



HxGN EAM OpenCAD & OpenCAD BIM Activation Guide

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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 allows to get acquainted with the new OpenCAD and describes the main steps to install it and have it up and running within HxGN EAM.

Introduction

The following are the considerations on the installation and upgrading of EAM OpenCAD version.

- The hardware and software requirements of EAM OpenCAD are based on the hardware and software requirements of HxGN EAM;
- EAM OpenCAD is indeed compatible to either HxGN EAM for Oracle or MS SQL Server;
- EAM OpenCAD has compatibility with HxGN EAM from 12.2 version;
- EAM OpenCAD has compatibility with AutoCAD drawing format 2018 and earlier versions
- To maintain the smooth implementation of the system and to fully utilize the advancement offered by this release, it is advisable to uninstall the old version and reinstall the new one. The installation phase is very simple and it will take just a few minutes, so definitely, it will not bring trouble to the user. The installation guide documentation provided in this release demonstrates a comprehensive installation process and will guide the user throughout the installation phase
- All upgrade considerations on the recent release version of HxGN EAM are indeed adapted by the EAM OpenCAD. The complete Tenant Upgrade that contains all the important queries needed to run the system can be achieved through the proper reinstallation of the product, therefore, it is recommended to do so.
- The user who installs and check the result of the installation with tests must have a client machine and connection in line with the company to use EAM

Note: please consider that EAM OpenCAD and OpenCAD BIM products will be installed during installation. The specific product will be activated by inserting the appropriate license cd key

Product installation (On-prem)

For on-premises installations, note that in the EAM installation package for **Oracle**, OpenCAD is already included and only needs to be activated.

For the EAM installation package on **MS SQL**, only the OpenCAD application component is included. Before activation, you must run the MS SQL database script:

`opencad_OpenCADversion_MSSQL.sql` corresponding to the installed EAM version.

Installation Instructions

In order to ensure that your HxGN EAM environment continues to operate with maximum efficiency and minimal problems, OpenCAD team strongly recommends that you:

- Back-up your current HxGN EAM database before installing OpenCAD.
- Let only a qualified HxGN EAM Integrator/ Administrator install OpenCAD.
- Install OpenCAD to a test environment and perform your own user acceptance testing before installing OpenCAD to your production environment.
- Check the file size to be uploaded as an EAM document in the config.yml file. We suggest setting that as 50Mb for OpenCAD or 100Mb if you're also using OpenCAD BIM.

CD-KEY

Before starting the installation process, please ensure that the 'activation code' is entered in the install parameters of the product you wish to activate.

In case of new installation where the install parameters CDKEYDWG and CDKEYBIM are not present, please run the script (please refer to 'Database installation' chapter) then perform the OpenCAD Product Activation process of the product you wish to activate.

The KEY is provided by the Order Management and Provisioning teams as an e-shipment (via email).

Application Server Installation

Installation content

“**ServerInstallation_OpenCADversion_MSSQL.exe**” or

“**ServerInstall_OpenCADversion_ORA.exe**” are self-extracting executable files.

Content of file:

- “ScriptSQL” folder contains “opencad_OpenCADversion_MSSQL.sql” or “opencad_OpenCADversion_ORA.sql” script file;
- “ServerInstallation” folder contains two sub-folders (apache, depconfig) and four files (install.bat, uninstall.bat, install.sh, uninstall.sh)
- README file

This chapter will give you a picture on what OpenCAD will install and where:

..\ (HxGNEAMpath)

..\depconfig\skeletons\mp_subsystem.ear\web.war\eamdwg
Main folder .jsp files

..\apache\web.war\resources\shared\scripts\opencad
Main folder .js .css image files

Important:

For EAM application server on modality cluster 2 java virtual machine you need OpenCAD patch which is not included in the standard installation.

Installation steps for Windows

1. Log all users out of the application
2. Stop the HxGN EAM application as mentioned in the HxGN EAM Administration Guide
3. Copy and unzip the contents of the “**ServerInstall_OpenCADversion_ORA.exe**” file (or “**ServerInstallation_OpenCADversion_MSSQL.exe**” file) to a local directory.
4. Open a command prompt (cmd.exe) as Admin and change the directory to “ServerInstallation”
5. Install OpenCAD by executing this command at the prompt, substituting values for destination_of_server_root:

```
install.bat destination_of_server_root
```

NOTE:

destination_of_server_root is the root location of where HxGN EAM is installed. (E.g. c:\HxGNEAM)

To determine what HxGN EAM version is installed, login to HxGN EAM, click on “About” and verify the version.

6. Execute the EAM deploy batch script: deploy.bat
7. Start the HxGN EAM services if they are not running

Installation steps for Linux

1. Log all users out of the application
2. Stop the HxGN EAM application as mentioned in the HxGN EAM Administration Guide
3. Copy and unzip the contents of the “**ServerInstall_OpenCADversion_ORA.exe**” file (or “**ServerInstallation_OpenCADversion_MSSQL.exe**” file) to a local directory
4. Copy the “ServerInstallation” folder to the Linux server
5. Navigate to “ServerInstallation” folder via command prompt (putty)
6. Install OpenCAD by executing this command at the prompt, substituting values for destination_of_server_root and patch_level:

```
./install.sh destination_of_server_root patch_level
```

NOTE:

destination_of_server_root is the root location of where HxGN EAM is installed. (E.g. c:\HxGNEAM)

From OpenCAD 11.71.1 version, patch_level value (mineq114/ maj114) is no longer needed.

To determine what HxGN EAM version is installed, login to HxGN EAM, click on “About” and verify the version.

7. Execute the EAM deploy batch script: `deploy.bat`
8. Start the HxGN EAM services if they are not running

Database Installation

Installing on an Oracle Database:

1. Log all users out of the application
2. Stop the HxGN EAM application as mentioned in the HxGN EAM Administration Guide
3. Copy and unzip the contents of the “**ServerInstall_OpenCADversion_ORA.exe**” file to a local directory
4. Navigate to “ScriptSQL” folder and locate “**opencad_OpenCADversion_ORA.sql**” script file
5. Before proceeding, we recommend having a backup copy of the data
5. Open “**opencad_OpenCADversion_ORA.sql**” installation script from Oracle SQL Developer
 - The DB scripts is made on UTF-8 language, take care to not open the file with SQL Developer or other editor set in different mod from UTF-8.
The script uses functions and store procedures written in T-SQL to verify that the DB user with which you run the script or the user with whom EAM connects to the DB has no restrictions to run these objects.
 - From Oracle SQL Developer, open the EAM tenant connection where you want to configure OpenCAD.
 - Make sure to login with the user which has the permissions to edit the EAM DB (for example EAM user DB).
 - Enable DBMS output to check script progress and increase standard buffer size (for example 1000000).
 - Run the script
 - Check the DBMS window if the script returned any error messages by searching "ORA" text.
6. Restart the application server.

Installing on an MS SQL Server Database:

1. Log all users out of the application.
2. Stop the HxGN EAM application as mentioned in the HxGN EAM Administration Guide.
3. Copy and unzip the contents of the “**ServerInstallation_OpenCADversion_MSSQL.exe**” file to a local directory
4. Navigate to “ScriptSQL” folder and locate “**opencad_OpenCADversion_MSSQL.sql**” script file
5. Run “**opencad_OpenCADversion_MSSQL.sql**” installation script from MS SQL Server Management Studio
 - The DB scripts is made on UTF-8 language, take care to not open the file with MS SQL Server Management Studio or other editor set in different mod from UTF-8.
 - The script uses functions and store procedures written in T-SQL to verify that the DB user with which you run the script or the user with whom EAM connects to the DB has no restrictions to run these objects.
 - Check that Microsoft SQL Server Management Studio is set to **autocommit mode**

- From MS SQL Server Management Studio, open the EAM tenant connection where you want to configure OpenCAD
 - Make sure to login with the user which has the permissions to edit the EAM DB (for example EAM user DB)
 - Check the Messages window if the script returned any error messages by looking in the text "error in"
6. Restart the application server.

Activating OpenCAD

OpenCAD Cross-Browser

- Insert the OpenCAD CDKEY (*CDKEYDWG install parameter*). The KEY is provided by Order Management and Provisioning teams as an e-shipment (via email).
- **If you have already activated OpenCAD BIM do nothing.** If you have not yet activated 'OpenCAD BIM' add the 'OpenCAD Product Activation' screen to a User Group: 'Administration' menu | 'Security' | 'User Groups'. Then select a User Group and click the 'Menus' Tab. Search for the 'OpenCAD Product Activation' screen from the 'Available Screens' then drag and drop it in the Menu Details.
OpenCAD screen uses APPURL install parameters and then it is recommended to check its value.
- Click the activation button in the Product Activation screen.

OpenCAD BIM

- Insert the OpenCAD BIM CDKEY (*CDKEYBIM install parameter*). The KEY is provided by Order Management and Provisioning teams as an e-shipment (via email).
- **If you have already activated OpenCAD Cross-Browser do nothing.** If you have not yet activated 'OpenCAD Cross-Browser' add the 'OpenCAD BIM Product Activation' screen to a User Group: 'Administration' menu | 'Security' | 'User Groups'. Then select a User Group and click the 'Menus' Tab. Search for the 'OpenCAD BIM Product Activation' screen from the 'Available Screens' then drag and drop it in the Menu Details.
OpenCAD BIM screen uses APPURL install parameters and then it is recommended to check its value.
- Click the activation button in the OpenCAD BIM Product Activation screen.

