

A Light for Science



European Synchrotron Radiation Facility



Remote Access

Web application - advantages

- Web applications is remote by design
- Only a web browser is needed to run MxCuBE, no special tool or configuration is required. Basically works out of the box on any recent computer.
- Platform independent

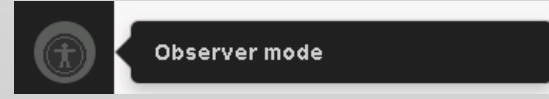
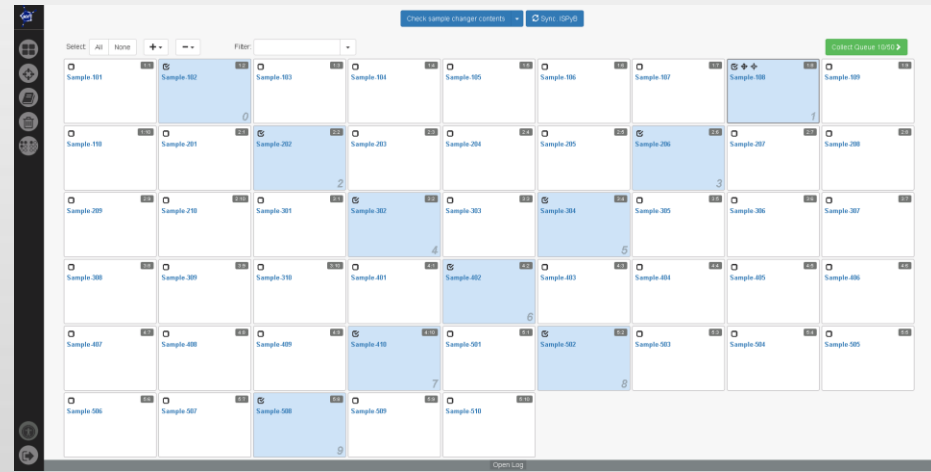
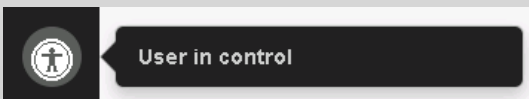
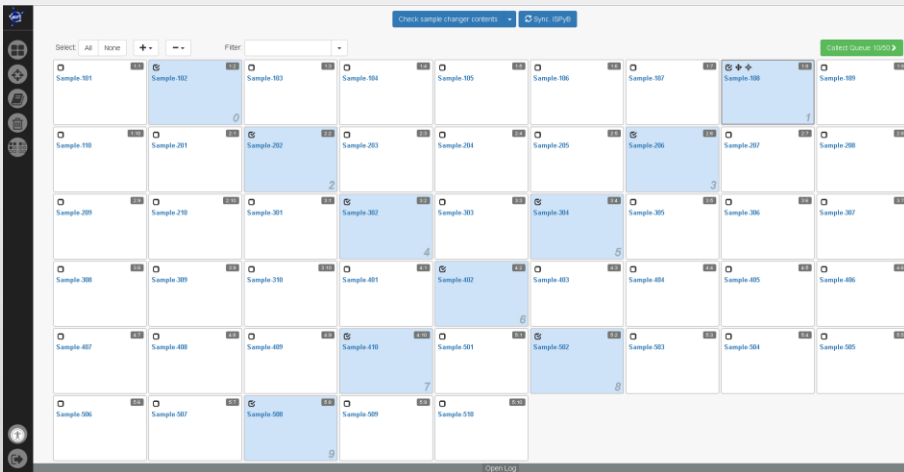
New improved RA - Features

Only one proposal is allowed to be logged in at once, the first one that logs in will be the user in control (master). Other logins from the same proposal will become observers (and cannot operate the beamline)

The screenshot displays the RA control interface. At the top, there are buttons for "Check sample changer contents" and "Sync ISPyB". Below these, there are "Select" options: "All", "None", "+", and "-", along with a "Filter" dropdown menu. On the left side, there is a vertical menu with several icons. Two callout boxes point to specific icons in this menu: the top one is labeled "User in control" and the bottom one is labeled "Observer mode". To the right of these callouts, text explains: "User in control (master) or observer indicated in the menu to the left". At the bottom right of the interface, there is an "Open Log" button.

