

Software Project Plan

Developers: Cameron Bundy, Richard Homan, Joel Wink

Client: Dr. John Tixier

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Roles

This section describes the official role titles of each team member and details the responsibilities of those roles.

Cameron Bundy – Front-end lead

The front-end of the software is the part that is client facing. As such, Cameron will be in charge of development of UI design, UI logic, and the front-end API logic. This includes management of the React.JS server and its modules.

Richard Homan – Back-end lead

The back-end of the software is the part that is not client facing. Richard will be in charge of configuring the JanusRTC to the needs of the project and designing and implementing the back-end API.

Joel Wink – Schedule Manager/QA lead/Marketing lead

Joel will be maintaining the project schedule as the project is in progress. Joel will also lead QA testing of the project through its various stages, and lead the direction of all associated marketing tasks such as the project demo.

Tools/Libraries

This section lists and explains the modules that will be used to develop the project.

Docker

The platform containerizes the applications, ensuring a consistent runtime environment across various systems.

React.JS server

The server used for the website interface and design.

JanusRTC server

The server manages WebRTC-based communication and facilitates real-time audio.

janus-gateway node module

A module that connects the React.js server to the JanusRTC server.

MUI node module

A library providing UI components for React applications.

React Router node module

A module enabling routing within a React application, allowing for navigation between pages.

Risks

This section enumerates possible risks of pursuing the project.

Front/Back-end Incompatibility

Due to unknown factors, the front-end could intermittently or completely fail to communicate with the back-end components. (e.g. ReactJS failing to connect to WebRTC)

Janus Scalability

The JanusRTC server may not be able to support enough call groups and/or client connections for the back-end servers to handle.

Admissions Department Rejection

There's a chance that the Admissions Department would believe that the application we're developing is not feasible or they would not like to maintain the software if it is implemented.