

OPENCAD

HxGN EAM OpenCAD

Getting Started

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Resources

Here below you may find the link for accessing OpenCAD resources:

Documentation Site :

<https://docs.hexagonali.com/p/opencad>

Hexagon University:

<https://universityhexagonali.360learning.com/paths/6515b495f8606307675dccc/home>

OpenCAD videos

<https://vimeo.com/showcase/10666314>

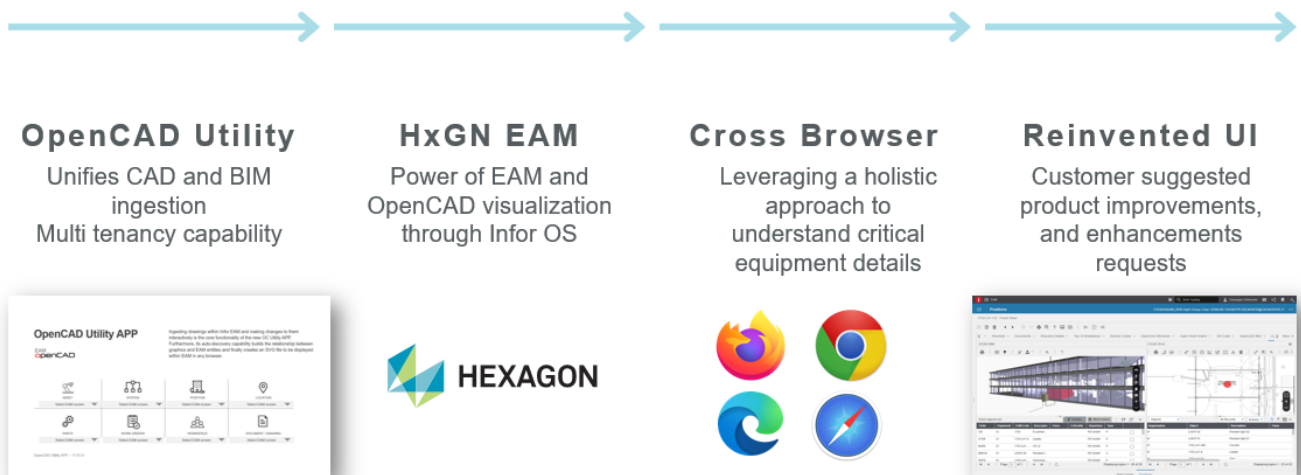
About this guide

This guide introduces you to the new OpenCAD Cross-browser and outlines the steps to get it up and running in HxGN EAM.

Introduction

OpenCAD is provided with a series of features OOTB (out-of-the-box) then an HxGN EAM user can take advantage of all of them with no effort in configuring and setting the product. However, OpenCAD can be configured for a broad range of topics, representing an essential aspect of flexibility and scalability.

Product Architecture



High Configurability using EAM custom grids

Various Grids and Views related to Assets, Positions, Systems, Locations, Work Orders, Parts, Workspaces are provided out of the box.

We have added the ability to easily make configuration changes to the ones provided in order to meet your specific needs. Changes are bi-directional.

You can add your own ones too, such as GRIDs for performing graphic analysis on Safety, Non-Conformity etc.

SVG Adoption natively supported by any browser

We have reinvented the User Interface and the current User Interface will be retired.

The new User Interface, which is supported by your favourite browser, provides the user with a simple user experience.

The reinvented User Interface OpenCAD Toolbar has been given a major revamp and the icons are now more meaningful.

HxGN EAM ingests drawings via OC Utility through WS calls

A major change to the current functionality, using Internet Explorer Settings, is the new OpenCAD Utility App. The OpenCAD Utility will be installed on the user's client, in a similar way to the HxGN EAM Import Utility. It will communicate with your HxGN EAM tenant using Web Services.

Part of the core functionality included in the OpenCAD Utility is the ability to upload drawings to HxGN EAM and interactively make changes to them, open a drawing from HxGN EAM or open a new one.

The Auto-Discovery engine is built into the OpenCAD Utility. It provides the relationship between the graphics and the HxGN EAM entities. When saving the final graphic, the OpenCAD Utility creates an SVG file which can be displayed within HxGN EAM in any browser.

Intended audience

This guide is intended for any EAM users. Since OpenCAD cross-browser is an update of the previous version (plugin for IE), it might be approachable in the Cloud in two different scenarios:

- New EAM Client who did not have started using OpenCAD in the Cloud
- Existing EAM Client who was using OpenCAD within Internet Explorer and a client plugin installed

New EAM Client

This section describes the essential steps needed to setup and configure OpenCAD Cross Browser. However, the complete instructions for any EAM user, is documented in the OpenCAD User Guide.

Activation

If you are running EAM in the Cloud, OpenCAD is already installed. It must only be activated

- Insert the OC CDKEY (*CDKEYDWG install parameter*). The CDKEY is provided by Hexagon as an e-shipment (via email)

- Add the OpenCAD 'Product Activation' screen to a User Group (from 'Administration' menu > 'Security' > 'User Groups' > Select a User Group > Select 'Menus' Tab > Search for the 'OpenCAD Product Activation' screen from the 'Available Screens' > Drag and drop it in the Menu Details)
- Click the activation button in the Product Activation screen
- The activation process will be responsible to make usable the product features and create the complete OpenCAD Cross Browser menu within the R5 user group

Setup

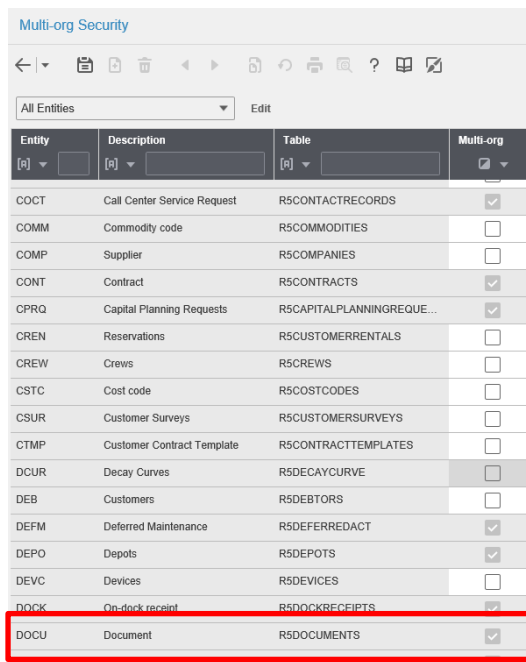
OpenCAD Install Parameters Setup

OpenCAD uses the following EAM install parameters. It is recommended to double check their status. These two parameters will be used for setting up the OC Utility APP

