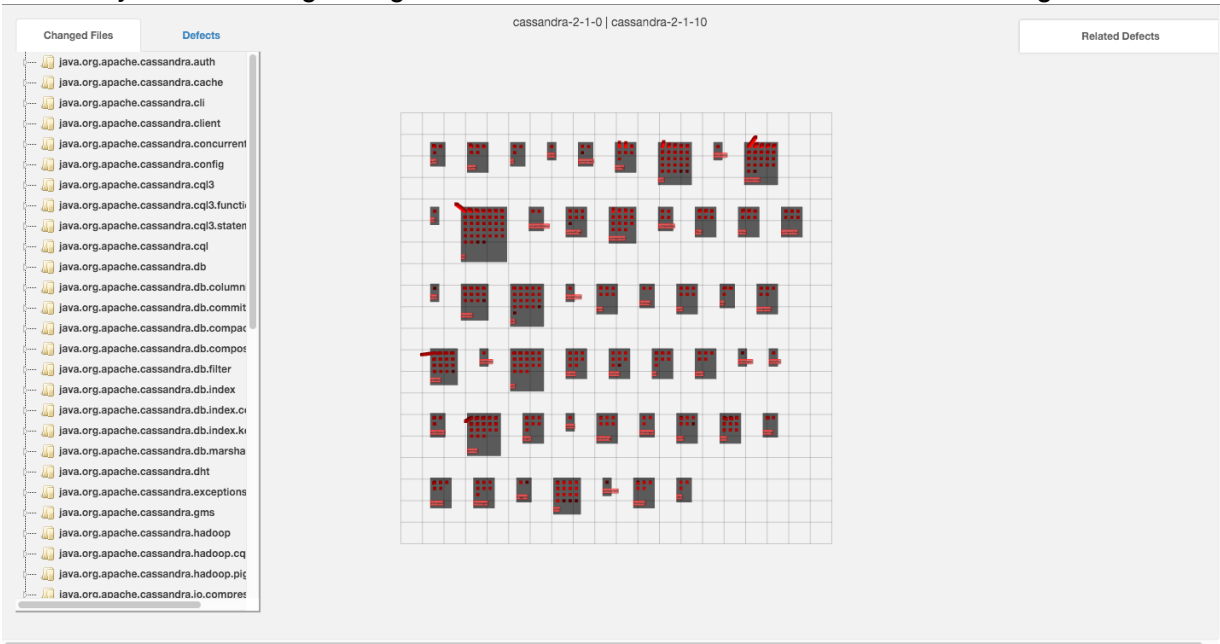


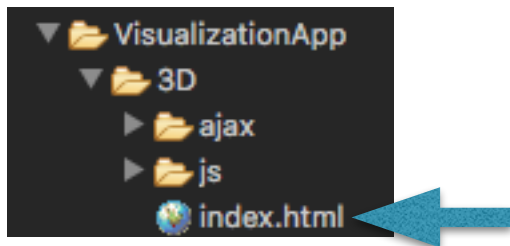
Visualization User Guide

Introduction

This is a data visualization for bridging the gap between changes on source code and defects. It's mainly for visualizing changed source files and defects related to these changes.



Double click on index.html to start



If already started, please click the Refresh Button!



1. Source Code List

This is a list of changed files. You can quickly locate a file in this list.

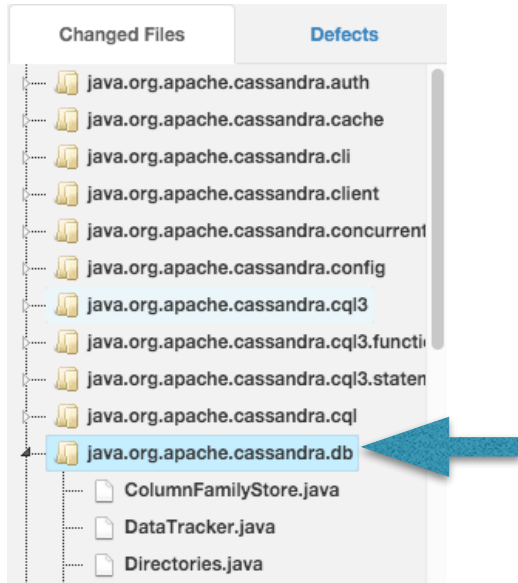
Interaction options

- Double click on a folder to unfold it.

