BRAMS-OTP

Introduction.

JATOS training http://www.jatos.org/.

https://brams.org/category/online-testing-platform/

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CRBLM
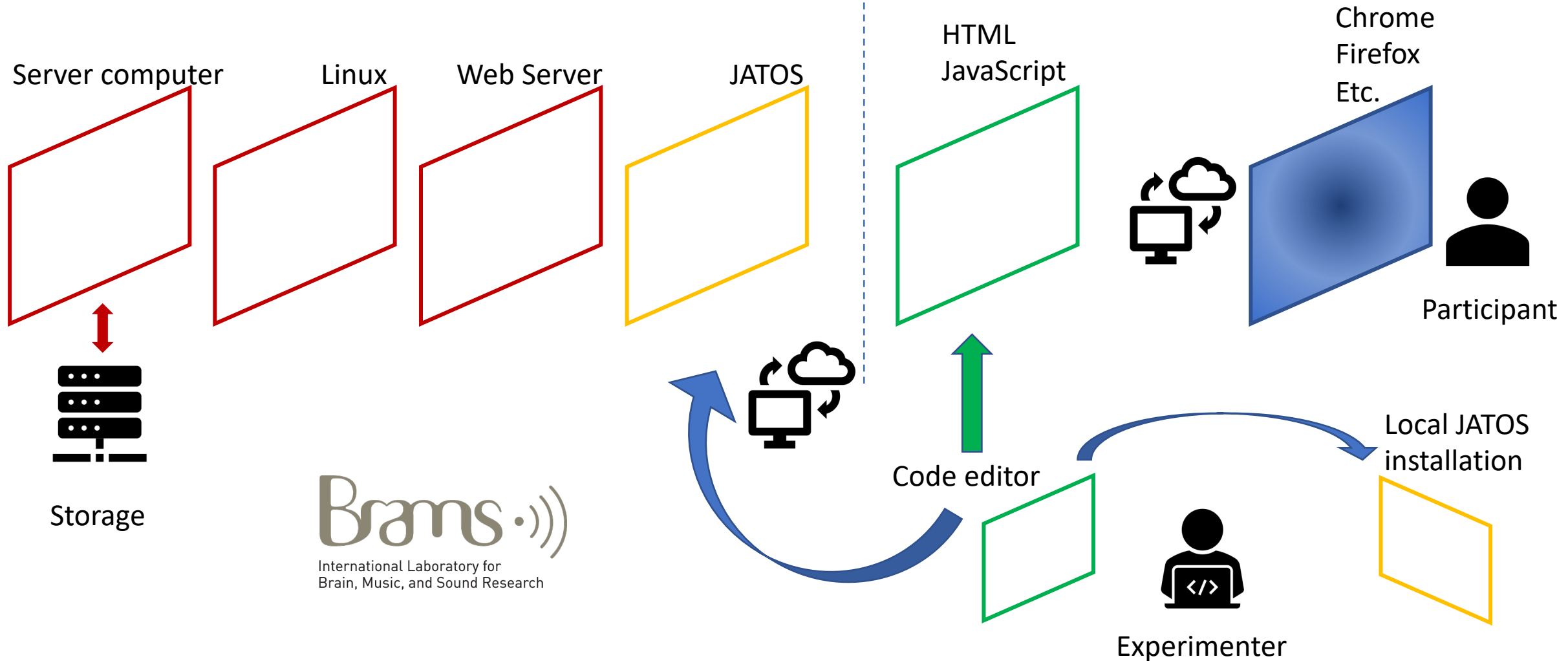Centre for Research on Brain, Language and Music

Outline

- Pre-requisites to use the BRAMS-OTP
- Introduction to the BRAMS-OTP.
- Preparing your experiment.
- Working in JATOS local installation.
  - Adapt experiment to work in JATOS.
  - Test experiment.
  - Export files.
- Working in JATOS server.
  - Get participant (worker) links.
  - Downloading data from JATOS.
- Questions

# Pre-requisites to use the BRAMS-OTP

- An experiment coded in JavaScript and that is functional.

- Basic programming experience.

- JavaScript basic user experience.

- HTML is a plus!

- Check out and review examples and demos!
  - https://brams.org/category/online-testing-platform/

BRAMS OTP layer structure

Server computer | Linux | Web Server | JATOS | HTML JavaScript | Chrome Firefox Etc.

Participant

Storage

International Laboratory for Brain, Music, and Sound Research

Code editor

Local JATOS installation

Experimenter

Working experiment in HTML-JavaScript

- Hello World experiment.

