

# Usage Manual for the Bechmarktool Web Application User's Interface

June 3, 2015

## Summary

<b>1</b>	<b>Introduction</b>	<b>1</b>
<b>2</b>	<b>Accessing the system</b>	<b>1</b>
<b>3</b>	<b>Registering on the system</b>	<b>1</b>
<b>4</b>	<b>Performing Simulations</b>	<b>2</b>
<b>5</b>	<b>Checking the Simulation Results</b>	<b>4</b>

## 1 Introduction

This manual is a quick guide that explains how to perform simulation on the benchmarktool web application. The main features are explained in detail, from the registration steps upto checking the final simulation results.

## 2 Accessing the system

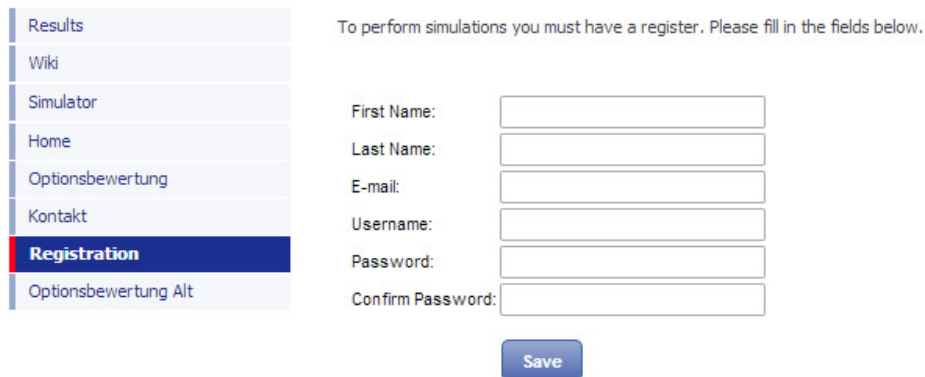
The system can be accessed through the following URL: \TODO{addtheURL}  
On the left hand side it is possible to check the available options and on the main frame it's shown the content of the active option.

TODOadd initial page image

## 3 Registering on the system

To start a new simulation, it's necessary to be registered on the system. This is done by filling up a simple registration form with personal data.

Figure 1 shows how this form looks like. After filling up the form, you should click on the "Save" button and then the registration process is done.

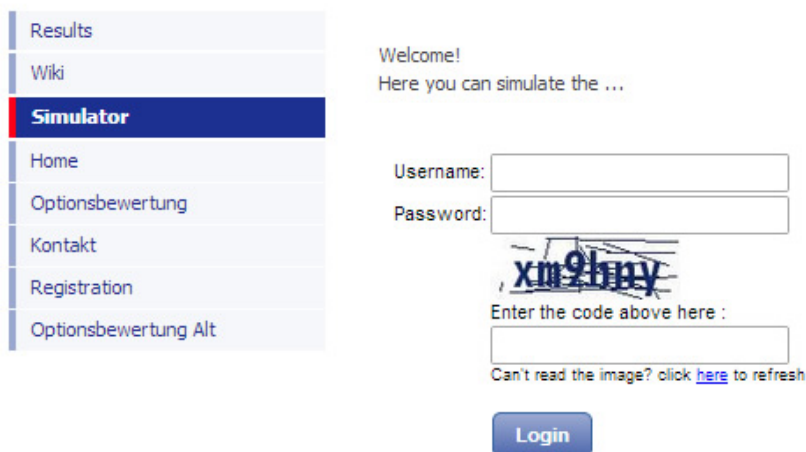


The registration form features a vertical menu on the left with the following items: Results, Wiki, Simulator, Home, Optionsbewertung, Kontakt, **Registration** (highlighted in blue), and Optionsbewertung Alt. The main content area contains the text: "To perform simulations you must have a register. Please fill in the fields below." Below this text are six input fields labeled: First Name, Last Name, E-mail, Username, Password, and Confirm Password. A blue "Save" button is positioned at the bottom center of the form.

Figure 1: Registration Form

## 4 Performing Simulations

Whenever one wants to compare two different implementations of market simulation with hardware acceleration, one should perform a benchmark over those platforms, through simulations. It is necessary to login into the system in order to be able to access the simulation form. On the left hand side from the menu, the user must select "Simulator" and a screen as in the image below will be shown:



The login form features a vertical menu on the left with the following items: Results, Wiki, **Simulator** (highlighted in blue), Home, Optionsbewertung, Kontakt, Registration, and Optionsbewertung Alt. The main content area contains the text: "Welcome! Here you can simulate the ...". Below this text are three input fields labeled: Username, Password, and a CAPTCHA field with the text "Enter the code above here :". The CAPTCHA image shows the text "xm9bny" with a blue scribble over it. Below the CAPTCHA field is a link: "Can't read the image? click [here](#) to refresh". A blue "Login" button is positioned at the bottom center of the form.

