

User guide „SimManager“

Application requirements

For starting the SimManager.jar file, which is the Java application, you need following components:

- Java Runtime Environment 8 (or above)
- simmanager.properties file, which defines important parameters, which are needed to launch the application
 - o this file has to be in the same folder as the SimManager.jar file

Content of the simmanager.properties file

The simmanager.properties is the configuration file, which contains important parameters and is read out on application start.



It must contain the following key-value pairs:

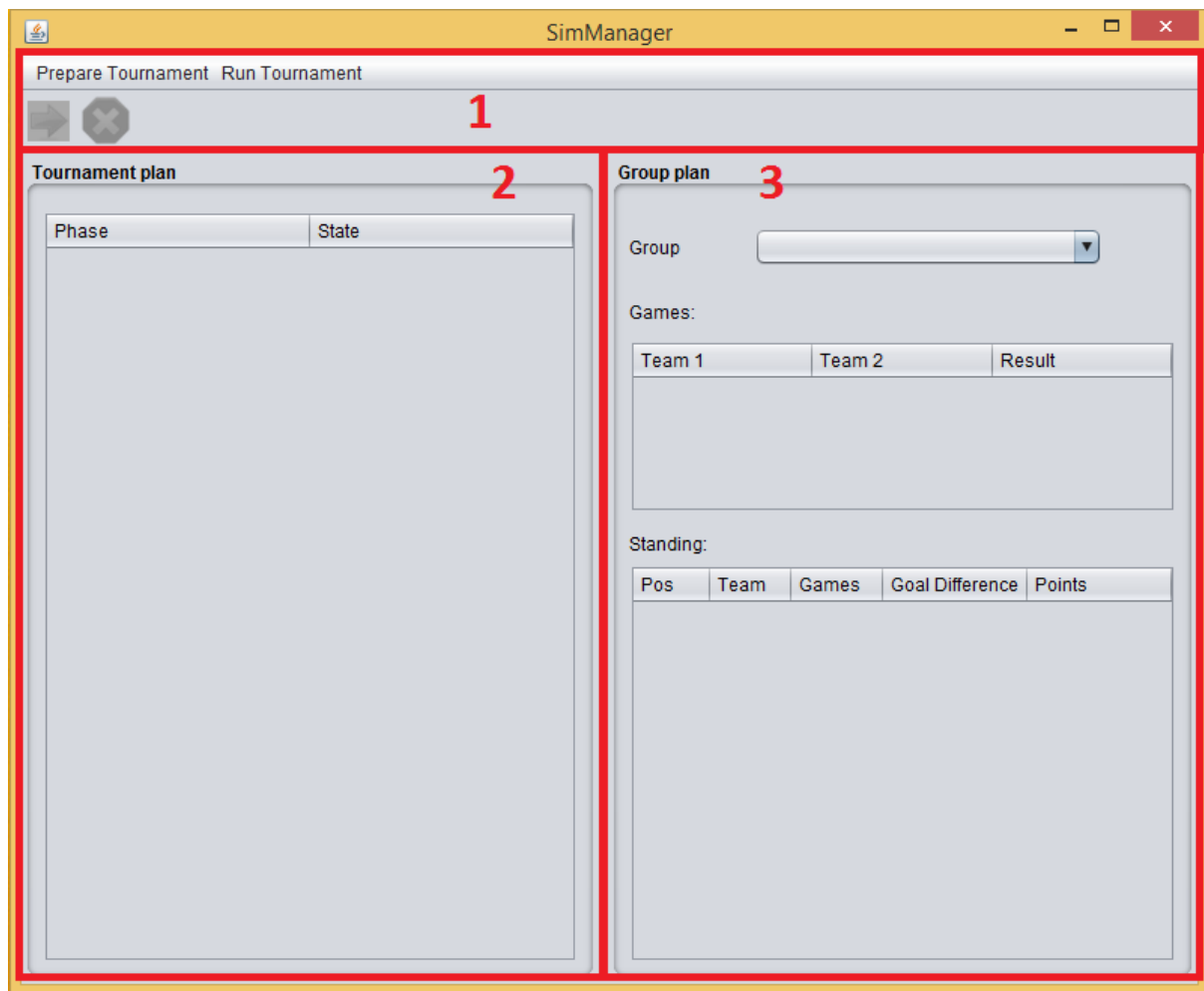
- serverAddress = 141.79.65.126
 - o address of the server, where the rcssserver3d will be started and the games are played
- serverPort = 3200
 - o the port of the game server
- serverUserName = theuser
 - o the user which is used for the ssh connection to server
- serverUserPassword = thepassword
 - o the password for the server user above
- teamLeftAddress = 141.79.65.128
 - o the address of the first team server (for one team of the game)
- teamRightAddress = 141.79.65.129
 - o the address of the second team server (for the other team of the game)
- fileStartPath = C:/Users/Daniel/Desktop
 - o the path where the application will write to, it must exist on application start
- knownHostPath = C:/cygwin/home/Daniel/.ssh/known_hosts
 - o the path to the known_host file for the ssh connections, this file must exist on application start



