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D2 Smartview SDK

version: 25.4.0

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- D2 Smartview UI extension environment.
- D2-REST services extension environment.
- D2 plugin development environment.

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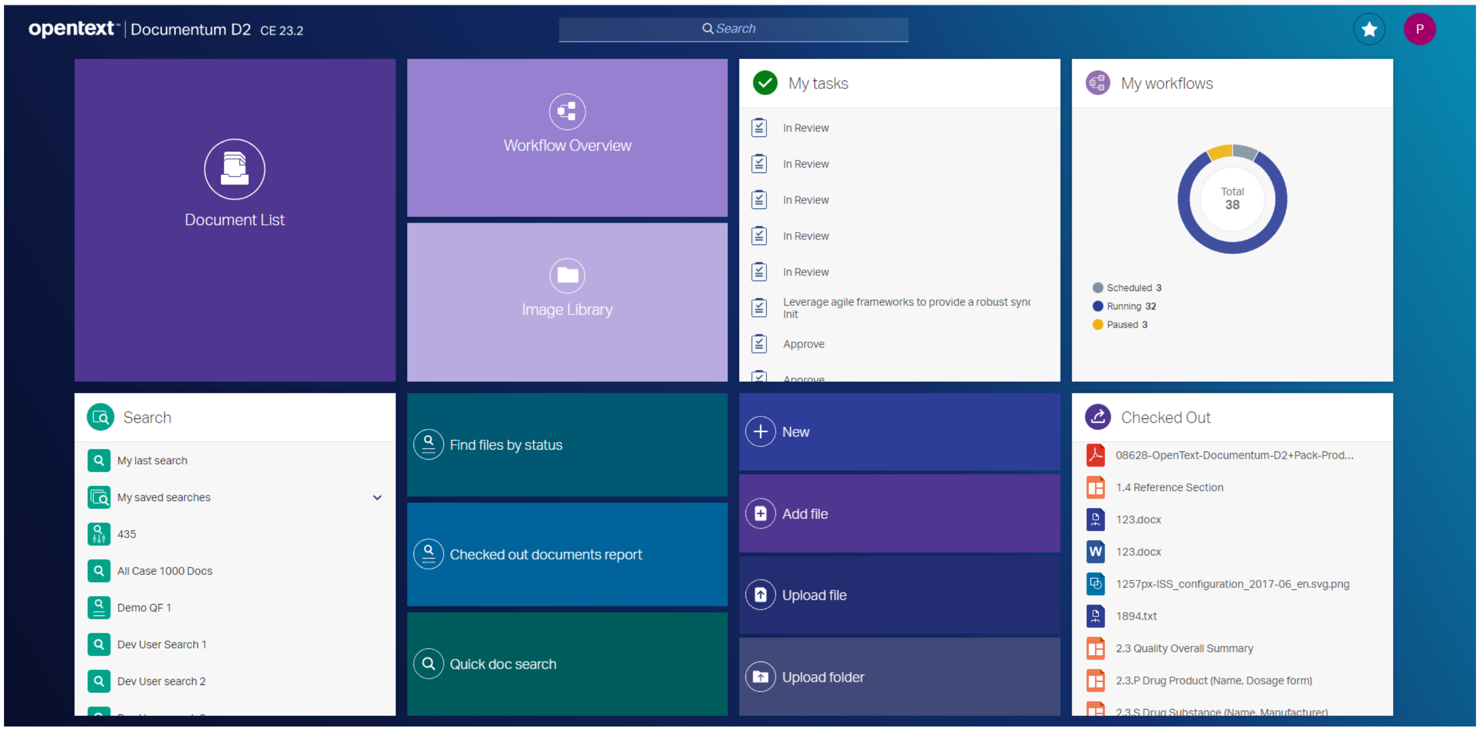

How to prepare and start with the development environment

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3. Create the development workspace
4. Get familiar with SDK tools
5. Create a plugin project
6. Start coding

1. Download the developer tools for your OS:

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4. Get familiar with Workspace assistant

Check out the Workspace assistant. It's a good idea to familiarize yourself with the general aspects of the SDK, this can be done later though.

