CDE SDK

What is CDE SDK?

CDE SDK is a product specially designed to create cloud product or service in the field of CAD and BIM design. It enables fast deployment in any environment, including isolated local networks, without relying on third-party services. Distributed as a technology rather than a service, CDE SDK can be deployed anywhere, making it highly adaptable to diverse infrastructure needs.

If you'd like to test this product, we provide not only trial archives, but a demo as well.

CDE SDK includes:

- Open Cloud server with REST API.
- JavaScript library for rendering 2D and 3D files in a browser.
- Various auxiliary applications from the WebTools package for running various tasks on the backend.

Open Cloud Server is a central part of the CDE SDK solution and is written in .Net Core version 8. It uses the following components for normal operation:

Backend

- MongoDB database for server data storage like users, files info, projects, permissions etc.
- File system or Cloud Storage provider for storing user files. Server support next Cloud providers:
    - Azure BLOB Storage
    - AWS S3
    - Google Cloud Storage

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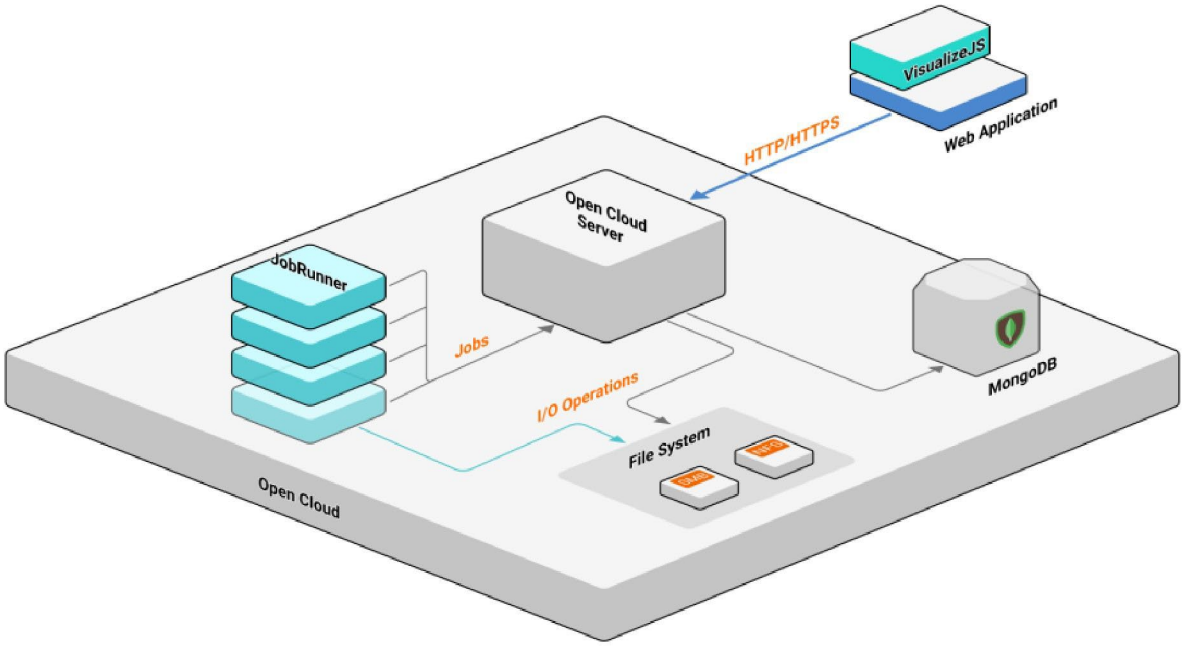
- The JobRunner application is used to start tasks from the Jobs group. Here tools from WebTools a started.
- WebTools that contains a set of utilities for working with BIM and CAD files.
    - FileConverter allows you to convert formats.
    - WebIfcValidator checks IFC files for validity and provides a report.
    - ClashDetector allows you to run a test for intersection of geometry from vsfx files

Frontend

- VisualizeJS library in WebAssembly format is used to display graphics in a browser.
- A ClientJS browser library that provides an API and simplifies working with VisualizeJS and Open Cloud Server.

The general Server operation scheme is shown below.



To work with the server, a REST API is provided. It contains the following resource groups:

- /files - Load, manage and delete files.
- /jobs - Work with jobs to convert files to other formats.
- /markups - Create notes and annotations.
- /users - User management.
- /assemblies - to work with merged files
- /project - Work with projects\

We also provide Client.js library - it is used for the browsers for implementing BIM Project management applications. Client.js provides the following benefits:

- Easy access to the server resources like Projects, Files, Issues etc
- Integration of the VisualizeJS library with the Open Cloud Server
- Convenient API to open BIM files from the server for rendering and data management
- Optimizations and improvements of the quality of rendering BIM files

Features

1. Centralized Data Management
2. Version Control and Revision Management
3. Secure Access and Permissions
4. Collaboration and Communication
5. Data Integration and Interoperability
6. File and Data Exchange
7. Performance and Scalability
8. Reporting and Analytics
9. BIM data inspections: BCF Format Support: and File Analysis Tools

Pricing and Format Support

CDE SDK works with all desktop ODA archives, making it possible to use various formats in your cloud or web solution.

Starting from the Sustaining membership level, you'll have access not only to the CDE SDK, but to the whole Core Package - Visualize, Architecture, IFC, STEP, and Publish SDKs and all formats associated with it:

- DWG, DXF, DWF
- DGN
- IFC, IFCZIP, BCF, IDS
- STEP, STP
- SVG
- STL
- OBJ
- RCS / RCP

The following file format are supported within Extensions and require additional subscription:

- NWD, NWC, NWF
- RFA, RVT