Upgrading to OpenCAD's latest version (On-prem)

To upgrade OpenCAD from a previous version to the latest one:

1. Uninstall the previous version of OpenCAD (see 'Uninstalling the Application' below)
2. Install the new version of EAM OpenCAD (see the 'Product installation' on page 4).
3. During the update phase, OpenCAD **must no longer be activated**.

When updating from older versions of OpenCAD, it is not necessary to apply all intermediate database patches. You can directly run the database script from the latest version.

Note: If the OpenCAD installed version is prior to 11.61.7 (and therefore it used the Client plugin), it is suggested to remove it from Client computers where it was installed. The plugin removal is done from 'Control Panel' as any other Windows application.

Uninstalling the application (On-prem)

Windows Server

1. Stop the HxGN EAM application as mentioned in the HxGN EAM Administration Guide
2. Copy and unzip the contents of the "ServerInstallation_OpenCADversion_ORA.exe" file (or "ServerInstallation_OpenCADversion_MSSQL.exe" file) to a local directory
3. Open a command prompt (cmd.exe) as Admin and change the directory to "ServerInstallation"
4. Uninstall OpenCAD by executing this command at the prompt, substituting values for destination_of_server_root:

```
uninstall.bat destination_of_server_root
```

NOTE:

destination_of_server_root is the root location of where HxGN EAM is installed (e.g. c:\HxGNEAM)

5. The following folders (with their respective files and subfolders) will be deleted:

EAM folder\apache\web.war\resources\shared\css\opencad

EAM folder\apache\web.war\resources\shared\images\opencad

EAM folder\apache\web.war\resources\shared\scripts\opencad

EAM folder\depconfig\skeletons\mp_subsystem.ear\web.war\eamdwg

Linux Server

1. Stop the HxGN EAM application as mentioned in the HxGN EAM Administration Guide
2. Copy and unzip the contents of the "ServerInstallation_OpenCADversion_ORA.exe" file (or "ServerInstallation_OpenCADversion_MSSQL.exe" file) to a local directory
3. Copy the "ServerInstallation" folder to the Linux server
4. Navigate to "ServerInstallation" folder via command prompt (putty)
5. Uninstall OpenCAD by executing this command at the prompt, substituting values for destination_of_server_root:

```
./uninstall.sh destination_of_server_root
```

NOTE:

destination_of_server_root is the root location of where HxGN EAM is installed (e.g. c:\HxGNEAM)

6. The following folders (with their respective files and subfolders) will be deleted:

EAM folder\apache\web.war\resources\shared\css\opencad

EAM folder\apache\web.war\resources\shared\images\opencad

EAM folder\apache\web.war\resources\shared\scripts\opencad

EAM folder\depconfig\skeletons\mp_subsystem.ear\web.war\eamdwg

OpenCAD Setup

OpenCAD can be configured using the following steps:

- *Install parameters:*
OpenCAD uses the following EAM install parameters and then it is recommended to check their values (the two parameters are also used for setting up the OpenCAD Utility APP):

APPURL
AXISURL

Example for the Cloud:

APPURL: <https://eu1.eam.hxgnsmartcloud.com/web/base/logindisp?tenant=TENANTNAME>

AXISURL: <https://eu1.eam.hxgnsmartcloud.com/axis/services/EWSCconnector>

NOTE:

eu1 depends on the region of the Cloud datacenter;

Install parameters must be properly set; in case they don't, please refer to CloudOp Team.

Example on premises:

APPURL: <https://eamservername.com/web/base/logindisp?tenant=TENANTNAME>

AXISURL: <https://eamservername.com/axis/services/EWSCconnector>

- *Multi-org security:*
Document entity must be enabled as Multi-org
- *Security and permissions:*
'Function security' screen (Administration | OpenCAD Cross Browser | Setup) 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.

OpenCAD Utility App

OpenCAD Cross-Browser includes a specific utility, called OpenCAD Utility App for providing drawings within HxGN EAM.

The OpenCAD Utility App will be installed on the user's client, in a similar way to the HxGN EAM Import Utility (please refer to the user guide guide).

The OpenCAD Utility App will communicate with your HxGN EAM tenant using Web Services. Part of the core functionality included in the OpenCAD Utility App 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.

Note: please add the 'Connector' checkbox to the EAM User that will use the OpenCAD Utility App.

Only those users with access to OpenCAD Utility must have the connector license.

All the remaining EAM users do not need any connector license to be able to use OpenCAD.

Third-Party and Open-Source

OpenCAD integrates a range of third-party and open-source components to enhance functionality, improve performance, layout style and ensure a smooth and efficient interaction for users.

All third-party and open-source libraries are consolidated under the OpenCAD directory.

..\\apache\\web.war\\resources\\shared\\scripts\\opencad\\assets\\js

This structure ensures that external dependencies are organized in a single location, facilitating easier management, updates, and compliance with licensing requirements.

This section provides an overview of the key third-party and open-source software we use

Component	License Type	License	Description
jquery-3.3.1.min.js	https://jquery.com/license/	MIT License	This library is used thanks to its wide support across all browsers and to the capabilities of handling a variety of js events, animations, and object manipulation. It is used across all the OpenCAD's solution;
ext-all.js	https://www.sencha.com/legal/sencha-software-license-agreement/	Commerical	This library is used following it's adoption in HxGN EAM. It provides a great variety of visual components used everywhere in OpenCAD, like for panels, threeviews, windows, page subdivision, modals, and prompts;
exporter-debug.js	https://github.com/eligrev/FileSaver.js/blob/master/LICENSE.md	MIT License	This library is used to empower sencha libraries with the grid export in a varieties of formats including excel xls,csv,xml
mktree.js	https://www.npmjs.com/package/mktree	MIT License	This library is used to facilitate the interaction with sencha's tree view
webgl-utils.js	https://github.com/toji/gl-matrix/blob/master/LICENSE.md	MIT License	This library provides standardization that ensures WebGL properly functions across all browsers
gl-matrix.js	https://github.com/toji/gl-matrix/blob/master/LICENSE.md	MIT License	This library provides optimized functions for manipulating vectors and matrices, which is particularly useful for WebGL and other 3D graphics applications. It focuses on performance and low-level operations, enabling efficient mathematical computations in 2D and 3D spaces.
jspdf.js	https://artskvdi.github.io/jsPDF/docs/index.html	MIT License	This library handles the creation of PDF and the interaction with elements inside the document, like images, texts, and formatting. It is used across all OpenCAD's Moduli;
xbrowser.js	https://github.com/xBimTeam/XbimWebUI/blob/master/LICENCE.md	CDDL License	This library complements xviewer.js by enhancing browser compatibility and interaction with the HTML Webpage and UI. This library was customized during time to further enhance capabilities and support mobile interaction.
svg.js	https://svgdotjs.github.io	MIT License	This library is used to handle svg models and to easily interact with the object present in the drawing, including creating shapes, and notations, and making objects interactive. It is adopted in OpenCAD in many Moduli, including OpenCAD SVG, EPC, OpenCAD Dashboard;
pdf.js	https://www.apache.org/licenses/LICENSE-2.0	Apache2.0	This library handles the creation of PDF and the interaction with elements inside the document, like images, texts, and formatting. It is used across all OpenCAD's Moduli;
pdf.viewer.js	http://www.apache.org/licenses/LICENSE-2.0	Apache2.0	This library enables to visualize PDF files in the EPC
svg.panzoom.js	https://github.com/bumbu/svg-pan-zoom/blob/master/LICENSE	BSD	This library enables the panning and zooming of an SVG in an HTML document, with mouse events or custom JavaScript hooks. It is used in combination with svg.js library;
panzoom.min.js	https://github.com/bumbu/svg-pan-zoom/blob/master/LICENSE	BSD	Panzoom is a small library to add panning and zooming functionality to an element. Rather than using absolute positioning or setting width and height, Panzoom uses CSS transforms to take advantage of hardware/GPU acceleration in the browser, which means the element can be <i>anything</i> : an image, a video, an iframe, a canvas, text...
map.js	https://truviedev.scrollhelp.site/tvsdk/?l=en	Commerical	This library is required for the correct functioning of the TruView site module(OpenCAD RV)

Component	License Type	License	Description
xviewer.js	https://github.com/xBimTeam/XbimWebUI/blob/master/LICENCE.md	CDDL License	The xBIM Toolkit is an open-source BIM toolkit supporting IFC, enabling developers to read, create, and view BIM models with full geometric and topological operations, as well as COBie translation. xBimWebUI is a WebGL-based library for presenting BIM models in the browser, using the custom WexBIM format, which is particularly suited for lightweight 3D models visualization and interaction.
xlsx.full.min.js	http://sheetjs.com	Apache2.0	This library is required to work with spreadsheet excel files and to convert them to json
viewer.js	https://truviedev.scrollhelp.site/tvsdk/?l=en	Commercial	This library is required for the correct functioning of the TruView setup module (OpenCAD RV)

Additional third-party libraries are utilized within the OpenCAD Utility App desktop application.