Paths must be absolute to avoid problems (e.g. don't use “~” in linux paths, instead set “/home[...]”)

First application start

If the requirements are fulfilled and the .properties file has the needed content, the application can be started. The application window should look like this:

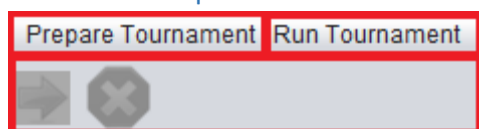


The window contains three components:

- Menu panel for tournament control (top)
 - o Here you can prepare and control the tournament launching
- Tournament Plan (left)
 - o This is an overview of the tournament's phases and status
- Group Plan (right)
 - o This view is for observing a running (or listing a planned/finished) group phase of a tournament. After selecting a group, the underlying tables will be filled with games and the actual standing

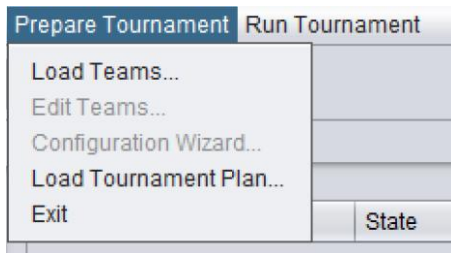
After starting the application, most fields are empty and greyed out. This has the reason, that no tournament is created or loaded yet. The next chapters will give you a short introduction in how to create or to import a tournament.

The Menu panel



The menu panel shown on the top of the window is subdivided into following three sections:

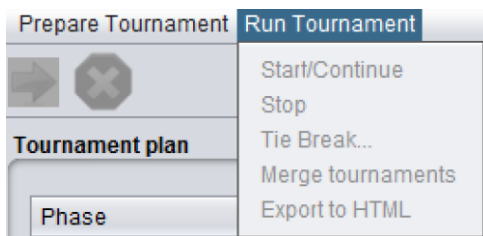
Prepare Tournament



This is the first menu that you have to use when you plan to make a tournament. After starting the application, you have two options here (besides exiting the application):

- Create a new tournament step by step, first loading the teams through a csv file
- Import a tournament.json file, which contains a serialized tournament and got exported before by this application

Run Tournament



In this menu you can start and stop a created or imported tournament. Also tie break games can be listed and started later on via this menu. A merge of two tournament.json files (e.g. when playing a tournament on two clusters) is also able via this menu as an export of the actual tournament status to HTML.

Start/Stop Tournament



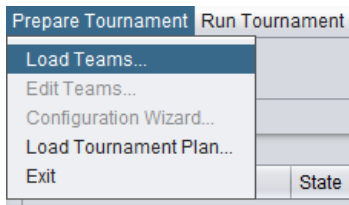
This two buttons have the same function as the first and the second one of the menu "Run Tournament" – to start or stop the actual tournament launching.

Create a new tournament step by step

The application helps you to create a new tournament. After starting the menu "Prepare Tournament" has only two items which are enabled for the user (without exiting). One is to import an existing tournament.json file (which was exported earlier after creating or launching a tournament), this is not what to use to create a new tournament. The other item which says "Load Teams" is the more important at this scenario, because for preparing a tournament you need to import a team list first.

