



AVEVAWORLD

ACCELERATE INDUSTRIAL INTELLIGENCE

CONNECT



WEDNESDAY, MAY 20, 2026

12:30-12:50

Entities: Giving Your Data Meaning in CONNECT

Presented by: Derek Endres

Agenda

Intro

CONNECT overview

What is an Entity

Entities in applications

Entities in the wild

Presenter

Sr Manager Product Readiness

AVEVA

Derek Endres

derek.endres@aveva.com



Access, visualize, and model trusted industrial information
to predict and inform more efficient outcomes

CONNECT

Industrial Intelligence Platform



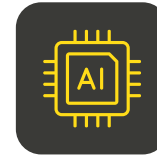
Connectivity



Data management
& visualization



Collaboration



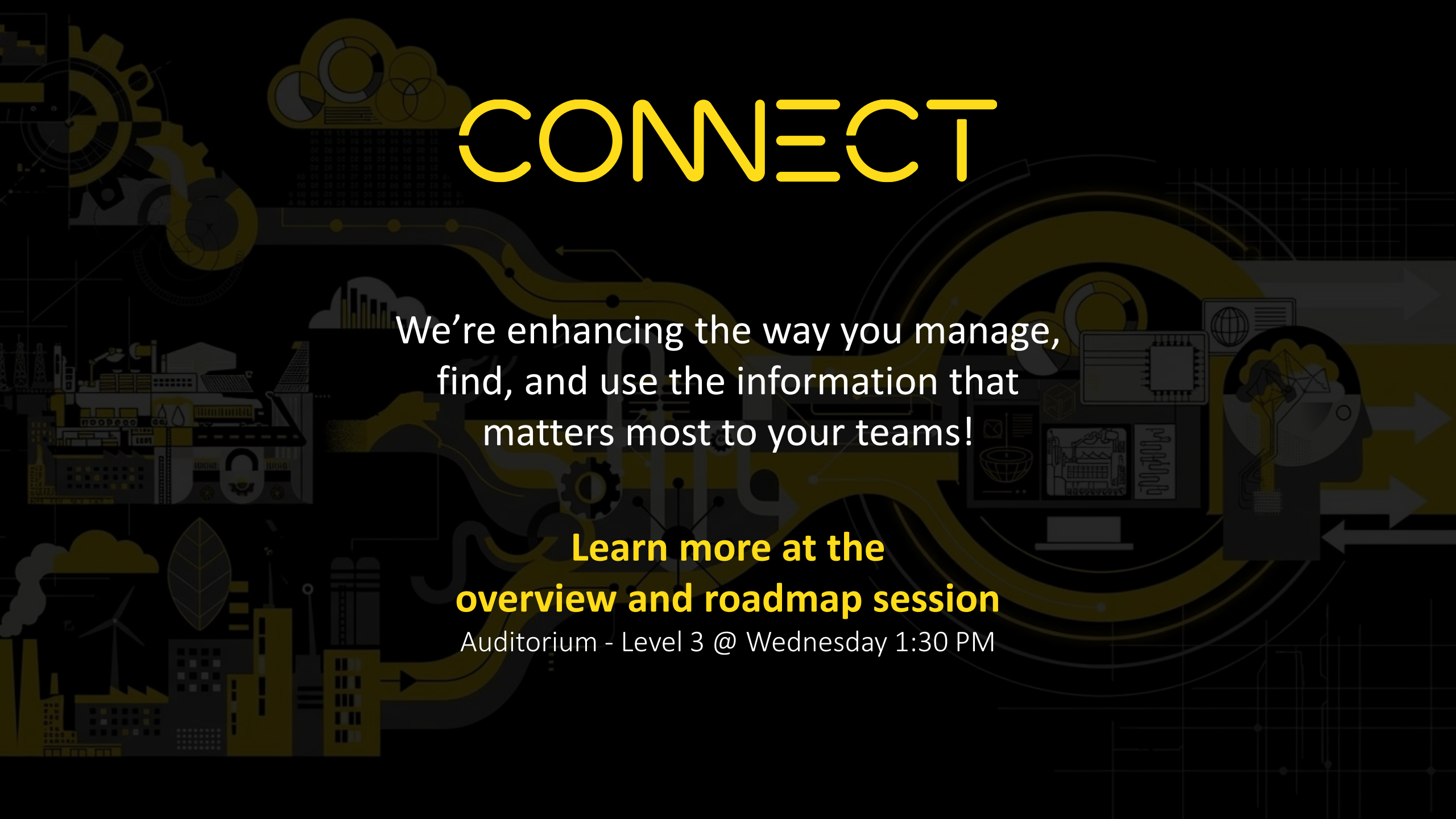
AI & analytics



Applications



Created specifically for industry, CONNECT allows you to aggregate, contextualize, and share information securely and easily across multiple sites and data types in a collaborative and frictionless environment.