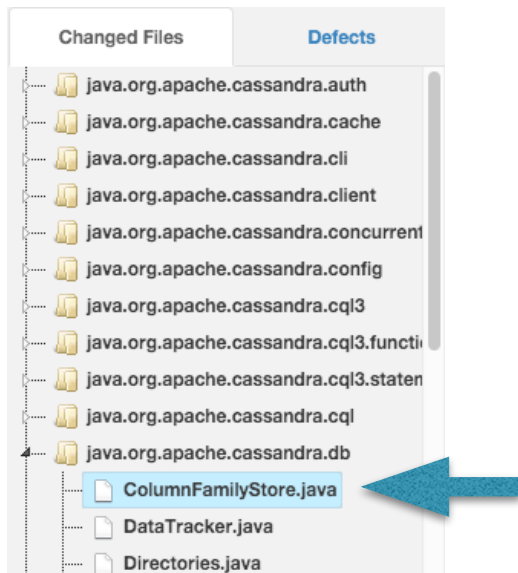
- Click a file to view related defects in the list at right of the window.
- Double click on a file to move closer to the representation of it in the visualization.

Example

- Find java.org.apache.cassandra.db in the Changed Files list and double click on it.



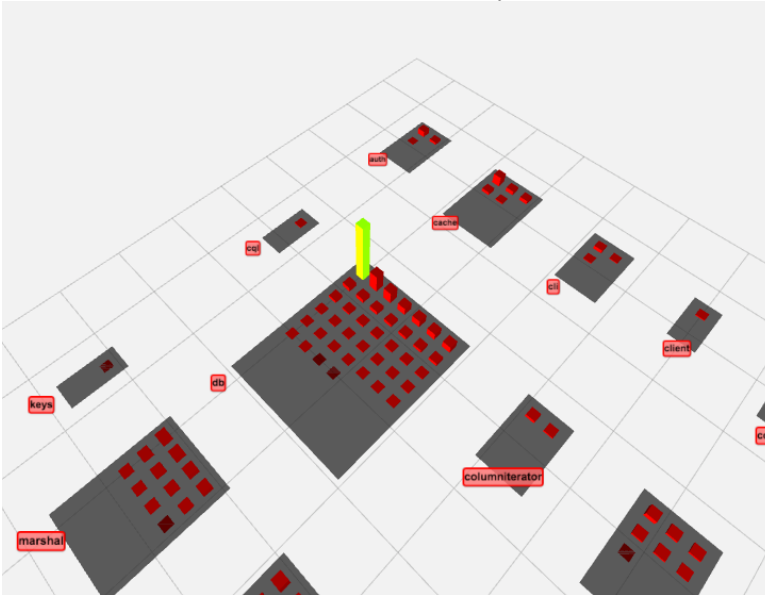
- Find ColumnFamilyStore.java and click on it.



- View its representation, marked by green color, in the visualization.



- Double click on ColumnFamilyStore.java to move the camera closer to the representation.



2. Defects List

This is a list contains all defects that related to changes between two versions of a project.

Interaction Options


- Click on an item in the list to expand it and view a summary of this defect.
- Click this item again to collapse this item.

Example

- Select Defects tag

Changed Files	Defects
	CASSANDRA-10205
	CASSANDRA-10507
	CASSANDRA-10161
	CASSANDRA-10478
	CASSANDRA-10219
	CASSANDRA-10275

- Find CASSANDRA-10507 and click it to expand it.

Changed Files	Defects
	CASSANDRA-10205
	<u>CASSANDRA-10507</u> 
	Update cqsh copy for new internal driver serialization interface (2.1 and 2.2) #a85afbc7a83709da8d96d92fc4154675794ca7fb Committed By Tyler Hobbs Committed on 10/13/2015 Created By Stefania Alborghetti
	CASSANDRA-10161
	CASSANDRA-10478
	CASSANDRA-10219
	CASSANDRA-10275

- Click CASSANDRA-10507 again to collapse this item.