Component	License Type	License	Description
xbim toolkit	https://docs.xbim.net/license/license.html	CDDL License	The xBIM toolkit is a .NET open-source software development BIM toolkit that supports the BuildingSmart Data Model (aka the Industry Foundation Classes IFC). Xbim allows .NET developers to read, create and view Building Information (BIM) Models in the IFC format. There is full support for geometric, topological operations and visualisation. In addition xBIM supports bi-directional translation between IFC and COBie formats. Core libraries for data manipulation are all written in C#, core of geom
VectorDraw Developer Framework	https://www.vdraw.com/about/licenses-and-warranties/	Commercial	VectorDraw Developer Framework (VDF) is an easy to program SDK component that every developer needs to easily create and manage and print 2D and 3D drawings in his applications. Its objects expose methods and properties that are compatible with most common vector formats and other CAD objects. Supports over 10 vector formats and many raster formats and has the ability to export drawings to PDF. It is fully object oriented (OOP) .NET 2
BitMiracle Docotic Pdf	https://www.nuget.org/packages/BitMiracle.Docotic.Pdf/9.5.17525/License	Commercial	Docotic.Pdf is a high-performance C# PDF library for .NET. You can use it to create, read, and edit PDF documents in .NET Core, ASP.NET, Windows Forms, WPF, Xamarin, Blazor, Unity, and HoloLens applications. The library supports .NET 8, .NET 7, .NET 6, .NET 5, .NET Standard / .NET Core, and .NET 4.x frameworks.

Technical aspects which have impacts with HXGN EAM

OpenCAD will add these elements into the EAM database.

Please note: The words written in gray color refer to obsolete EAM entity elements that were used in previous versions of OpenCAD. On the opposite, "**In bold**," you may see the parts added from this version (OpenCAD12.21.0)

Tables

Table Name	Table Description
OCAD_EVENTS	Contains the events that users made to the drawings
OCAD_TEXTS	List of the OpenCAD labels
OCAD_GRAPHICFIELDS	List of the fields set as spatial data
OCAD_RGB	List of the available colors in RGB format
OCAD_THEMECOLORS	List of colors related to the spatial data
OCAD_GRIDQUERIES	Name of the query that loads the object grid

Table Name	Table Description
OCAD_OBJCNTCONFIG	Fields configured for the objects count functionality
OCAD_OBJCNTLOOKUPVALUE	List of values to be linked to the objects
OCAD_OBJCNTTABLE	Contain the values read from the drawing and will be written automatically
OCAD_LAYERSPRINTCONF	Configuration of the layers in printing phases
OCAD_OBJCNTLKPTRACE	Trace of values modified in objects count functionality
OCAD_OBJCNTDRWCHANGE	Trace of drawings to be upgraded by the objects count functionality
OCAD_R5GRID	List of custom grids and user defined screens installed in EAM by OpenCAD
OCAD_FORMATDRWFILE	List of templates that OpenCAD uses when the user creates a new drawing starting from an image
OCAD_DRWNAVIUSER	Configuration of multi-drawings screen
OCAD_DOCUTYPECFG	Configuration of drawings based on class document
OCAD_AUTODISCOVERYCONFIG	Configuration of auto-discovery that will occur once drawing ingestion
OCAD_LAYERSNOTAG	List of layers that have to be excluded by auto-discovery
OCAD_LVUPBLOCKLIST	Contains the blocks configuration for level-up modality
OCAD_AE_AUTODISCOVERYCONFIG	Contains the last OpenCAD auto-discovery settings.
OCAD_AE_DOCUMENTS	List of processed drawings
OCAD_AE_DOCUMENTS_PROCESS	Contains list of OpenCAD AutodiscoveryEngine service activities.
OCAD_AE_OBJECTS	Contains the EAM objects code detected in the drawings by OpenCAD AutodiscoveryEngine
OCAD_AE_TEXT	Contains all text detected in the drawings by OpenCAD AutodiscoveryEngine service
OCAD_AE_OBJECTS_TRACE	Contains the history of the detected objects positions in the drawings generated by Auto-discovery
OCAD_PTMGENPAR	Push to map configuration
OCAD_PTMOBJPAR	Push to map configuration
OCAD_PTMPARTPAR	Push to map configuration
OCAD_AE_LAYERS_OFF	List of layers to turn off during the additional file generation (svg,pdf...)
OCAD_AE_LAYERS_COLOR	Colors of layers management related to file being generated (svg,pdf...)
OCAD_AREATYPERENTITY	Sets the configuration related to EAM entities (OBJ/LOC)
OCAD_AE_XREFS	Defines the relation from the master drawing and its x-ref
OCAD_LINKBYGRA	Used in new object by graphic functionality
OCAD_WKSDATACAD	Workspace data for OpenCAD
OCAD_DOMCFG_BLOCKS	OpenCAD Inventory configuration
OCAD_DOMCFG_ATTRIBUTES	OpenCAD Inventory configuration
OCAD_DOMSETTINGS	OpenCAD Inventory configuration
OCAD_DOMOBJDRAWING	OpenCAD Inventory Functionality
U5OCAD_PDF	Contains parts list discovered in a PDF and then to be created as EAM parts (EPC functionality)
OCAD_CTB	CTB configuration
OCAD_AE_PDF_PROPERTIES	Pdf properties read by OpenCAD Auto-Discovery
OCAD_PDF_EPC_CONFIG	Electronic Part Catalog Configuration
OCAD_GRIDTHEMECOLORS_NEW	Color-code themes
OCAD_ROUTES	Graphic configurations for Routes
OCAD_PTMOBJPAR_NEW	Graphic configurations for PTM
OCAD_AE_SPACES	Spatial values
OCAD_AE_SPACES_VERTEX	Coordinates to draw spaces
OCAD_SMART_TAG_CFG	Smart Tag configurations
OCAD_U5OCAD_PDF_TABLE_COORD	Coordinates of pdf parts table
OCAD_U5OCAD_PDF_SCHEMA_COORD	Coordinates of pdf parts hotspots

Table Name	Table Description
OCAD_AE_OBJECTS_COORDS	Coordinates of objects for SVG finding
OCAD_AE_LAYERS_STATUS	Stores the status of any layer prior to be created as SVG
OCAD_LAYERS_SPACES_CFG	Stores the name of the layer use in the dwg for spaces
OCAD_CTA	Call to Action
OCAD_CTA_COMMENTS	Comments of Call to Actions
OCAD_PTMOBJPAR_NEW1	P2M Push 2 Map
OCAD_AE_OBJECTS_ALIAS_MULTI	Alias reference
OCAD_WOCOORDS	Work Orders Coords
OCAD_R5EXTMENUS	List menu items of R5 UserGroup installed in EAM by OpenCAD
OCADBIM_SCREEN	Setup copy of screen destination for Hyperlink
OCADBIM_JOIN	Reference between BIM and EAM
OCADBIM_PSET	BIM table
OCADBIM_ATTRPSET	BIM table
OCADBIM_CLASSPSET	BIM table
OCADBIM_DOCVER	BIM table
OCADBIM_FEDERATED	BIM table
OCADBIM_MOC	BIM table Management of Change
OCADBIM_MOC_TOT	BIM table Management of Change
OCADBIM_COORDS	BIM table reference of SVG coordinate
OCADBIM_TEMPLATE_MAPPING	BIM Mapping template
OCADBIM_TEMPLATE_PSET	BIM Mapping template
OCADBIM_TEMPLATE_ATTRPSET	BIM Mapping template
OCADBIM_TEMPLATE_CLASSPSET	BIM Mapping template

Views

View Name	View Description
OCAD_DATAGRAPHICS	Fields theme is configured in this view, it is possible to add fields , join new table , create new theme
OCAD_VERS	Contains versioning of the drawings
OCAD_VERS1	Contains versioning of the drawings
OCAD_VERS2	Contains versioning of the drawings
OCAD_VERS3	Contains versioning of the drawings
OCAD_MDATA	Contains EAM Object codes
OCAD_MDATA1	Contains EAM Object codes
OCAD_MDATA2	Contains EAM Object codes
OCAD_CFAREA	Contains surface areas based on custom field
OCAD_OBTP_UCODES	List of OBTP codes
OCAD_R5CLASSES	List of EAM OBJ classes
OCAD_OBJCNTTABLE_MAXDATE	Object Counter feature
OCAD_OBJCNTTABLE_GROUP	Object Counter feature
OCAD_OBJCNTTRACE_UPD_DRW	Object Counter feature
OCAD_OBJCNTTRACE_DEL_DRW	Object Counter feature
OCAD_R5OBJECTS	List of EAM Objects
OCAD_DRWNAVUSER	List of drawings by User (Drawing navigation feature)
OCAD_R5STRUCTURES	Contains EAM structure
OCAD_R5STRUCTURES1	Contains EAM structure
OCAD_PRO_DRW_LAY	Contains drawing's layer configuration
OCAD_GRAPHICFIELDS_V	Fields for graphic themes
OCAD_AE_VERS	Contains versioning of the drawings (AutoDiscovery)