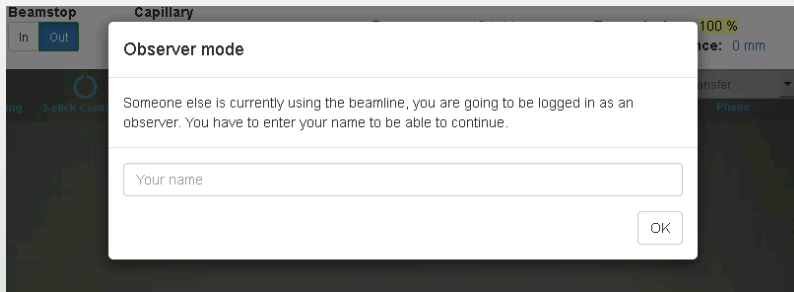
Observing

- Observers sees what the user in control (master) is doing, and can only change between pages. Remember: Only users with the same proposal as the master can observe

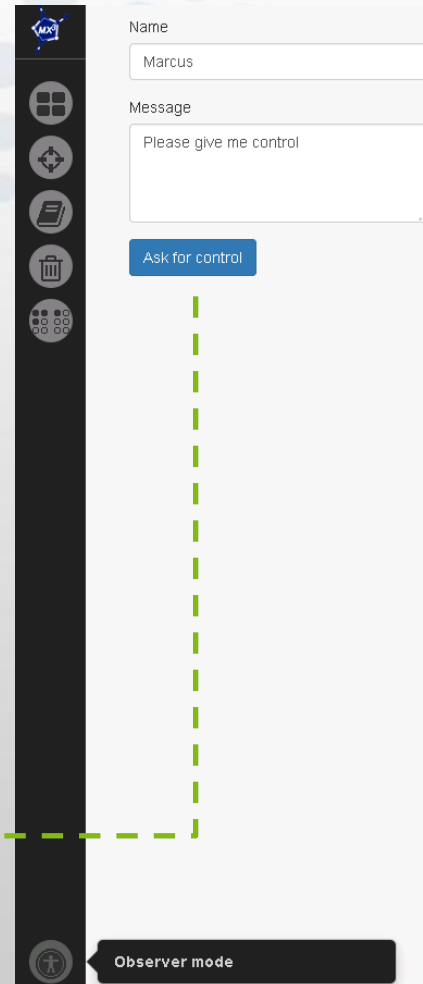
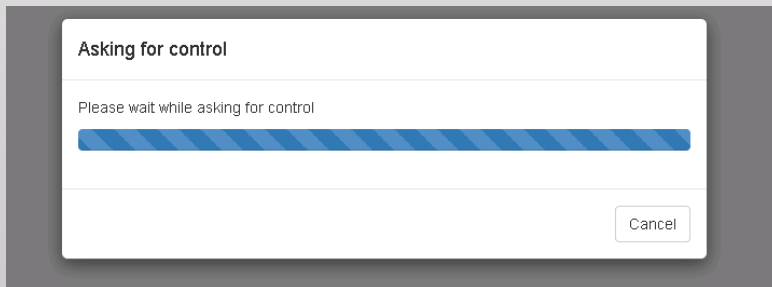


Asking for control

Logging in as an observer, the user must provide a username to be able to continue



Waiting for reply from user in control (master)



Giving control

A user is asking for control,
Give control, or deny

A user is asking for control

User Matias is asking for control, message:
"Please give me control"

Here you go !