3. Related Defects List

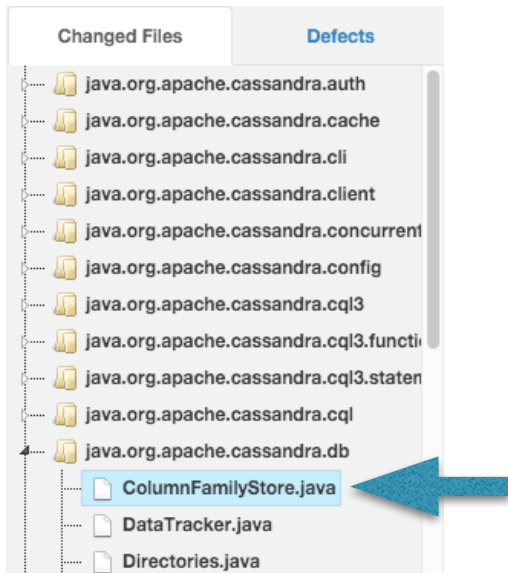
This is a list to show defects that are related to the changed file you select in the list at left, or you select in the visualization.

Interaction Options

- Click the tag at the top right with the name of the changed file on it to expand that tag and show a list of related defects.
- Click the tag again to collapse it.
- Click a related defect to view a summary of this defect.

Example

- Click ColumnFamilyStore.java in the list at left



- Click the tag at the top right with ColumnFamilyStore.java on it



- Click any item to view detailed information

4. Version Number

This is a tag at the top to show the compared version numbers of a project. In the future work, we'd like to allow users to switch between versions.

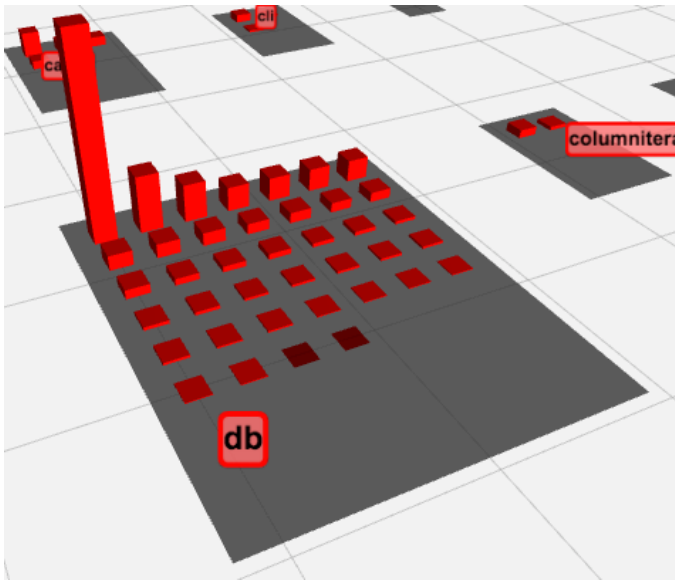
cassandra-2-1-0 | cassandra-2-1-10

5. 3D visualization

This is a visualization of changed files.

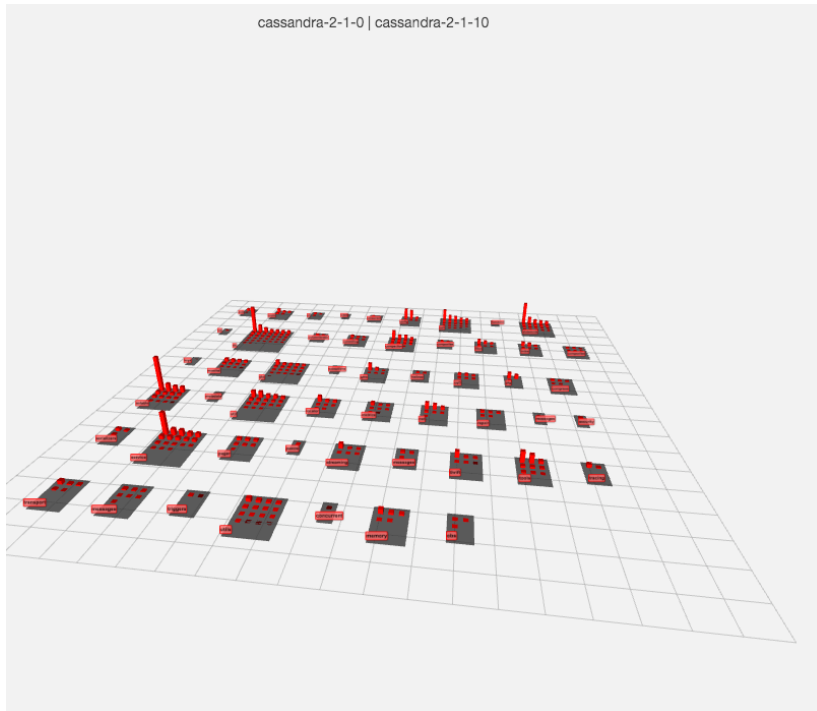
- **View**

- A grey rectangle with its name aside represents a package.
- A red cube represents a changed file. The taller the cube is, the more changes have been made on the file it represents.

