

FEWS-Taiwan Dashboard

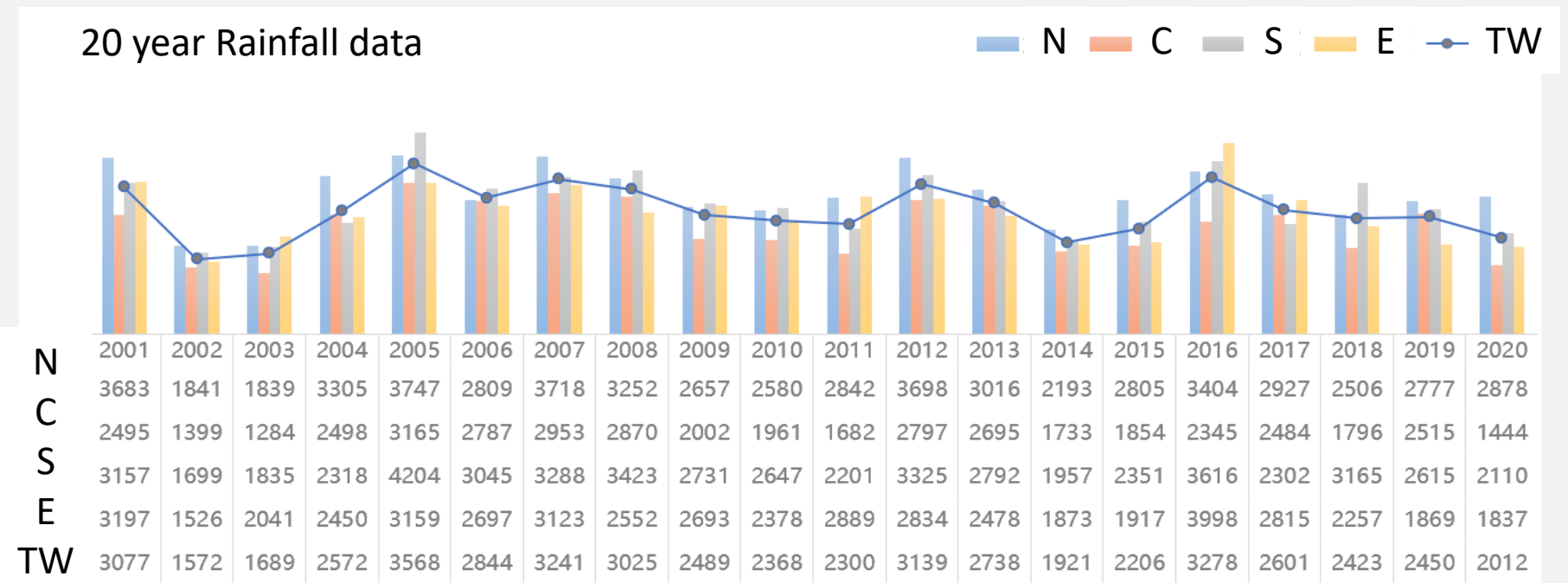
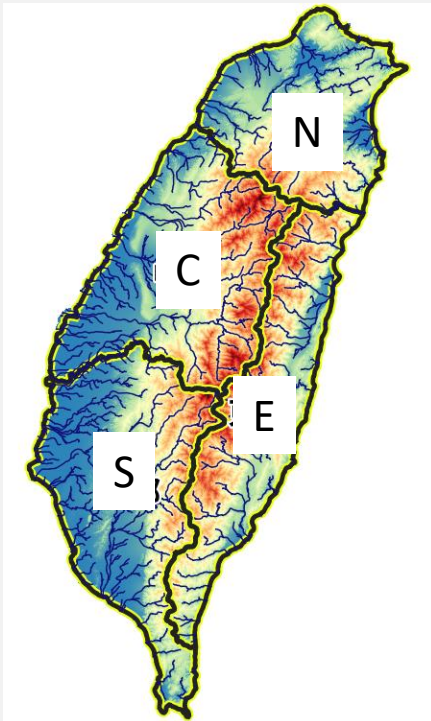
Jhih Cyuan Shen