View Name	View Description
OCAD_AE_VERS1	Contains versioning of the drawings (AutoDiscovery)
OCAD_AE_VERS2	Contains versioning of the drawings (AutoDiscovery)
OCAD_AE_OBJDOC1	Auto-Discovery records
OCAD_AE_TRACE_NOT_FOUND	OpenCAD Inventory configuration
OCAD_AE_ALL_WO	Default view for custom grid auto-discovery related to work orders
OCAD_AE_OBJDOC2	Sub-query related to the OpenCAD Auto-discovery
OCAD_AE_TEMP1	Permit To Work Dashboard functionality
OCAD_AE_TEMP2	Permit To Work Dashboard functionality
OCAD_AE_TEMP3	Permit To Work Dashboard functionality
OCAD_AE_TEMP4	Permit To Work Dashboard functionality
OCAD_AE_TEMP5	Permit To Work Dashboard functionality
OCAD_AE_TEMP6	Permit To Work Dashboard functionality
OCAD_PARGRID_SUP_MAN	Alternative query to OCAD_PARGRID with Manufacturers and Suppliers data (EPC)
OCAD_PARGRID_SUP	Alternative query to OCAD_PARGRID with Suppliers data only (EPC)
OCAD_PARGRID_MAN	Alternative query to OCAD_PARGRID with Manufacturers data only (EPC)
U5OCAD_GRIDDOC	OpenCAD U5View Grid Documents
U5OCAD_GRIDOBJ	OpenCAD U5View Grid Objects
U5OCAD_GRIDPRT	OpenCAD U5View Grid Parts
U5OCAD_GRIDWO	OpenCAD U5View Grid Work Order
U5OCAD_GRIDROUT	OpenCAD U5View Grid Routes
U5OCAD_GRIDWS	OpenCAD U5View Grid Workspaces
U5OCAD_JGRIDNOCONF	OpenCAD U5View Grid Nonconformities
U5OCAD_JGRIDPTW	OpenCAD U5View Grid Permit To Work
U5OCAD_JGRID_ROUT2	OpenCAD U5View Grid Routes, include routes with tagged objects in the document. Used by default in the OpenCAD Routes grid, since activation performed after version 12.10.1 (included).
U5OCAD_JGRIDWOCALIAS	OpenCAD U5View Grid Work Order with coords aware and alias reference
U5OCAD_JGRIDOBJALIAS	OpenCAD U5View Grid Objects with alias reference
U5OCAD_JGRIDWOC1202	OpenCAD U5View Grid Work Order with coords aware (Used by default in the OpenCAD Work Order grid, since activation performed after version 12.10.1 (included))
U5OCADBIM_GRIDOBJ	OpenCAD BIM U5View Grid Objects
U5OCADBIM_GRIDOWO	OpenCAD BIM U5View Grid Permit To Work
U5OCADBIM_GRIDONCF	OpenCAD BIM U5View Grid Permit To Work
U5OCADBIM_GRIDMOC01	OpenCAD BIM U5View Grid - MOC Objects Grid
U5OCADBIM_GRIDMOC02	OpenCAD BIM U5View Grid - MOC Changes List
U5OCADBIM_GRIDMOC03	OpenCAD BIM U5View Grid - MOC Properties Grid
U5OCAD_EAMBIMCAD_GRID01	OpenCAD BIM U5View Grid - EAM-BIM-CAD Reference List
U5OCADEPC_JGRIDSPARTS	OpenCAD U5View Grid EPC

Queries

EAM OpenCAD provides queries that are considerably essential in creating powerful filters. They allow the user to decide what fields or expressions are to be shown and what information are to be sought.

One more thing is that OpenCAD queries brings up a modality that makes it more convenient to work through **templates**. Through this improvement, performing various functionalities are apparently simple while creating or modifying queries will be effortless and surely consistent. Below the list of the active queries in OpenCAD Cross-browser version.

Note: The suffix in the query code has the following meanings:

A (e.g.: OC0001A): means the query is valid for OpenCAD Utility App only

W (e.g.: OC0007W): means the query is valid in the web application only

B (e.g.: OC0008B): means the query is valid for both (OpenCAD Utility App and web application)

Query Code	Query Title	Query Description	OpenCAD parameters
OC0001A	Objects list	Allows to search the database objects list (obj/loc) inside the drawing.	pOrg,pObj,pFileName,pFu
OC0002A	Objects list	Allows to search the database objects list (obj/loc) inside the drawing.	pOrg,pObj,pFileName,pFu
OC0003A	Surfaces list	Allows to search from the space for object list database then, calculate the surface into the drawing	pOrg,pObj,pFu
OC0004A	Surfaces list	Allows to search from the space for object list database then, calculate the surface into the drawing	
OC0007W	Themes values list	Obtain a list of values in the filter section.	pObj,pOrg,pFileName,pNameFieldTheme
OC0008B	Drawings list	Obtains a list of drawings when the user wants to get "ALL VERSION".	pObj#pOrg,pOrg,pObj
OC0009B	Drawings list	Obtains a list of drawings when the user wants to get the "LAST VERSION" only.	pObj#pOrg,pOrg,pObj,pUser,pCategory,pDocOrg,pDocCode,pDocFileName,pWoOrg,pWoCode,pSystemFunctionName,pUserFunctionName
OC0014A	Objects list	Allows to search the database objects list within the drawing.	pOrg,pFileName
OC0015A	Objects list	Allows to search the database objects list within the drawing.	pOrg,pFileName
OC0016A	Parts list	Allows to search the database part list within the drawing.	pOrg,pFileName
OC0017A	Parts list	Allows to search the database part list within the drawing.	pOrg,pFileName
OC0018A	Parts list	Allows to search the database part list within the drawing.	pOrg,pFileName
OC0019A	Parts list	Allows to search the database part list within the drawing.	pOrg,pFileName
OC0021B	Drawings list	Obtains a list of drawings when the user wants to get "ALL VERSION". and the class configuration is active.	pObj#pOrg,pOrg,pObj,pUser,pCategory,pDocOrg,pDocCode,pDocFileName,pWoOrg,pWoCode,pSystemFunctionName,pUserFunctionName
OC0022B	Drawings list	Obtains a list of drawings when the user wants to get the "LAST VERSION" only, and the class configuration is active.	pObj#pOrg,pOrg,pObj,pUser,pCategory,pDocOrg,pDocCode,pDocFileName,pWoOrg,pWoCode,pSystemFunctionName,pUserFunctionName
OC0024W	Advanced tooltip	Objects query	pObj,pOrg,pFileName
OC0025W	Advanced tooltip	Parts query	pObj,pOrg,pFileName
OC0026W	Pushing to map	Objects query	pObj,pOrg,pFileName
OC0027W	Pushing to map	Parts query	pObj,pOrg,pFileName
OC0028W	Workspace Tooltip	Workspace tooltip	pObj,pOrg,pFileName
OC0029W	PTM Workspace	Push to map designed for workspace	pObj,pOrg,pFileName
OC0030W	BIM	BIM Document List	pOrg,pUser

Query Code	Query Title	Query Description	OpenCAD parameters
OC0030R	BIM	BIM Document List with EAM roles enable	pUser, pRoleCurr
OC0040A	Workspace	Workspace list	pOrg
OC0041W	EPC	EPC tooltip	pOrg,pPart,pFileName,pIdSession
OC0042W	Open Dashboard	Provide list of documents to Open Dashboard	pUser
OC0042R	Open Dashboard	Provide list of documents to Open Dashboard with EAM roles enable	pUser, pRoleCurr
OC0043A	Workspace	Workspace alias reference	pOrg
OC1001A	Auto-discovery Engine	Auto-discovery query to get a list of EAM objects	pOrg
OC1002A	Auto-discovery Engine	Auto-discovery query to get a list of EAM parts	pOrg
OC0108B	Drawing list	List of PDF documents (All version)	pObj,pOrg,pCategory,pObj#pOrg
OC0109B	Drawing list	List of PDF documents (Last version)	pObj#pOrg,pOrg,pObj,pUser,pCategory,pDocOrg,pDocCode,pDocFileName,pWorkOrg,pWorkCode,pSystemFunctionName,pUserFunctionName
OC0121B	Drawing list	Obtains a list of drawings when the user wants to get "ALL VERSION". and the class configuration is active.	pObj#pOrg,pOrg,pObj,pUser,pCategory,pDocOrg,pDocCode,pDocFileName,pWorkOrg,pWorkCode,pSystemFunctionName,pUserFunctionName
OC0122B	Drawing list	Obtains a list of drawings when the user wants to get the "LAST VERSION" only, and the class configuration is active.	pObj#pOrg,pOrg,pObj,pUser,pCategory,pDocOrg,pDocCode,pDocFileName,pWorkOrg,pWorkCode,pSystemFunctionName,pUserFunctionName
OC1101W	PTW Dashboard	To retrieve the list of Permits To Work and related Isolation Points	pOrg,pDocCode,pUserGroup
OC1202W	Screen parameters	List of work orders	
OC1203W	Screen parameters	List of equipment	
OC1204W	Screen parameters	List of parts	
OC1205W	Screen parameters	List of workspaces	
OC1206W	Screen parameters	List of permit to work	

Queries and Custom Grids OpenCAD Parameters

The table below shows the list of parameters that have been used throughout the development of the software particularly for building EAM queries and EAM Custom Grids.

