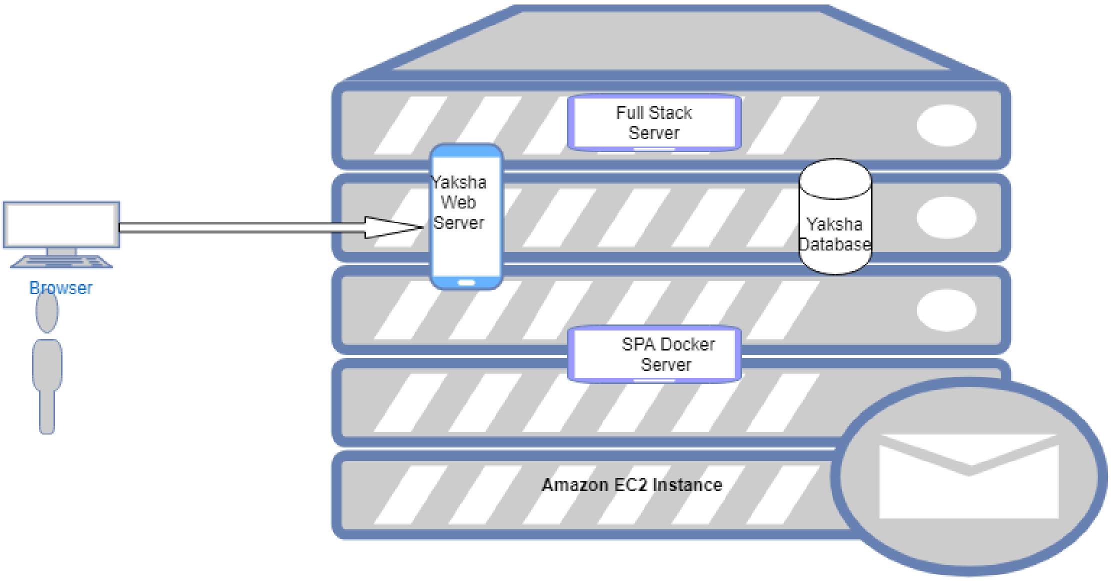
1. Overview

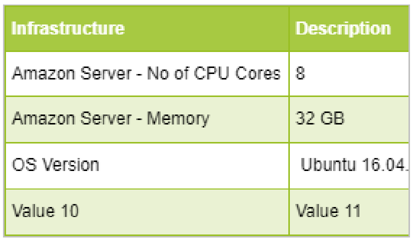
Yaksha is a fully blown Assessment platform that tests learners on following type of tests

a. McQ
b. SPA – Single Page Applications
c. Full Stack assignments

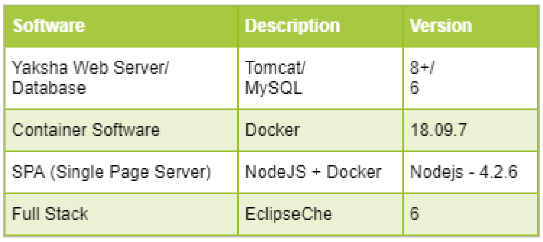
This document is a summary of deployment specifics for Yaksha Assessment platform as it is now and listing of all data flows. Each data flow is distinguished by a set of common software component involved irrespective of function – There might be multiple features that might be using the same component flow.