CONNECT

We're enhancing the way you manage,
find, and use the information that
matters most to your teams!

**Learn more at the
overview and roadmap session**

Auditorium - Level 3 @ Wednesday 1:30 PM

Entities

Core concepts

Modular, contextual representations of industrial objects, such as assets, documents, and visualizations

An entity is modular, composed of discrete components derived from types and is capable of being connected to other industrial data types through relationships

Entities provide a rich, contextualized representation of an industrial entity

- Much more than logically organized streams (Assets)

- Can represent

- Asset



- Document



- Visualization



Entity Definition

Name

Description

Id

ClassId

Aliases

Properties

Relationships

Components

SecurityTags

Big Buffalo Wind Farm

Details

74

5

51

ID
PIWindtopiaAF_8b33d5c9-382a-11f0-94d2...

CLASS ID
BaseAsset

TYPES
Windtopia Wind Farm Template

ALIASES
None

DESCRIPTION
null

DATA SOURCES
None

VERSION
2

MODIFIED BY
39d3c07e-8889-46a4-9aa1-a57fd096f85f

MODIFIED DATE
November 24, 2025 at 9:13:09 AM GMT-5

CREATED BY
39d3c07e-8889-46a4-9aa1-a57fd096f85f

CREATED DATE
November 24, 2025 at 9:13:09 AM GMT-5

Properties, Relationships and Components are core concepts that unlock the power of entities

Properties

An entity property is a static piece of data associated with the entity, which can have a datatype (int, string, etc) and optional unit of measure

Entity properties

- Key, value pair with optional UOMs
- An entity may contain a large collection of properties

Entity property examples

- Latitude
- Longitude
- Maximum Rated Power
- Manufacturer
- Serial Number
- Etc.

```
1 {  
2   "id": "GE01",  
3   "name": "GE01",  
4   "description": "Entity representing a GE turbine",  
5   "properties": [  
6     {  
7       "id": "Serial Number",  
8       "value": "ABC123GE01",  
9       "typeCode": "String"  
10    },  
11    {  
12      "id": "Maximum Rated Power",  
13      "value": 1500,  
14      "typeCode": "Int32",  
15      "uom": "W"  
16    },  
17    {  
18      "id": "Latitude",  
19      "value": 45.4636,  
20      "typeCode": "Double"  
21    },  
22    {  
23      "id": "Longitude",  
24      "value": 9.1881,  
25      "typeCode": "Double"  
26    }  
27  ]  
28 }
```



Components and Types

From the perspective of different roles, an entity can mean different things!

