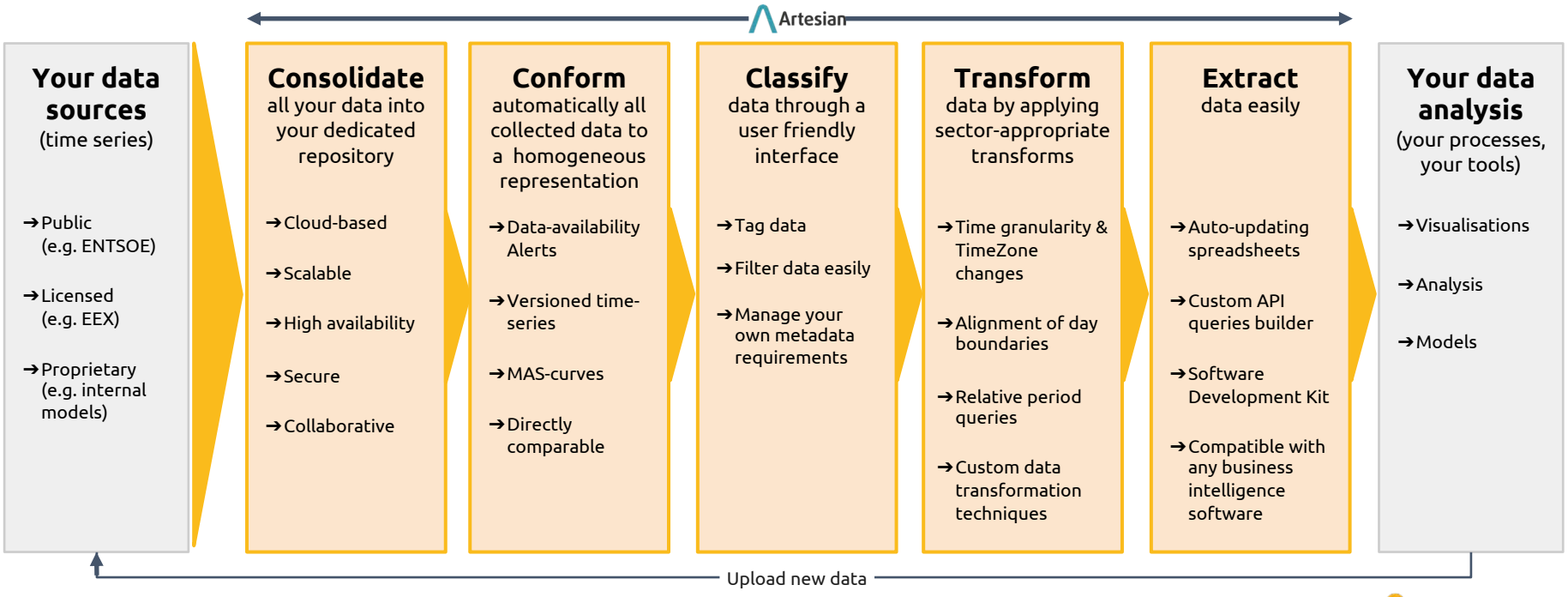
Artesian
Quickening time to insight
https://artesian.cloud
Azure
Marketplace
new entry
(Q1 2021)
ARK

ARTESIAN IS "*DATA-PREPARATION AS-A-SERVICE*" FOR TIME-SERIES DATA

A cloud-based service that fully automates all your data preparation freeing your time to focus on analysis with your own tools



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ALL YOUR TIME-SERIES ACCESSIBLE IN ONE PLACE

SAMPLE SELECTION OF SUPPORTED DATA SOURCES[1]

TSO/Infrastructure Operator
ENTSO-E
ENTSO-G
50Hertz
Amprion
Tennet
Transnet
GIE
RTE
Societa' gasdotti Italia
SNAM Rete Gas
Enagas
TERNA
TERNASunSet
...

Market
Belpex
CEGH Gas Exchange
EEX
EPEXSpot
EXAA
GME
MibGas
Red Electrica de Espagna
Lagie
SEMO
Southpool Regional Exchange
Trayport Trading Gateway
...