Parameter Name	Parameter Description	Custom Grid EAM	Query EAM
pFu	The left part of the object code up to the "CADCODE" separator character, see install parameters section	<input type="radio"/>	<input checked="" type="radio"/>
pNameFieldTheme	Field name of the current theme	<input type="radio"/>	<input checked="" type="radio"/>
pDocOrg	SVG Document Organization	<input type="radio"/>	<input checked="" type="radio"/>

Parameter Name	Parameter Description	Custom Grid EAM	Query EAM
pDocCode	SVG Document Code	<input type="radio"/>	<input checked="" type="radio"/>
pPart	Part code	<input type="radio"/>	<input checked="" type="radio"/>
pIdSession	Current EPC id session	<input type="radio"/>	<input checked="" type="radio"/>
pDocuOrg	Current doc org	<input type="radio"/>	<input checked="" type="radio"/>
pDocuCode	Current doc code	<input type="radio"/>	<input checked="" type="radio"/>
pWoOrg	Work Order Organization	<input type="radio"/>	<input checked="" type="radio"/>
pWoCode	Work Order Code	<input type="radio"/>	<input checked="" type="radio"/>
pSystemFunctionName	Screen Code	<input type="radio"/>	<input checked="" type="radio"/>
pUserFunctionName	Screen Code User	<input type="radio"/>	<input checked="" type="radio"/>
pOrg	Current object organization	<input checked="" type="radio"/>	<input checked="" type="radio"/>
pObj	Current object code	<input checked="" type="radio"/>	<input checked="" type="radio"/>
pFileName	Current file name	<input checked="" type="radio"/>	<input checked="" type="radio"/>
pCategory	Current category code	<input checked="" type="radio"/>	<input checked="" type="radio"/>
pUserGrou	Current User Group	<input checked="" type="radio"/>	<input checked="" type="radio"/>
pLang	Current Language	<input checked="" type="radio"/>	<input type="radio"/>
pUser	Current User	<input checked="" type="radio"/>	<input checked="" type="radio"/>
pDocuOrg	Current doc org	<input checked="" type="radio"/>	<input checked="" type="radio"/>
pDocuCode	Current doc code	<input checked="" type="radio"/>	<input checked="" type="radio"/>
pRoleCurr	Current role	<input type="radio"/>	<input checked="" type="radio"/>

EAM Custom Grids

Below are the custom grids that lists the EAM objects and their relationship between drawing tags that are provided upon installation of OpenCAD.

Default code	Description
OUE001	Lists 'All Objects' found in the drawing(s) discovered by Auto-discovery
OUE002	Lists 'All Parts' found in the drawing(s) discovered by Auto-discovery
OUE006	Lists 'All Work Orders' found in the drawing(s) generated by the Auto-discovery Engine Service
OUCN01	Drawing list navigation
OUC101	Objects
OUC102	Work orders
OUC103	Parts
OUC106	Workspaces
OUC107	Routes
OUC108	Documents drill-down
OUC110	Nonconformities
OUC112	PTW for Open Dashboard
OUC120	EAM-BIM-CAD Reference List
OUC201	BIM Objects

Default code	Description
OUC202	BIM Work Orders
OUC203	BIM Nonconformities
OUC204	MOC Objects Grid
OUC205	MOC Changes List
OUC206	MOC Properties Grid
OUC207	MOC Model List
OUC301	Objects Alias Reference
OUC302	Work orders Alias reference
OUC208	BIM Federated Objects List
OUC209	BIM Federated Work Orders
OUC130	EPC Parts List

User Defined Screens

Below are the User Defined Screen.

Default code	Description
O UU001	OpenCAD Parts list
O UU003	OpenCAD Screen Parameters
O UU004	Function Security
O UU005	Custom Grid

Custom Tabs

OpenCAD will add custom tabs to following screens:

Screen	Tab	Url
OSOBJA	OpenCAD	:appurl/eamdwg/opencadnofp.jsp?user=:user&org=:org
OSOBJP	OpenCAD	
OSOBJS	OpenCAD	
OSOBJL	OpenCAD	
WSJOBS	OpenCAD	
BSDOCU	OpenCAD	
SSPART	OpenCAD	
OSWKSP	OpenCAD	

Custom Fields

Entity	Name	Description	Content	Type	Association
Spaces	SPACE	Identify the space object inside the system object	[0 to 1]	Numeric	no longer default-associated since OpenCAD version 12.20.0
Surfaces	AREA	The surface will be written in this field	Double	Numeric	no longer default-associated since OpenCAD version 12.20.0

Entity	Name	Description	Content	Type	Association
Surfaces	AREATYPE	Surface type	[NET,GROSS,2,3,4,5...]	Code + Description	no longer default-associated since OpenCAD version 12.20.0
Surfaces	HEIGHT	Height	Double	Numeric	no longer default-associated since OpenCAD version 12.20.0
Surfaces	CUBICMET	Calculated volume	Double	Numeric	no longer default-associated since OpenCAD version 12.20.0
Surfaces	PERIMTR	Perimeter	Double	Numeric	no longer default-associated since OpenCAD version 12.20.0
Surfaces	SMWALLS	Dimension of walls calculated in square meters	Double	Numeric	no longer default-associated since OpenCAD version 12.20.0
Documents	UM	CAD file Unit of Measurement ([MMT,CMT,MTR,INH,FOT,YRD])	Unit of Measurement	System Entity	DOCU
Documents	LONGDESC	Document long description	String	Text	DOCU
Documents	READONLY	Read only document, modification is not allowed	[Y,N]	Code + Description	DOCU
User/Group	CAEDIT	Allows drawing modification	[Y,N]	Code + Description	USER/GROUP
User/Group	DOCDETA	View document details from OpenCAD	[Y,N]	Code + Description	USER/GROUP
User/Group	VERSION	View different versions of the drawing	[Y,N]	Code + Description	USER/GROUP
User/Group	MVERSION	Create new drawing version	[Y,N]	Code + Description	USER/GROUP
User/Group	NDOCORG	Drawing dashboard screen - Document organization	String	Text	USER/GROUP
User/Group	NDOCCODE	Drawing dashboard screen - Document code	String	Text	USER/GROUP
User/Group	NOBJORG	Drawing dashboard screen - Object organization	String	Text	USER/GROUP
User/Group	NOBJCODE	Drawing dashboard screen - Object code	String	Text	USER/GROUP
User/Group	ROUCHANG	Change existing routes	[Y,N]	Code + Description	USER/GROUP
User/Group	OCAUTUPD	Auto update of drawing and database when objects block into the drawing was modified (objects counter)	[Y,N]	Code + Description	USER/GROUP
User/Group	NEWDRW	Allows the user to create new drawing through OpenCAD	[Y,N]	Code + Description	USER/GROUP
User/Group	USRASDET	View asset details	[Y,N]	Code + Description	USER/GROUP
User/Group	USRLSTWO	View work order list	[Y,N]	Code + Description	USER/GROUP
User/Group	USRNEWWO	Allows new work order	[Y,N]	Code + Description	USER/GROUP

Entity	Name	Description	Content	Type	Association
User/Group	USRNEWWR	Allows new work request	[Y,N]	Code + Description	USER/GROUP
User/Group	USROBJTR	View object tree	[Y,N]	Code + Description	USER/GROUP
User/Group	USRPADET	View part details	[Y,N]	Code + Description	USER/GROUP
User/Group	USRQUIWO	Allows quick work order	[Y,N]	Code + Description	USER/GROUP
User/Group	CADALLON	If set to Y all the functionalities will be enabled, if N all the functionalities will be disabled	[Y,N]	Code + Description	USER/GROUP
User/Group	CADNAKD	Dashboard:Naked or Full modality	[Y,N]	Code + Description	USER/GROUP
User/Group	CADNAKF	OpenCAD: Naked or Full functionality	[Y,N]	Code + Description	USER/GROUP
Documents	DRWG3D	3D functionality in drawing navigation	[YES,NO]	Code + Description	3D
User/Group	USRPRTEX	Allow print function	[Y,N]	Code + Description	USER/GROUP
User/Group	USROBJGR	New object by graphics	[Y,N]	Code + Description	USER/GROUP
Documents	EPCBOOK	Drawing catalog	[Y,N]	Code + Description	DOCU
User/Group	USRLSTWS	Allow Workspaces	[Y,N]	Code + Description	USER/GROUP
User/Group	USRRESER	Allow reservation	[Y,N]	Code + Description	USER/GROUP
User/Group	USRINVEN	Allow inventory function	[Y,N]	Code + Description	USER/GROUP
User/Group	USRPDFRE	Allow PDF parts reading	[Y,N]	Code + Description	USER/GROUP
Documents	TAGPDF	Allow to set if PDF must be tagged	[Y,N]	Code + Description	DOCU
Documents	DASHBOAR	PtW dashboard ?	[YES,NO]	Code + Description	DOCU
Documents	DEFDASHB	PtW default dashboard ?	[YES,NO]	Code + Description	DOCU
User/Group	PTMACTIV	Enable Push To Map	[Y,N]	Code + Description	USER/GROUP
User/Group	PTMAUTOM	Enable AUTO Push To Map	[Y,N]	Code + Description	USER/GROUP
Documents	PTMDOCU	AUTO PTM Entity (OBJ/PART/WS)	N,OBJ,PART,WS	Code + Description	DOCU
Documents	DRWPDEC	Precision decimals	Double	Numeric	DOCU
User/Group	USRSMTAG	Enable smart tag	[Y,N]	Code + Description	USER/GROUP
Documents	DOCFLDNM	Alias field for auto-discovery	String	Text	DOCU
Organization	CADFLDNM	Alias field for auto-discovery	String	Text	ORG

Note: If User/Group custom fields do not exist, the functionality will be always active.