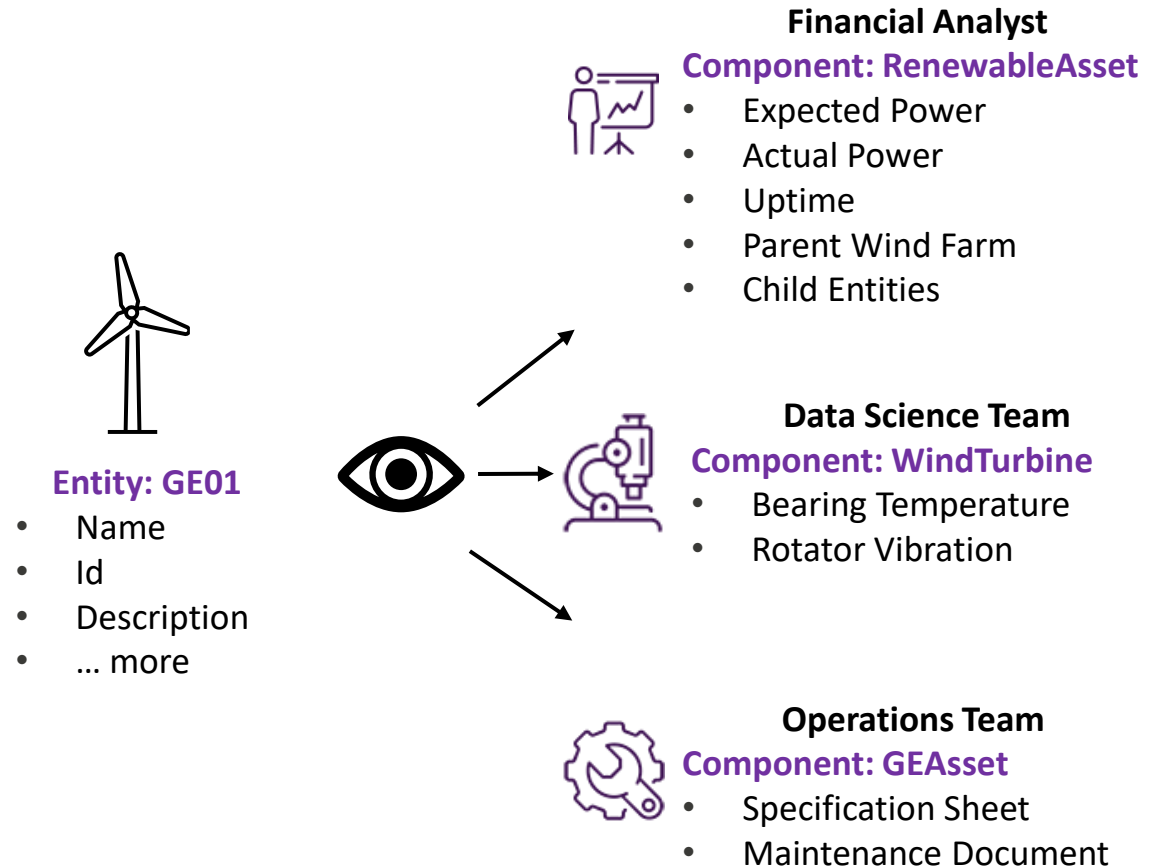
GE01 represents more than 1 thing at a time, it can be a...

- Wind Turbine
- Renewable Asset
- GE Asset

Components allow entities to be defined by a composition of types, or building blocks

Advantages

- Users can get to the information they care about faster by getting data by component
- All entities that contain a given component have similar properties and can be compared apples to apples
 - For example, can compare expected vs actual power for both a solar panel and a turbine, because they both have the **RenewableAsset** component