- APPURL (e.g. : <https://use1.eambeta.hxgnsmartcloud.com/web/base/logindisp?tenant=TENANTNAME>)
- AXISURL (e.g. : <https://use1.eambeta.hxgnsmartcloud.com/axis/services/EWSCconnector>)

Multiorg security

Document entity must be enabled as Multi-org



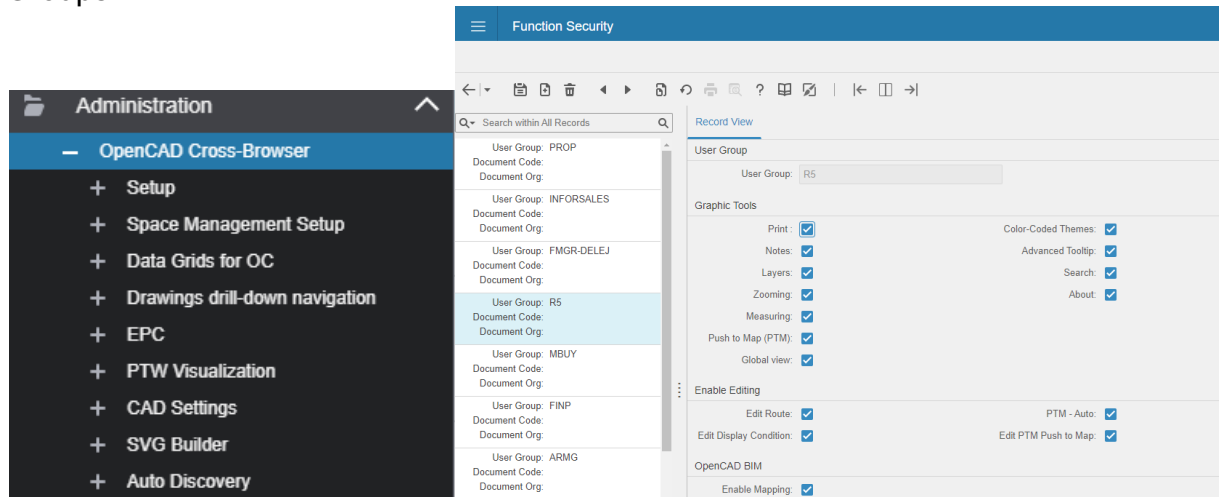
| Entity | Description | Table | Multi-org |
|--------|-----------------------------|---------------------------|-------------------------------------|
| COCT | Call Center Service Request | R5CONTACTRECORDS | <input checked="" type="checkbox"/> |
| COMM | Commodity code | R5COMMODITIES | <input type="checkbox"/> |
| COMP | Supplier | R5COMPANIES | <input type="checkbox"/> |
| CONT | Contract | R5CONTRACTS | <input checked="" type="checkbox"/> |
| CPRQ | Capital Planning Requests | R5CAPITALPLANNINGREQUE... | <input checked="" type="checkbox"/> |
| CREN | Reservations | R5CUSTOMERRENTALS | <input type="checkbox"/> |
| CREW | Crews | R5CREWS | <input type="checkbox"/> |
| CSTC | Cost code | R5COSTCODES | <input type="checkbox"/> |
| CSUR | Customer Surveys | R5CUSTOMERSURVEYS | <input type="checkbox"/> |
| CTMP | Customer Contract Template | R5CONTRACTTEMPLATES | <input type="checkbox"/> |
| DCUR | Decay Curves | R5DECAYCURVE | <input type="checkbox"/> |
| DEB | Customers | R5DEBTORS | <input type="checkbox"/> |
| DEFM | Deferred Maintenance | R5DEFERREDACT | <input checked="" type="checkbox"/> |
| DEPO | Depots | R5DEPOTS | <input checked="" type="checkbox"/> |
| DEVC | Devices | R5DEVICES | <input type="checkbox"/> |
| DOCK | On-stock receipt | R5DOCKRECEIPTS | <input checked="" type="checkbox"/> |
| DOCU | Document | R5DOCUMENTS | <input checked="" type="checkbox"/> |
| EEVL | Equipment Evaluation | R5EQUIPEVALUATIONS | <input type="checkbox"/> |

Function Security

By activating OpenCAD, the 'OpenCAD Cross Browser' menu will be available for R5 User Group only. Old OpenCAD menu is still in EAM and must be hidden.

'Function security' screen contains the activation of the main OpenCAD functionalities.

These functionalities are already activated for R5 User Group so they must be activated for other User Groups.