Custom Screens

Please follow the instructions below in order to view or modify the screens (as user R5):
 From ADMINISTRATION menu >> SETUP >> SCREENS >> NEW RECORD (+) or RECORD VIEW

Work ▾ Materials ▾ Equipment ▾ Purchasing ▾ Operations ▾ Administration ▾

Screen OCAD01 Graphic fields themes

Record View Text × Fields to Remember × Tabs × Dataspies × Custom Tabs ×

Screen Code: OCAD01 **Graphic fields themes**

Screen Details

Class: WEB Form Type: Master Functions

System Settings

Parent: Last Value Entity:

User Settings

Icon: Startup Action: No Action

Report: q? Startup View: Split View

Employee Filter: q? Split View Display: Mixed

URL Path: :appurl/eamdwg/graphicfields.jsp?user=:user&org=:org

Open URL in New Window: Auto Refresh Timer (seconds):

Screen	Description	Url :appurl/eamdwg
OCAD01	Defines the themes graphic fields	../graphicfields.jsp?user=:user&org=:org
OCAD02	Labels / Text customization	../texts.jsp?user=:user&org=:org
OCAD03	Color-coding themes management	../themescolors.jsp?user=:user&org=:org
OCAD04	Sets the queries for the object grid and part grid	../gridqueries.jsp?user=:user&org=:org
OCAD08	Block counter configuration	../objcntconfig.jsp?user=:user&org=:org
OCAD09	Values list for block attributes	../objcntlookupvalue.jsp?user=:user&org=:org
OCAD10	Layers print management	../layersprintconf.jsp?user=:user&org=:org
OCAD12	Advanced setup	../advancedsetup.jsp?user=:user&org=:org
OCAD13	Navigation user configuration (User Settings)	../drwnaviuserset.jsp?user=:user&org=:org
OCAD14	Drawings navigation user (Multi drawings screen)	../drwnaviuser.jsp?user=:user&org=:org
OCAD15	Drawings class user group configuration	../docutypeusergroupset.jsp?user=:user&org=:org
OCAD16	User activation for OpenCAD	../useractivation.jsp?user=:user&org=:org
OCAD17	Drawing profiles management	../profiledrw.jsp?user=:user&org=:org
OCAD18	Layers list with no tags number	../layersnotag.jsp?user=:user&org=:org
OCAD19	Level up modality - blocks configuration	../levelupblocksconf.jsp?user=:user&org=:org
OCAD20	Auto-discovery engine: List of layers off in the image generation	../enginelayersoff.jsp?user=:user&org=:org
OCAD21	Auto-discovery engine: List of layers colored in the image generation	../enginelayerscolors.jsp?user=:user&org=:org
OCAD22	Area type, entities type configuration	../areatypeset.jsp?user=:user&org=:org
OCAD23	Auto-discovery engine: Log	../ocadservice.jsp?user=:user&org=:org
OCAD24	OpenCAD Product activation	../activation.jsp?user=:user&org=:org
OCAD97	Open Dashboard	../DEPLOY_DASHBOARD.jsp?user=:user&org=:org
OCAD98	Single drawing navigation	../opencadnofp.jsp?user=:user&org=:org&navi=y
OCAD99	OpenCAD Permit To Work Dashboard	../dashboard.jsp?user=:user&org=:org
OBIM01	OpenCAD BIM	../bim_opencadbim.jsp?user=:user&org=:org
OBIM04	OC screens configuration	../bim_screensconfiguration.jsp?user=:user&org=:org

Install Parameters

Code	Description	Group
CDKEYDWG	OpenCAD activation code	Application
CADUPGR	OpenCAD's url to upgrade client package	Application
CADEVCOL	Default color for locating a unique asset in the global view (RGB value [255,255,255])	Global View
CADFLCOL	Default color for locating all assets in the global view (RGB value [255,255,255])	Global View
CADSPSUR	Stored procedure name to run after the updated of surface calculation in EAM. Set NO if you don't want to trigger any procedure	Stored procedure
CADSPCNT	Stored procedure that has to be triggered after updating the blocks objects recovered from the drawing; SP must have this parameter : SpName([ObjCode#ObjOrg])	Stored procedure
ROURVRST	Creating EAM Route by drawing. EAM Route Status code has to be set (A)	Routes
ROURVST	Creating EAM Route by drawing. User Route Status code has to be set (A)	Routes
CADOCAUT	Setting default area type to update in objects counter functionality [NET],[GROSS]	Objects counter
CADLKAUT	If set to [Y], the system will automatically unlocks the drawing, otherwise [N]	Drawing upload
CADSPENT	EAM CAD space entity.For example rooms: setting if you want to use objects or locations, ("OBJ" / "LOC")	Surfaces
CADAREAF	Instead of using OpenCAD custom field, setting an alternative field in R5OBJECTS for calculating area from a drawing. Empty value means the surface area will be written in OpenCAD custom field named AREA	Surfaces
CADUMRT	Unit of measurement returned from the system in the surfaces area page, ("MMT","CMT","MTR","INH","FOT","YRD")	Surfaces
CADDWOBJ	Drawing list associated to EAM object: set [true] to get objcode visible; set [false] to get it invisible	Drawingsobject
CADDWPAR	Drawing list associated to EAM Part: set [true] to get part code visible; set [false] to get it invisible	Drawings object
CADCODE	Separator character code for objects "OBJ", if set OpenCAD works in Part Code Modality , otherwise, in Standard Modality	Autodiscovery
CADCODEL	Separator character code for locations "LOC", if set OpenCAD works in Part Code Modality , if not set the parameter takes the CADCODE value	Autodiscovery
CADCONT	PCM search code typology: if set to [TRUE] the system will look for the content or part of the text, if set to [FALSE] the system will look for a full text.	Autodiscovery
CADADTXT	Drawing elements discovered by Auto discovery; All Texts within the drawing [true], [false]	Autodiscovery
CADADMTX	Drawing elements discovered by Auto discovery; MTexts within blocks [true], [false]	Autodiscovery
CADADBLA	Drawing elements discovered by Auto discovery; Attributes within blocks [true], [false]	Autodiscovery
CADADBLT	Drawing elements discovered by Auto discovery; Texts within blocks [true], [false]	Autodiscovery
CADADTXC	Drawing elements discovered by Auto discovery; Texts inside a circle [true], [false]	Autodiscovery
CADCODCO	Auto-Discovery combination logic applicable for block attributes and text lines for retrieving EAMCODE (1;1+2;1+2+3,ETC)	Autodiscovery
CADUPMOD	Enabling Auto-Discovery level-up functionality [true],[false] See further details in CADUPCHR parameter.	Autodiscovery

Code	Description	Group
CADUPCHR	Auto-Discovery level up character after first level, The object code to find is as follows : [superior code]+[CADUPCHR value]+[text in drawing]	Autodiscovery
CADDOCTY	Enable the user group documents configuration on class field [true],[false].	Docu
CADHPURL	Documents file server, http URL, to be used as soon as documents path is not the EAM default anymore. Example : "http://ServerName:7878/docuploads/"	Docu (Obsolete)
CADFDURL	Documents file server\shared folder path to be set when the path is not the EAM default. Please make sure to type the path of the new EAM folder documents with the tenant name at the end. Example1: "\\servername\newdocuploads\tenantname" Example2: "d:\newfolder\tenantname" The tenant folder will be: Example tenant name: tenant1 Example1: "\\servername\newdocuploads\tenant1" Example2: "d:\newfolder\tenant1"	Docu (Obsolete)
WOALERT	Setting a WO type for Graphical Alert	Graphic alert (Obsolete)
COLWOOPE	Setting the color used by the Graphical Alert to display [Open] WO (RGB values)	Graphic alert (Obsolete)
COLWOCLO	Setting the color used by the Graphical Alert to display [Closed] WO (RGB values)	Graphic alert (Obsolete)
ALRFLDTH	Setting Field name for Theme to be used for achieving graphical alert	Graphic alert (Obsolete)
ALARTYCD	Setting AreaType (Gross/Net) to be used for achieving graphical alert	Graphic alert (Obsolete)
CADUSRLD	User code used to log to the EAM web services, if not set the OpenCAD uses the EAM user	Web services (Obsolete)
CADPWDLD	User password code used to log to the EAM web services, if the user above is set	Web services (Obsolete)
OPUSREWS	EAM User name where OpenCAD checks the existing EWS connector license. If not set,OpenCAD checks the current EAM user. If the user do not have the license, the modify environment is disabled. However, if the value sets to NONE, the connector license will not be checked.	Web services (Obsolete)
CADRGTFN	EAM OpenCAD right click functionalities position on plug-in, [BOTH],[TORIGHT],[TOLEFT]	Security (Obsolete)
CADFAST	If set to [YES], allows OpenCAD to improve the visualization with its own file format also known as vdcl format[YES/NO]	Engine service
CADBKGRD	Drawings background color	Drawing
CADRELNU	OpenCAD release number	DataBase
CADOTSCA	Scaling factor of the circles (object themes)	Display condition (Obsolete)
CADENGIN	Must be set to YES if AutoDiscovery (Windows service) is running (for on-premise use only). Otherwise, please set it to NO.	Autodiscovery
CADOBJBL	Auto-Discovery feature takes in consideration space char in between text in the drawing (YES, NO)	Autodiscovery
CADNVG	Disable drill down capability from OpenCAD objgrid, pargrid and wogrid (plus button) (YES/NO)	CGRIDS
CADLAYLK	Drawing layers profile management. Locked layers must be turned off as well (YES,NO)	Layers Profile