Figure 2: Login Form

To login, it is necessary to fill in the form with correct username - password, as well as the CAPTCHA value, and click the button "Login". Then,

the simulator interface will be available, allowing the user to perform new simulations.

The image shows a web interface for a simulator. On the left is a sidebar menu with the following items: Results, Wiki, Simulator (highlighted in blue), Home, Optionsbewertung, Kontakt, Registration, and Optionsbewertung Alt. The main content area has a welcome message: "Welcome! Here you can simulate the ...". Below this is a form with the following fields: "Benchmark Set:" with a dropdown menu showing "-- Select benchmark set --"; "Start Level:" with a text input containing "1"; "Multilevel Constant:" with a text input containing "4"; "Epsilon:" with a text input containing "0.02"; "Number Of Paths On First Level:" with a text input containing "10000"; "Reference Price:" with an empty text input; "Price Precision:" with an empty text input; and "Available Resources:" with two checkboxes, "cpu" and "fpga", both of which are currently unchecked. At the bottom of the form is a blue button labeled "Start Simulation".

Figure 3: Simulation Form

Figure 3 shows the form where the user can choose the parameters to perform a benchmark. The dropdown menu “Benchmark Set” contains all the benchmark sets available in the system. A benchmark set has a name associated with market parameters and option parameters, meaning that, once a benchmark set is selected, the market and the option parameters are automatically selected as well. The algorithm parameters are filled already with the default values, but the user has freedom to change them before starting the simulation. The algorithms parameters are composed by:

- Start Level
- Multilevel Constant
- Epsilon
- Number Of Paths On the First Level
- Reference Price
- Price Precision

At the end of the Simulator page, there is a field called “Available Resources” where the user can select one or more resources to perform the

benchmark and compare the results. To select a node to perform the simulation it is enough to check the check box beside its name. Once all the parameters are defined, it is necessary to click on the button “Start Simulation”. As soon as the simulation finishes, an e-mail will be send to the user with the respective simulation ID.

## 5 Checking the Simulation Results

Whenever a simulation is finished, the user will receive an e-mail with an identification number associated with the simulation. The simulation results can be viewed from the “Results” menu.



The screenshot shows a web interface for viewing simulation results. On the left is a vertical navigation menu with a blue header labeled "Results". The menu items are: Wiki, Simulator, Home, Optionsbewertung, Kontakt, Registration, and Optionsbewertung Alt. The "Simulator" item is highlighted. To the right of the menu, there is a text prompt: "Please, enter with JOB ID that you recive in your e-mail, to view the results." Below this prompt is a text input field labeled "Job ID:". Underneath the input field is a blue button with the text "Show Results".

Figure 4: Results Form

The results form (Figure 4) is a really simple form, where the user can enter the ID of already performed simulations and search for its results. After clicking on “Show Results”, a graph comparing both simulations will be displayed.

Results
Wiki
Simulator
Home
Optionsbewertung
Kontakt
Registration
Optionsbewertung Alt

Please, enter with JOB ID that you recive in your e-mail, to view the results.

**cpu**  
 Energy 35.0052518531  
 Runtime Value 4840.51193496  
 Price 0.1028  
 Precision Value 339.518014135

**fpga**  
 Energy 0  
 Runtime Value 236.485421  
 Price 0.006176  
 Precision Value 0

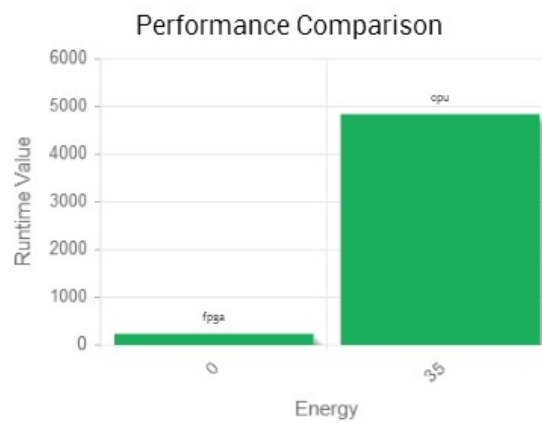


Figure 5: Results of performed simulations