1. Importing a .csv file with team information

The first step is to import a list of all teams which participate in the tournament. This can be done by clicking the “Prepare Tournament” menu, item “Load teams”:



The file must be a semicolon separated (one line per team plus header line) .csv file with following information:

```
TeamName;Username;StartScript;Path;SetTeam
magmaOpponent;robocup;start.sh;/home/robocup/test_teams/team1>true
magma2;robocup;start.sh;/home/robocup/test_teams/team2>false
magmaOffenburg;magma;start.sh;/home/magma>true
```



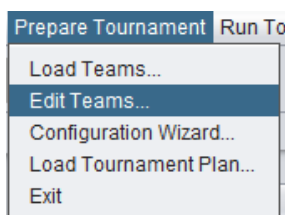
- First row is the header row, it is used for explaining the columns and is skipped on reading in, so don't use the first row for the first team information (it will be missing in the tournament)!
- The next rows contain the team information, per team one row with following attributes (the order of the columns is important!):
 - o Column 1: The team name
 - o Column 2: The name of the user who's folder contains the team's scripts.
 - o Column 3: The file name of the team's start file
 - o Column 4: The path to the team's start script
 - o Column 5: Boolean, which decides, whether a team is a “set” team (group head)
→ set teams won't be added to the same group (if enough groups existing)



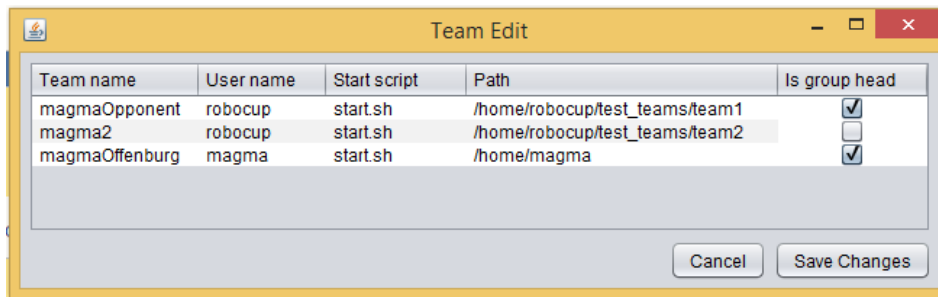
After a successful import of the teams you get a message dialog shown via the csv file, you can either change the team information by application or you can start the configuration wizard to create the tournament with this teams. If you get an error message you should check the .csv file for correct start script paths, file or team names.

1.1 Edit teams after importing

After a successful import of the teams from csv file, you can edit them via menu “Prepare Tournament” – “Edit Teams”:

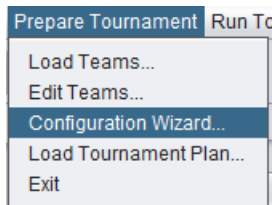


After selecting this menu item, the following window is shown, here you can edit the team information if needed:



1.2 Create tournament via the Configuration Wizard

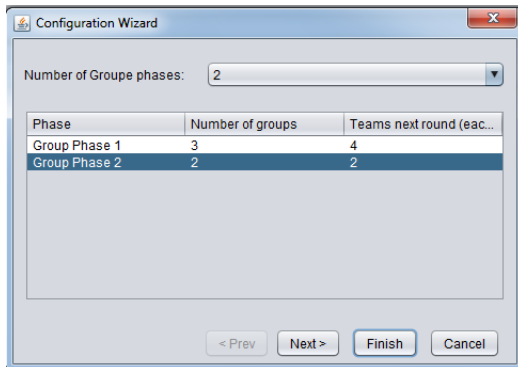
After importing (and editing) the teams you are ready to create a tournament with them. Therefore you have the Configuration Wizard, which helps you setting the right parameters which are needed to create a new tournament.



The wizard consists of three pages, which will be explained below.