FondUS.inc

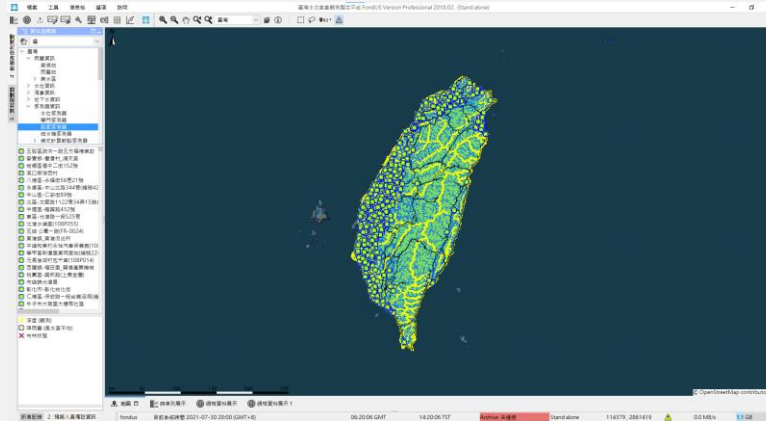
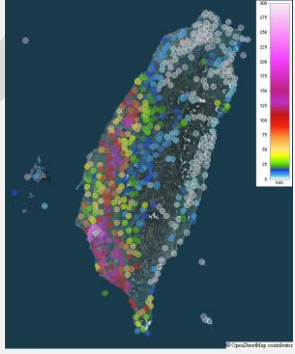
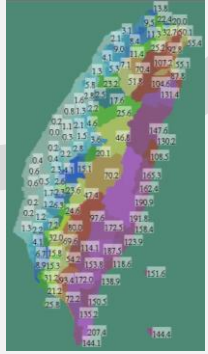
2022/11/09

Why We Need the FEWS-Taiwan Dashboard

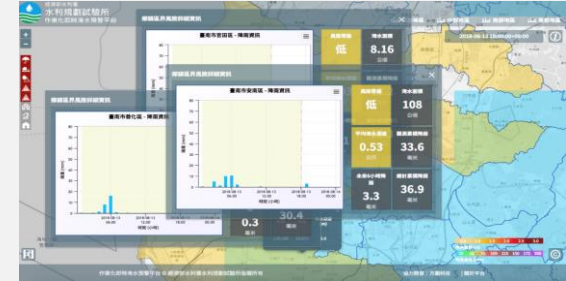
- More and More Data Source and API Services.
- The Short , Medium and Long-term Data and Model Validation and Verification.
- Easy Using and Share Tools for the Data Visualization.



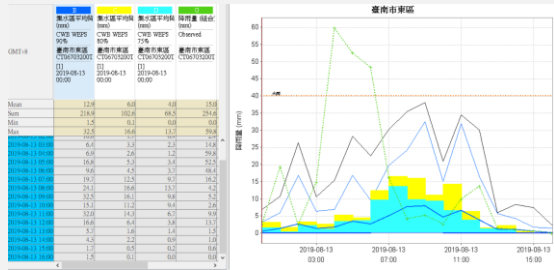
Provide a Different Kind of Data Service for the Users



Application



1D-2D flood forecast



1D

CSV, XML, JSON, bui

2D

NetCDF ASC Image



Long-term Hydrology Analysis

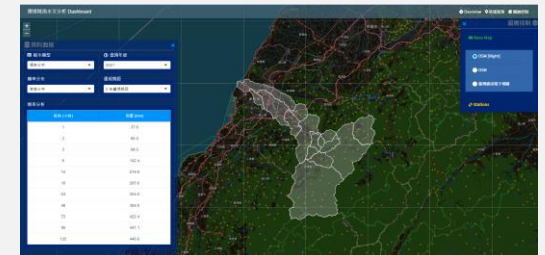
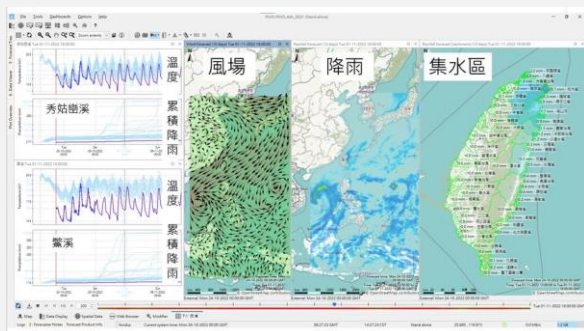
Service