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# Once done, type and run-
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# Or, alternatively run the workspace assistant again and select "Build all plugins in
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# This will build all projects in the workspace
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6. Getting started with SDK development

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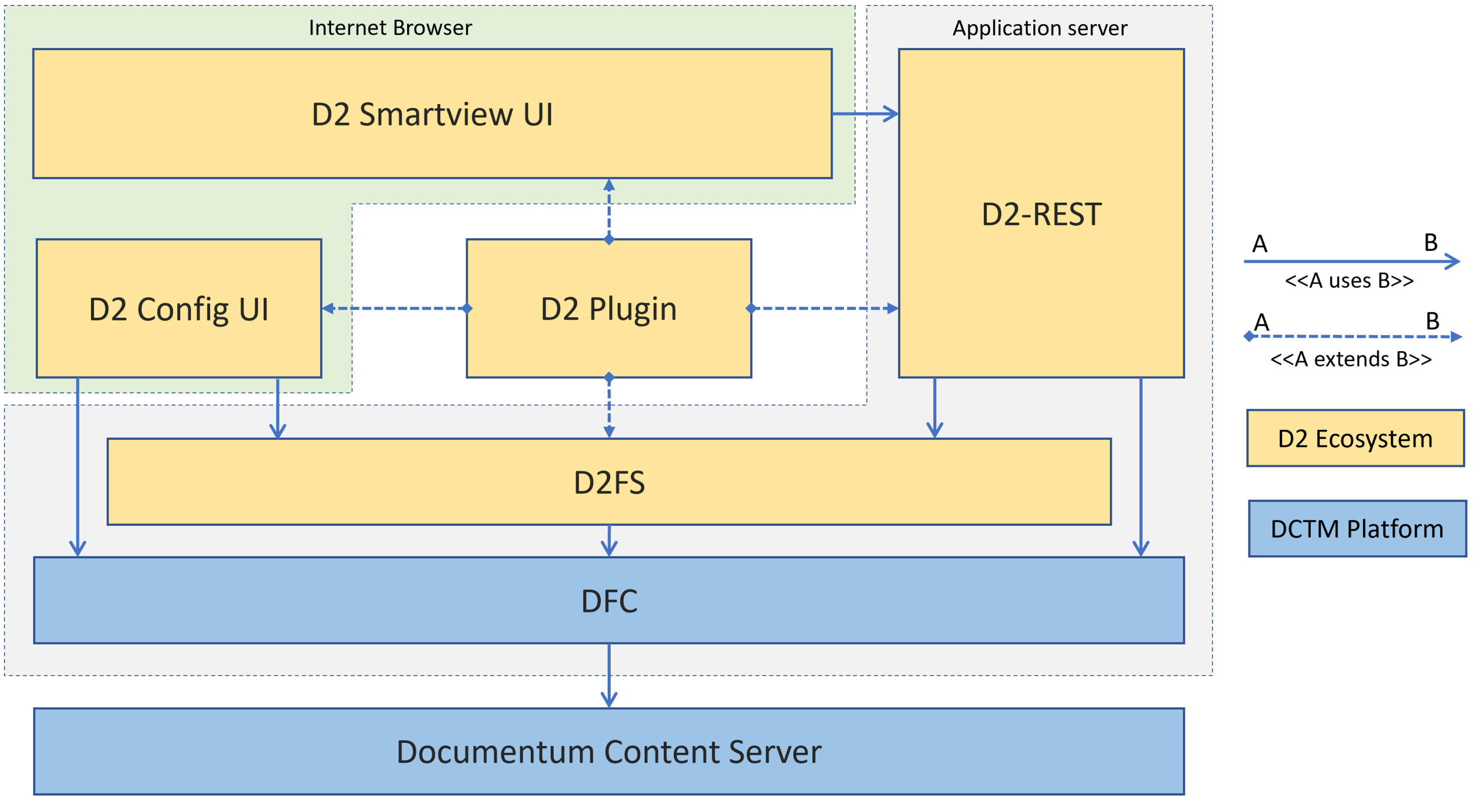
Architecture

A simplified representation of the D2 Smartview(D2SV) runtime.



A central component of the runtime is D2 Plugins a.k.a D2FS Plugins. A D2 Plugin is loaded dynamically in the D2SV Ecosystem and it can primarily augment functions of D2 Foundation Services(D2FS).

The D2SV SDK API is built around the same D2 Plugins architecture and additionally it can augment functions of D2SV UI & D2FS-REST runtime.

The SDK deals with hybrid Maven + NodeJS project which has both Java & Javascript code along with other static resources organized in a certain structure. Upon build, the SDK compiles and packages the built output into a Jar. This Jar file can then be dropped inside the `lib` folder of a D2 Smartview runtime. The D2SV runtime loads the pluggable components from within the Jar dynamically.

