



Jonathan Easow <jonathan.academic1@gmail.com>

Re: PC² Help

5 messages

John Buck <buckj_at_icpc.global_jthweb@duck.com>
To: "jthweb@duck.com" <jthweb@duck.com>
Cc: ECS PC2 <ecs-pc2_at_csus.edu_jthweb@duck.com>

18 June 2025 at 17:02

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Hi Jonathan,

Based on your email, it seems you want to run your contest using PC2 in a MS Window's environment. I can answer some of your questions now, but I'd need a little more information to help with some of the others.

Let's start with question 3 - how to run the resolver.

When your contest is finished and you have finalized it, you can have PC2 generate a file called the "event feed ndjson". If you are running the latest Nightly Build of PC2, you can use the "Reports" tab from an "administrator" account or from the "server". Select the "Results Export Files" from the "Reports" pull-down list, then press the "Export Report Contents" button. A window will pop up showing you where it created the reports, for example:

```
pc2 results dir      : reports\report.Results_Export_Files.06.18.126.txt.files
```

```
Contest finalized    : No. (Warning - contest is not finalized)
```

Wrote results files to:

```
reports\report.Results_Export_Files.06.18.126.txt.files\results.tsv
reports\report.Results_Export_Files.06.18.126.txt.files\scoreboard.json
reports\report.Results_Export_Files.06.18.126.txt.files\awards.json
reports\report.Results_Export_Files.06.18.126.txt.files\event-feed.ndjson
```

If you are not using the nightly build, you'll have to generate 2 reports: the "Event Feed JSON" report and the "awards JSON" report.

The files you are interested in will be the "**event-feed.ndjson**" and possibly the "**awards.json**" files.

Copy these 2 files to a new folder (ex. \users\jon\contest_data). Use the latest version of the resolver from the ICPC tools download page:

<https://tools.icpc.global/> Currently, this is: <https://github.com/icpctools/icpctools/releases/download/v2.6.1210/resolver-2.6.1210.zip>

Extract that zip to a new folder. From a Windows command prompt (cmd.exe), go into that directory and type:

```
resolver <full path to where you copied the awards.json and event-feed.ndjson files>
```

If you didn't finalize the contest, you will have to add a **--test** option. If you have multiple displays, you may have to force the resolver

to use a specific display: **--display 1** or **--display 2** (whatever works for you), so, let's say you put the awards and event feed in a folder

called: **\users\jon\contest_data** and you extracted the resolver to: **\users\jon\resolver-2.6.1210**, you could this, for example:

```
cd \users\jon\resolver-2.6.1210
resolver ..\contest_data --test --display 2
```

Of course, that gets you the basic resolver, if you have school or team logos for each team, it's a bit more involved;

you'll have to create

an "organizations" folder in the \users\jon\contest_data, and for each organization (school) you'd have to create a subfolder in there using

the organization ID, and in THAT folder a file called logo.png

Similarly, if you want team pictures to come up for the teams getting awards, (1st place, 2nd place, 3rd, first-to-solve , etc), you'll have to

create a "teams" folder in \users\jon\contest_data and in the teams folder create a sub-folder for each team id, and in each of those folders

the picture should be called "photo.jpg"

If it's more than the resolver that you want to use, that is, if you want to use a CDS or presentations, you'll have to talk to the ICPC tools group.

For question 4, how to add documentation and problem links

Any files (or subfolders) you place in the WTI ...\\WebTeamInterface-1.2\\WebContent\\WTU-UI folder will be served up by the WTI web server. For example, if you create a

folder called: ...\\WebTeamInterface-1.2\\WebContent\\WTU-UI\\problems, and then put a PDF in that folder for each problem (A.pdf, B.pdf, C.pdf,...), teams can then access those files

from their browser: <http://wtiserver:8080/problems/A.pdf> (for example, if problem A's problem statement is called "A.pdf". You can put an 'html' file in that folder that

acts as a landing page that has links to all the problems. You can do a similar thing for any documentation you want to make available. That is, create, for example,

a "documentation" folder in ...\\WebTeamInterface-1.2\\WebContent\\WTU-UI\\ and put HTML pages in there, or PDF's or whatever you want. Contestants can then

access it using the WTI server: <http://wtiserver:8080/documentation/<whatever>>

(in the above examples, "wtiserver" is the hostname or IP address of where you are running the WTI server.