How OpenCAD works now

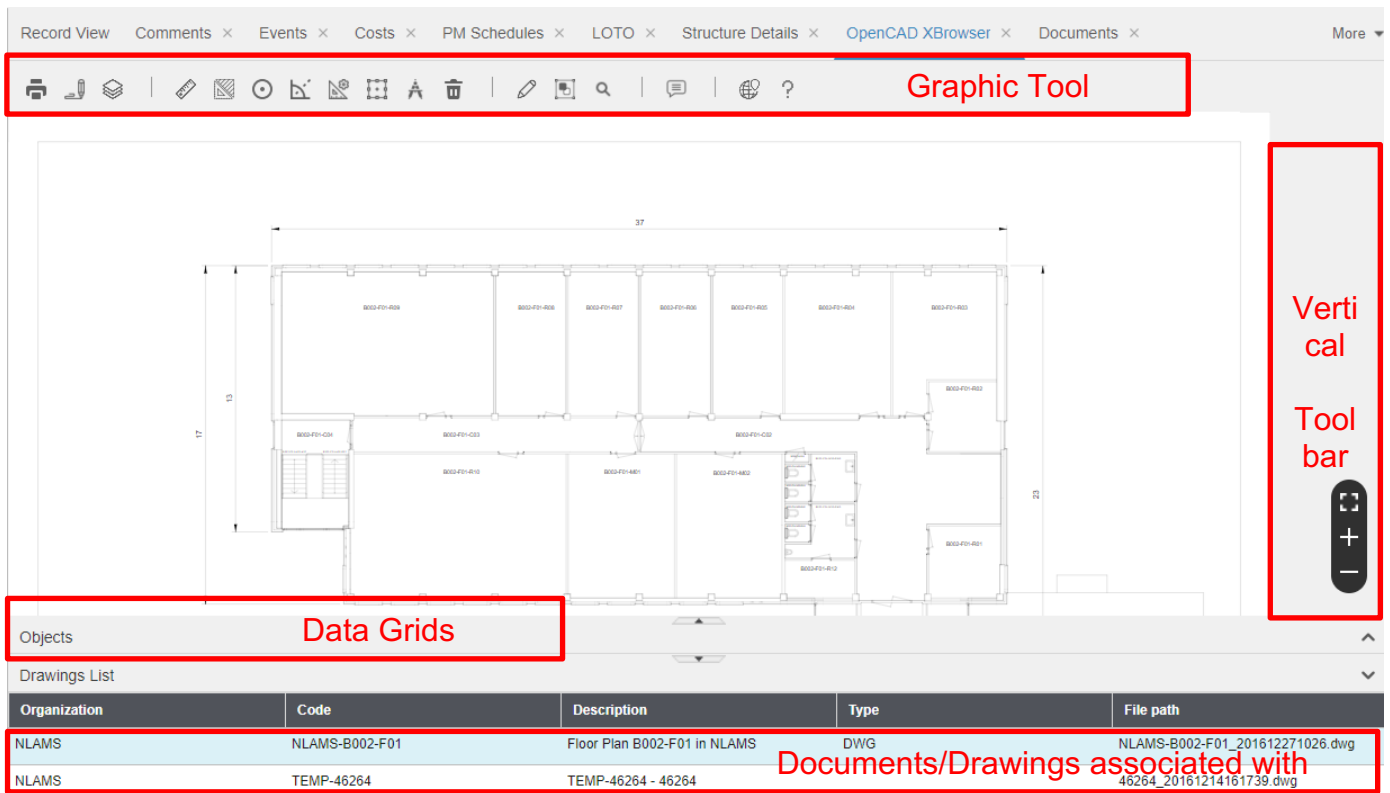
OpenCAD exists as default as a custom tab (OpenCAD Cross-Browser) against the following EAM screens:

- Asset/Position/System/Location
- WO
- Document
- Part
- Workspace

In case you need to create a cloned screen, you can use the URL as shown below for setting the OpenCAD custom tab as needed

[:appurl/eamdwg/opencadnofp.jsp?user=:user&org=:org](http://appurl/eamdwg/opencadnofp.jsp?user=:user&org=:org)