- Major-Minor chords experiment.
  - We are going to use the jspsych library (https://www.jspsych.org/) which is written in JavaScript
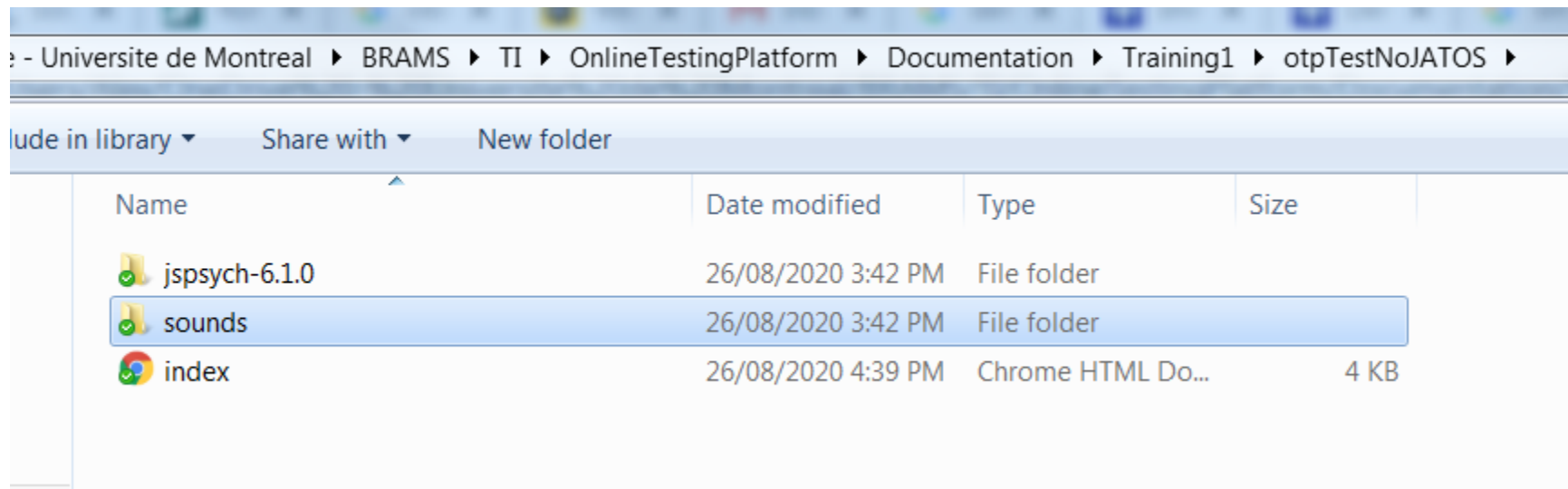
Integrating the experiment with JATOS

1. Install JATOS in your personal computer. ✓

2. Import an example in JATOS. ✓

3. Create experiment in JATOS (this will create a folder in study_assets_root). ✓

4. Modify already existing HTML-JavaScript so that it works with JATOS.

5. Copy files into JATOS assets directory.

6. Create your first component.

Modify already existing HTML-JavaScript so that it works with JATOS.

How to turn your jsPsych experiment into a JATOS study

1. Include the `jatos.js` library in the `<head>`

```
<script src="/assets/javascripts/jatos.js"></script>
```

Remember: Any URL or file path in a HTML file should only use '/' as a file path separator - even on Windows systems.

2. Wrap jsPsych's init call `jsPsych.init` in a `jatos.onLoad` call

```
jatos.onLoad(function() {
  jsPsych.init( {
    // ...
  });
});
```

That's all. If you additionally want to send your result data to JATOS read on.

Send jsPsych's result data back to JATOS

Here we use jsPsych's function `jsPsych.data.getData()` (jsPsych 5) or `jsPsych.data.get().json()` (jsPsych 6) to collect the data into a JSON-formatted string. Then we use JATOS' function `jatos.submitResultData` to send your result to JATOS and ask JATOS to move to the next component, if there is one.

http://www.jatos.org/jsPsych-and-JATOS.html

Send results back to JATOS

Send jsPsych's result data back to JATOS

Here we use jsPsych's function `jsPsych.data.getData()` (jsPsych 5) or `jsPsych.data.get().json()` (jsPsych 6) to collect the data into a JSON-formatted string. Then we use JATOS' function `jatos.submitResultData` to send your result to JATOS and ask JATOS to move to the next component, if there is one.

jsPsych 6

```
jatos.onLoad(function() {
  jsPsych.init( {
    // ...
    on_finish: function() {
      var resultJson = jsPsych.data.get().json();
      jatos.submitResultData(resultJson, jatos.startNextComponent);
    }
  });
});
```

Integrating the experiment with JATOS

1. Install JATOS in your personal computer. ✔

2. Import an example in JATOS. ✔

3. Create experiment in JATOS (this will create a folder in study_assets_root). ✔

4. Modify already existing HTML-JavaScript so that it works with JATOS. ✔

5. Copy files into JATOS assets directory. ✔

6. Create your first component.

What are components?

