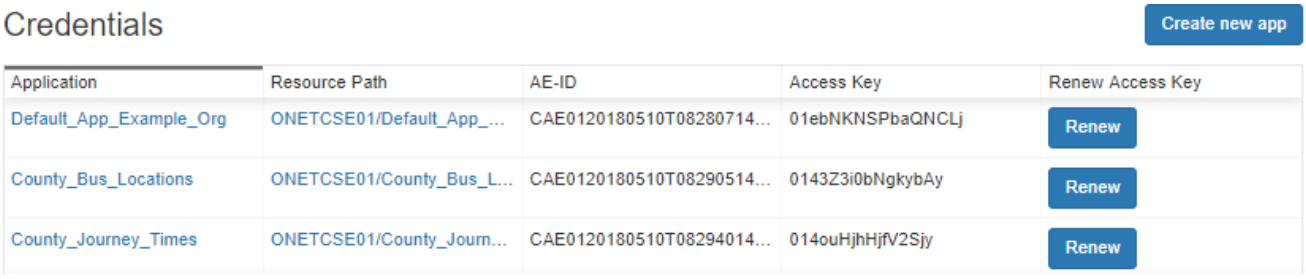
Steps to utilise published content

The oneTRANSPORT Service Portal enables the discovery and licence acceptance for new datasets. Applications and Services wanting to consume data directly can do so via the system API, using App access keys (AEID). Data metering is done on a per app (AEID) basis, so creating multiple Apps allows for more granular monitoring of data consumption across different apps and services. As previously mentioned, accessing data content via the system API is gated by license acceptance, which must be done through the portal.

Step 1: Create an App (AEID)

Go to “Credentials” tab. Click on “Create new App” and give your new App a unique name. The App is created!

The App’s unique ID (“AE ID”) and the Access Key needs to be embedded in any System API calls.



Step 2. Setting subscription or Retrieving specific data instances

Subscriptions can be set up on containers, to auto-forward any data updates to a specified endpoint. Use the oneM2M Broswer, navigate to the desired Container and use the “subscribe” button at the top. Alternatively, the API can be used for subscription set-up or to read specific content instances. Instructions and pre-populated code snippets are provided in the resource tree browser to support you to do this, below the “latest Content Instance” panel. Use a Terminal Emulator or Console window of your choice to run these code snippets to exercise System APIs.

Steps to share data

Your organisation’s data (both dynamic / live data and Static reference files) can be added to the system as datasets. When creating new datasets, this will initially be listed in the ‘your organisations dataset’ section of the data catalog, and will remain private to your organisation until published.