Commercial Data Providers
Alba Soluzioni
Genscape
Meteogroup
Meteologica
PointConnect
Wattsight
...

Capacity Management
Damas
Jao
Nordpool
...

REMIT
Pip Ipex
...

- Artesian does not own nor sell data
- It can accommodate any data source:
  - Already supports most energy & commodities market data in Europe
  - **Artesian accommodates any new source you may need in less than a week for free**
- + Add your own data using the **"write"** API feature
- Set expectations on incoming **data quality/availability**, and be notified in case of issues from the data provider

(1) Contact us for an up to date full list

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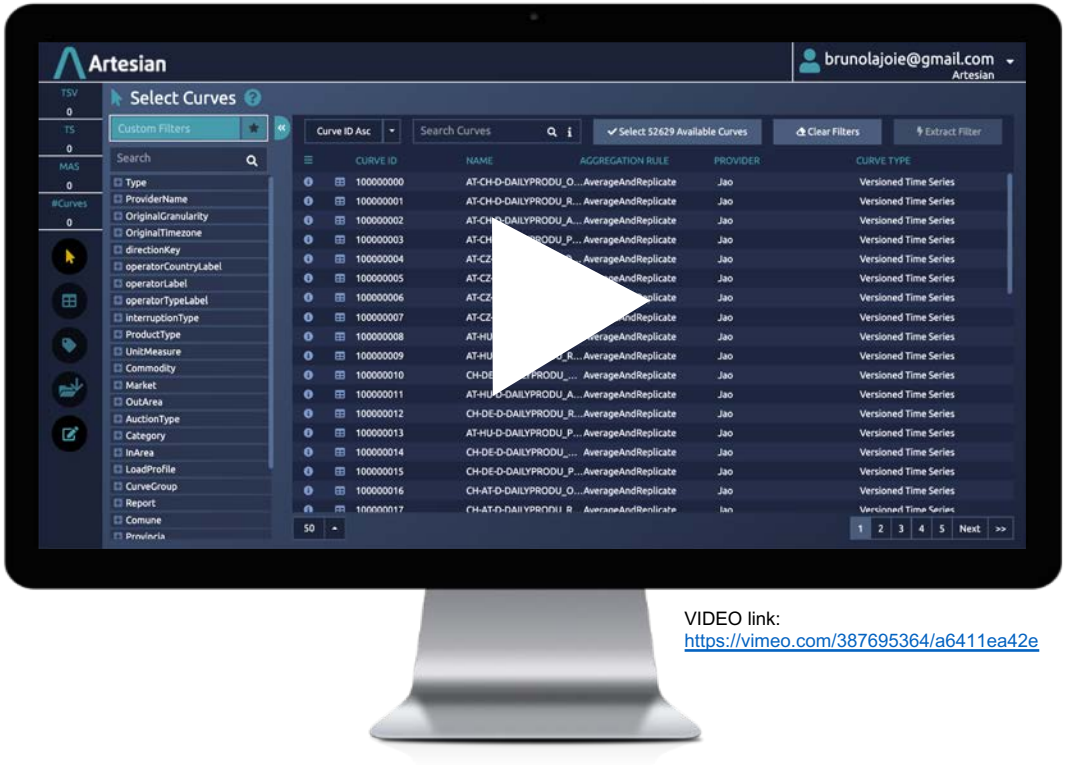
HOW DO I USE ARTESIAN ?

Click the Play button or use the video link below for a quick peek at the Artesian user interface (2m:25s)