Technology

The D2 Smartview is a web application and requires a hybrid middleware runtime. JVM runs the Java written back-end code and an Internet browser's Javascript VM runs the front-end. All the communication between FE & BE happens through AJAX request-response.

- The Java based back-end uses the Spring WebMVC Framework, configured to run in an application container, along with other proprietary and open-source libraries.
- The Javascript front-end uses Backbone & Marionette UI framework along with jQuery, RequireJS, Underscore, Handlebars etc. libraries.

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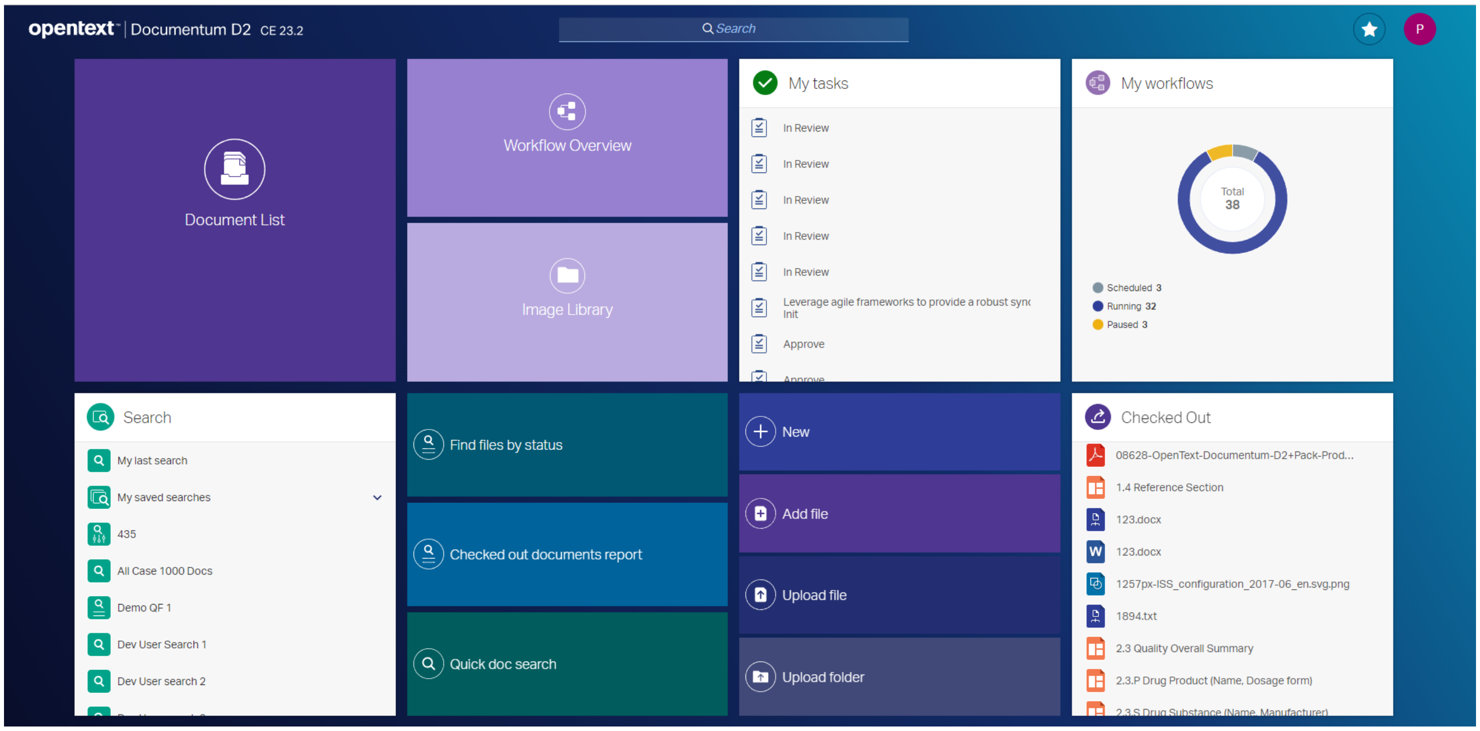

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Overview

The API includes classes, objects, methods & extension points that could be used to enhance/alter existing components of D2SV runtime or write brand new components for it.

The D2SV runtime is comprised of

FRONT-END

Runs on Internet browsers, written using Javascript, HTML, CSS.