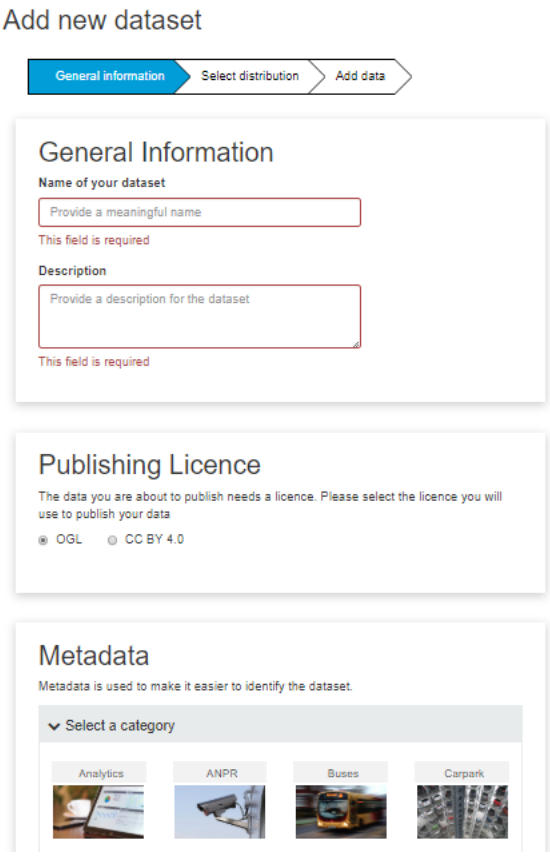
Step 1: Add a Dataset

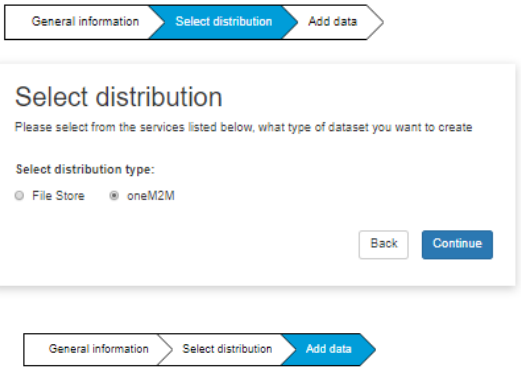
Go to the “Data Catalogue” tab. Click on “Add dataset”

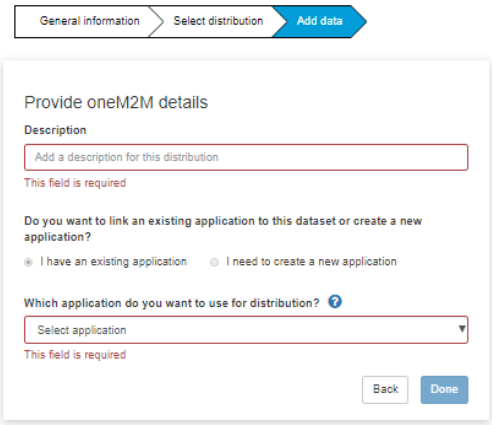
Complete the general information – the dataset name shows in Data catalogue

Carefully select the desired license to use for later publication. Metadata can be added immediately and edited later.

Select type of distribution: use File Store when only static data is to be added, else use oneM2M for live data which optionally may include static data.







Where oneM2M distribution is chosen, provide a short description of your data. This will be seen by others in the ‘dataset details’ page.

App access keys (AEIDs) are used to control dataset distribution and publishing. Associate an App with your new Dataset by either creating a new app or selecting a unused app from the list. Note the App used.

Step 2: Create some containers and upload live data.

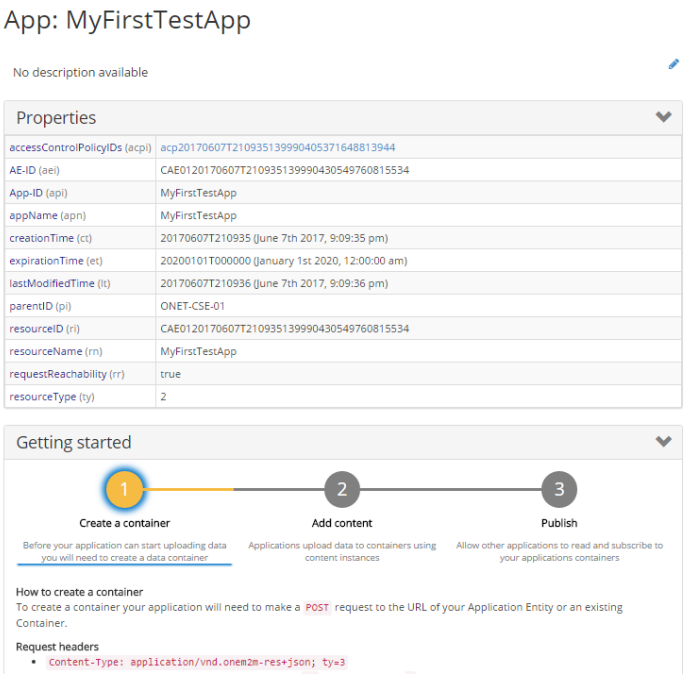
Click on “oneM2M browser”

Click the next to Default_App_ and it will expand to show a single line below which represents the Access Control Policy for your App, but no containers below that (since you haven’t created any yet). Click on your App name and meta data about the App is displayed on the right.

Further instructions and pre-populated code snippets are provided in ‘Getting Started’ below, that explain how to use the System APIs to create and organise containers and add content instances.