Archive, S3, DB, API, Chart API

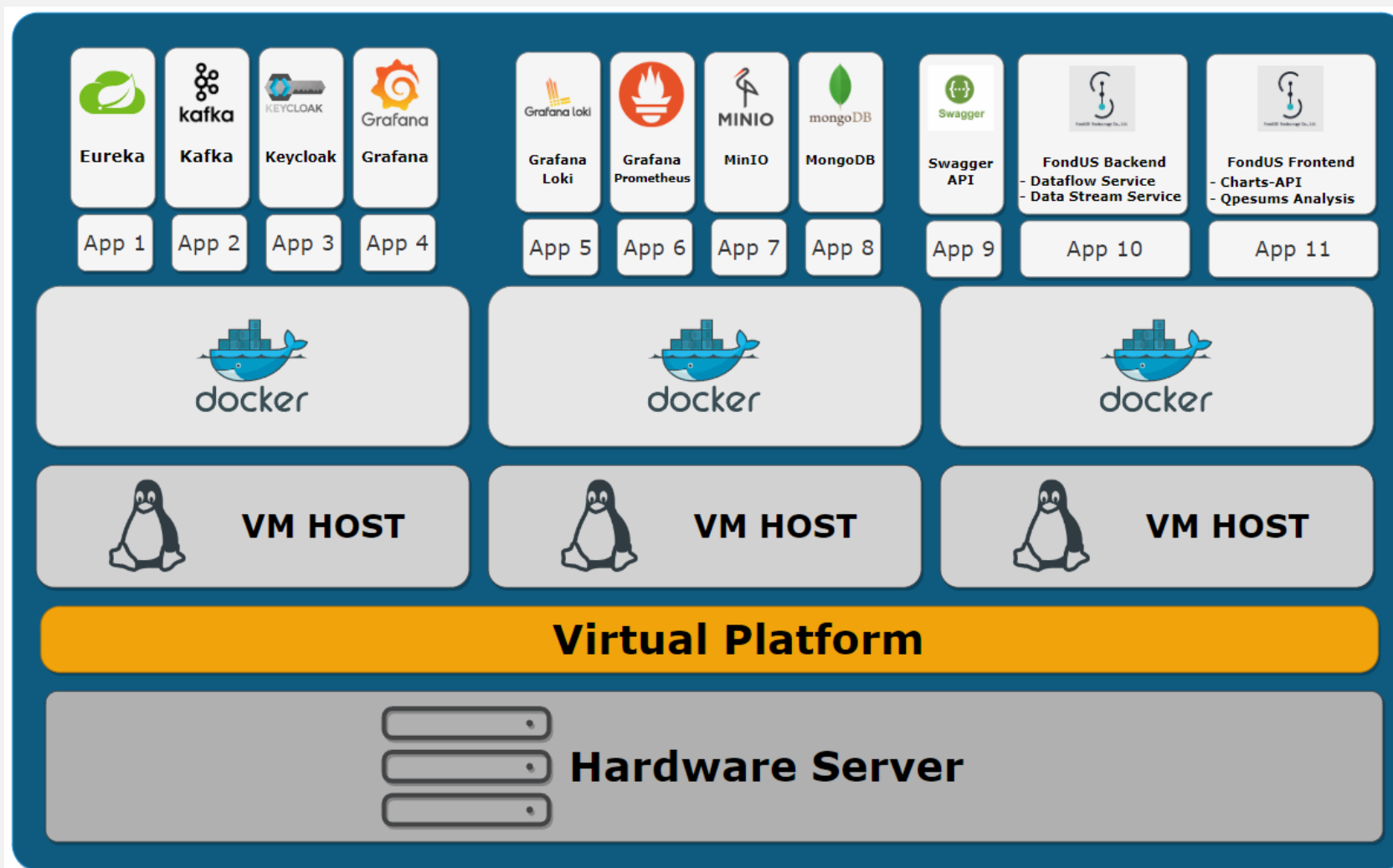
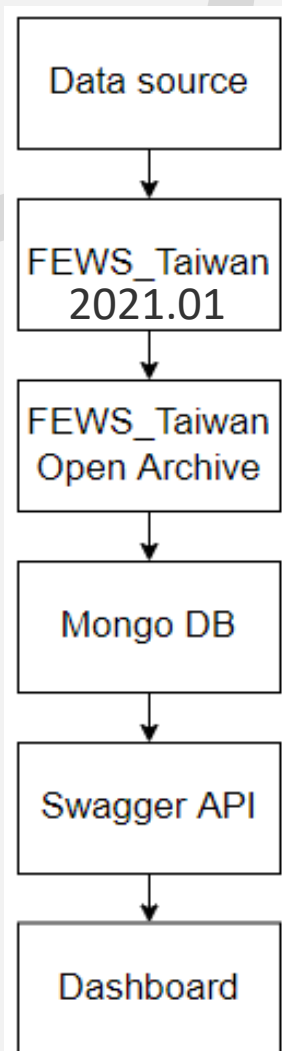
Application

Web Site
html

Report Slide
Power point



Microservices for the Data Service



FEWS Charts API
FEWS Open API
Model Verification
Workflow Stream
Dashboard

Docker Swarm FondUS Cloud Service

Open API + Chart API



Open Archive 讀取 API ^{v1} OAS3

[/v3/api-docs/archive-event-reader-service](#)