Code	Description	Group
CADAUTDC	Setting display condition functionality with self-alignment (YES, NO)	Themes
CLOUDURL	Setting an URL drawing location from where the system will have the ability to download the drawings. Example url : http://servername/folder/Method?document_id=pDocuCode Parameters list : pDocuCode: EAM document code pDocuFileName : Drawing file name	Drawing download
DATACTIV	Enables meta data file creation for drawings [Y,N]	Drawing upload
DATFLFOR	Defining data structure of the meta data file. Parameters list : pDocuCode : EAM document code. pDocuParent : EAM parent document code. pDocuLocCode : EAM location code. pDocuLocDesc : EAM location description. pDocuVer : EAM document version. pDocuEntityCode : (OBJ or LOC) pDocuEntityType :EAM location or object code. pCreationDate : Date of document creation. pDocuFileName : Drawing file name. Custom fields : @[CustomfieldCode]#STR :EAM Custom field, string type. @[CustomfieldCode]#NUM : EAM Custom field, numeric type. @[CustomfieldCode]#DAT :EAM Custom field, date type. Example : pDocuCode pDocuParent pDocuLocCode pDocuLocDesc pDocuVer pDocuEntityCode pDocuEntityType @DRWTYP#STR @DRWNUM#STR pCreationDate pDocuFileName	Drawing upload
HEAFLFOR	Meta data file head string, the string will be added on the top of the meta data file. Example : eam_document_id,original_eam_document_id,location_code,location_description,eam_version_number,entity_code,entity_type,drawing_type ,drawing_number,eam_created_date,filename	Drawing upload
EXTDATFN	Setting metadata file extension. If the value is blank, will be used [.000]	Drawing upload
DOCAUTCD	Enabling Auto-Codification for master drawing [Y,N] If yes EAM will assign a unique doc-ID for each drawing uploaded by OpenCAD	Docu
DOCAUTPR	Ability to set a prefix for auto codification drawings. Example : TEST Code generated : TEST001	Docu
DOCAUTDC	Enabling Auto-Codification of the EAM documents record in R5DOCUMENTS for x-refs and images inside the master drawing [Y,N] If DOCAUTDC install parameter is set to Y the DOCAUTCD install parameter will be forced to Y.	Docu

Code	Description	Group
DEFLDCLA	<p>EAM class code and ORG class code for defining EAM custom fields to be used by OpenCAD Utility during the drawing ingestion</p> <p>See the configuration syntax in DEFIELD1,2,3,4,5 install parameters.</p> <p>Syntax : CLASS=eamclasscode&CLASSORG=eamclassorg&</p> <p>Example : CLASS=DWG&CLASSORG=*&</p>	Docu
DEFIELD1	<p>Ability to set custom fields (document entity) for being used by OpenCAD Utility for uploading new drawing (1 of 5)</p> <p>Syntax : NAME=customfieldcode&DATATYPE=customfieldtype&LABEL=opencadlabeltype&</p> <p>DATATYPE values : STRING, NUMERIC (STRING might be used for code+description as well)</p> <p>Example : NAME=DRWTYP&DATATYPE=STRING&LABEL=1000001&</p> <p>LABEL parameter is a custom label crated in ocad_texts table.</p>	Docu
DEFIELD2	<p>Ability to set custom fields (document entity) for being used by OpenCAD Utility for uploading new drawing (2 of 5)</p> <p>See the configuration in DEFIELD1 install parameter.</p>	Docu
DEFIELD3	<p>Ability to set custom fields (document entity) for being used by OpenCAD Utility for uploading new drawing (3 of 5)</p> <p>See the configuration in DEFIELD1 install parameter.</p>	Docu
DEFIELD4	<p>Ability to set custom fields (document entity) for being used by OpenCAD Utility for uploading new drawing (4 of 5)</p> <p>See the configuration in DEFIELD1 install parameter.</p>	Docu
DEFIELD5	<p>Ability to set custom fields (document entity) for being used by OpenCAD Utility for uploading new drawing (5 of 5)</p> <p>See the configuration in DEFIELD1 install parameter.</p>	Docu
XLODTIME	Setting a delay time to display the drawing (for cloud only)[seconds number]	Drawing download
CADFIELD	R5DOCUMENTS field name where OpenCAD will read and write the drawing file name, default value is DOC_FILENAME, admitted [DOC_FILENAME,DOC_ORIGFILENAME].	Docu
CADORGDR	Default organization of the new drawing in creation phase.	Docu
CADUMDEF	Default unit of measurement of the drawing, default value is MTR, others values admitted [MMT,CMT,MTR,INH,FOT,YRD].	Drawing
CADSAVET	Enable OpenCAD users to save temporary the drawings in a client PC during the modification phase. Default value is NO.	Drawing
CADLNURL	Documents file server , http URL, to be used when the drawing path is a network path	Docu
CADINIZE	Zoom extends at the opening of the drawing (YES , NO). Default value: YES.	Drawing
CADOPSMR	Smart drawing opening modality (YES,NO). Default value: NO.	Quick start
FLVERSUB	Subject of drawing versioning field name in R5DOCUMENTS table.	Drawing
UDSCREOB	User defined screen OpenCAD parts. Default value: OUU001. Only for EAM version >= 11.2	Parts creation
UDSCRETB	User defined screen OpenCAD parts table name Default value: U5OCAD_PDF. Only for EAM version >= 11.2	Parts creation

Code	Description	Group
EDWOSTDI	Work order status code where drawing is not editable	Work orders
AUTDIENG	Must be set to YES to allow OpenCAD Plugin to activate AutoDiscoveryEngine functionality. Otherwise, please set it to NO.	Autodiscovery
SVGIMAGE	Creation SVG image file after uploading drawing (YES , NO). If set to YES, AUTDIENG parameter must be set to YES too.	SVG
SVGFOSIZ	Scale factor for texts dimensions in SVG image file (1.0 texts unscaled) DEFAULT VALUE = 1.0	SVG
SVGBABLA	Black background color in SVG image file (YES , NO) DEFAULT VALUE = NO	SVG
DSTMREF	OpenCAD dashboard - Refresh timing Default = 300000	PTW Dashboard
WSPMTW	Permit to work screen code Default value = WSPMTW	PTW Dashboard
WSLOTE	E-LOTO certificate screen code Default value = WSPMT2	PTW Dashboard
WSLOTM	M-LOTO certificate screen code Default value = WSPMT2	PTW Dashboard
DSHDAFMT	OpenCAD dashboard date format. Default value = d-m-Y (possible values: 'd-m-Y' //Europe ; 'm-d-Y' //America)	PTW Dashboard
DSHNOTAG	Dashboard background-color no tagged objects. (RGB color #FFFFFF)	PTW Dashboard
SVGCTB	CTB global default for SVG Builder	SVG
SVGLAYON	SVG creation with all layers in the drawing (YES , NO).	SVG
CADSPCFG	Global default layers configuration for space	SVG
CADGRORG	Is the Org field hidden in any OpenCAD grid? YES for not being able to see the Org; NO for making the ORG field visible in any OpenCAD grid	SVG/BIM/DSH
CADPDFLO	A parameter that defines the custom logo to be used for the OpenCAD report. The parameter represents the EAM document's code that corresponds to the logo to be used within the report. The file MUST have a PNG extension.(Preferred size: 256x256 px)	SVG
BIMRELNU	OpenCAD BIM release number	BIM
CDKEYBIM	OpenCAD BIM Key	BIM
BIMUDF01	Field where the IFC file name is stored.	BIM
BIMUDF02	Field where the IFC id name is stored.	BIM
BIMUDF03	Field where the IFC asset name is stored.	BIM
BIMWORGH	Is the WO relationship with equipment visible in the EAM BIM toolbar? YES,for being able to see the WO list against the equipment. NO for closing the query and then being unable to get the list. The default is set as NO for not impacting performance.	BIM
OCWOSCRE	WO Cloned Screen (leave it blank for WSJOBS)	SVG
CADOBJFI	This parameter enables the setup of an additional EAM field (*) to establish a relationship between EAM and drawings, at the TENANT level. When this parameter is valued, it affects the auto-discovery behavior of OpenCAD Utility accordingly.	SVG
PARHYALT	Alternative Hyperlink configuration in EPC Part grid functionality	EPC
UDSCROLD	This installation parameter activates the OpenCAD EPC data update procedure. Valid values are: YES (data update procedure is carried out following the EPC logic), NO (the procedure is not executed)	EPC
DCPMIN	This installation parameter defines the time interval in minutes for the execution of the OpenCAD standalone service of DCP (Drawing Consistency Process). Valid values are 0 (the service is processing continuously) or any integer value greater than 0.	SVG

Eam Database Oracle - Function, Stored Procedure, Triggers

Functions

#	Function
1	CADCHECKOCADACTIVE
2	CADCHECKEXISTINGCOLUMN
3	CADCHECKEXISTINGTABLE
4	CADTABLECOLUMN
5	CADTABLECOLUMNPLUS
6	CADR5TABLES
7	CADCHECKEXISTINGVIEW
8	CADUSERVIEWS
9	CADR5VIEWS
10	CADR5USERVIEWS
11	CADCALCTABUT
12	CADCHECKEXISTINGTAB
13	CADCUSTOMFIELD
14	CADCUSTOMFIELDASSOCIATION
15	CADCUSTOMFIELDVALUEDESCRIPTION
16	CADENABLECUSTOMGRID
17	CADFORMATFORSQL
18	CADINSERTBOILERTEXT
19	CADQUERY
20	CADQUERYFIELDSDATASPYEAM
21	CADREPLACESPECIALCHARACTERS
22	CADSCREENPERMISSION
23	CADSCREEN
24	CADSCREENNOUPDATEURL
25	CADSINGLEBOILERTEXTS
26	CADSINGLEBOILERTEXTS1
27	CADSINGLEBOILERTEXTSONLANFIELD
28	CADSINGLEBOILERTEXTSONLANGGRID
29	CADBOILERTEXTFORGRIDDESC
30	CADSINGLECOLOR
31	CADSINGLECOLORCTB
32	CADSINGLELAYSPACECFG
33	CADCHECKUPDATEOLDTAB
34	CADSINGLETBSECURITY
35	CADSINGLESECCGRID
36	CADINSOUU003
37	CADSINGLECUSTOMGRID
38	CADSINGLEDATASPY
39	CADSINGLEDDFIELDNOTEXIST
40	CADFIELDFREETEXTNOTEXIST
41	CADSINGLEDDFIELD
42	CADSINGLEFUNCTIONTAB
43	CADSINGLEFUNCTIONUSERTABS
44	CADSINGLEGRIDFIELD
45	CADSINGLEGRIDFIELDNEW
46	CADSINGLEGRIDQUERY
47	CADSINGLEMENUITEM
48	CADSINGLEMENUITEMHIDE
49	CADSINGLEMENULANG
50	CADSINGLEOCADFUNCTION
51	CADSINGLEOCADBIMFUNCTION