Relationships

A relationship is an association between objects – objects in CONNECT can have many relationships to other objects. Defined on an object and specify both a **target type** and **target id**

Entity relationship type examples

1. Entity -> Entity

- WindFarm is a parent entity of turbine

2. Entity -> Stream

- Turbine.GeneratedPower is a stream related to the turbine entity

3. Entity -> Document

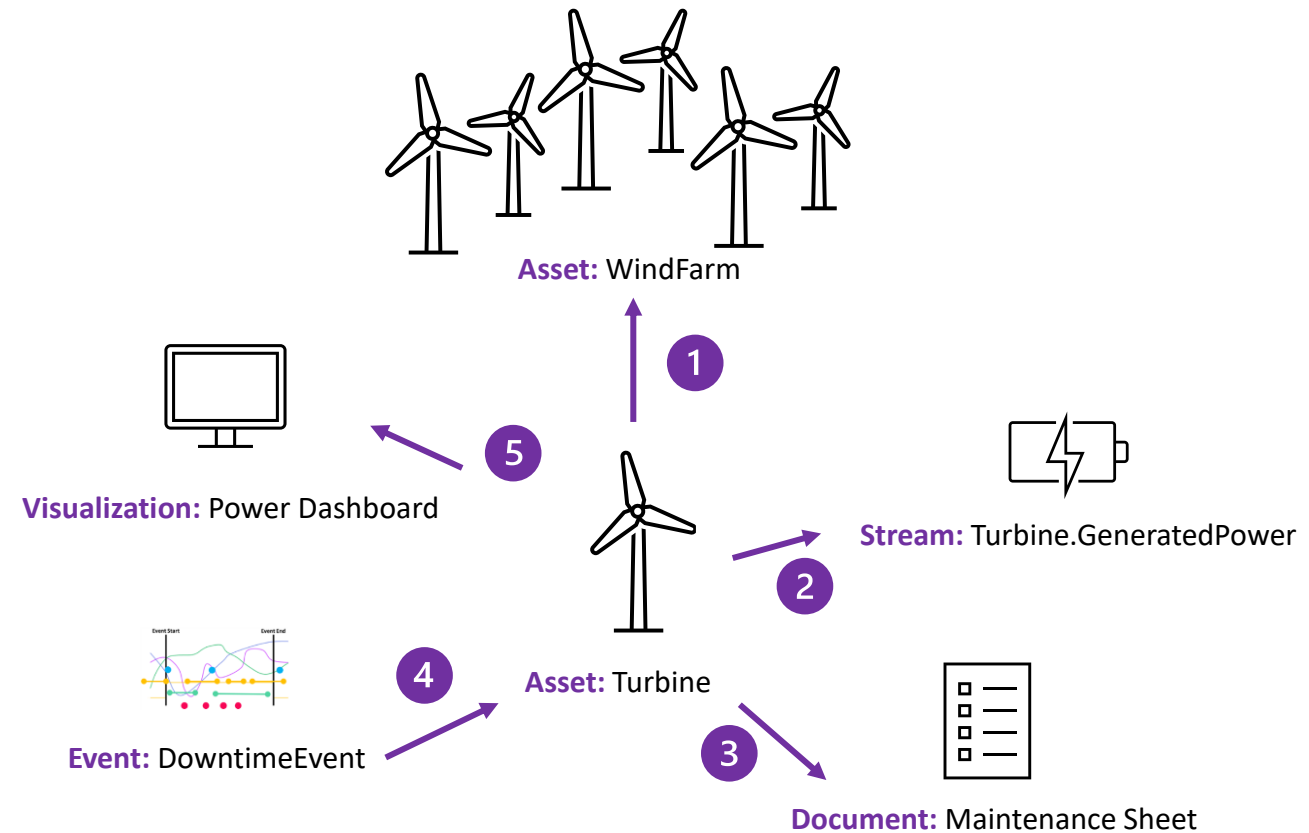
- Maintenance sheet is a related document for the turbine