1.2.1 Configuration Wizard – Page 1: Group Phase Settings

The first window that is shown by the Configuration Wizard looks like this:

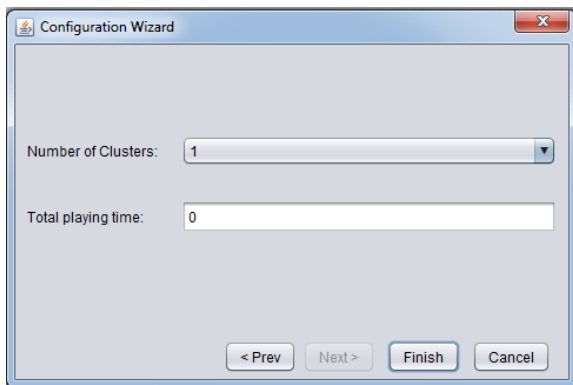


Here you can select the number of Group phases the tournament should have. After selecting this number, one line per group phase will appear in the list below. There you can select the number of groups the phase should have and the number of teams which will get ahead into the next phase (that means that after all games of this phase the top x teams will stay in the tournament for the next phase).

Example (with 16 teams): In the screenshot above the tournament will have two group phases. In the first we'll have 3 groups in which the best 4 teams will reach the next phase ($=3*4 = 12$ teams after first phase). In the second group phase these teams will be placed into 2 groups, in which the top 2 teams will stay ($2*2 = 4$). These best 4 teams will play against each other in the following KO phases.

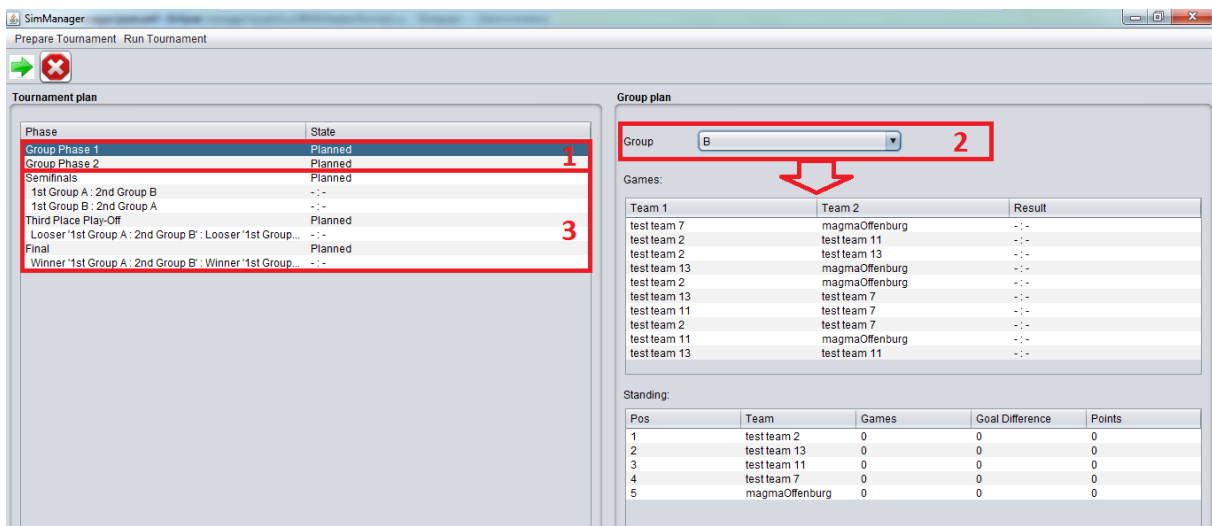
1.2.2 Configuration Wizard – Page 2: General Tournament Settings

The second page asks you for the number of server clusters (should be set to 1 or 2 at the moment) the tournament will take place. Also you can set a total playing time for the tournament¹.



After finishing the configuration wizard per “Finish” button, the planned tournament should appear with its phases and games. The sections of this filled view will be explained below.

The Tournament Plan



Once a tournament is created or imported, the GUI will look like this. It's separated into this sections:

- Tournament Plan overview (1 + 3)
- Group Plan (2)

By selecting a group phase in the list (1), the right group plan will be refreshed with the associated group plan, which contains the games and the standing within a group. To show these group details, the user has to select a group via the combo box (2) of the group phase. The game table shows the games results (in real-time during playing), and also the standing is recalculated after each goal of a game in this group.

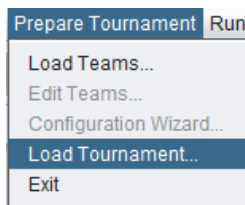
¹ This attribute has no effect yet, it is planned for setting the time the tournament may take, to automate the game duration calculation and game start times.

