

## Challenge - Distributed System

The scope of this challenge is to demonstrate that the proponent understands the basics of a distributed system with the potential to be scalable.

The proponent must complete this challenge in 48 hours and send the GitHub repository link to [joao.madeira@helloprint.com](mailto:joao.madeira@helloprint.com) and [michael.heerkens@helloprint.com](mailto:michael.heerkens@helloprint.com). All the configuration and setup should be included on the readme file.

This challenge is composed of 3 components:

1. Webserver - contains a simple login page
  - form with username and password
  - link for password recovery
2. Producer (API) - this component will manage the requests and responses of the webserver and is responsible for inserting the events into queue.
3. Consumer (Microservice) / Queue / Database - a Queue will include producer events and consumer commands and the **consumer will include all the business logic**.

The database will have only one table with one record:

Table - users

Id - unique id

username - helloprint

password - P@ssw0rd!

email - [xxxxxx@xxxxxx.xxx](mailto:xxxxxx@xxxxxx.xxx)

status – 1 (active)

### Tasks:

Create this environment considering that each component will be on different servers.

The process that must be implemented will be, firstly, the user inserts his username in the defined field and click on the password recovery link. This request must be sent and will have asynchronous response as an email with the user's password.

Secondly, the user will have to authenticate with his username and the password that he received, and get a response, if he was successful or not.

**The languages that should be used are javascript and php. The use of frameworks and libraries will be only the strictly necessary.**

Best of luck!