4. Event -> Entity

- A particular downtime event is associated with the turbine

5. Visualization -> Entity

- A user creates a power dashboard which is specifically for this turbine



- Home
- Applications
- Browse
- Create
- Data management
 - Data connections
 - Data stores
 - Data modeling
- Administration
 - Access
 - Account
 - Configure
 - Developer tools
- Marketplace
- Collapse

Entities: Production [Change instance](#)

[Go to Data store page](#)

Production [Copy ID](#)

List Hierarchy

Search entities

Build query

Clear query

Turbine Status

038a3e0d-31d7-4833-b8ce-78367cc5df15

PALH_DashboardLevel1

70608390-f14e-46a7-a555-fb65a9f7af98

Yorkshire

PIIntellavi_8b33d5c6-382a-11f0-94d2-001ddcb7830

GE01

PIIntellavi_8b33d5cc-382a-11f0-94d2-001ddcb7830

GE02

PIIntellavi_8b33d614-382a-11f0-94d2-001ddcb7830

GE03

PIIntellavi_8b33d659-382a-11f0-94d2-001ddcb7830

GE04

PIIntellavi_8b33d69f-382a-11f0-94d2-001ddcb7830

GE05

PIIntellavi_a5844f07-382a-11f0-94d2-001ddcb7830

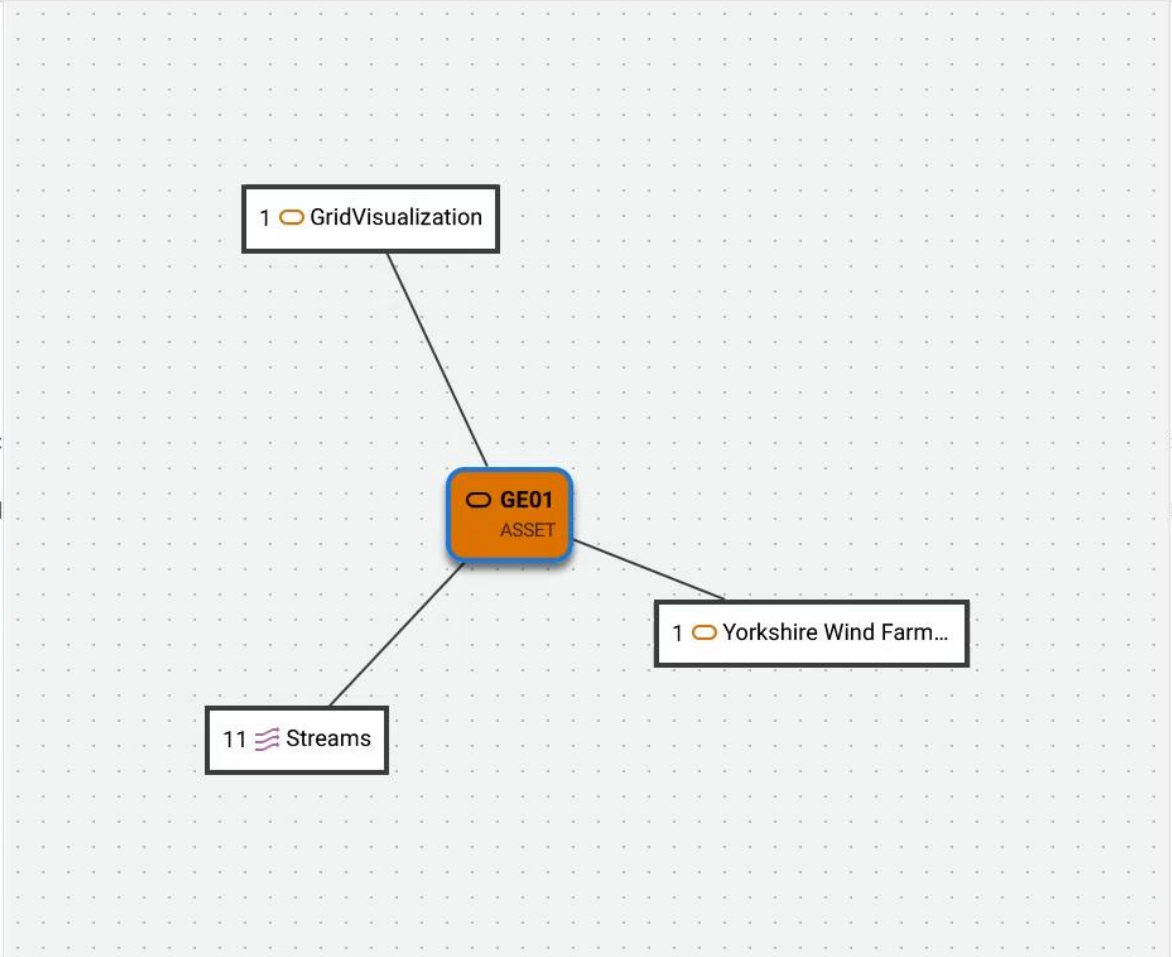
GE06

PIIntellavi_ab8a414b-382a-11f0-94d2-001ddcb7830

GE07

PIIntellavi_ab8a414b-382a-11f0-94d2-001ddcb7830

14 results



GE01

Details

18

2

11

ID

PIIntellavi_8b33d5cc-382a-11f0-94d2-001...

CLASS ID

Asset

TYPES

Wind Turbine

Remote Asset

Renewable Asset

ALIASES

None

DESCRIPTION

null

DATA SOURCES

None

VERSION

8

MODIFIED BY

e535c717-3dfd-45e6-9487-77f0ec800763

MODIFIED DATE

April 24, 2026 at 10:11:30 AM GMT-4

CREATED BY

8a88c4b9-fe0c-4dcb-b5ac-74108a82e496

CREATED DATE

March 18, 2026 at 1:47:12 PM GMT-4

Create visualization

 Select type
None selected

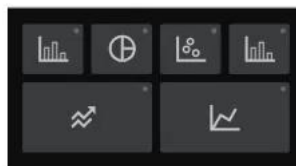
OPTIONAL

 Asset context
Not set

 Time context
Today

Select a visualization type

Select the visualization type that best meets your needs. Use the optional sections to set the asset and time context.



Grid

A responsive visualization where content items snap into alignment with each other.

Select



Canvas

A freeform visualization type that allows layered content and a customized look.

Select

Cancel

Create

🏠 Home

📁 Applications

☰ Browse

+ Create

Data management

🔌 Data connections

🗄 Data stores

🔗 Data modeling

Administration

🔑 Access

📅 Account

⚙ Configure

<> Developer tools

📦 Marketplace

Name*
GE Turbine Power Data

Description
GE Turbine Power Data

Data View Shape

🔍

Standard

Narrow

Create query

🗑

?