How OpenCAD tab looks like

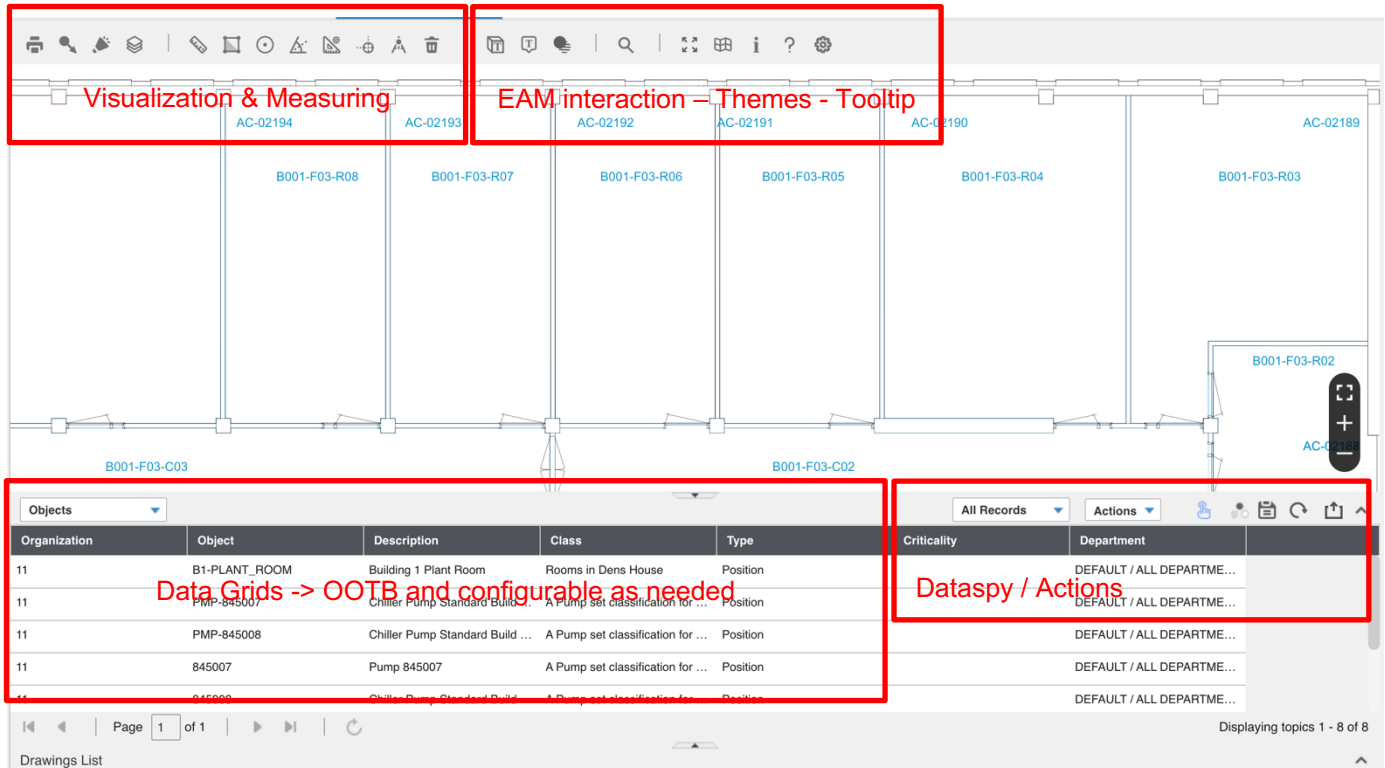


The screenshot displays the OpenCAD software interface with a floor plan drawing. The interface includes a top menu bar with options like Record View, Comments, Events, Costs, PM Schedules, LOTO, Structure Details, OpenCAD XBROWSER, and Documents. Below the menu is a **Graphic Tool** toolbar. The drawing area shows a floor plan with dimensions (17, 13, 37, 23) and room labels (e.g., B002-F01-A08, B002-F01-A09, B002-F01-A10, B002-F01-A11, B002-F01-A12, B002-F01-A13, B002-F01-A14, B002-F01-A15, B002-F01-A16, B002-F01-A17, B002-F01-A18, B002-F01-A19, B002-F01-A20, B002-F01-B01, B002-F01-B02, B002-F01-B03, B002-F01-B04, B002-F01-B05, B002-F01-B06, B002-F01-B07, B002-F01-B08, B002-F01-B09, B002-F01-B10, B002-F01-B11, B002-F01-B12, B002-F01-B13, B002-F01-B14, B002-F01-B15, B002-F01-B16, B002-F01-B17, B002-F01-B18, B002-F01-B19, B002-F01-B20). A **Vertical Tool bar** is located on the right side. Below the drawing is an **Objects Data Grids** section. At the bottom is a **Drawings List** table.

| Organization | Code | Description | Type | File path |
|--------------|----------------|------------------------------|------|---------------------------------|
| NLAMS | NLAMS-B002-F01 | Floor Plan B002-F01 in NLAMS | DWG | NLAMS-B002-F01_201612271026.dwg |
| NLAMS | TEMP-46264 | TEMP-46264 - 46264 | | 46264_20161214161739.dwg |

Documents/Drawings associated with

Reinvented UI



The screenshot displays a technical drawing interface with several key features highlighted by red boxes and text:

- Visualization & Measuring:** A toolbar at the top left containing icons for various drawing tools.
- EAM interaction – Themes - Tooltip:** A toolbar at the top center containing icons for EAM-related actions.
- Data Grids -> OOTB and configurable as needed:** A table at the bottom left listing object data.
- Dataspy / Actions:** A table at the bottom right showing record details and action options.

| Organization | Object | Description | Class | Type |
|--------------|---------------|---------------------------------|-----------------------------------|----------|
| 11 | B1-PLANT_ROOM | Building 1 Plant Room | Rooms in Dens House | Position |
| 11 | PMP-845007 | Chiller Pump Standard Build... | A Pump set classification for ... | Position |
| 11 | PMP-845008 | Chiller Pump Standard Build ... | A Pump set classification for ... | Position |
| 11 | 845007 | Pump 845007 | A Pump set classification for ... | Position |

| All Records | Actions |
|-------------|---------------------------|
| Criticality | Department |
| | DEFAULT / ALL DEPARTME... |
| | DEFAULT / ALL DEPARTME... |
| | DEFAULT / ALL DEPARTME... |
| | DEFAULT / ALL DEPARTME... |
| | DEFAULT / ALL DEPARTME... |

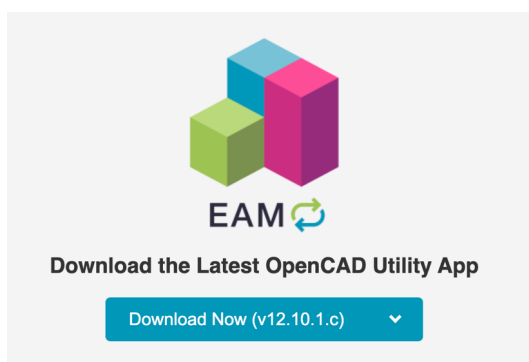
How to ingest and display a drawing within EAM?

OC Utility provides drawings to HxGN EAM. It will be installed on the user's device, in a similar way to the HxGN EAM Import Utility. It will communicate with your HxGN EAM tenant using Web Services. The Auto-Discovery engine is built into the OpenCAD Utility. It provides the relationship between the graphics and the HxGN EAM entities. When saving the final graphic, the OpenCAD Utility App creates an SVG file which can be displayed within HxGN EAM in any browser.

Installing and Configuring OpenCAD Utility

The installation is very easy and it takes a couple of minutes. You can get the latest version from the following link. You can choose between .exe / .msi options

<https://www.cadservice.cloud/download-center/app/>

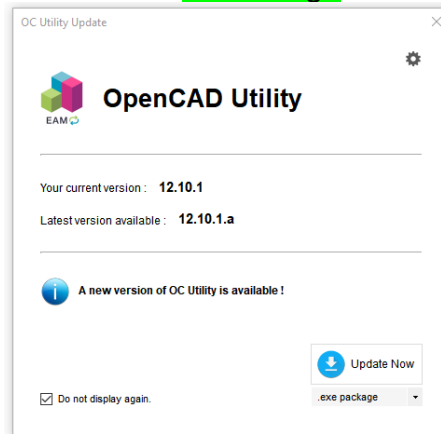


The banner features the EAM logo (three colored cubes) and the text "Download the Latest OpenCAD Utility App". A prominent blue button labeled "Download Now (v12.10.1.c)" is centered at the bottom.

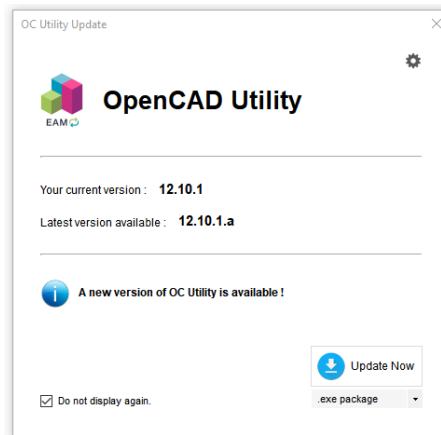
This version implements an automated process to ensure the application remains consistently up to date.