Important: If you are starting from scratch or adding a new component, you have to link the html file with JATOS via Components->+New. Fill up the required information.

*components are the main procedures of the study. The study can be one big component, or can have modules consisting in several components.

Integrating the experiment with JATOS

1. Install JATOS in your personal computer.

2. Import an example in JATOS.

3. Create experiment in JATOS (this will create a folder in study_assets_root).

4. Modify already existing HTML-JavaScript so that it works with JATOS.

5. Copy files into JATOS assets directory.

6. Create your first component.

Testing the experiment in Local JATOS

What are workers?

- Workers are the participants of your study!

Worker Types

Summary: Details of different worker types

Table of Contents

- Overview
- 🔧 Jatos Worker
- 🌿 Personal Single Worker
- 🌳 Personal Multiple Worker
- 🍸 General Single Worker
- ✳ General Multiple Worker (since version 3.3.2)
- ♞ MTurk (Sandbox) Worker

What type of workers can you have?

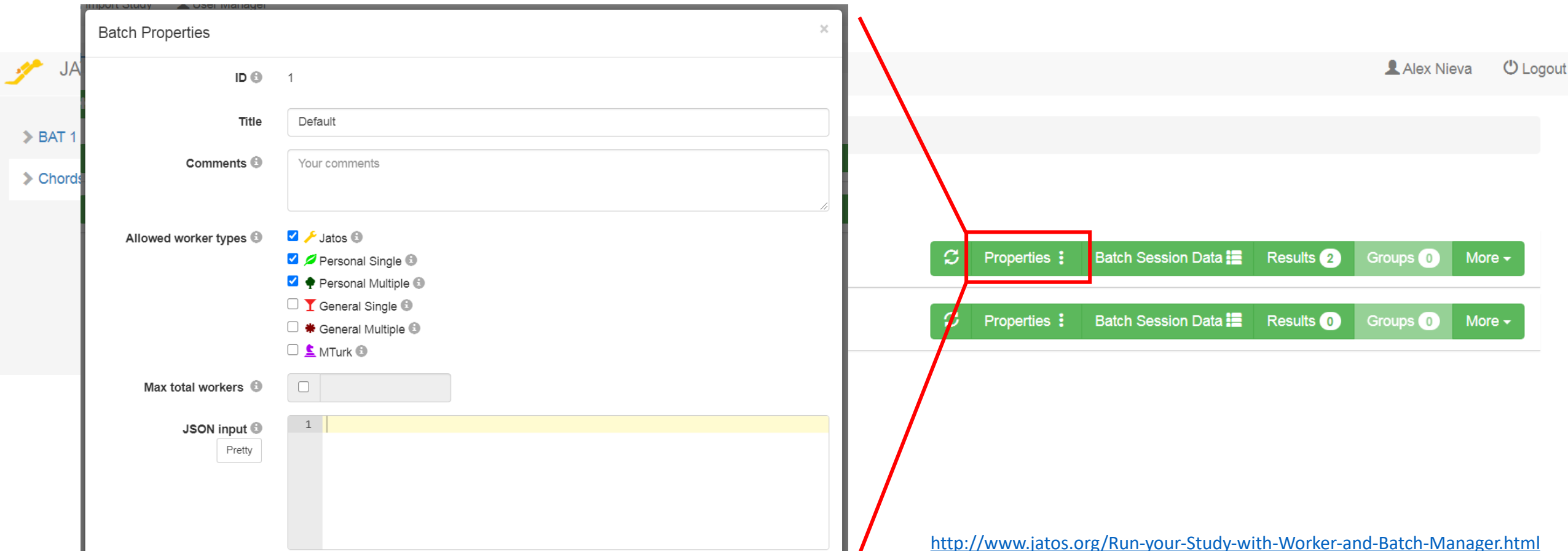|	Jatos	Personal Single	Personal Multiple	General Single	General Multiple (since v3.3.2)	MTurk (Sandbox)
Icon	🔧	🌿	🌳	🍸	✳	♞
Typical use	During study development	Small targeted group, each one of them gets a link	Small targeted group of workers who pilot the study or need to do it multiple times	Bigger groups but with less control; link shared e.g. via social media	Bigger groups and where the workers need to do it multiple times	For Amazon Mechanical Turk
Created when?	Together with the JATOS user	When you create the link	When you create the link	On-the-fly whenever someone uses the link	On-the-fly whenever someone uses the link	On-the-fly after a MTurk worker clicked on the HIT link
Repeat the same study with the same link	(has no links)	❌	✅ (keeps the same worker)	❌	✅ (creates a new worker each time)	❌ (✅ with Sandbox)
Run different studies with the same worker	✅	❌	❌	❌	❌	✅

