

WebSocket Adapter

Desktop File System Access

eQuorum's ImageSite and Engine-Box products provide a free, optional feature (at customer discretion) utilizing HTML5 WebSockets to facilitate easy document/file uploads and downloads, especially when placing CAD files in their proper local workspaces. This is accomplished via the eQuorum ImageSite WebSockets Adapter (WSA). The adapter is a native Windows application installed on the user's local machine allowing it to interact with Windows in a way web browsers usually can't.

The Adapter starts up on login to the computer of the installing user. This native client uses WebSocket protocols to communicate automatically with the ImageSite/Engine-Box server and receive requests from the browser regarding needed file operations.

The local browser connects to the WebSockets Adapter with a URL of `wss://local.imagesite-websocket.com`. This resolves to 127.0.0.1, the localhost's loopback IP address. The WebSocket Adapter also has an SSL certificate from Comodo embedded in the executable.

The Adapter receives server requests from the browser and services them as required. These requests include activities such as:

- Requesting the logged in user's identity from Windows to authenticate the user and automatically log them into ImageSite (for on-premise installations)
- Downloading a file, or multiple files, from the ImageSite/Engine-Box server to the user's local file system without typical browser prompts
- Automatically opening up local applications after files have been downloaded
- Retrieving a file from the user's local file system and uploading it to the ImageSite/Engine-Box server without browser interaction
- Scanning a user's configured workspace folder structure to determine if there are any new or modified files to be uploaded.

WebSocket Adapter Features and Functions

The Adapter is primarily driven by requests from the ImageSite/Engine-Box browser application. The specific functions include:

- Scan Workspace – Scans the user's configured local file system or network share for new files that do not exist in ImageSite/Engine-Box or modified files. New files are uploaded and modified files are uploaded and checked in as a new revision
- Scan Workspace Folder – Functions the same as Scan Workspace on a user specified folder within the workspace
- Download File(s) to Workspace – Downloads one or more files as read only from ImageSite/Engine-Box to the user's configured workspace on the local disk or network share
- Download File(s) to User Specified Location - Downloads one or more files as read only from ImageSite/Engine-Box to a location on the local disk or network share, as specified by the user via a file browser dialog
- Check Out Files to Workspace – Downloads a file as read/write to the user's configured local workspace. The user can then modify the file with its associated application and check it in as a new revision
- Open File – On download or check-out the user can optionally specify the file's associated application open the file
- Upload File – Uploads a file into ImageSite/Engine-Box from the user's local disk or network share, as specified by the user via a file browser dialog
- Check-In File - Uploads a file into ImageSite/Engine-Box and creates a new revision of the file from the user's local disk or network share, as specified by the user via a file browse dialog
- Update Local Workspace Tree – Automatically creates folders in the user's configured workspace to mirror the folder that exists in the corresponding location in ImageSite/Engine-Box
- CSV Upload – Allows the user to browse to and select a comma separated values (CSV) file from the local file system and automatically upload the files specified within the CSV along with their associated attributes
- CAD Related Features – Automatically downloads files that are referenced by the file being downloaded or checked-out. Automatically uploads files being referenced by the master file being uploaded or checked-in. Referenced files that cannot be automatically located on the local disk invoke a prompt for the user to manually specify the location
- Options for Download and Check-Out – Includes prompting for overwriting existing files and whether to open the file in its associated application
- Options for Upload and Check-In – Optionally specify if a dialog should be displayed after upload that allows entry of the file's attributes. Optionally, specify if the system should prompt the user for reference files that it cannot locate.

Technical Aspects

Other technical aspects of the WebSockets Adapter:

- HTTP support enforces an Access-Control-Allow-Origin to limit requests only from the local PC
- Tunneling is not allowed through any WebSocket support within the WebSocket Adapter
- All HTTP requests outside the WebSocket channel are intercepted and result in a status 200 message
- All WebSocket requests must be in the appropriate format, including containing the encrypted ID
- Requests are validated against a limited set of possible requests and any invalid requests are ignored, with an error message being posted to the log.