For question 5, how to host a smooth and efficient competition

If you find the answer to that question, please let me know! :-) The best advice I can give, from years of experience doing this at the regional, national and World Finals

level is to "practice". Set up test/practice contests beforehand, and have your friends try *everything* before the contest. Make test submissions, judging, access all the

web links, etc. After you run a few of these contests, you'll get good at it.

For the first 2 questions, I'll need some more information from you - maybe

How are you configuring your contest? Are you doing it from scratch using the GUI administrator client? Or, are you doing it the easier way by using a "CDP (contest data package). I strongly recommend using the "CDP" method...

There are several examples in the "pc2\\samps\\contests" folder - these were installed when you unzip'd the PC2 installation file. I refer you to the

pc2\\samps\\contests\\clics_sumithello sample contest. You can copy this folder to a new folder and edit it for your contest. Let's say you copied it to:

\\users\\jon\\contests\\mycontest

You'll find a "config" folder inside the "mycontest" folder.

If you look in the "config" folder, you'll see a folder for each problem (hello, sumit), a YAML file (problemset.yaml) that describes what problems are in the contest

(just the 2 in this case: hello and sumit). In each of the problem subfolders, there's a "data" folder that contains the test cases. You can add as many as you like

in the data/secret folder, following the naming conventions: "X.in" and "X.ans" for each test case, where X can be anything you like, usually we use numbers, like:

[1001.in](#), [1001.ans](#) [1002.in](#), [1002.ans](#) etc.

You can also create a "data/sample" folder which contains any test data for samples you may include in your problem statement. These are usually called: [1.in](#), [1.ans](#), [2.in](#), [2.ans](#), etc.

BTW the "samps" folder also includes sample solutions to each problem in a variety of languages in the samps/src folder.

The **contest.yaml** file can be edited to reflect your contest. You can change the "id:", "name:", start_time, duration,

etc.

The **system.pc2.yaml** contains PC2 specific configuration information. You'll have to edit it to suit your needs. It lets you create however many team accounts you want, judges, scoreboards, etc. You can determine which problems are "auto-judged" or not. There are a lot of configuration parameters that can be set in that file. I also attached another sample of system.pc2.yaml that shows many more of the configuration parameters from an actual contest.

The **system.yaml** file includes the definitions for your languages. I am attaching a more "comprehensive" example of the **system.yaml** file to this email.

You'll have to go through and change the pathnames for all the compilers and execution commands to those that are suitable for your Windows system.

For example, you may not be using "kotlin" or "java", so you can just remove the sections you're not using.

Python is special. PC2 requires that python programs be compiled using the **"-m py_compile"**. It then executes the "compiled" python code using

the **pypy3** command. Make sure that **pypy3** is installed when **python3** is installed. This is probably why you had issues getting python to work: you have to compile it first, then you use **pypy3** to execute the compiled code.

Once you make all the changes to the configuration files and add your problems, you'll have to clean out your PC2 contest folder (delete any contest you may have configured)

by using the **"pc2reset"** command. (Note that this deletes all previous contest information in the current folder). You

can use **"pc2zip"** to backup your current configuration to the **"archive"** folder

prior to doing **pc2reset**. A quicker way to clean out your contest folder is to simply delete the **"profiles"** folder and the **"profiles.properties"** file.

I also assume that the PC2 "bin" folder is on your PATH:

```
cd \users\jon\contests\mycontest
copy <path to pc2 installation folder>\pc2v9.ini .
pc2reset
pc2server --login site1 --password site1 --contestpassword "contest" --load "\users\jon\contests\
mycontest\config"
```

(you may want to choose a better password for the contest than, "contest" in the example above).

If you have configuration errors, it will report them and you'll have to check the log files to find out what the issue is with your configuration files.

The "logs" subfolder and the "profiles/*/logs" folder may be helpful here. If you make changes to the configuration files, you'll have to do a "pc2reset"

(or remove the profiles folder and profiles.properties file) before attempting to load the new configuration again. If a previous configuration exists, PC2 will NOT attempt to load the new one.

If the server comes up, congratulate yourself - when you stop screaming with extreme happiness and jubilation, your contest should be fully configured. This is the way we run regionals, nationals and the World Finals.