GE Turbines

Development

Entities

Query Id*
GE Turbines

Query Source
Development

Query Value
name startsWith 'GE'

Entity Name	Entity Id
GE01	PIIntellavi_8b33d5cc-382a-11f0-94d2-001ddcb78302
GE02	PIIntellavi_8b33d614-382a-11f0-94d2-001ddcb78302
GE03	PIIntellavi_8b33d659-382a-11f0-94d2-001ddcb78302
GE04	PIIntellavi_8b33d69f-382a-11f0-94d2-001ddcb78302
GE05	PIIntellavi_a5844f07-382a-11f0-94d2-001ddcb78302
GE06	PIIntellavi_ab8a414b-382a-11f0-94d2-001ddcb78302
GE07	PIIntellavi_ab8a4190-382a-11f0-94d2-001ddcb78302
GE08	PIIntellavi_b8329108-382a-11f0-94d2-001ddcb78302
GE09	PIIntellavi_be6fc6ca-382a-11f0-94d2-001ddcb78302
GE10	PIIntellavi_be6fc70f-382a-11f0-94d2-001ddcb78302

Items per page: 50 1 - 10 of 10

Cancel and Return

Apply

GE01

ID
PIIntellavi_8b33d5cc-382a-11f0-94d2-001ddcb78302

NAME
GE01

ENTITY TYPE ID
<None>

Fields

Metadata

Entities in AVEVA Advanced Analytics

```
graph TD
    Site[1 Site] --> Bioreactor1[1 Bioreactor1]
    Child[1 Child] --> Bioreactor1
    Bioreactor1 -- "is primarily a child of" --> Bioreactors[Bioreactors]
    Bioreactors -- "is primarily a child of" --> Bioreactor2[Bioreactor2]
    Bioreactors -- "is primarily a child of" --> EFDemo[EFDemo]
    Bioreactors -- "is primarily a child of" --> BioGen[BioGen]
    Bioreactors -- "is primarily a child of" --> Bioreactor3[Bioreactor3]
    Bioreactors -- "is primarily a child of" --> Streams[7 Streams]
```

Bioreactor1

Details 1 2 7

Stream relationships

- ☐ Show all
- ☐ PL_afink-pi_51
Batchid
- ☐ PL_afink-pi_57
DO
- ☐ PL_afink-pi_56
Pressure
- ☐ PL_afink-pi_55
Temperature
- ☐ PL_afink-pi_351
Temperature_10m_Avg
- ☐ PL_afink-pi_52
Trigger
- ☐ PL_afink-pi_352
Yield

Sources / BioGen Bioreactors

Sensor Map | **Hierarchy** | Logs | History Loads

Configure Twins

☒ Select All Assets

- ☐ EFDemo(1)
- ☐ BioGen(2)
 - ☐ Bioreactors(3)
 - ☒ Bioreactor1
 - ☐ Bioreactor2
 - ☐ Bioreactor3
 - ☐ Sites(1)

Bioreactor1

Enter a sensor selection rule to apply to all selected assets

Mapped To	Name	Description	Data Type	Engineering Units
☒	Bioreactor1.Batchid.Value	Bioreactor1.Batchid.Value	String	
☐	Bioreactor1.Batchid.Quality	Bioreactor1.Batchid.Quality	Integer	
☐	Bioreactor1.Batchid.PIQuality	Bioreactor1.Batchid.PIQuality	String	
☐	Bioreactor1.Batchid.DigitalStateName	Bioreactor1.Batchid.DigitalStateName	String	
☐	Bioreactor1.Batchid.Annotation	Bioreactor1.Batchid.Annotation	String	
☒	Bioreactor1.DO.Value	Bioreactor1.DO.Value	Float	percent
☐	Bioreactor1.DO.Quality	Bioreactor1.DO.Quality	Integer	
☐	Bioreactor1.DO.PIQuality	Bioreactor1.DO.PIQuality	String	
☐	Bioreactor1.DO.DigitalStateName	Bioreactor1.DO.DigitalStateName	String	
☐	Bioreactor1.DO.Annotation	Bioreactor1.DO.Annotation	String	
☒	Bioreactor1.Pressure.Value	Bioreactor1.Pressure.Value	Float	bar
☐	Bioreactor1.Pressure.Quality	Bioreactor1.Pressure.Quality	Integer	

Exploring the graph with GraphQL Console

- Graphical interface for constructing graphql queries for data in CONNECT
- Use the console to construct a query, then can be used in another external application