The EAM user receives notifications for the following events:

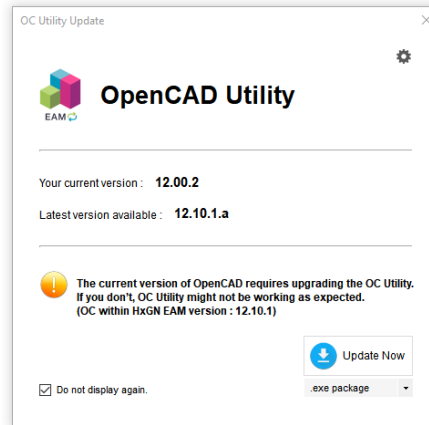
- When he is using the latest version -> **Good to go**



- When he is not using the latest version even if won't have issue with the current EAM version -> **Suggesting the update**



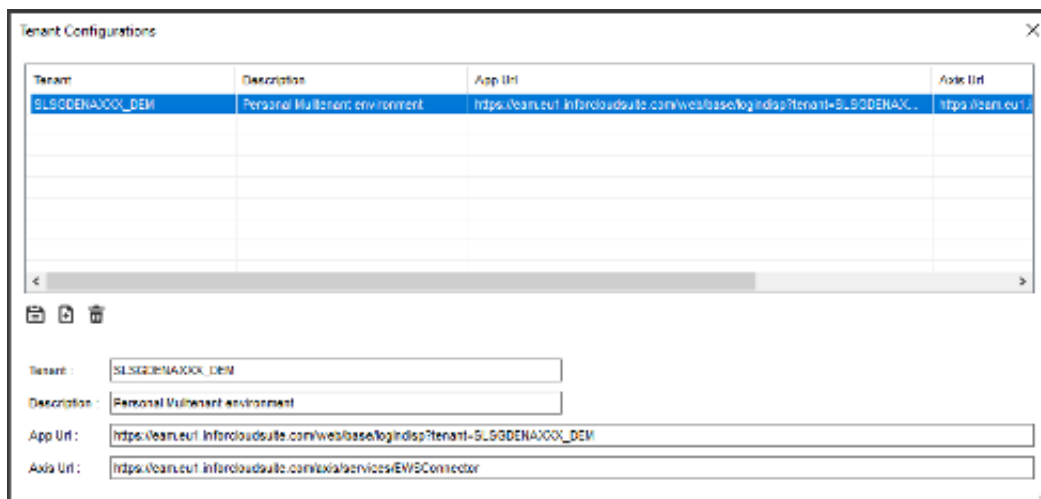
- When he must proceed with the upgrade because the EAM version is no longer compliant -> **Requesting the upgrade**



When you install OpenCAD Utility on your Windows client you can specify where the application should be installed. You may consider accepting the default install path. Or you can change this path as you want to make a different decision based on your permission.

When the installation is complete you will have two short-cuts on your desktop “OC Utility” and “OC App”. The difference is that the OC Utility is an online tool that talks with your EAM environment using webservices, whereas the OC App is an off-line tool that can be used to prepare drawings prior to be ingested within EAM.

Launch the OC Utility and press on the ... in the right corner, press the + sign and enter your tenant’s name by copying the tenant-portion of the URL, add a description and enter APPURL and AXISURL which you copy from the corresponding install parameters. Click save and close the window. For connecting to your EAM environment choose the tenant in the drop-down Menu and enter username/password for your EAM instance.



Because the OpenCAD client uses Webservices, checking your user settings under Administration / Security / User Setup is essential. The Connector checkbox needs to be set. It is important to note that the connector license is required for OpenCAD Utility users only, who typically must ingest drawings into EAM. All EAM users in the browser do not need the connector activated.

Also check the LGNCON Install Parameters. This parameter needs to be set to STD (Standard), and then use username and password instead of EXTERN if you have access via Mingle within HxGN Cloud.

Finally, let's check the Interface permissions. Below you may find the list of the minimum requirements that have to be assigned to the OC Utility users.

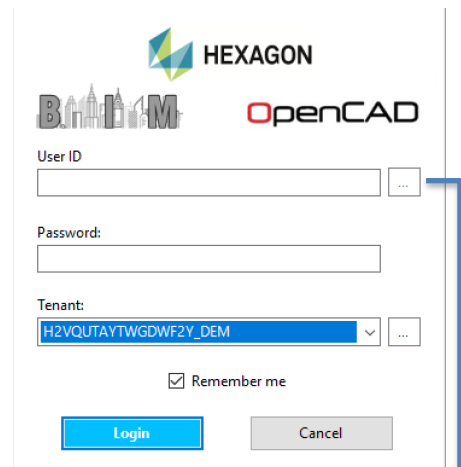
- **BEORGS** (Organization) with the option "Query" enabled
- **BEGDON** (Grid data) with the option "Query" enabled
- **BEGHDA** (Grid header and data) with the option "Query" enabled

You do not have to setup the Utility before the login anymore. It has been enhanced for being able to select the EAM tenant from the dropdown list.

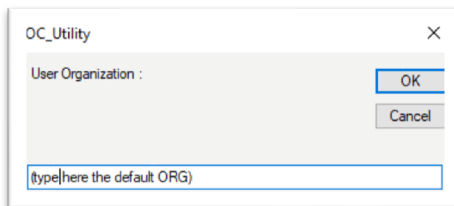
If you do not have your tenant configured yet, please Click to ... for setting up a new tenant as needed
Enter HxGN EAM User ID, Password and click "Login"