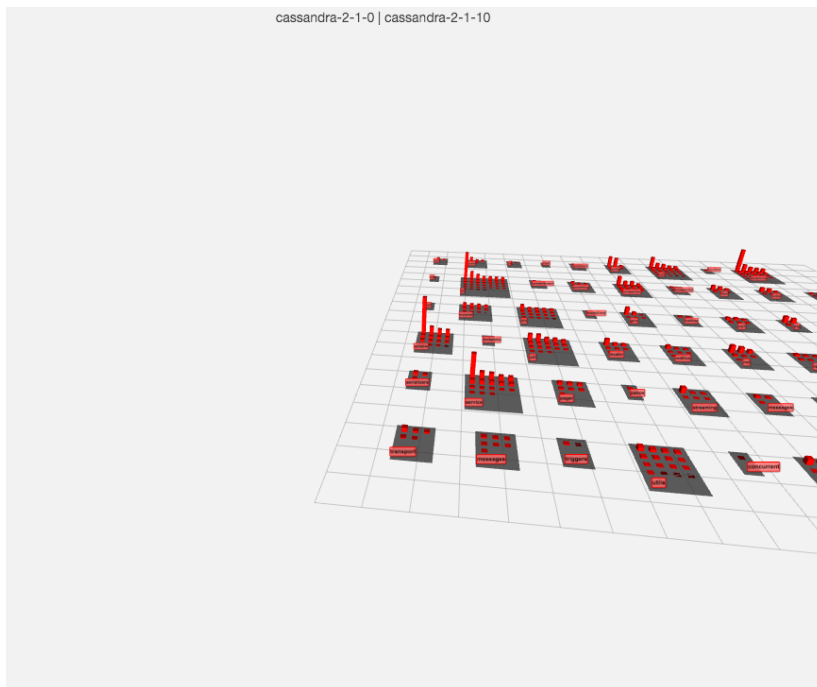


- **Navigation**

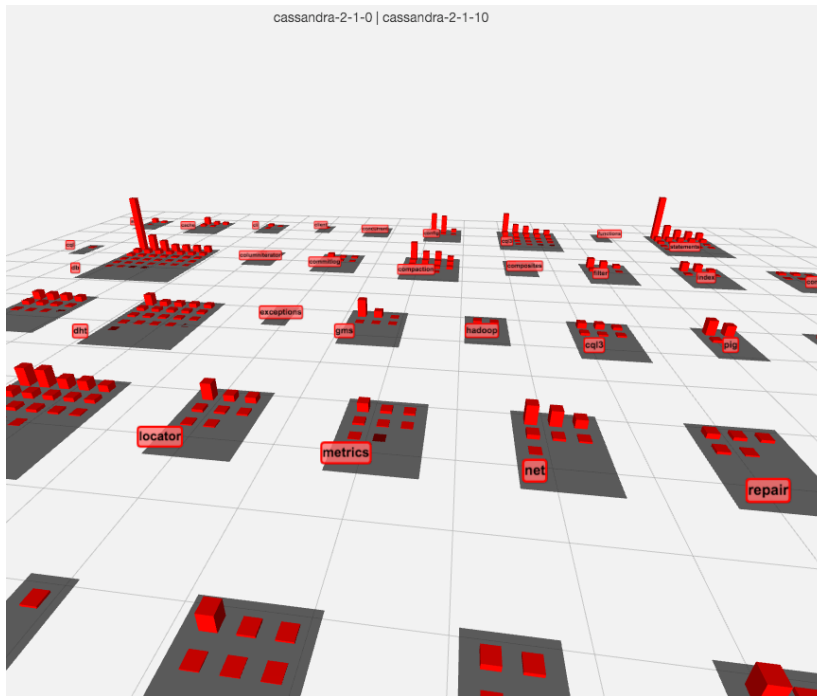
- Use the left button of a mouse or a touch pad to rotate the base of the whole view.