VIDEO link:
https://vimeo.com/387695364/a6411ea42e

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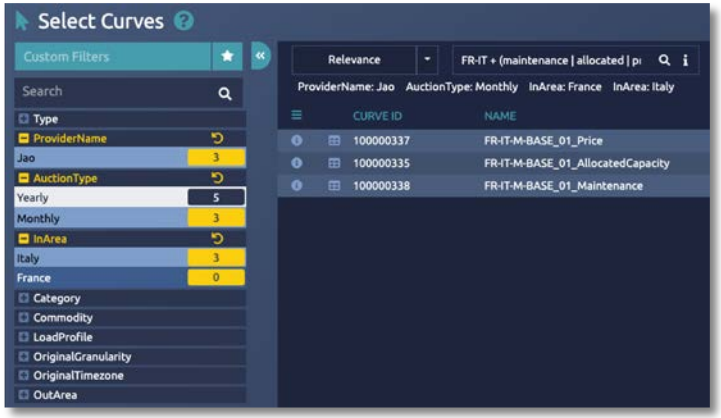
IN DETAIL (1) : BUILD YOUR CUSTOM QUERY USING THE ARTESIAN UI

Example: monitor FR-IT cross border auction

First, select the appropriate time series to compare

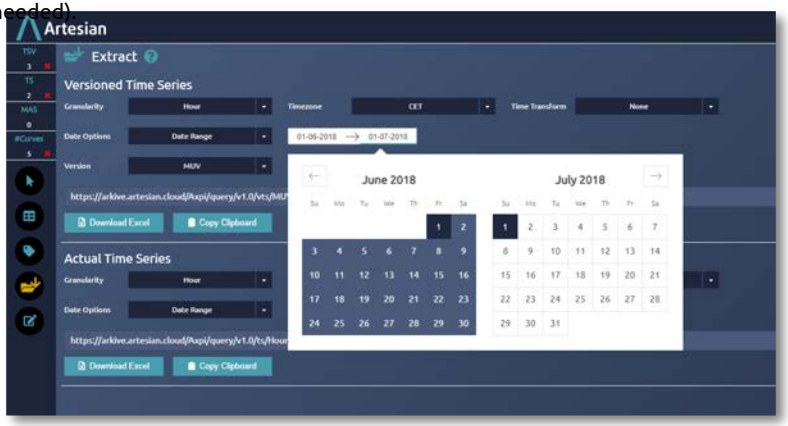
1. Select cross-border monthly auction curves: Filter data by “InArea = Italy” and “outArea = France”, as well as “ProviderName = JAO” to get only relevant auctions curves, and select the Maintenance, Allocated Capacity and Prices curves of monthly granularity.



2. Select spot prices curves: Using the same approach, locate electricity spot prices for France by selecting PointConnect[1] as a provider and pick the epex spot price curve, and spot price for north of Italy by selecting GME as a data provider and using free text search to find the curve related to prices in the NORD area.

Then, select the desired period and transformation needed

3. Go to the basket to set parameters for data extraction. Select the desired data range either as a fixed window or a rolling one with offset. Ensure everything is extracted at the same time granularity (downscale monthly auction data to hourly granularity) and for the same time zone (transform data if needed).



You have built one single query URL that gathers all five transformed time-series necessary to feed your analysis.

[1] subject to license from Thompson Reuters

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IN DETAIL (2) : USE YOUR FAVOURITE TOOL OR FRAMEWORK TO CONSUME THE PREPARED DATA …

Example: monitor FR-IT cross border auction

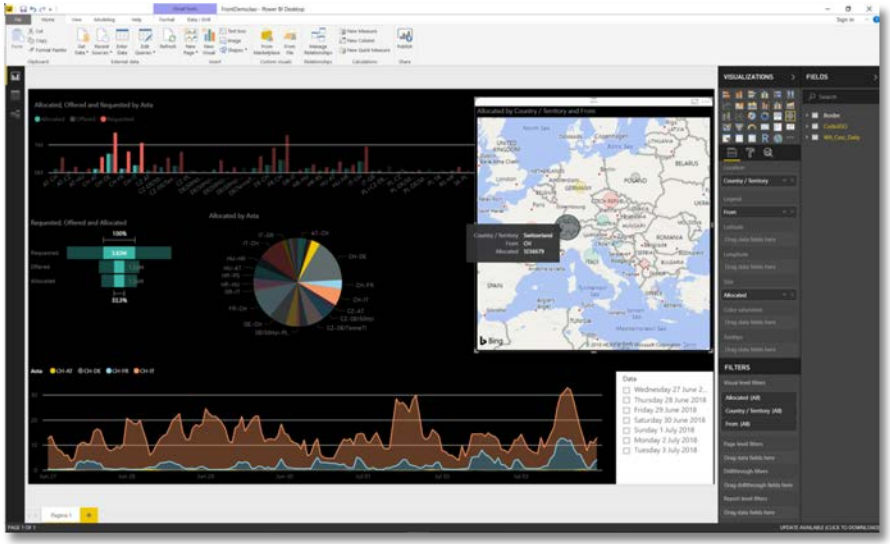
You are now ready to use your data in a dynamic excel spreadsheet or connect it via a platform of your choice:

Option 1: Download a spreadsheet (auto-refresh) Click on “download Excel”. The excel will contain your data table, ready to be used for graphs or further computations. The Data table will refresh in one click using the “Refresh Data” button on Excel. You can share your excel with anyone in your organization who has credential access to Artesian.

Option 2: Connect to a Business Intelligence Tool Microsoft Power BI for instance allows you to create a live dashboard that can be shared with other members of your organisation. In the screenshot on the right, we have extended the queries in the previous example to other European borders and created an interactive dashboard where it is possible to click on the map in order to view data for the relevant border.

Option 3: Use our Analytics Adapters to synchronize selected data directly to your downstream platform (e.g. DBMS, Databricks etc.). We will help you configure the connection.

Microsoft Power BI connected to Artesian



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… OR SIMPLY CONNECT PROGRAMMATICALLY

- Once you know the IDs of the time-series needed for your analysis, you can either:
  - **Call our API** programmatically to get JSON format (Query API docs)
  - Use our **Software Development Kits** to create flexible queries easily (available in C#, Python, JavaScript and Matlab, see SDK docs)
- You can also publish yourself any new time-series in Artesian via the Write API endpoint (docs)

```
➜ code curl https://arkive.artesian.cloud/ArkDemo/query/v1.0/ts/Day/2020-01-12/2020-01-13\?tz\=CET\&id\=100072687 -H "X-API-Key: ${X_API_Key}" -s | jq '.'
[
  {
    "P": "RTE",
    "C": "ActualGeneration_SOLAR",
    "ID": 100072687,
    "T": "2020-01-12T00:00:00+01:00",
    "D": 781.9166666666665,
    "S": "2020-01-12T00:00:00+01:00",
    "E": "2020-01-13T00:00:00+01:00"
  }
]
```

```
from artesian import QueryService,Granularity

qs = QueryService(cfg);
q = qs.createVersioned() \
    .forMarketData([100042422,100042283,100042285,100042281,100042287,100042291,100042289]) \
    .inAbsoluteDateRange("2018-01-01","2018-01-02") \
    .inTimeZone("UTC") \
    .inGranularity(Granularity.HOUR)
```

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ARTESIAN BENEFITS CONSUMER OF A LARGE NUMBER OF DISPARATE DATA SOURCES

USERS

Data consumers

- Energy traders, Utilities, Retailers, Aggregators, Large industrial consumers
- Consultants needed to analyse data quickly or create dynamic reports.

Data producers

- Commercial data providers that sell time-series data subject to license.
- Organisations wishing to provide transparent access to the the public

BENEFITS

Time saving: Organizations report that they spend more than 60% of their time in data preparation. Subscribing to Artesian virtually eliminates this activity.

Scale smoothly: Decreasing costs per unit of datapoint downloaded. Free unlimited online storage of all historical data and time-series versions.

Freedom to keep your own analytic tools: On top of an UI, Artesian offers an API end-point with SDK and analytical connectors for all your data tools.

Improve analytics quality: A single source of truth reduces data quality issues and enables you to easily explore the data and iterate on models faster

Increased audience: Publish your own time series through Artesian, effectively using it as internal or external distribution platform

Ease of adoption by consumers and flexibility with respect to traditional methods such as ftp or file delivery.