2. Deployment Diagram



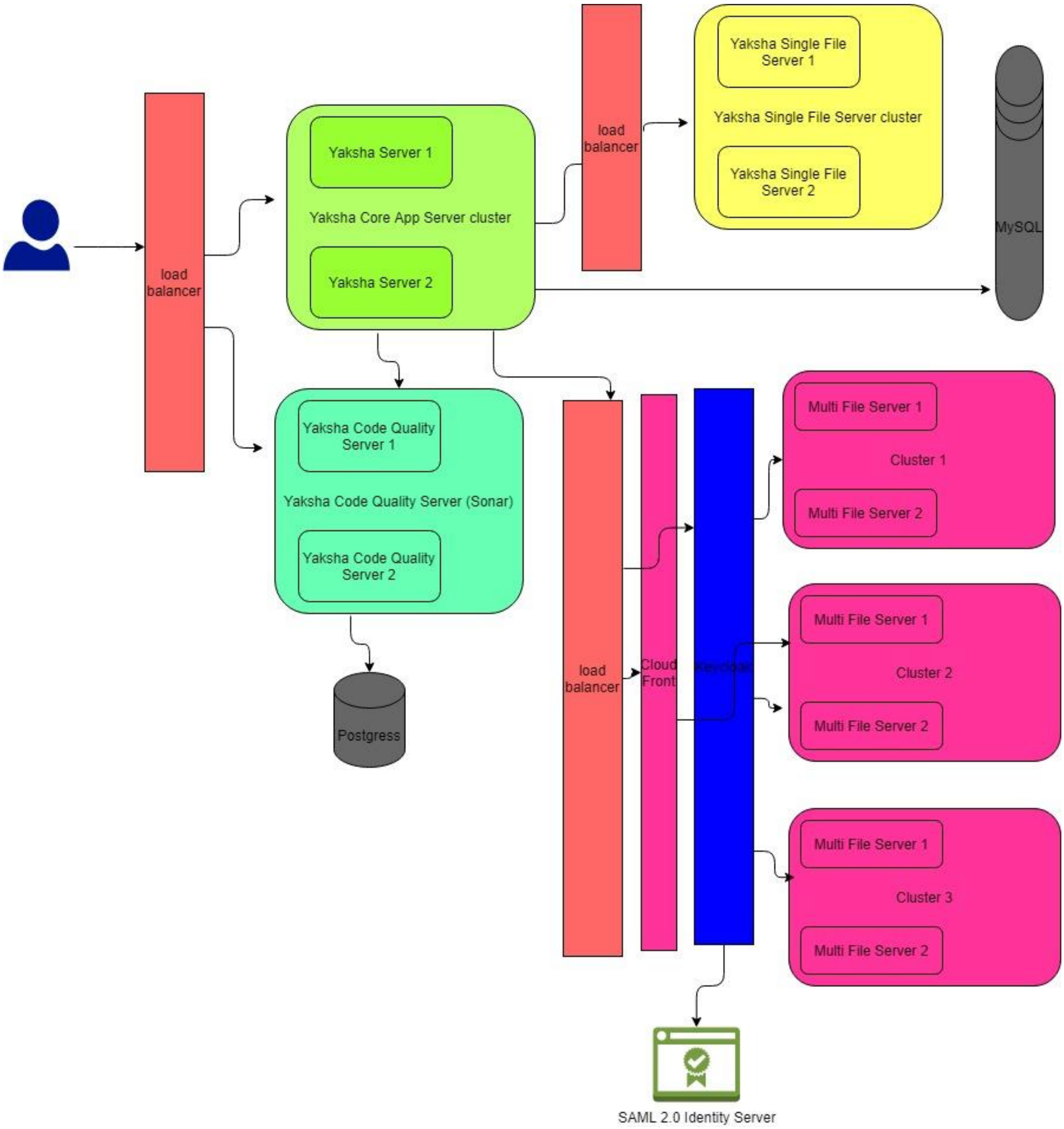


Infrastructure	Description
Amazon Server - No of CPU Cores	8
Amazon Server - Memory	32 GB
OS Version	Ubuntu 16.04.
Value 10	Value 11

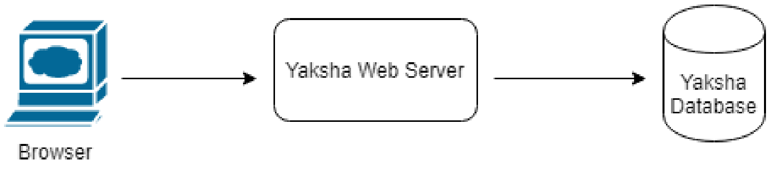


Software	Description	Version
Yaksha Web Server/ Database	Tomcat/ MySQL	8+/ 6
Container Software	Docker	18.09.7
SPA (Single Page Server)	NodeJS + Docker	Nodejs - 4.2.6
Full Stack	EclipseChe	6

2.1 Detailed Deployment



3. Data Flow 1



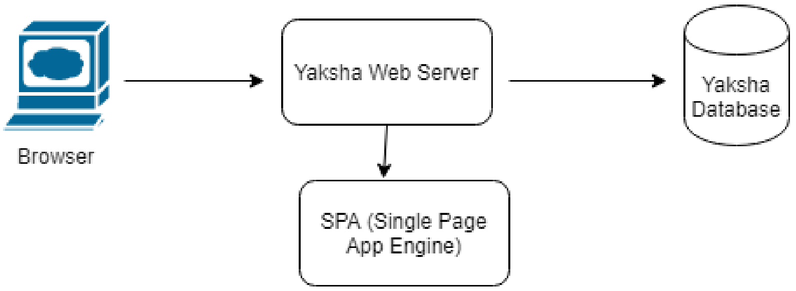
Administrator
1. Questions Set up
2. Tests Configuration
3. Tests Scheduling
4. Tests Sharing
5. View Reports