1. Add data to request or add filters
2. Query is constructed for you
3. Response window

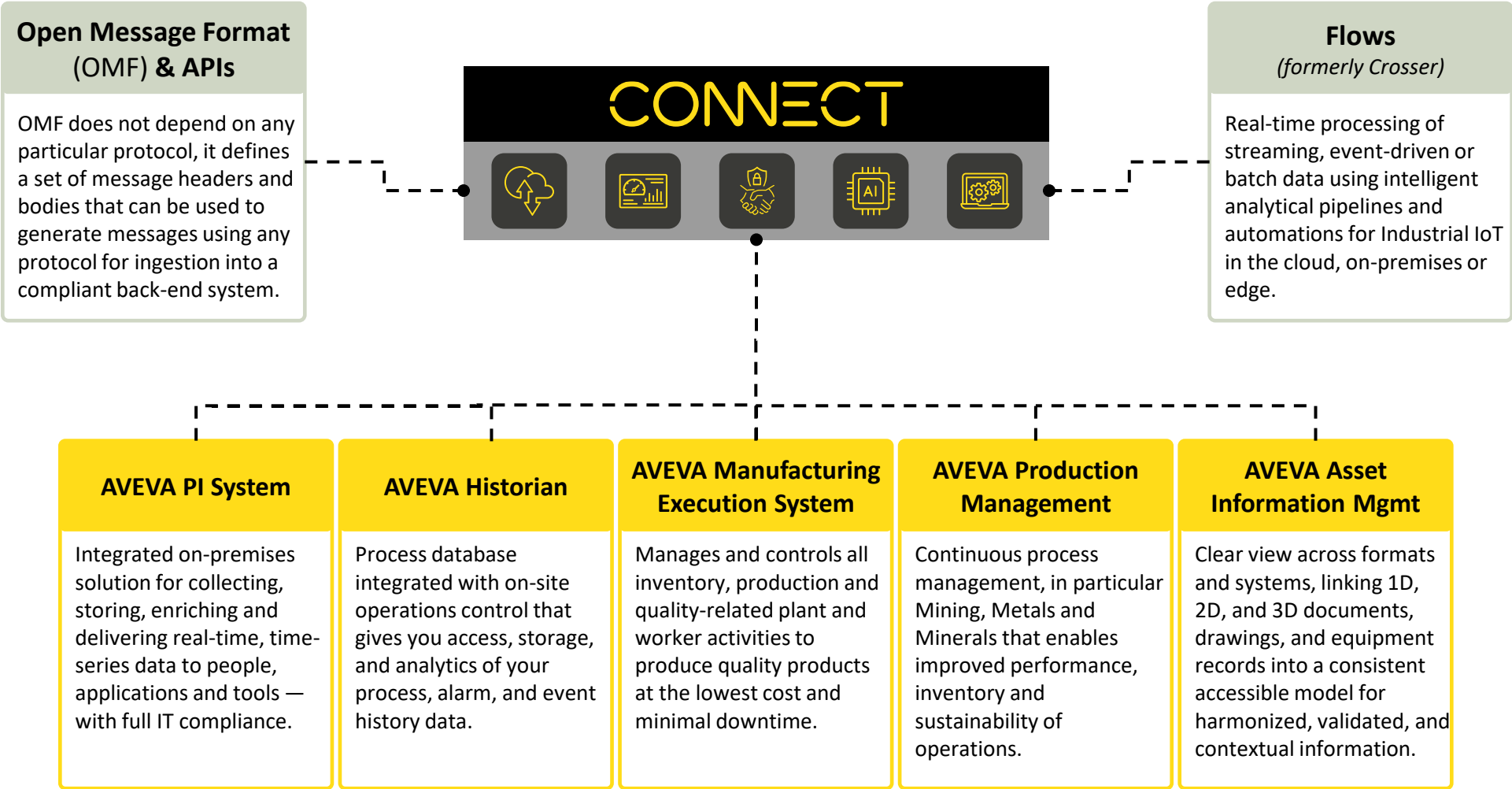
The screenshot displays the GraphQL console interface within the CONNECT application. The interface is divided into three main sections, each highlighted with a red box and a numbered callout:

- 1. Explorer:** This section on the left allows users to build a query by selecting fields from a schema. It shows a tree view of the schema with fields like `entities`, `input`, `filter`, `where`, `orderBy`, `contains`, `limit`, `continuationToken`, `items`, `id`, `name`, `description`, `properties`, `relationships`, `inbound`, `classId`, `dataSources`, `version`, `createdAt`, and `createdBy`. The `limit` field is set to 1.
- 2. Request:** This central section shows the constructed GraphQL query. The query is:

```
1 {
2   entities(
3     limit: 1
4     input: {
5       filter: {
6         where: {
7           name: {
8             startswith: "GE01"
9           }
10        }
11      }
12    }
13  ) {
14    items {
15      id
16      name
17      description
18    }
19  }
20 }
```
- 3. Response:** This section on the right shows the JSON response from the query. The response is:

```
1 {
2   "data": {
3     "entities": {
4       "items": [
5         {
6           "id": "ADM - Advanced|REN|GE01",
7           "name": "GE01",
8           "description": "Offshore Wind Turbine - Monopile"
9         }
10       ]
11     }
12   }
13 }
```