Using batches

A batch is a collection of workers together with some properties. Using different batches is useful to organize your study runs, separate their results and vary their setup. E.g. you could separate a pilot run from the "proper" experiment, or you could use different batches for different worker types.

Participant Management
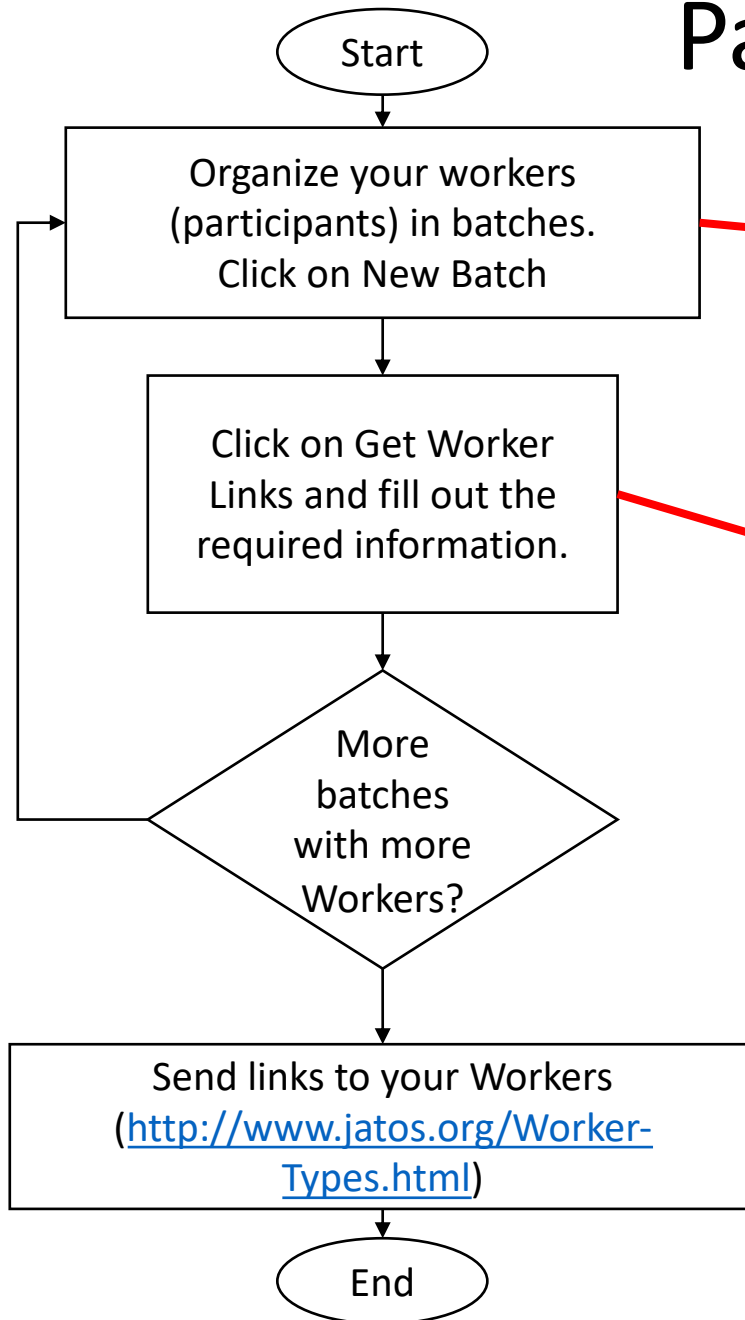
Start

Organize your workers (participants) in batches. Click on New Batch

Click on Get Worker Links and fill out the required information.

More batches with more Workers?

Send links to your Workers (http://www.jatos.org/Worker-Types.html)

End

Home / Hello World

This is JATOS' Hello World example study.