用於從 Open Archive 讀取水文氣象資料並轉換為標準格式

[Brad Chen - Website](#)

[Send email to Brad Chen](#)

Servers

<https://gateway.fondus.com.tw/archive-event-reader-service> - Generated server url

External Forecast Dataset

GET [/api/v1/read/external-forecast/grids/qsums-qpn](#) 讀取外部預報資料集 QPESUMS-QPN

Observed Dataset

GET [/api/v1/read/observed/catchment-basins/rainfall-01h-cwb-idw](#) 讀取觀測資料集氣象局雨量站 IDW 內插網格集水區平均降雨 (1小時)

GET [/api/v1/read/observed/catchment-basins/rainfall-01h-cwb-kriging](#) 讀取觀測資料集氣象局雨量站克利金內插網格集水區平均降雨 (1小時)

GET [/api/v1/read/observed/catchment-basins/rainfall-01h-qsums-qpe](#) 讀取觀測資料集 QPESUMS-QPE 內插網格集水區平均降雨 (1小時)

GET [/api/v1/read/observed/catchment-basins/rainfall-01h-qsums-qpe-cwb-idw](#) 讀取觀測資料集組合 QPESUMS-QPE + 氣象局雨量站 IDW 內插網格集水區平均降雨 (1小時)

GET [/api/v1/read/observed/catchment-counties/rainfall-01h-cwb-idw](#) 讀取觀測資料集氣象局雨量站 IDW 內插網格集水區平均降雨 (1小時)

GET [/api/v1/read/observed/catchment-counties/rainfall-01h-cwb-kriging](#) 讀取觀測資料集氣象局雨量站克利金內插網格集水區平均降雨 (1小時)

Select a definition

archive-event-reader-service
archive-event-search-service
archive-event-workflow
fews-location-name-discovery-service
fewstaiwan-dataflow-dataset-service
fewstaiwan-standarddb-entities-service
hydro-qsums-entities-service
map-feature-service
pi-modelformat-service
timezone-mapping-service

Open API + Chart API



作業化預警系統



時間序列 API



Charts API

Chart catalog of supported data types

Chart type	Types of data	API description page
Average rainfall in the catchment		
Time series and cumulative series	The extent of the main island	Description page
Time series and cumulative series	County catchment areas	Description page
Time series and cumulative series	Township boundary catchment area	Description page
Time series and cumulative series	Catchment area upstream of the water level station	Description page
Time series and cumulative series	Reservoir catchment	Description page
Time series and cumulative series	Watershed catchments	Description page
Time series and cumulative series	Flood control hotspots	Description page
Time series and cumulative series	Water catchments	Description page
Time series and cumulative series	Regional drainage catchments	Description page

*The chart data is updated for about 30 minutes, so we recommend that you use the Time Series API to plot the data for more immediate data presentation.

Township boundary range average rainfall chart API description

You can use iFrame to quickly help you get average rainfall charts for display within township boundaries.

時間序列

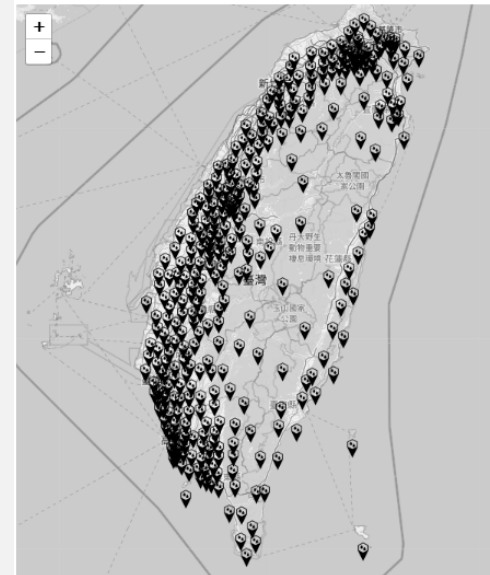
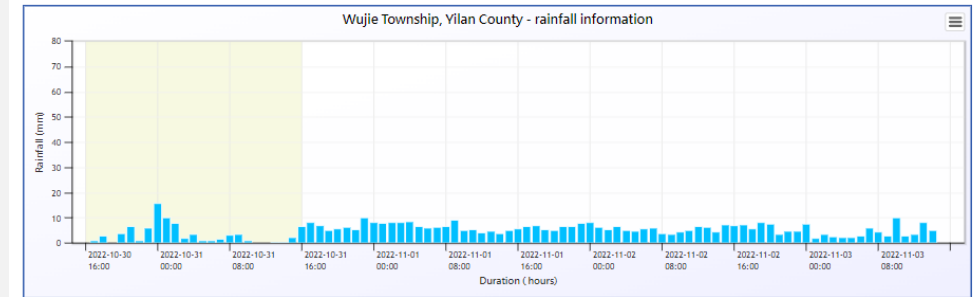