Entities to CONNECT



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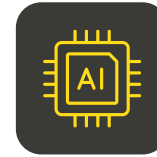
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Other Sessions

Digital Twin Builder: AI-Powered Design at Your Fingertips

Discover how AI-assisted tools in CONNECT can help you model and simulate your digital twin environments more effectively.

Day 2, May 20 @ 5:00 pm

CONNECT Lounge

CONNECT Flows Data Egress: Send Data Anywhere, Anytime

Explore strategies for exporting data from CONNECT to external systems using Crosser, enabling flexible data access.

Day 2, May 20 @ 1:30 pm

CONNECT Lounge

CONNECT Flows Data Ingress: Bringing Data In, Fast and Easy

Learn approaches for efficiently ingesting industrial data from diverse sources into CONNECT using Crosser technology.

Day 2, May 20 @ 2:00 pm

CONNECT Lounge



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capabilities coming this year.

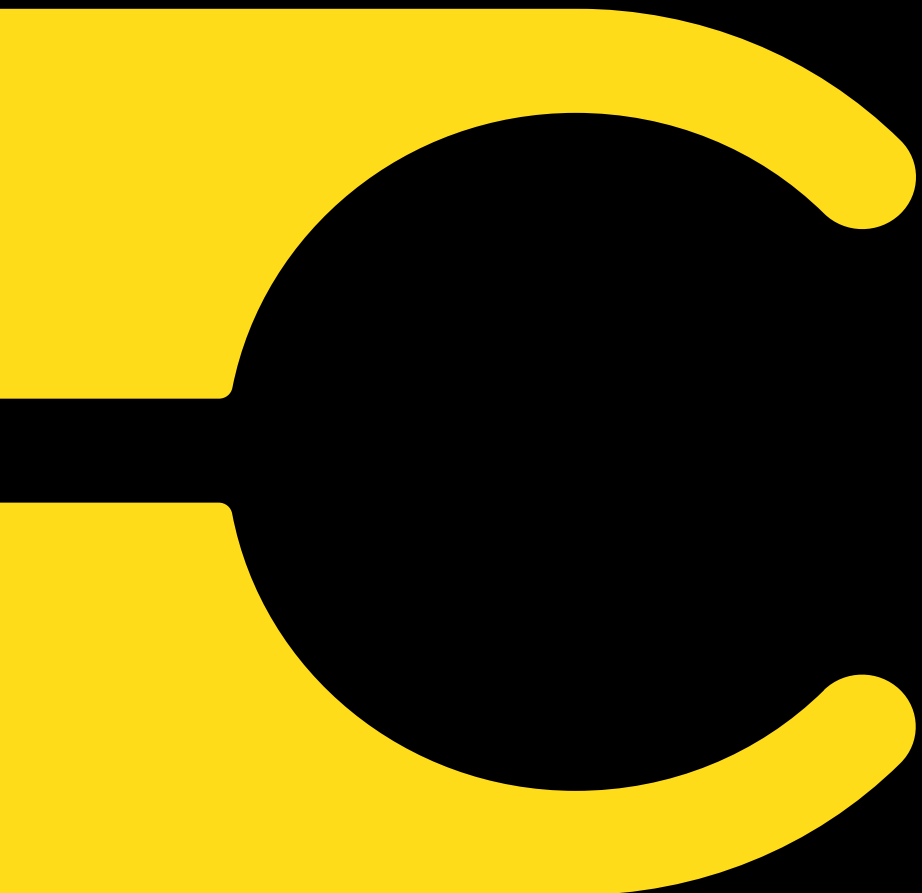
aveva.com/getCONNECT



CONNECT

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AVEVA is a world leader in industrial software, providing engineering and operational solutions across multiple industries, including oil and gas, chemical, pharmaceutical, power and utilities, marine, renewables, and food and beverage. Our agnostic and open architecture helps organizations design, build, operate, maintain and optimize the complete lifecycle of complex industrial assets, from production plants and offshore platforms to manufactured consumer goods.

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