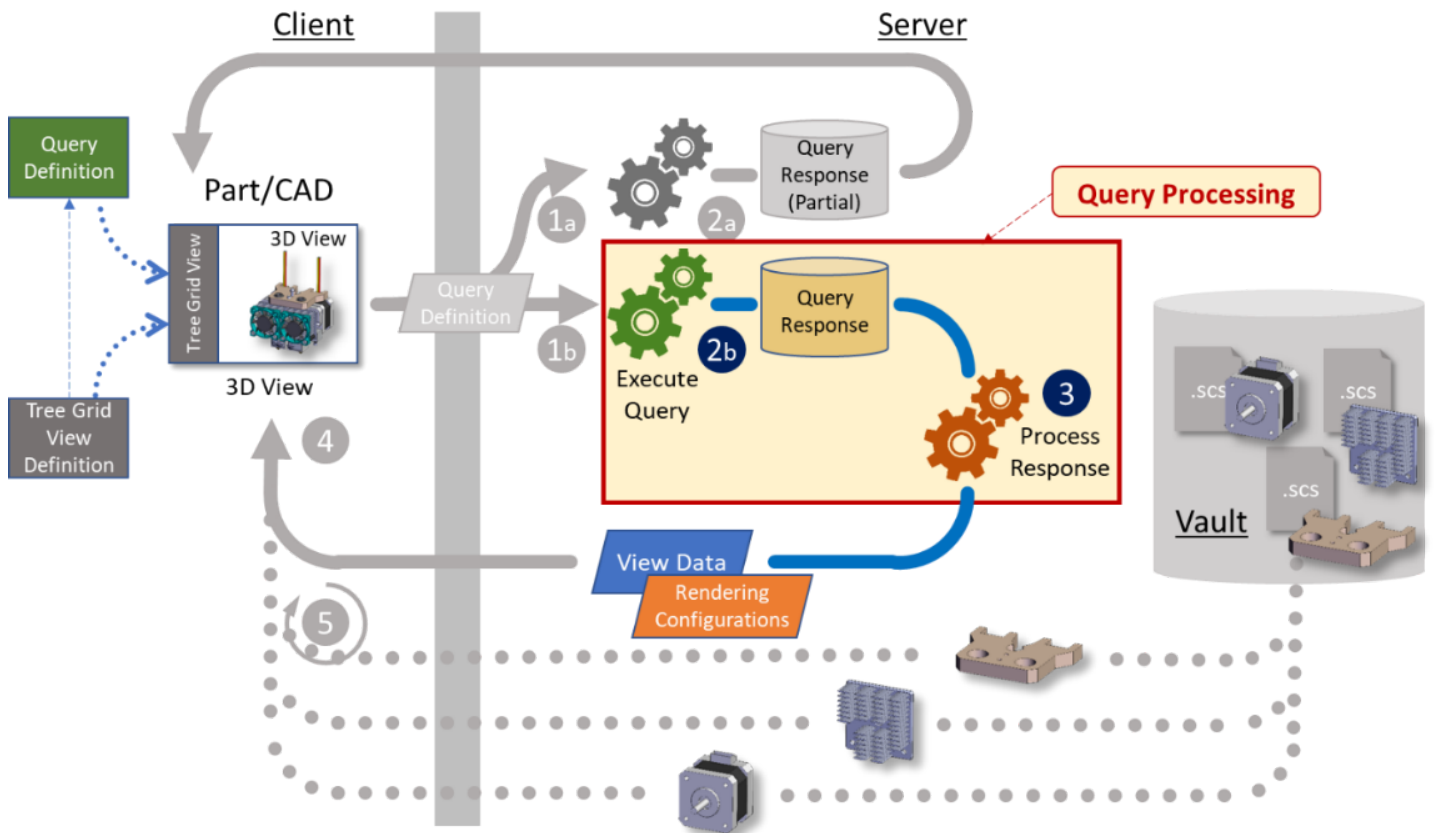


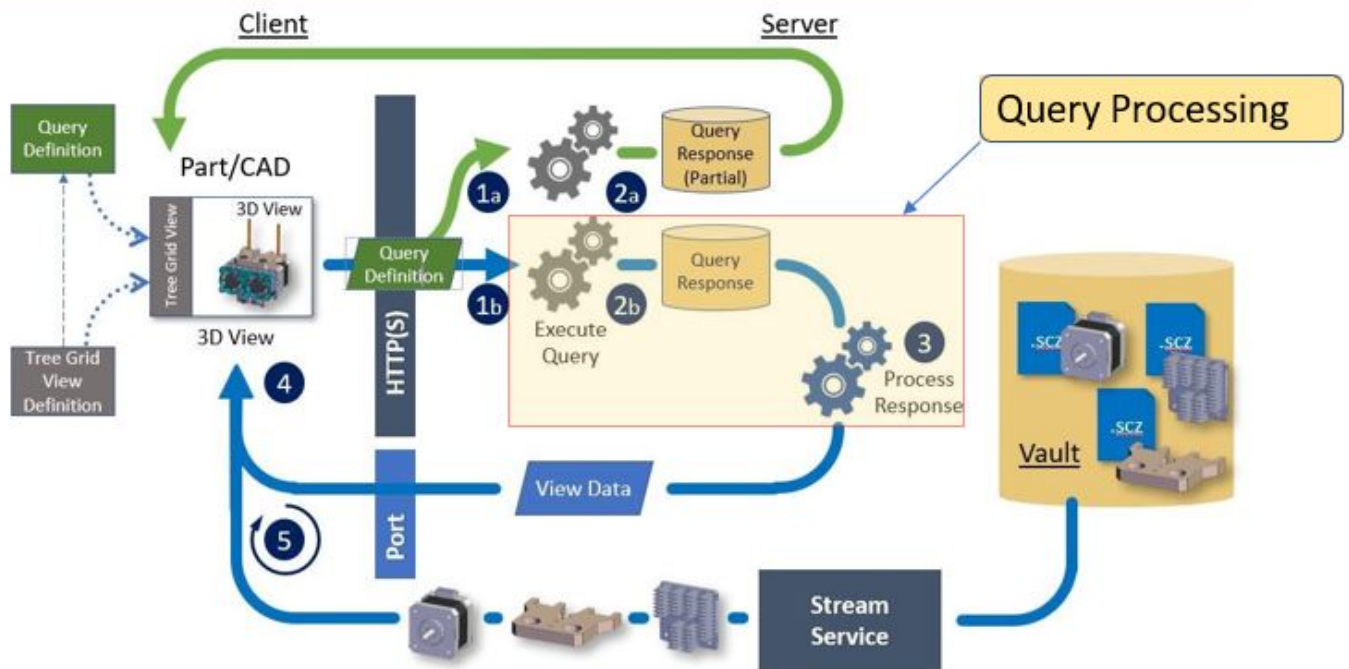
# Overview

For Dynamic Visualization, Query Processing refers to the process of executing a given Query Definition, parsing the results, and constructing a set of 'Product Occurrences' that represent the instances of the view geometry to display in the Dynamic or Streaming Viewer. Dynamic Visualization includes a Default Query Processor and, as explained in section *Error! Reference source not found.*, uses the CAD and CAD Structure data model as the source for the data required to construct a 3D View. As explained in section Creating Query and Tree Grid View Definition, this required data includes:

- 3D Component geometry
- Instances
- The transformations necessary to place and orient each instance



## Streaming Viewer Rendering Process (Shattered)



A Query Processing API was provided for Dynamic Visualization to allow implementations to utilize their own custom Query Processor when default processing will not fulfill the 3D Visualization requirements. A custom Query Processor provides the ability to:

1. Retrieve required data from alternate sources in a customer's data model.
2. Apply custom logic when processing the Query Definition execution results.
3. Create and apply alternate Rendering Configurations used to render the 3D View with different color and opacity for the 3D Component Geometry.
4. Map 3D Component Geometry to ItemType nodes displayed in the Tree Grid View other than CAD ItemTypes.

This capability greatly expands the applicability of 3D Visualization and enables use cases that are not possible using the Default Query Processor.

### Important

Query Processing for Streaming Viewers require SCZ files