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ARTESIAN IS COST-EFFECTIVE WITH FLEXIBLE PRICING

👉 Artesian saves costs by **mutualizing** infrastructure and data-preprocessing intelligence **amongst every customers**

Pricing model:

- T-shirt subscription model (Free*, Small, Medium, Large, Enterprise)
- Pay-per-datapoint downloaded, independently of the number of data-sources (workers) connected
- Decreasing datapoint unit-price

ARTESIAN MONTHLY COST

	Licence	minimum monthly cost	Monthly datapoint download scenario	MONTHLY COST	cost per M datapoint	Price comparison* with in-house solutions (number of data workers) 1 3 5 10 15 20 30 50 70
free *	3 workers max, 5M datapoints max	€0	5 000 000	€0	0	→ larger licence required
small	5 workers max, unlimted DP	€250	50 000 000	€1 250	€25,00	→ larger licence required
medium	10 workers max, unlimited DP	€750	100 000 000	€1 750	€17,50	→ larger licence required
large	15 workers max, unlimited DP	€1 000	500 000 000	€3 300	€6,60	→ larger licence required
entreprise	unlimited	€1 750	1 000 000 000 (eq. ~20-30 users)	€4 800	€4,80	
entreprise	unlimited	€1 750	5 000 000 000 (eq ~100 users)	€9 100	€1,82	

* Comparing total cost of ownership amortized over 5yrs horizon
Cheaper than any in-house development of Artesian-like solution
Cost roughly equivalent to writing & maintaining local scripts / VBA macros ran regularly, plus cloud storage
Artesian more expensive than manual download via FTP/CSVs etc... in the short-run only

* Free tier available from end Q2 2021. Limited to max 3 public data sources not requiring credentials, no write API available

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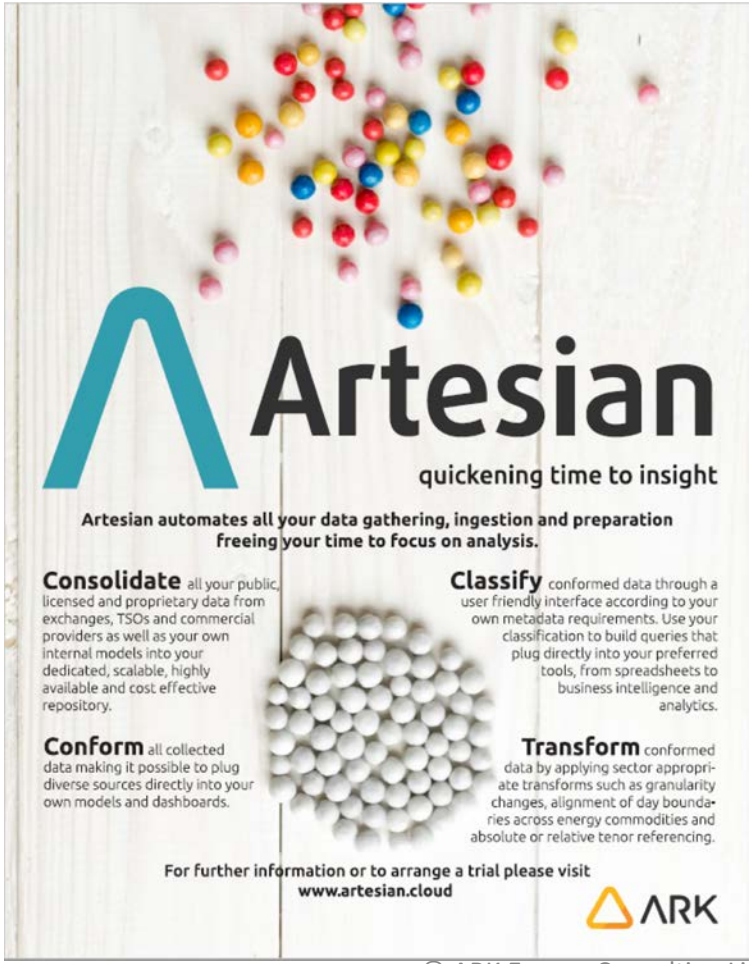

For a demo, trial or simply to find out more please contact us on:

enquiries@artesian.cloud

Or visit

www.artesian.cloud

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