#	Function
52	CADSINGLEPARAMETER
53	CADSINGLEPARAMETERUPBREAND
54	CADSINGLEPERMISSION
55	CADSINGLEUDSPERMISSION
56	CADSINGLEQUERYFIELD
57	CADSINGLEQUERYFIELDFIELDPLUS
58	CADSINGLESCREEN
59	CADSINGLESCREENGRID
60	CADSINGLESCREENPERMISSION
61	CADSINGLETABPERMISSION
62	CADSINGLETEXT
63	CADSINGLEUOMS
64	CADWRITEOCADR5GRID
65	CADALLLANGUAGES
66	CADALIGNMENTTEXT
67	CADALLLANGBOILERTEXT
68	CADBOILERTEXTFORFIELD
69	CADBOILERTEXTFORFIELDALLEXT
70	CADBOILERTEXTFORGRID
71	CADBOILERTEXTFORGRIDALLEXT
72	CADBOILERTEXTFORGRIDALL
73	CADCUSTOMFIELDVALUE
74	CADHYPERLINK
75	CADR5CONTENTTABLES
76	CADSINGLEDATASPYEAM
77	CADRECOVEROCADUTTAB
78	CADSINGLEMENULANGALLLANGS
79	CADR5EXTMENUXB
80	CADR5FUNCTION
81	CADR5FUNCTIONACTIVATION
82	CADR5FUNCTIONTABS
83	CADCODECGRID
84	CADCODECGRIDOU
85	CADCODECGRIDALLCASES
86	CADSINGLEUSERDEFINEDSCREEN
87	CADSINGLEWSPROMPTS
88	CADSINGLESCREENUDS
89	CADBOILERTEXTFORUDS
90	CADSINGLEBOILERTEXTSALLLANG
91	CADBOILERTEXTFORUDSALLEXT
92	CADBOILERTEXTFORUDSALLEXTBLOCK
93	CADBOILERTEXTUCADU03ALLEXTBLK
94	CADBOILERTEXTUCADU04ALLEXTBLK
95	CADBOILERTEXTUCADU05ALLEXTBLK
96	CADSINGLEPAGELAYOUT
97	CADSINGLEUDSFIELD
98	CADSINGLEWSPROMPTFIELDS
99	CADSINGLEFIELDGRR1
100	CADSINGLEFIELDGRR1ALIAS
101	CADUDSUCADU01FIELDSUPDATE
102	CADLABELSEPCUPDATE
103	CADUDSUCADU01LABELSUPDATE
104	CADUDSUCADU01FIELDS
105	CADUDSUCADU03FIELDS
106	CADUDSUCADU04FIELDSUPDATE
107	CADUDSUCADU04FIELDS

#	Function
108	CADUDSUCADU05FIELDSUPDATE
109	CADUDSUCADU05FIELDS
110	CADR5GRIDS
111	CADR5UDFSCREENS
112	CADR5HYPERLINKS
113	CADR5CDKEYDWG
114	CADR5INSTALL
115	CADR5PROPERTIES
116	CADR5QUERIES
117	CADR5UOMS
118	CADEMNPARENTCHECK
119	CADNOMENUITEM
120	CADSRULESET01PTWGRID
121	CADSINGLEOCADRTRUTKNS
122	CADOCEMNCODE
123	CADR5EXTMENUDELMENUITEM
124	CADR5EXTMENUXBDEL
125	CADSINGLEOCADR5EXTMENUS
125	CADEMNCODEFROMSEQUENCE
127	CADR5EXTMENUXBSEQUENCE
128	CADCODEUDSOUU
129	CADSINGLEURLPARAMETER
130	CADINSOUU003CGR

Procedure

#	Procedure
1	OPENCADACTIVATION

Trigger

#	Trigger
1	PREUPD2_U5OCAD_PDF
2	PREUPD2_U5OCAD_SVG_SEC_CGRID
3	PREUPD2_U5OCAD_SVG_TB_SECURITY
4	PREUPD2_U5OCAD_PARAMS

Eam Database MsSQL - Function, Stored Procedure, Triggers

Stored Procedure

#	Stored Procedure
1	CADCHECKOCADACTIVE
2	CADCHECKEXISTINGCOLUMN
3	CADCHECKEXISTINGTABLE
4	CADTABLECOLUMN
5	CADTABLECOLUMNPLUS
6	CADR5TABLES

#	Stored Procedure
7	CADCHECKEXISTINGVIEW
8	CADUSERVIEWS
9	CADR5VIEWS
10	CADR5USERVIEWS
11	CADCALCTABUT
12	CADCHECKEXISTINGTAB
13	CADCUSTOMFIELD
14	CADCUSTOMFIELDASSOCIATION
15	CADCUSTOMFIELDVALUEDESCRIPTION
16	CADENABLECUSTOMGRID
17	CADFORMATFORSQL
18	CADINSERTBOILERTEXT
19	CADQUERY
20	CADQUERYFIELDSDATASPYEAM
21	CADREPLACESPECIALCHARACTERS
22	CADSCREENPERMISSION
23	CADSCREEN
24	CADSCREENNOUPDATEURL
25	CADSINGLEBOILERTEXTS
26	CADSINGLEBOILERTEXTS1
27	CADSINGLEBOILERTEXTSONLANFIELD
28	CADSINGLEBOILERTEXTSONLANGGRID
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31	CADSINGLECOLORCTB
32	CADSINGLELAYSSPACECFG
33	CADCHECKUPDATEOLDTAB
34	CADSINGLETBSECURITY
35	CADSINGLESECCGRID
36	CADINSOUU003
37	CADSINGLECUSTOMGRID
38	CADSINGLEDATASPY
39	CADSINGLEDDFIELDNOTEXIST
40	CADFIELDFREETEXTNOTEXIST
41	CADSINGLEDDFIELD
42	CADSINGLEFUNCTIONTAB
43	CADSINGLEFUNCTIONUSERTABS
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51	CADSINGLEOCADBIMFUNCTION
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53	CADSINGLEPARAMETERUPBREAND
54	CADSINGLEPERMISSION
55	CADSINGLEUDSPERMISSION
56	CADSINGLEQUERYFIELD
57	CADSINGLEQUERYFIELDPLUS
58	CADSINGLESCREEN
59	CADSINGLESCREENGRID
60	CADSINGLESCREENPERMISSION
61	CADSINGLETABPERMISSION
62	CADSINGLETEXT

#	Stored Procedure
63	CADSINGLEUOMS
64	CADWRITEOCADR5GRID
65	CADALLLANGUAGES
66	CADALIGNMENTTEXT
67	CADALLLANGBOILERTEXT
68	CADBOILERTEXTFORFIELD
69	CADBOILERTEXTFORFIELDALLEXT
70	CADBOILERTEXTFORGRID
71	CADBOILERTEXTFORGRIDALLEXT
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77	CADRECOVEROCADUTTAB
78	CADSINGLEMENULANGALLLANGS
79	CADR5EXTMENUXB
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106	CADUDSUCADU05FIELDSUPDATE
107	CADUDSUCADU05FIELDS
108	CADR5GRIDS
109	CADR5UDFSCREENS
110	CADR5HYPERLINKS
111	CADR5CDKEYDWG
112	CADR5INSTALL
113	CADR5PROPERTIES
114	CADR5QUERIES
115	CADR5UOMS
116	OPENCADACTIVATION
117	CADEMNPARENTCHECK

#	Stored Procedure
118	CADNOMENUITEM
119	CADSRULESET01PTWGRID
120	CADSINGLEOCADTRUTKNS
121	CADOCEMNCODE
122	CADR5EXTMENUDELMENUITEM
123	CADR5EXTMENUXBDEL
124	CADSINGLEOCADR5EXTMENUS
125	CADEMNCODEFROMSEQUENCE
126	CADR5EXTMENUXBSEQUENCE
127	CADCODEUDSOUU
128	CADSINGLEURLPARAMETER
129	CADINSOUU003CGR

Function

#	Function
1	CAD_MSSQL_CHECKCREATEORREPLACEVIEW

Trigger

#	Trigger
1	PREUPD2_U5OCAD_PDF
2	PREUPD2_U5OCAD_SVG_SEC_CGRID
3	PREUPD2_U5OCAD_SVG_TB_SECURITY
4	PREUPD2_U5OCAD_PARAMS