Chart API description

Embedding example

```
<iframe style="width:$WIDTH$; height:$HEIGHT$; overflow-y:hidden;" scrolling="no"src="$URL$" > </iframe>
```

Embed the URL

/api/v2/\$TYPES\$/catchment_towns?locationId=\$LOCATIONIDS

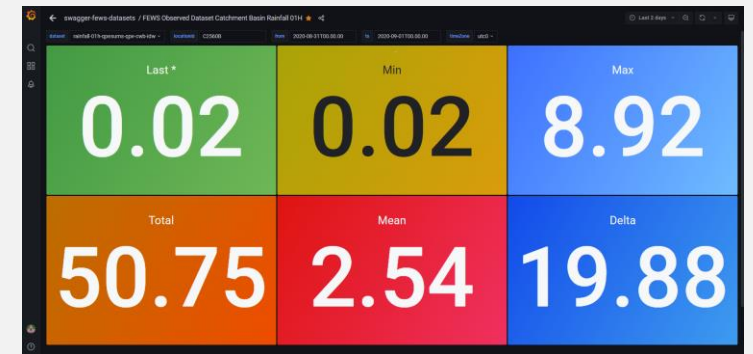
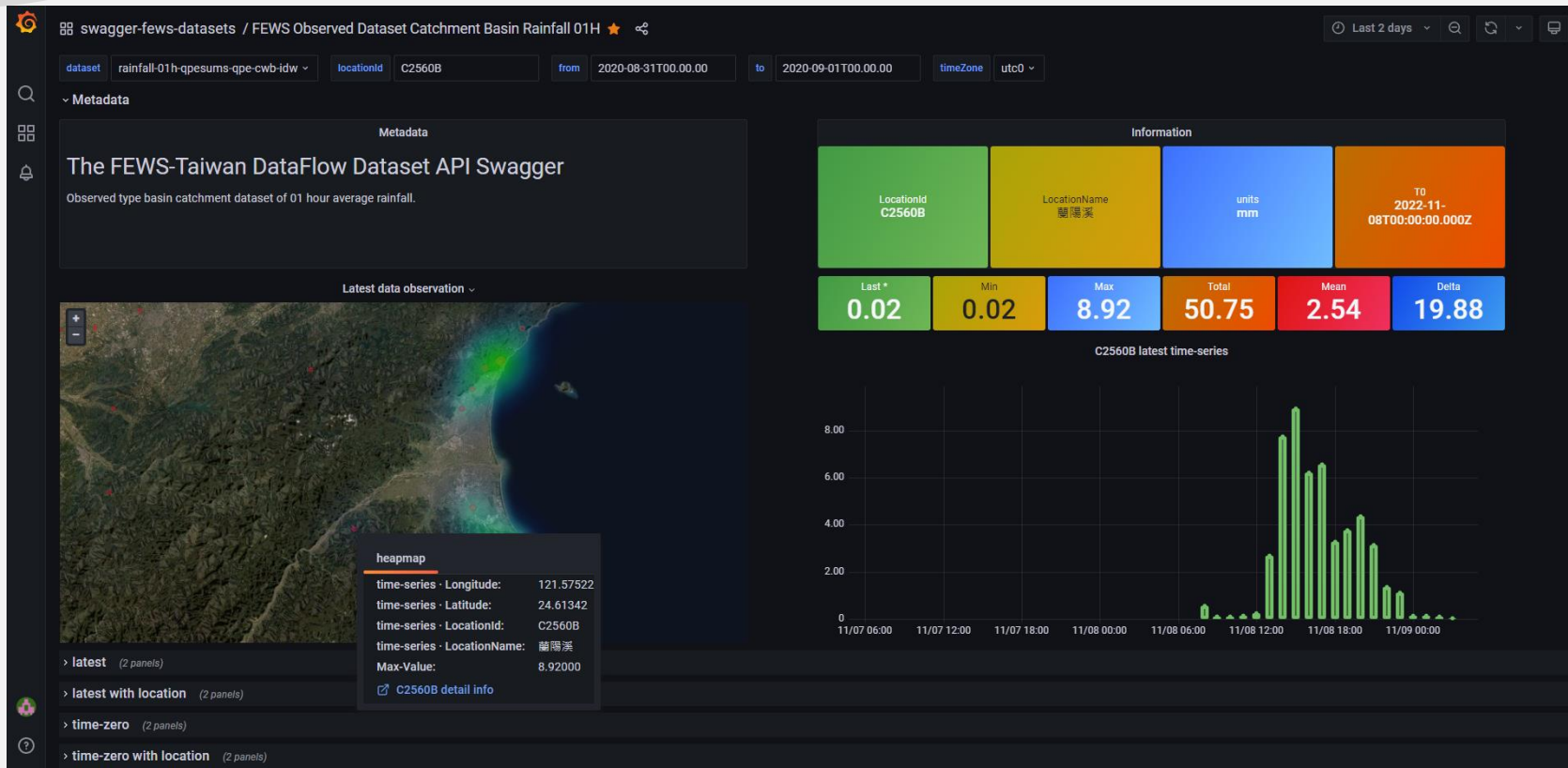
Parameter description