Run ▶ | Results ❷ | Properties ⋮ | Export ⬆ | More ▾ | Unlocked | Components | Worker & Batch Manager

➕ New
⬆ Import Properties

↕ Active ID Title

1   ✔   3   Simple

Run ▶ | Results ❷ | Properties ⋮ | More ▾

Home / Hello World / Worker & Batch Manager

➕ New Batch   Get Worker

1 ›   ✖   Default

1 ⌄   ✔   batch 1

1 ›   ✖   🔧 Ja

0 ›   ✔   🌿 Po

0 ›   ✔   🌳 P

0 ›   ✖   ⚑ G

0 ›   ✖   ✳ G

0 ›   ✖   ♟ M

⬆ Import Study

Links for Personal Single workers in batch 'batch 1'

Each of these URLs will start a run.

http://192.168.2.20:9000/publix/3/start?batchId=4&personalSingleWorkerId=3&pre
http://192.168.2.20:9000/publix/3/start?batchId=4&personalSingleWorkerId=4&pre
http://192.168.2.20:9000/publix/3/start?batchId=4&personalSingleWorkerId=5&pre
http://192.168.2.20:9000/publix/3/start?batchId=4&personalSingleWorkerId=6&pre
http://192.168.2.20:9000/publix/3/start?batchId=4&personalSingleWorkerId=7&pre
http://192.168.2.20:9000/publix/3/start?batchId=4&personalSingleWorkerId=8&pre
http://192.168.2.20:9000/publix/3/start?batchId=4&personalSingleWorkerId=9&pre
http://192.168.2.20:9000/publix/3/start?batchId=4&personalSingleWorkerId=10&pre
http://192.168.2.20:9000/publix/3/start?batchId=4&personalSingleWorkerId=11&pre
http://192.168.2.20:9000/publix/3/start?batchId=4&personalSingleWorkerId=12&pre

☑ Allow preview ⓘ

Copy & paste and hand them to your workers.

Close

Going online

Importing your study to JATOS in BRAMS-OTP

otp@brams.umontreal.ca

Import your study to the BRAMS-OTP

- Get a BRAMS-OTP account.

- Export your study from your local JATOS

- Import your study to the BRAMS-OTP JATOS server.

Final steps

- Test your experiment again!!
- Get worker links. This is important since these will have the correct address.
- Get your data once the participant(s) is/are done.

Data Management

Start

Click on top Results tab (blue) to view results from all components. Click on light blue Results to view each component separately.

Select one, several, or leave blank for all the results

Click on Export Results and Export Metadata to save your data locally.

end

Home / Hello World

This is JATOS' Hello World example study.

Run ▶ Results 2 Properties ⋮ Export ⬆ More ▾ Unlocked Components ▾ Worker & Batch Manager

＋ New
⬆ Import Properties

↕ Active ID Title

1	✔	3	Simple	Run ▶	Results 2	Properties ⋮	More ▾
2	✔	4	Submit Result Data	Run ▶	Results 1	Properties ⋮	More ▾
3	✔	5	Properties	Run ▶	Results 1	Properties ⋮	More ▾
4	✔	6	Set Study Session Data	Run ▶	Results 1	Properties ⋮	More ▾
5	✔	7	Get Study Session Data	Run ▶	Results 1	Properties ⋮	More ▾

Home / Hello World / Results

Show 10 entries

⟳ Show/Hide Columns Select All Select Filtered Deselect A Export Results ▾ Export Filter Export Metadata ▾ Delete ▾

Filter Results ❶: RegEx Aa

		Result ID ❶	Start Time ❶	Last Seen ❶	Duration ❶	Batch ❶	Worker ID ❶	Worker Type ❶	MTurk Worker ID (Confirmation Code) ❶	State ❶	Message ❶
5 ❯	✔	7	2020/04/30 15:24:58	2020/04/30 15:25:20	00:00:26	Default	2	🔧 Jatos	none (none)	FINISHED	none
1 ❯	—	6	2020/04/30 15:22:36	never	00:00:02	Default	2	🔧 Jatos	none (none)	FINISHED	none
❶	❶	Result ID	Start Time ❶	Last Seen ❶	Duration ❶	Batch ❶	Worker ID ❶	Worker Type ❶	MTurk Worker ID (Confirmation Code) ❶	State ❶	Message ❶

Showing 1 to 2 of 2 entries   1 row selected

Collecting your data

- Export results and Export Metadata.
  - Results have the responses you expect from the participant, Metadata has the admin information such as Participant ID.
- Both files are going to have json type data structure.
- Each line on the exported results correspond to each line on the exported metadata.

Resources

- https://brams.org/category/online-testing-platform/
- http://www.jatos.org/
- http://www.jatos.org/Example-Studies.html
- https://youtu.be/PkZNo7MFNFg JavaScript tutorial for beginners
- https://www.jspsych.org/