Save / Export a tournament

A tournament is always serialized to file “tournament.json”, which is placed in the same folder as the simmanager.jar can be found. It is resaved on every game update (goal, after configuration wizard or after import of another tournament.json file. To save a tournament, just copy the tournament.json file from the application folder to any other directory before you import another tournament or launching the configuraton wizard via GUI (because this would overwrite the file).

Import a tournament file

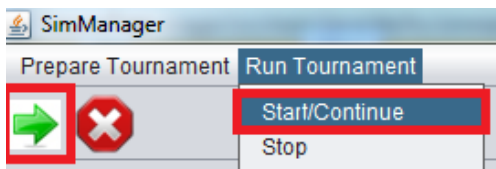
To restore a saved tournament, you can import a tournament.json file (e.g. that was serialized and copied before). Therefore you can use the menu “Prepare Tournament” – “Load Tournament”:



If the file is a correct serialization of a tournament, the GUI should show the phases and the games after successful importing the file.

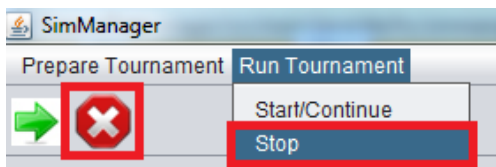
Start a tournament / phase

To start a tournament or a phase, just choose the correct one in the Tournament plan in the left list of the GUI and click the green start button in the upper icon panel. Alternatively you can do this via menu “Run Tournament” – “Start/Continue”.



Stop a running tournament

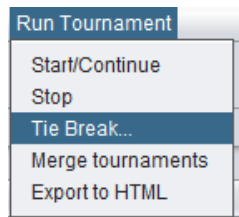
You can also stop a running game of the tournament by clicking the red abort button in the upper icon panel. Alternatively you can do this via menu “Run Tournament” – “Stop”.



Play a tie-break game

If a group of a group phase has two or more teams with same points after finishing the phase, tie-break games are needed to decide a winner via an additional decision game. This tie-break games are

not listed in the tournament plan on the GUI but you can get the games via menu “Run Tournament” – “Tie Break...”.

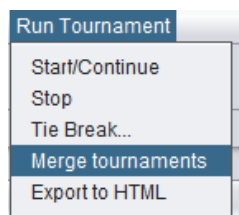


You have to select the correct group phase before using the menu to list tie-break games. Also all games of the group phase must be finished to get a list of the tie-break games.

After selecting this menu item, a new window will pop up. It shows the tie-break games which are needed to decide a winner of teams with same standing within the group phase. You can select the games via the group the teams are in. After selecting a group you can start the tie-break games listed above via click on “Play Games”.

Merge two tournaments

If you played on more than one cluster, you have to merge the tournament.json files, to get a complete one, which contains all games with results.



Example: If gameA was played on cluster A and gameB on cluster B, every SimManager instance will use its own tournament.json to save game results in it. So if you want to have a complete result of the clusters, you have to merge the two .json files, to get one complete tournament.json (which you can use e.g. for exporting as HTML, explained in the next section).

You can merge via menu “Run Tournament” – “Merge tournaments”. You will get a file choose dialog, where you can select a tournament.json file. This file will be merged with and into the local used tournament file of the SimManager instance where you run the merge process (e.g. if you want to have all results on cluster A, you have to do the merge from here, and merge with the tournament from cluster B by importing its tournament file).

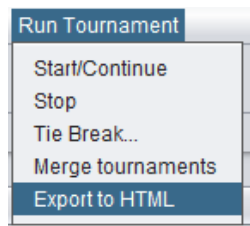


The two tournament.json files you want to merge must have the same tournament plan serialization. You can't merge two different tournaments (other teams / phases / games)!

HTML export

You can export the local tournament plan to a HTML document which you can use to inform users about the actual standing via website. The HTML document shows information about the phases, the groups of them and the games, also of the KO phases.

To export the tournament to HTML document, choose menu “Run Tournament” – “Export to HTML”.



The HTML document is exported to tournament.html and saved in the same folder as you can find the simmanager.jar application file.