Please make sure the EAM user has enabled the Connector

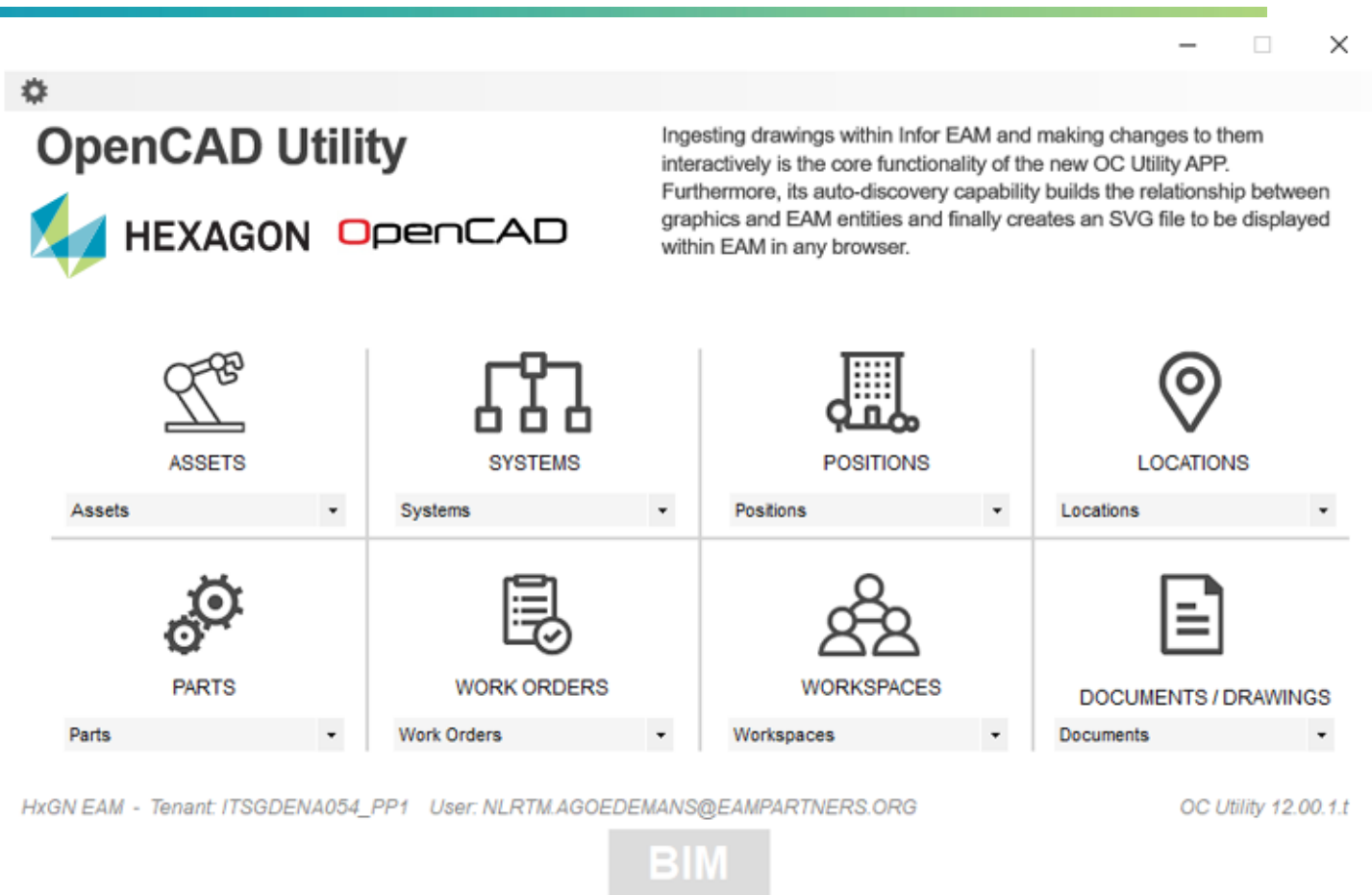
| Infor EAM Products | |
|--------------------|-------------------------------------|
| Infor EAM: | <input checked="" type="checkbox"/> |
| Connector: | <input checked="" type="checkbox"/> |
| Analytics: | <input type="checkbox"/> |



If something prevents to login, in addition to enter the username, please check the ... button next to it and then type the default ORG for that particular user.



If the credentials were appropriately entered and match EAM credentials, the system allows the user to get to OC Utility Home Page.



Note: OC Utility version must be compliant with the EAM version, so please make sure that the OC Utility version is updated.

OC Utility has the ability to initiate the ingestion process for both 2D drawings and 3D BIM Models.

Click on the BIM button to switch to the BIM ingestion process. See the BIM user guide for more details about this.

For initiating the process of providing drawings into EAM, you have to select the EAM entity which is the target of the drawing ingestion. For instance, we're selecting Position and then OC App shows the EAM position accordingly with the user's rights.

As you will notice in the screenshot below the user can take advantage of using dataspy created in EAM as needed. It is recommended to use this feature to streamline the drawing ingestion process.

Positions

Position VPK TBT Apply -No Filter-- Run

| | Description | Organization | Status | Department | Class |
|--|------------------------|--------------|-----------|------------|-------|
| | Pump Pit 001 | 01 | Installed | * | PUMP |
| | Conveyour Section 001 | 01 | Installed | * | CONV |
| | Conveyour Section 002 | 01 | Installed | * | CONV |
| | Tank Farm - Processing | 01 | Installed | * | |
| | Storage Tank 001 | 01 | Installed | * | TANK |
| | Storage Tank 002 | 01 | Installed | * | TANK |
| | Storage Tank 009 | 01 | Installed | * | TANK |
| | Storage Tank 010 | 01 | Installed | * | TANK |
| | Tank Pit 001 | 01 | Installed | * | TANK |
| | Tank Pit 005 | 01 | Installed | * | TANK |

Records: 10 of 10 Grid load completed

Selecting a particular equipment, the screen opens a second part which represent the drawing associated with (if any) and allows the user to initiate several processes