Components of the application are loaded using RequireJS framework that comes bundled with the runtime. A bunch of other open-source libraries are pre-packed as part of the runtime. Below is a list of libraries and their RequireJS module dependency path -

- BackboneJS (nuc/lib/backbone)
- MarionetteJS (nuc/lib/marionette)
- UnderscoreJS (nuc/lib/underscore)
- jQuery (nuc/lib/jquery)
- MomentJS (nuc/lib/moment)
- jQuery Fancy tree (d2/lib/fancytree/jquery.fancytree)
- D3 JS (csui/lib/d3)

  Available requirejs plugins -

  - i18n - Loads a localization module
  - hbs - Loads handlebar template files (*.hbs)
  - json - Loads JSON files (*.json)
  - css - Loads CSS files (*.css)

BACK-END

Runs on Web application container, Written in Java.

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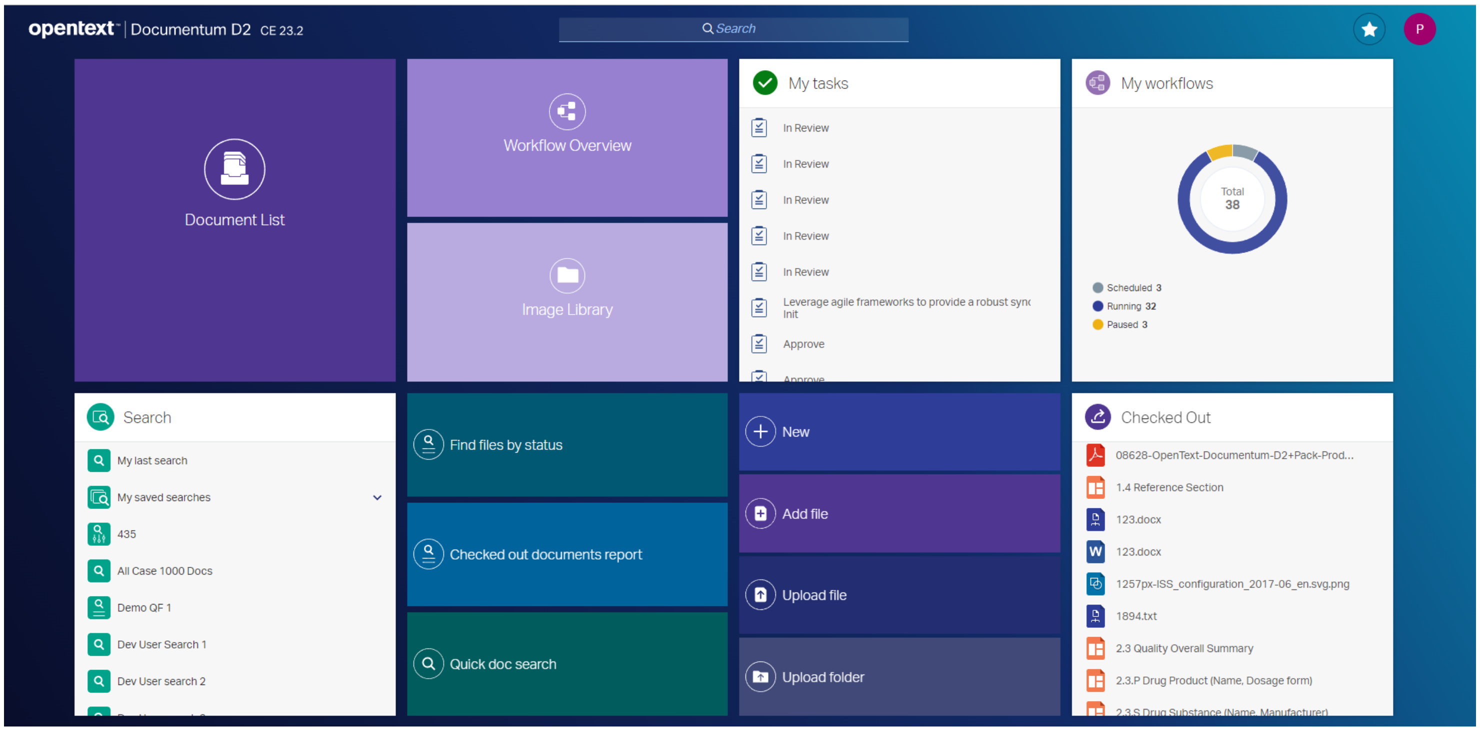

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