- Use the right button of a mouse or a touch pad, or push arrow keys to pan the view.

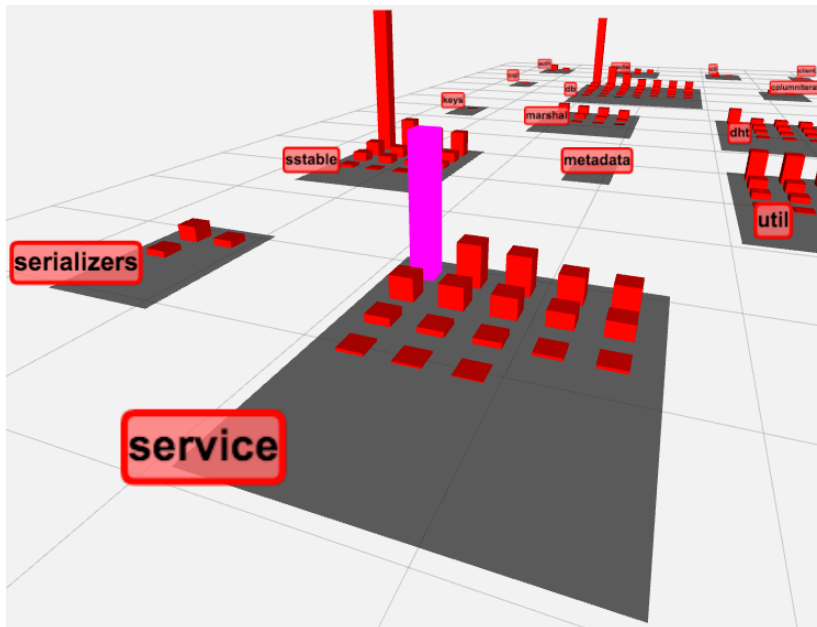


- Use a mouse wheel, or pinch on touch pad, or push number key 9/0 to zoom in/out.

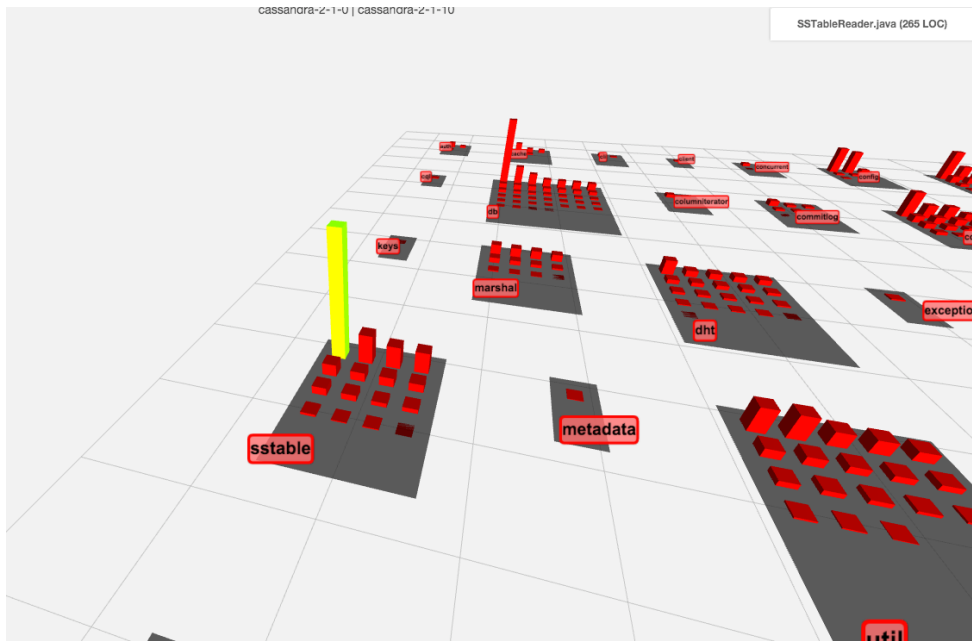


- **Interaction**

- Hovering on a cube changes the color of it to purple to indicate that it can be selected.



- Click a cube to select the one you are interested in. The cube will then turn to green, and a list of related defects will show up at the right.



- Double click a cube to move the camera closer to it.