If control was given away, user now becomes observer and needs to give a name, if not previously given

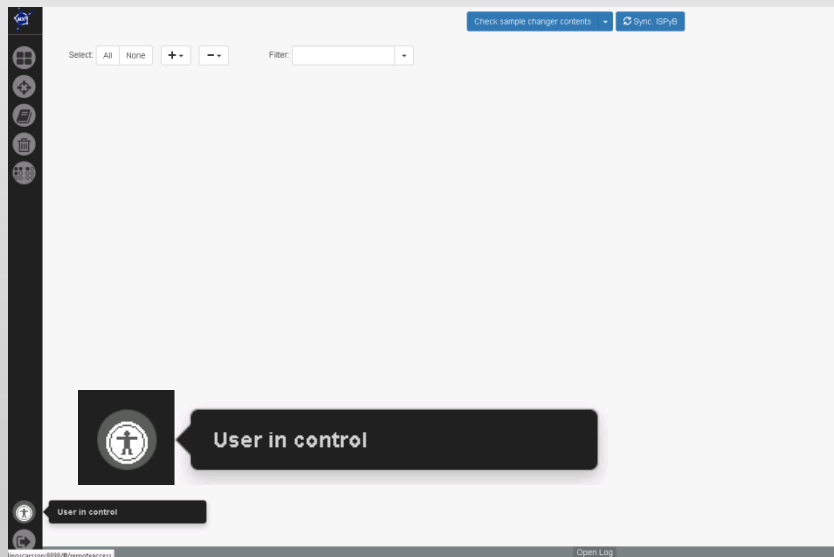
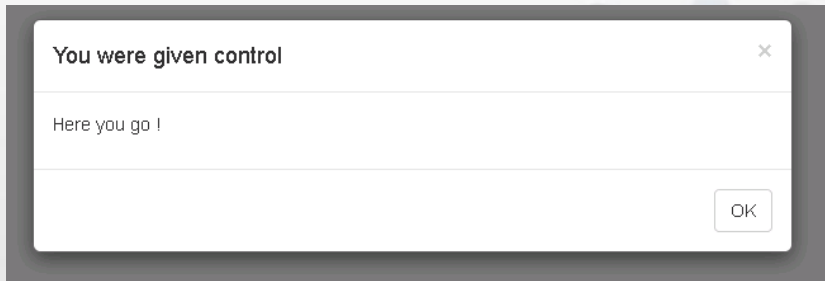
Observer mode

Someone else is currently using the beamline, you are going to be logged in as an observer. You have to enter your name to be able to continue.

Your name

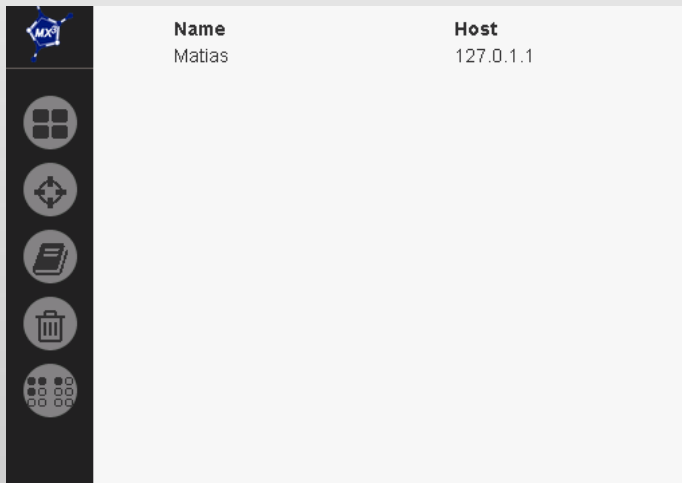
Control is transferred

- The control is passed to the observer asking for control



Queue control and who is watching ?

- Local beamline instance can always take control by using special account
- The queue is paused if the master instance for some reason loses control