Positions list

All Positions Apply --No Filter-- Run

| Position | Description | Organization | Status | Department | Class | Commission Date |
|----------------|--|--------------|-----------|------------|----------|-----------------|
| 845001 | Chiller Pump Standard Build No name prefix | 11 | Installed | * | DEN_PSET | 03-04-2023 |
| 845002 | Chiller Pump Standard Build No name prefix | 11 | Installed | * | DEN_PSET | 03-04-2023 |
| 845003 | Chiller Pump Standard Build No name prefix | 11 | Installed | * | DEN_PSET | 03-04-2023 |
| 845004 | Chiller Pump Standard Build No name prefix | 11 | Installed | * | DEN_PSET | 03-04-2023 |
| 845005 | Chiller Pump Standard Build No name prefix | 11 | Installed | * | DEN_PSET | 03-04-2023 |
| 845006 | Chiller Pump Standard Build No name prefix | 11 | Installed | * | DEN_PSET | 03-04-2023 |
| 845007 | Pump 845007 | 11 | Installed | * | DEN_PSET | 03-04-2023 |
| 845008 | Chiller Pump Standard Build | 11 | Installed | * | DEN_PSET | 03-04-2023 |
| 845009 | Chiller Pump Standard Build No name prefix | 11 | Installed | * | DEN_PSET | 03-04-2023 |
| B1-PLANT_ROO | Building 1 Plant Room | 11 | Installed | * | ROOM | 02-02-2019 |
| CB-DEN-001 | Circuit Breaker 001 | 11 | Installed | * | CB | 13-04-2023 |
| CB-DEN-002 | Circuit Breaker 002 | 11 | Installed | * | CB | 13-04-2023 |
| DEN-PMP-845001 | Chiller Pump Standard Build | 11 | Installed | * | DEN_PSET | 02-03-2023 |
| DEN-PMP-845002 | Chiller Pump Standard Build | 11 | Installed | * | DEN_PSET | 02-03-2023 |
| DEN-PMP-845007 | Arup-MechanicalEquipment-Pump-GlobalLinked:Pump:84 | 11 | Installed | * | DEN_PSET | 03-02-2019 |
| DEN-PMP-845008 | Arup-MechanicalEquipment-Pump-GlobalLinked:Pump:84 | 11 | Installed | * | DEN_PSET | 04-02-2019 |
| DEN-PMP-845009 | Arup-MechanicalEquipment-Pump-GlobalLinked:Pump:84 | 11 | Installed | * | DEN_PSET | 05-02-2019 |
| DEN-PMP-845010 | Arup-MechanicalEquipment-Pump-GlobalLinked:Pump:84 | 11 | Installed | * | DEN_PSET | 06-02-2019 |
| DENS-001-RM001 | Dens Main Store Room | 11 | Installed | * | DSK | 01-02-2019 |

Records: 20 of 36

Grid load completed

1 2 3 4 5 6 7 8

Drawings (1) Pdf (0)

| Organization | Code | Description | Class | Revision number | File name |
|--------------|------|----------------------|-------|-----------------|-------------------------------------|
| 11 | 211 | Org 11-Plant Room-01 | | 000 | Org 11-Plant Room-01_2023459563.dwg |

- 1 New drawing (with several options (by scratch, by image, pdf, etc)
- 2 Ingesting a **new version** of the drawing (Brand new feature in this release)
- 3 **Massive Ingestion** – Allows to ingest multiple drawings which are stored in a particular folder that the user can select.
- 4 View drawing – allows to display the drawing, locating asset, calculating surface, etc. No changes allowed
- 5 Edit drawing – allows to make changes using the app and uploading the result within EAM. Allows to do the versioning of the drawing
- 6 Ingest a new EPC Catalog (PDF) and uploading the document within EAM
- 7 Edit an existing EPC Catalog (scanning the content without uploading the file within EAM)
- 8 Last version / All versions – Allows the EAM user to get to the drawing's version

OpenCAD – First adopters – How does the upgrade work

This section describes the impact of the OpenCAD Cross Browser upgrade on existing EAM client on Multi-tenant Cloud.

Be aware that, the complete instructions for any EAM user, is documented in the OpenCAD User Guide.

Activation

OpenCAD cross-browser is already activated, so if you are an existing EAM customer, you do not have to proceed with the activation.

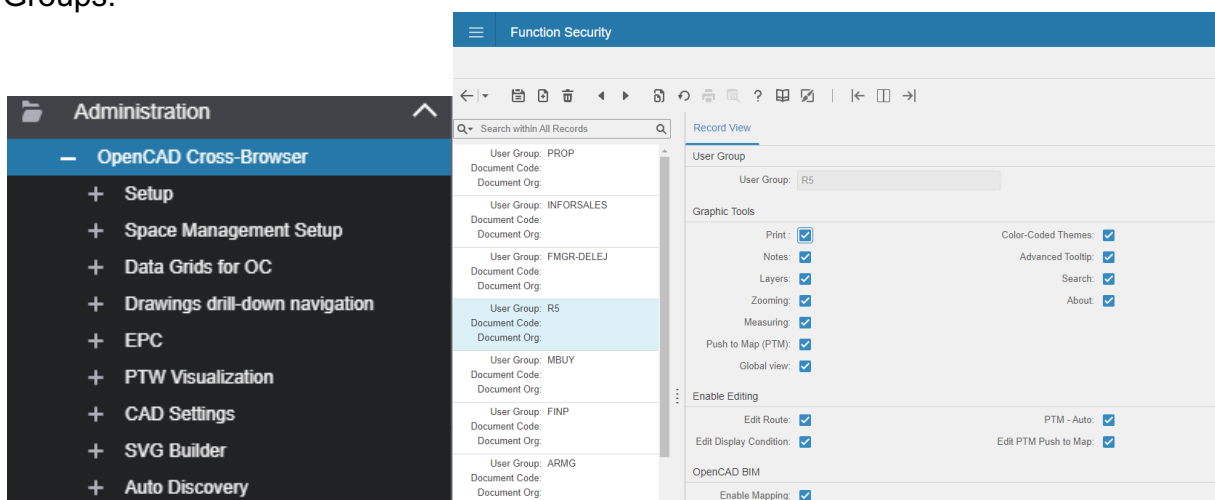
Setup

This section describes the essentials steps of the OpenCAD cross-browser setup for existing customers.

Function Security

By upgrading OpenCAD, the new 'OpenCAD Cross Browser' menu will be available for R5 User Group only. **Old OpenCAD menu is still in EAM and must be hidden.**

'Function security' screen contains the activation of the main OpenCAD functionalities. These functionalities are already activated for R5 User Group so they must be activated for other User Groups.