Please let us know if you have any other questions.

Good luck with your contest, and thank you for your interest in PC2.

John

On Wed, Jun 18, 2025 at 6:12 AM jthweb@duck.com <jthweb@duck.com> wrote:

Dear PC² team,

I'm Jonathan, a grade 10 student. My friends and I wanted to host an ICPC-style contest in our school after we participated in one. We tried using DOMJudge, but it was not easy, and required a Linux/Unix computer to run. Then we found PC². It is really easy to use, and we learnt how to set up teams, and even run a contest, but wanted more

help.

Will it be possible for you to create a tutorial video for us? We wanted help in:

1. Adding test cases
2. Adding python as a language (since every time we add it, it shows compilation error)
3. How to connect it to ICPC tools like the resolver
4. How to add documentation and problems tab in the web team interface
5. How to host a smooth and efficient competition.

Hoping to hear from you soon.

Thank you,
Best Regards,

Jonathan Easow

Student | Class 10

jthweb@duck.com

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2 attachments

 **system.yaml**
3K

 **system.pc2.yaml**
2K

Jonathan Easow <jonathan.academic1@gmail.com>
To: John Buck <buckj_at_icpc.global_jthweb@duck.com>

19 June 2025 at 14:34

Thank you so much John! I really appreciate the effort you spent replying to me. And yes, I am using the GUI administrator system. What is the CDP?

I will try the above steps and will let you know if it works. Just wanted to ask also, can I add the documentation main page and my problems main page as a tab in the PC2 web team interface?

Is there any other cool stuff that I should add for a better contest? I didn't understand what half the tabs in the Admin panel do. I don't require them as such right now, but just asking.

Thanks a lot once again!
Best Regards,

Jonathan Easow

Student | Class 10

jthweb@duck.com

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[Quoted text hidden]

John Buck <buckj_at_icpc.global_jthweb@duck.com>
To: jthweb@duck.com
Cc: ECS PC2 <ecs-pc2_at_csus.edu_jthweb@duck.com>

19 June 2025 at 19:05

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You can configure PC2 using 2 different methods. The manual method using the administrator GUI (which is evidently what you have been doing) or using a set of configuration files loosely referred to as the CDP (contest data package). More recently the name has been changed to the CPF (contest package format) - but that's something slightly different. Configuration using the CDP allows you to reload a contest from scratch using config files without having to perform manual tasks using the administrator client. It also allows you to make simple changes to the config file(s), then reload the contest. Using a CDP also allows you to copy the CDP config files to a new folder, make changes, and create a NEW contest that is similar to the old one. This is useful if you run a contest every year that is basically the same but only the teams and problems change, not the contest structure.

You can not change / add to the WTI web page easily. It uses angular and TS (really JS with a bunch of libraries). We have recently added support to the WTI for showing the problem statements if the user clicks on the problem letter on the scoreboard tab. This has not yet been merged into our nightly build but will be shortly as we intend to use this for the ICPC World Finals in Baku in September. (There will be PR's in git for it at some point).

A lot of the configuration tabs on the GUI have to deal with fine tuning the system for ICPC style contests. Ex. How you want team names formatted on the scoreboard, where to store the scoreboard HTML pages, configuring groups (really, sites - if you have more than one location, you can put them in a group). Many of the options are tailored for ICPC style contests and generating reports and so on for historical purposes (which is probably not that useful for your contest).

John

On Thu, Jun 19, 2025 at 7:35 AM <jthweb@duck.com> wrote:

Thank you so much John! I really appreciate the effort you spent replying to me. And yes, I am using the GUI administrator system. What is the CDP?

I will try the above steps and will let you know if it works. Just wanted to ask also, can I add the documentation main page and my problems main page as a tab in the PC2 web team interface?

Is there any other cool stuff that I should add for a better contest? I didn't understand what half the tabs in the Admin panel do. I don't require them as such right now, but just asking.

