

Base Query Definition

This shows the Query Items for the Base Query Definition. These elements correspond to the diagram. The Query Definition named 'View3D_CAD', accessible in the Table of Contents folder hierarchy **Administration** → **Configuration** → **Query Definitions**, is configured by default for the Dynamic Viewer and Streaming Viewers (see section [Default Tree Grid View Definition](#) for the default Tree Grid View Definition). This Query Definition can be used as a guide when creating alternative Queries for use with the Dynamic Viewer and Streaming Viewers.

Name	Context Item Type
View3D_CAD	<u>CAD</u>
Description	
Default Query Definition for Dynamic 3D viewer - DO NOT REMOVE	

Important

The Base Query Definition should not be modified. It has default Permissions designed to prevent inadvertent removal or change. See section Customizing the Query Definition for a description of how to customize the Query Definition used for the Dynamic Viewer and Streaming Viewer.

The base query identifies what data is necessary for the required information described in section CAD / CAD Structure Data Model. It is important to understand that this Query Definition, when executed, will return the 'Latest' in Structure Resolution – see Section Structure Resolution) CAD Structure.

Important

The CAD Structure Relationship is Hard Fixed by default



The properties given in the following table are required to be included in a Query Definition for the Dynamic Viewer and Streaming Viewer.

ItemType	Alias	Property
CAD ¹	CAD	id, keyed_name, x_min, x_max, y_min, y_max, z_min, z_max, config_id, is_current
CAD ConversionInfo		id, x_min, x_max, y_min, y_max, z_min, z_max
CAD Instance	CAD Instance	id, transformation_matrix
File	File_1	id, filename

The CAD Query Item, defined as the child of the root (context Query Item), ‘reuses’ the relationships and Properties of the root Query Item. This also defines a recursive Query whereby all Items of the child will be re-queried with the same Properties and related content as the root, and so on. By default, the keyed_name Property value is used for the text in the Tree Grid View. The xyz_min/max Properties are used to define the bounding volume for the associated geometry in the view file. It is used by the 3D View to help optimize the display priority of 3D component geometry when rendering and focus the camera when the view data is refreshed.

CAD ConversionInfo is a Null Relationship added to the CAD ItemType specifically to store information/metadata collected from the conversion process. Legacy environments stored the same information directly on the CAD ItemType. Thus, processing the results from an execution of a Query Definition must first refer to the CAD ConversionInfo relationship and then the CAD Item if this relationship does not exist.

The CAD ConversionInfo Null Relationship stores metadata processed during the CAD conversion process, including bounding box content.

Important

Legacy environments used the CAD ItemType to store data from the CAD Conversion process. The **CAD ConversionInfo** Relationship was added to obviate the need to update a CAD Item (and thus lock it) during the conversion process.

The CAD Instance Query Item should include the id and transformation_matrix Properties. As noted, the transformation matrix is used to position the view file geometry of the related child CAD Item.



The File Query Item that refers to the view file (note the Alias name - *File_1* - in the table) should include the id and the filename Properties. These values are used to form the proper URL to the vault so the 3D Viewer can retrieve the view files during processing.