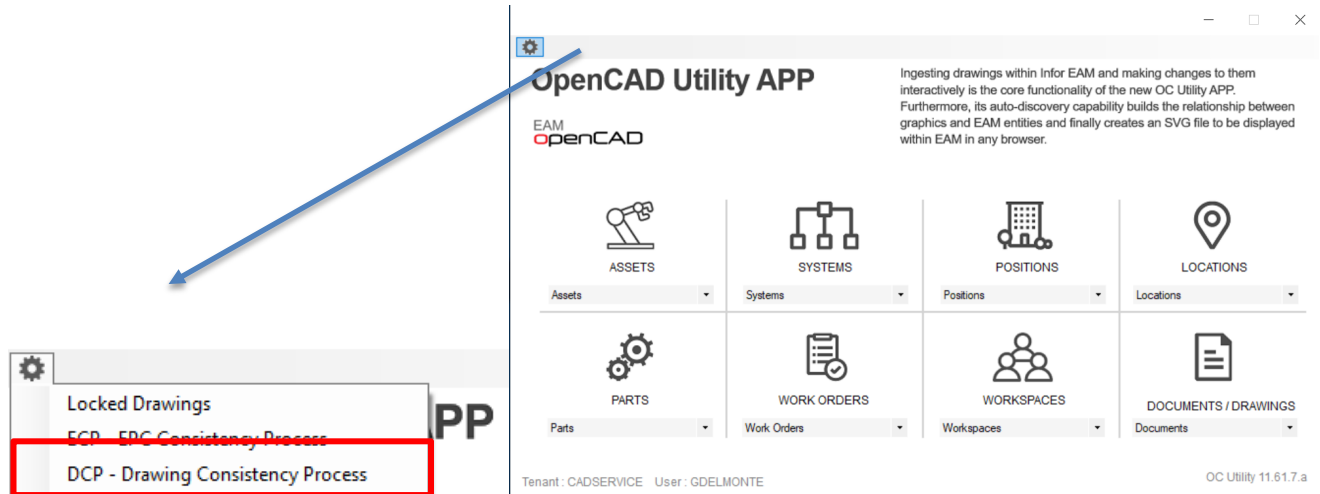
What's the impact on your existing drawings?

This section describes how OpenCAD supports the transformation of existing EAM drawings to be able to get them displayed in the new cross-browser technology. Make sure to perform this process for being able to use your existing drawings

Existing drawings must be elaborated by OpenCAD Utility

The process of elaborating existing drawings in order to get them usable into the new cross-browser solution, starts from OpenCAD Utility – Home page.

By clicking the designed button -> **DCP Drawing Consistency Process**



Making Existing Drawings Consistent With SVG

Massive Consistency Process have been designed to facilitate the process of making the existing drawings and EPC documents consistent with the new OpenCAD Cross-Browser solution.

OC Utility APP allows doing a massive elaboration for drawings and EPC Part Catalog to get them displayed into the new OpenCAD SVG GUI.

It is a fundamental process for existing HxGN SaaS customers that had already ingested drawings using the OpenCAD plugin. It ensures there is no additional effort for transitioning drawings and EPC documents into the new release.

Step 1 – OpenCAD shows the list of drawings that were ingested by using the plugin

Drawing Consistency Process

Org : 09 --No Filter-- Run

| Org | Document | Description | Class | Rev. N. | Uploaded | File | SVG |
|-----|-----------------|------------------------------|-------|---------|-----------------------|--|-----|
| 09 | 9353-D-001 | station1 | | 000 | | station1_201712611219.dwg | |
| 09 | 9353-D-002 | dessin-station-service | | 000 | | dessin-station-service_2017126113644.dwg | |
| 09 | 9353-D-003 | boutique-station-service | | 000 | | boutique-station-service_20171261379.dwg | |
| 09 | CAMPUS | Campus - CAMPUS master Plan | | 000 | | CAMPUS master Plan_2016729102851.dwg | |
| 09 | EBS-P2-DWG-MAIN | Plan deuxième étage EBS | | | 2016-07-22 17:33:20.0 | EBS-Floor-P2_201607221733.dwg | |
| 09 | MAG-003 | Magasin 003 | | | 2020-12-02 16:29:34.0 | PLAN MAGASIN 003_202012021629.dwg | |
| 09 | POMPAGE-DWG | Cad Drwaing Pompage Relevage | | | 2017-11-16 13:56:00.0 | EauParisMap_201711161356.dwg | |

File Processed/Total : 0 / 7 File to be processed File processed successfully

Drawings to be processed

Selected Drawings : 0

Step 2 – The EAM user can select records which are drawing that will be processed by OpenCAD Utility. The selection will be completed by clicking on the designed button **1** that creates the basket list of these drawings. If needed you can remove a record by selecting the back arrow. **2**

Step 3 – The elaboration process starts once you click on the designed button **3**

Drawing Consistency Process

Org : 09 --No Filter-- Run

| Document | Description | Class | Rev. N. | Uploaded | File | SVG created |
|---------------|------------------------------|-------|---------|-----------------------|--|---------------------|
| S3-D-001 | station1 | | 000 | | station1_201712611219.dwg | 2021-04-14 12:03:50 |
| S3-D-002 | dessin-station-service | | 000 | | dessin-station-service_2017126113644.dwg | 2021-04-14 12:03:55 |
| S3-D-003 | boutique-station-service | | 000 | | boutique-station-service_20171261379.dwg | 2021-04-14 12:03:58 |
| MPUS | Campus - CAMPUS master Plan | | 000 | | CAMPUS master Plan_2016729102851.dwg | 2021-04-14 12:04:34 |
| S-P2-DWG-MAIN | Plan deuxième étage EBS | | | 2016-07-22 17:33:20.0 | EBS-Floor-P2_201607221733.dwg | 2021-04-14 12:11:25 |
| G-003 | Magasin 003 | | | 2020-12-02 16:29:34.0 | PLAN MAGASIN 003_202012021629.dwg | 2021-04-14 12:06:16 |
| PMPAGE-DWG | Cad Drwaing Pompage Relevage | | | 2017-11-16 13:56:00.0 | EauParisMap_201711161356.dwg | 2021-04-14 12:06:22 |

File Processed/Total : 6 / 7 File to be processed File processed successfully

OK (154 sec.) : <EBS-P2-DWG-MAIN> <Plan deuxième étage EBS> <EBS-Floor-P2_201607221733.dwg>

Drawings to be processed

- EBS-P2-DWG-MAIN

Selected Drawings : 1

Step 4 – OC Utility creates a report once the elaboration is done.