Thanks a lot once again!
Best Regards,

Jonathan Easow

Student | Class 10

jthweb@duck.com

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On Wed, 18 Jun 2025 at 17:02, John Buck <buckj_at_icpc.global_jthweb@duck.com> wrote:

[Quoted text hidden]

Jonathan Easow <jonathan.academic1@gmail.com>
To: John Buck <buckj_at_icpc.global_jthweb@duck.com>

20 June 2025 at 17:17

Hey John,

Thank you so much for your response. It has been of great help. Sorry to bother you, and I might ask more since I don't know much regarding this and couldn't understand the given manuals. Hope you don't mind. I tried the ICPC resolver and it works, except for the fact that despite putting the organizations folder, the logo does not appear in the resolver, but the photos do from the teams folder. I also tried using PyPy3, and it runs, but I have an issue. I will send some screenshots below also regarding this.

When auto-judge runs, it shows the status of the runs as undetermined. Then I manually re-judged them, by executing the run, and it shows failed. But when I open the comparison, both answers are the exact same to the dot. I also tried the same with submitting a java file that uses javac, but the same error happens. It shows it as 'fail', but the comparison is the same.

Do you have any idea why this would happen?

Another query, how do I add test cases into the admin GUI panel? I can't add .in and .ans files. Also another error I am facing is with the CDP method, where when I run pc2server or any other command from any other directory except the bin folder, it shows":

```
ERROR: Could not locate scripts.
```

```
Please set the variable PC2INSTALL to the location of  
the VERSION file (ex: c:\pc2-9.0.0)
```

```
Press any key to continue . . .
```

I did put PC² bin and WTI bin into my path, but this error keeps showing. My system runs Windows 10 Pro. Also another issue I'm facing is that the teams that form from the CDP (after importing contest.yaml from the administrator panel "import config" tab), don't show up in the scoreboard, and I can't log in into them using the WTI.

I'm pretty sure I messed up somewhere, but don't know where. Could you help me? Can you please tell me how to put PC² into my path? Just to make sure I did it right. I did put both the 'bin' folders into the path

Once again, really sorry to bother you with these many issues. I just wanted to host a good competition along with my friends in our school. The competition won't be until mid-November, but I just wanted to learn and figure out how this works, since PC² is simpler than the other softwares, and I liked its Web Team Interface more than the others.

Thank you so much for your support. Good luck in your endeavours as chief judge in ICPC.

[Quoted text hidden]

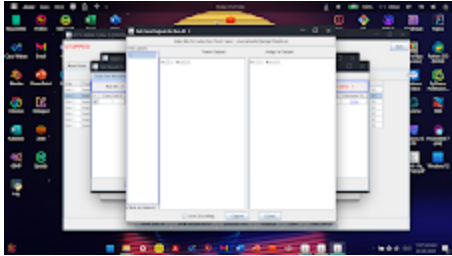
6 attachments



Screenshot (43).png
475K



Screenshot (45).png
496K



Screenshot (47).png
496K



Screenshot (46).png
494K



Screenshot (48).png
467K



Screenshot (44).png
494K

John Buck <buckj_at_icpc.global_jthweb@duck.com>
To: jthweb@duck.com

20 June 2025 at 19:10

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I'll try to answer inline-below...

On Fri, Jun 20, 2025 at 10:18 AM <jthweb@duck.com> wrote:

Hey John,

Thank you so much for your response. It has been of great help. Sorry to bother you, and I might ask more since I don't know much regarding this and couldn't understand the given manuals. Hope you don't mind. I tried the ICPC resolver and it

works, except for the fact that despite putting the organizations folder, the logo does not appear in the resolver, but the photos do from the teams folder.

When organization(!) logos don't appear, it means that the name of the file in the organizations folder does not match the organization ID for the team.

The organization ID is different from the team id. The team id's are 1,2,3...# of teams. Organization id's are per-school (not team).

The only way to enter organization ID's is to configure your contest using a CDP. Now you are starting to get into the more advanced

configuration options... In the config folder, you'll have to create 3 files:

institutions.tsv, **groups.tsv** and **teams2.tsv** (you can also create a 4th file called "**accounts.tsv**" which lets you supply the passwords for each team account).

I am attaching a sample copy of each file. you'll have to edit them and change them for your contest.

The **institutions.tsv** file lists each organization/school/institution on a separate line, (after the header line)

INST-U-ORGID<tab>Organization long name<tab>Organization short name

<tab> means a tab character, not spaces(!)