Test Giver
1. Go through MCQ Tests

Full Stack Reviewer
1. Review Full Stack Assignemnts by Test Giver

Actors for this flow – Test Admin / Test Giver / Reviewer

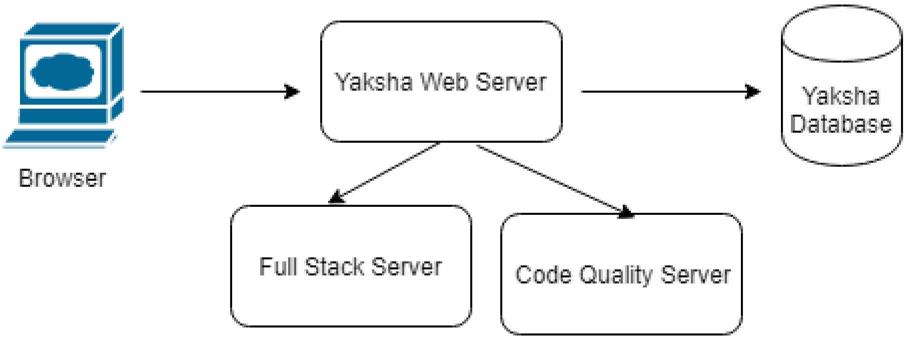
4. Data Flow 2



Test Giver
1. Go through Single Page Program Test

SPA – Single Page Application Test : Yaksha has a capability to ask test givers to code a problem statement in one of many programming languages that Yaksha supports. Single page programs are basically, as name suggests, 1 file isolated programs – e.g: Write a Fibonicci series, Arm strong number or so. Single page programs does not depend on third party libraries nor do they require more than 1 files to code a solution.