name	description	paradigm
URL	API URL	Please refer to the embed URL
WIDTH	iFrame width	500px
HEIGHT	iFrame height	700px
TYPE	API type	timeseries accumulate

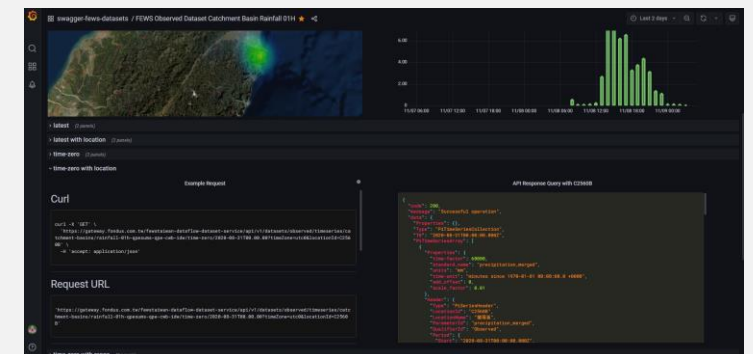
[paradigm](#) [Support site](#)

DashBoard for the Time Series Data

- Base on the Grafana
- Different kind of Dashboard template
- Dataset: **API** + **locationId** + **Time Range**



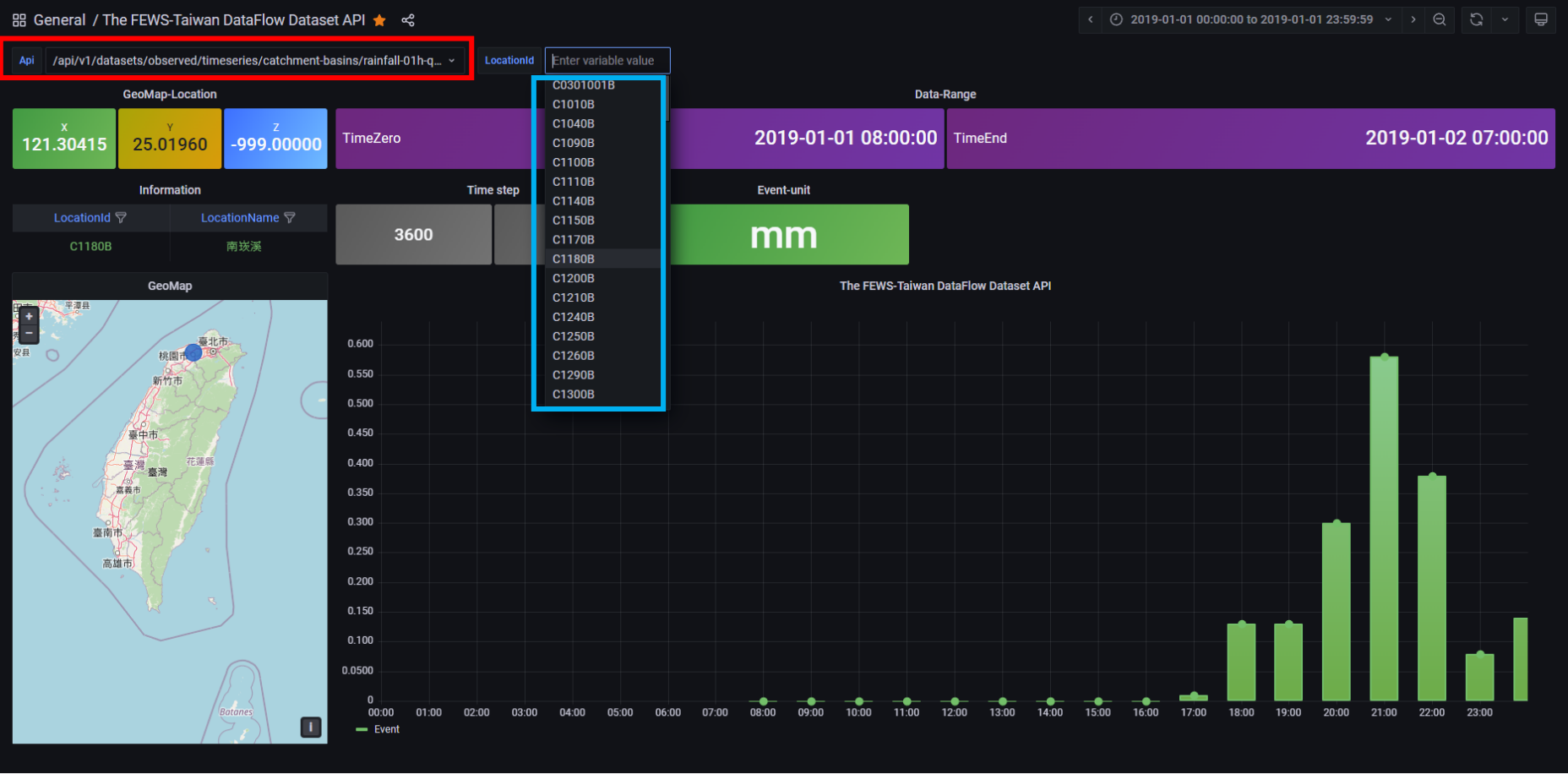
Monitor value



API

DashBoard

API + locationId



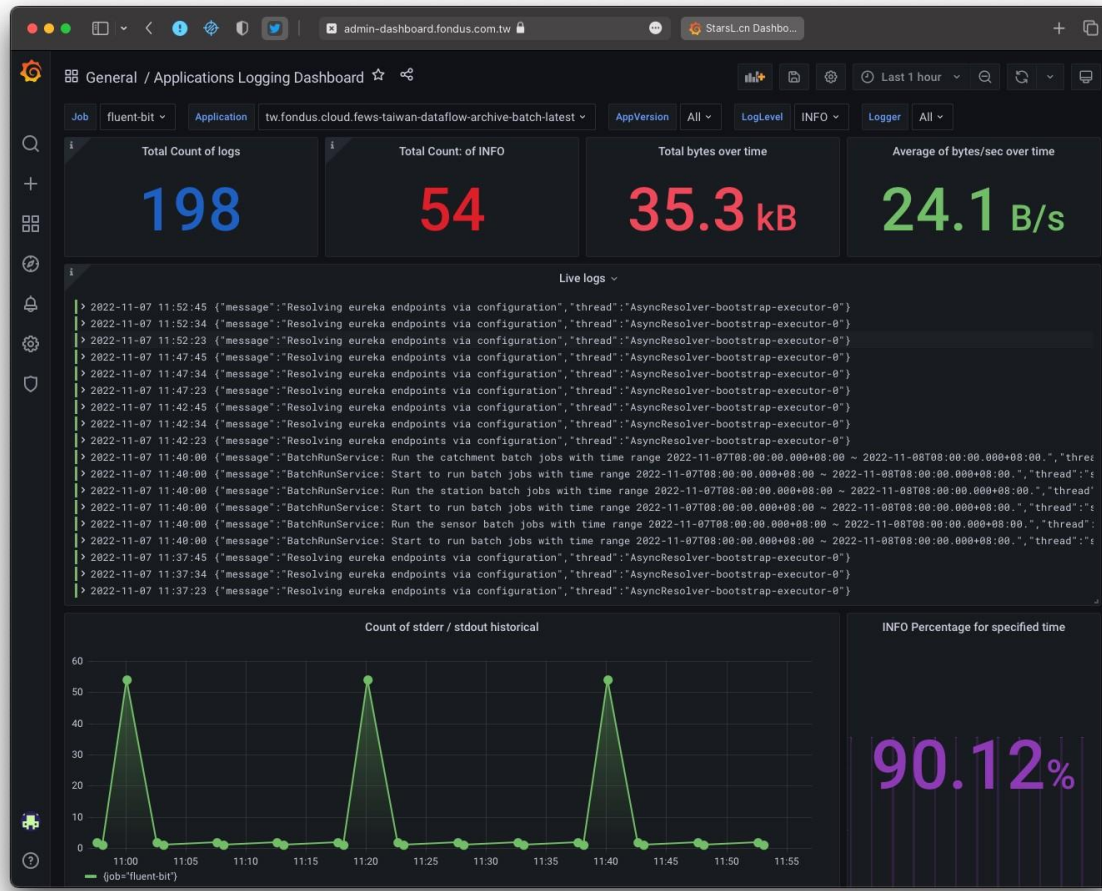
LocationId	Enter variable value
	C0301001B
	C1010B
	C1040B
	C1090B
	C1100B
	C1110B
	C1140B
	C1150B
	C1170B
	C1180B
	C1200B
	C1210B
	C1240B
	C1250B
	C1260B
	C1290B
	C1300B