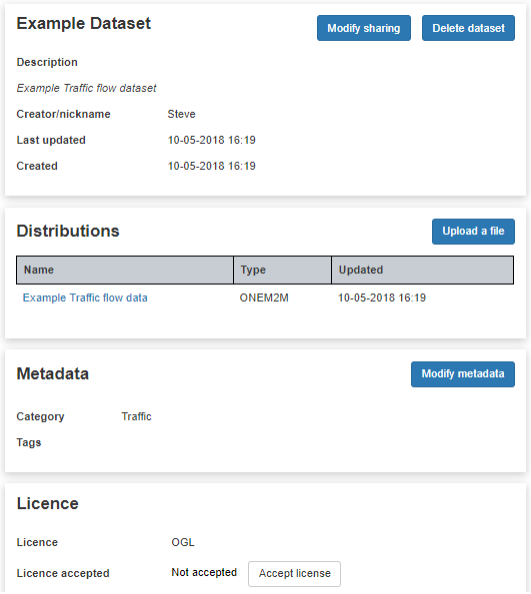
Remember to replace the app Credentials: Resource path, AE-ID, Access key in the code snippets with those of the dataset’s application listed in ‘Credentials’

Use the Terminal Emulator or Console of your choice to run these code snippets to exercise System APIs.



Step 3: Adding Static files

Groups of static data files are added to distributions on the ‘dataset details’ page. Click “Upload a file” and select file



Step 4: Publish

Users within your organisation can access datasets as soon as they are created. If you are ready to publish your data to other organisations, then navigate to the “dataset detail” page and click “Modify Sharing” button. **Once Published, your Dataset will be visible to all platform users via the Browser or related System API calls.**

Dataset management

Datasets remain under your control with any user in your organisation able to unpublish or remove datasets. Users of published datasets from other organisations are notified when a dataset is unpublished or removed and access is immediately blocked.

Un-publishing datasets

Navigate via “data catalogue” selecting the dataset to view “dataset detail” and click “Modify Sharing” button, and select ‘share with my organisation only’.

Removing datasets

Navigate via “data catalogue” selecting the dataset to view “dataset detail” and click “Delete dataset” button.

CAUTION : this will completely remove the dataset from the oneTRANSPORT system.

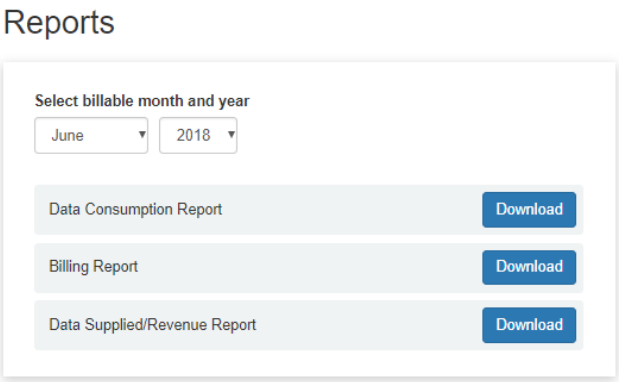
Usage reports

Reports are available to support your analysis of data usage. Go to “Reports” menu, select “billing period”.

Data consumption report – provides a breakdown of datasets which your organisation’s Apps are consuming.

Billing report – provides a breakdown of charges incurred for use of the service (eg accessing paid datasets)

Data supplied / Revenue report – provides a breakdown of the consumption of your organisation’s datasets by others, combined with revenue generated (if you set a fee for others to access your data)



Administrative tasks

Each organisation has an administrator user called the ‘Org Admin’. This user has extended privileges to manage user accounts across the organisation, and view bill, revenue and usage reports for the organisation.

User management

Adding Users

Go to “Users” menu, select “Invite Users”. Enter the email addresses of new organisation users to invite and click “Send”

Removing Users

Go to “Users” menu, select “List Users”. Select username which displays user details page, use ‘Delete’ button and confirm the action.

Note: Datasets and Apps created by users are retained in the organisation on user deletion

Transferring Admin Role

Go to “Users” menu, select “List Users”. Select username to be made organisation administrator. On user details page click ‘Edit’ authorisations allowing the role to be changed.

Note: Organisation admin role is transferred rather than duplicated.

Account status

Account information, outstanding balances and credits can be viewed in organisation details.

Go to “Users” menu, select “Organisation details”

Setting a Billing alerts

Click ‘set up alert’ button to enable notification if chargeable balance exceeds a limit which you can pre-set.