5. Data Flow 3

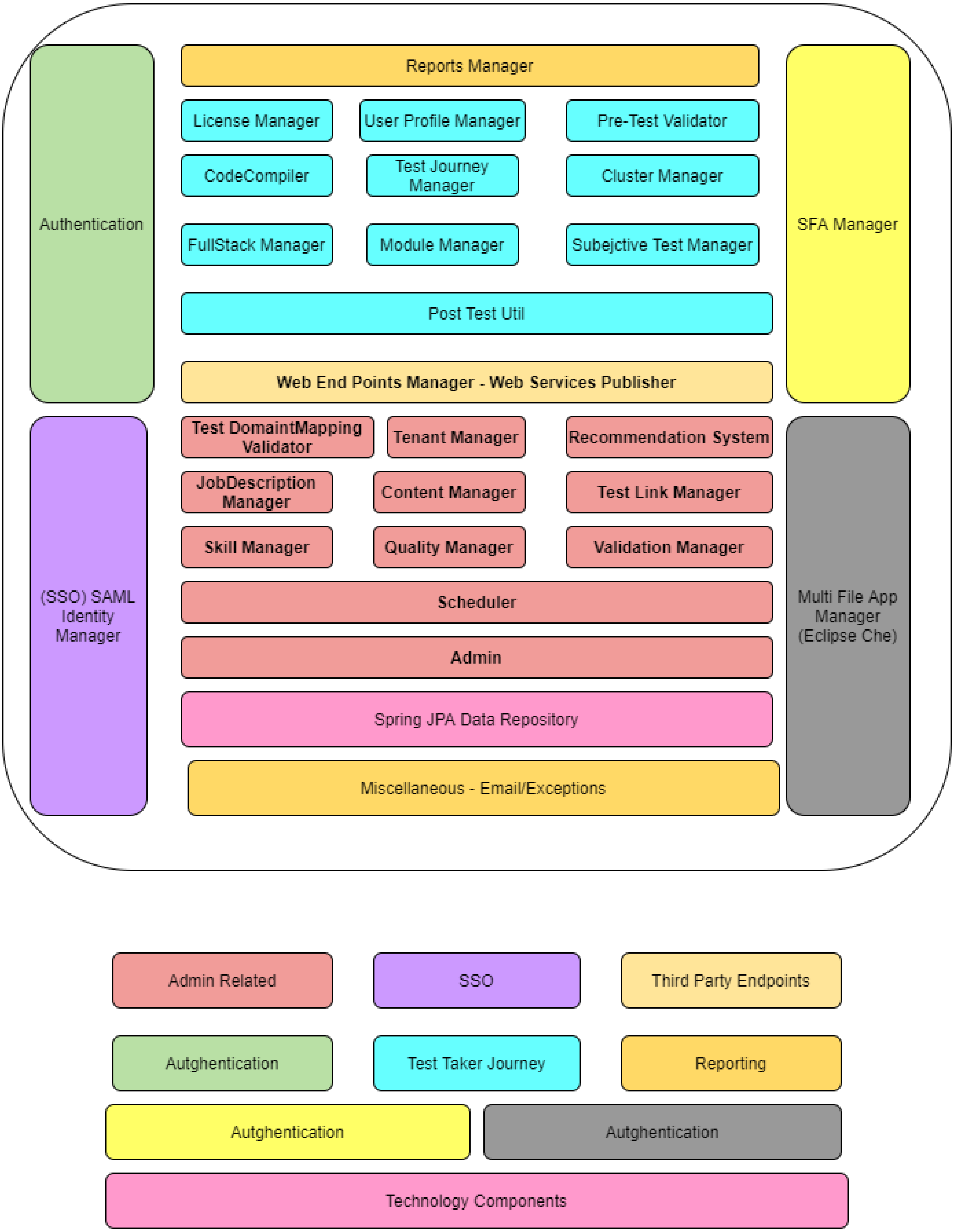


Test Giver
1. Complete Fullstack Server

a. Test Givers are also asked to complete a full stack test based on Java/.NET/JavaScript/Python/etc languages. Full stack assignments are different vis-à-vis SPA assignments in a way wherein the expectation from test givers is to develop an application spanning front/middle and data tiers. Test givers are allowed full liberty to use any third party library(s) as they deem fit for the purpose of the assignment.

b. Post the submit of the assignment there are 2 types of reviews that happen
    a. Automated Code Quality Check through Sonar Code Quality Server
    b. Manual review on functional and programming/architectural parameters by a manual reviewer (See Data flow 1)

6. Yaksha Logical Component Diagram



7. Yaksha Technical Component Functions Glossary

Component Type	Component	Description
Admin	Tenant Domain / Mapping Validator	Configure Tests only for test takers belonging to a specific domain (@www.com)
	Tenant Manager	Create Tenants on the fly
	Recommendation System	Configure the mapping between qualifiers and recommendations
	Job Description Manager	Create Job Descriptions as per set of qualifiers with different weights
	Content Manager	Create Questions, Tests with necessarily configurations
	Test Link Manager	Create Test links with time stamps
	Skill Manager	Create Skills to map with start and end dates
	Quality Manager	Verify the Question Excel data before actual upload
	Validation Manager	Set up business validations for tests - no of attempts/time/etc
Test Taker Related	License Manager	Fetch the tests/modules as per a set of licenses a Tenant Admin might have procured
	User Profile Manager	Generates the learner profile
	Pre Test Validator	Before actually commencing the test, validates the conditions - no of attempts/ domain check / date validity/etc
	Code Compiler	Does the compilation and execution of test spa programs by users
	Test Journey Manager	Manages the entire test giver journey from start to finish
	Cluster Manager	Check the Eclipse Che cluster for availability before creating the workspace there
	Full stack Manager	Manages the full stack test flow
	Module Manager	Displays modules (set of tests related to a subject) to the learner in his dashboard
	Subjective Test Manager	Manages the Subjective Test work flow
	Post Test Util Manager	Post the test completion - does p[ost facto activities like sending mails, calling IRIS queues, etc

SFA	SFA Manager	Manages SFA work flow - run all test cases, compiles and show results in test screen
MFA	Multi File App Manager	Interacts with Eclipse Che for workspace creation, code quality generation & running automated test cases
Basic Authentication	Authentication	
SAML Authentication SSO	SAML Identity Manager	SSO
Third Party Integrator	Web End points Manager	Web Service Endpoints (Documented) as shared with IRIS
Basic Util	Miscellaneous	Sending Emails, Managing Error screens etc