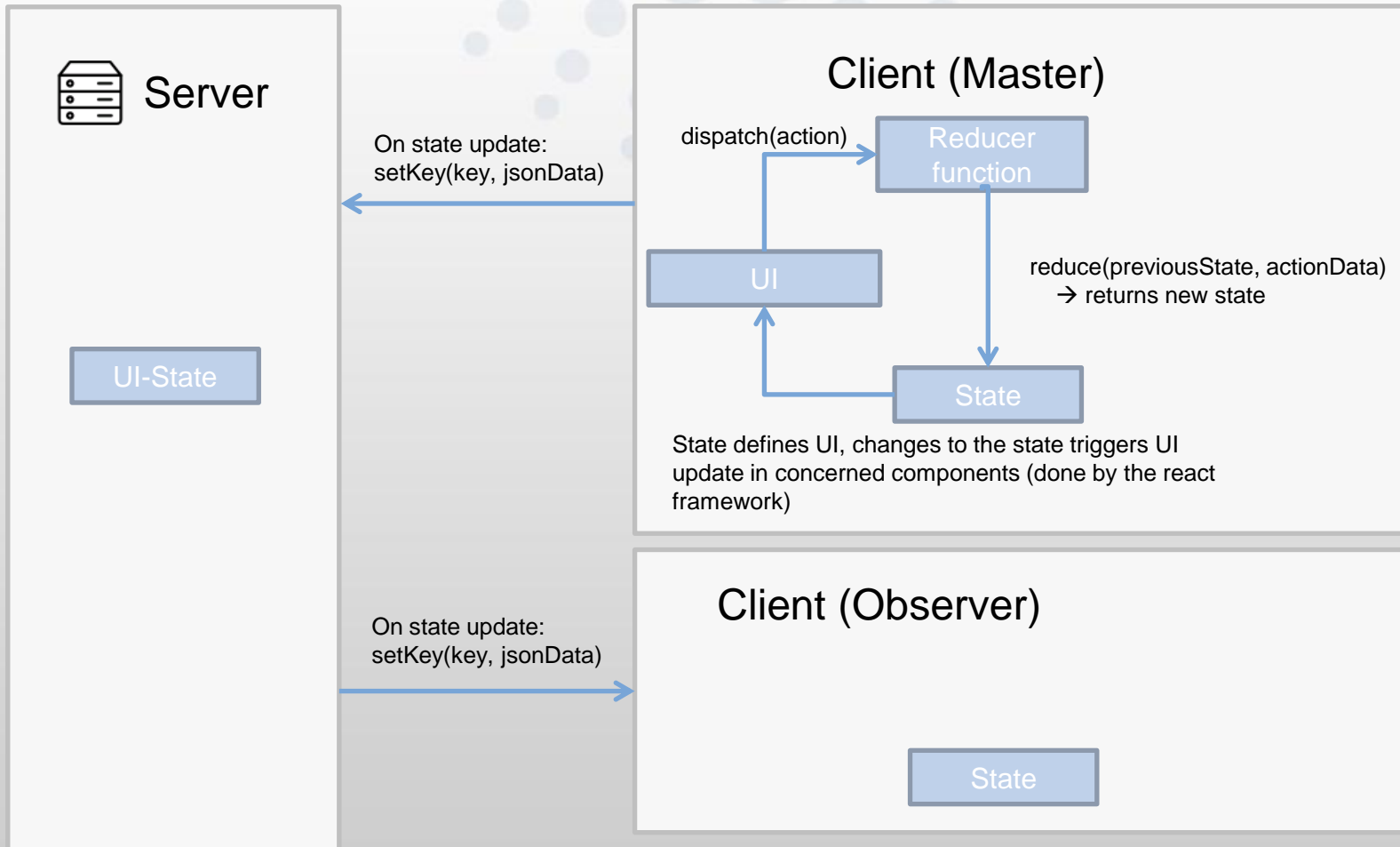
Name	Host
Matias	127.0.1.1

The user in control can see who is observing

So how does it work ?

- By taking advantage of existing libraries, react, redux, redux-persist and of course some code to fill in the gaps.
- The state of the UI is stored in a global data structure. This data structure can only be changed through something called actions
- The action triggers a pure function (a reducer) which creates a new state. The state change triggers a UI update by react.
- Each update of the state is sent to server where its saved (redux-persist)
- The server sends the state updates to the observers

So how does it work ?



Future work

- Chat
- Local beamline interface for taking control

A decorative graphic consisting of numerous light blue circles of varying sizes, scattered across the upper half of the slide, creating a soft, abstract pattern.

Questions ?