locationId

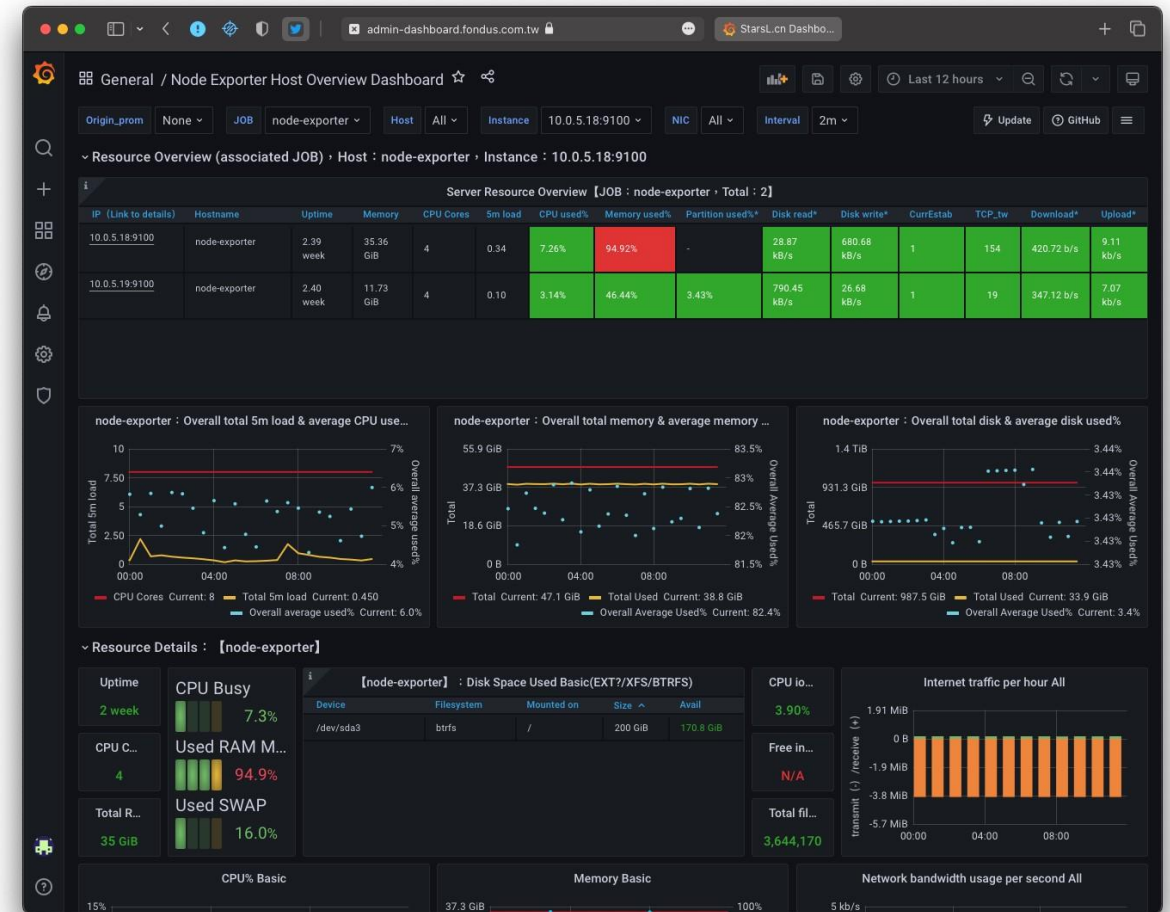
Api	Enter variable value	LocationId	C1180B
	/api/v1/datasets/observed/timeseries/catchment-basins/rainfall-01h-cwb-idw/time-zero/		
	/api/v1/datasets/observed/timeseries/catchment-basins/rainfall-01h-cwb-kriging/time-zero/		
	/api/v1/datasets/observed/timeseries/catchment-basins/rainfall-01h-qpesums-qpe-cwb-idw/time-zero/		
	/api/v1/datasets/observed/timeseries/catchment-basins/rainfall-01h-qpesums-qpe/time-zero/		

API → Open API LIST

DashBoard for the System IO Monitor



Task and workflow



System Hardware

Share and Cooperation



coop.shen@gmail.com

<https://twitter.com/JhihCyuan>

<https://www.facebook.com/coop.shen>



Fondus Technology

Thank you for your patience.