The **groups.tsv** file (recall i mentioned groups in the previous email) also has to exist. For you contest, you'll probably have just one group. The sample I included

has several groups since it was for a bigger contest. So, you can probably do something like:

File_Version<tab>1

1001<tab>JonsContestGroup

The **teams2.tsv** file allows you to specify each team's information (I think this answers another one of your questions). This is a file (see the attached) where each

line describes a team. There are 8 TAB separated fields (it must be a tab, not spaces!):

teamid#<tab>internalteam#<tab>groupid<tab>team name<tab>organization long name<tab>organization shorter name<tab>Country<tab>organizationID

The organization ID is the last field, and that comes from the **institutions.tsv** file. The group id is the 3rd field and that comes from the groups.tsv file (all your teams will

probably have the same group ID, 1001 if you used the example above). The **internalteam#** is anything you want, you can just duplicate the **teamid#** there. In the sample file

you'll see it's a big number - that was from our registration system

The **accounts.tsv** file lets you give a password for each team (rather than the default of "teamX") You should be able to figure it out by looking at the sample attached.

There are 4 TAB separated fields:

team<tab>Organization long name<tab>team#<tab>password

I also tried using PyPy3, and it runs, but I have an issue. I will send some screenshots below also regarding this.

When auto-judge runs, it shows the status of the runs as undetermined. Then I manually re-judged them, by executing the run, and it shows failed. But when I open the comparison, both answers are the exact same to the dot. I also tried the same with submitting a java file that uses javac, but the same error happens. It shows it as 'fail', but the comparison is the same.

Do you have any idea why this would happen?

My first guess is you don't have the output validator set up properly for each problem. Here is a sample of how we set it up for a problem:

Edit Problem Geometry Rush (/home/icpc/pc2/current/config/geometryrush)

General Judging Type **Output Validator** Test Data Files Input Validator Groups Sandbox

☐ Do not use Validator

☐ Use PC^2 Validator

PC^2 Validator options

Validator mode: None Selected

☐ Ignore Case In Output

☒ Use CLICS Validator ?

CLICS Validator options

☒ Case-sensitive ☐ Float relative tolerance:

☐ Space-sensitive ☐ Float absolute tolerance:

☐ Use Custom (User-supplied) Validator

Validator options

Validator program: Choose...

Validator Command Line:

Validator Interface: ☐ Use PC^2 Standard Interface ?

☒ Use CLICS Standard Interface ?

☐ Use CLICS Interactive Problem Interface ?

☒ Show Validator To Judges (SVT.J)

Update Report Cancel

If that isn't the problem, I'd have to see how you have the languages configured. I attached screenshots of how we configure python3 and java. Maybe that will help.

If it doesn't, then you can send me a pz2zip of your configuration. From a command prompt, change to where you're running your contest from and do:

```
c:\path\pc2> pc2zip
```

It will create a file in the "archive" (or maybe "archives") subdirectory which is a complete zip of your contest; if you can put that zip on a dropbox or google shared file or something, that would help. I'd also need the contest password you configured your contest with.

Edit Language Python 3

Auto Populate with: No Change

Display Name:

Compile Cmd Line:

Executable Filename:

☒ Script or Interpreted Language

☐ Use Judge specific execution command line

Judge Execution Command Line:

Program Execution Command Line:

☐ Hide Language

ID/Code:

Update Close

(the Program Execution Command line got cut off but this is it: /usr/bin/java -Dfile.encoding=UTF-8 -XX:UseSerialGC -Xss64m -Xms1920m -Xmx1920m {:package}{:basename})
 If you use the CDP method to configure, along with the sample system.yaml file, it sets all that up properly.

Another query, how do I add test cases into the admin GUI panel? I can't add .in and .ans files.

If you go to the Configure Contest->Problems tab, select a problem, and click on the "Test Data Files" tab. You can use the "Load" button on the bottom. It will ask you to browser to a folder where the test is. It will then add any test cases in the new folder to the list. Be sure to Update and save any changes.

Test Case	Data File	Answer File
1	1.in	1.ans
2	2.in	2.ans
3	3.in	3.ans
4	4.in	4.ans
5	expanding_triangles.in	expanding_triangles.ans
6	funneling_triangles.in	funneling_triangles.ans
7	largeBF02.in	largeBF02.ans
8	largeBR01.in	largeBR01.ans
9	largeSF01.in	largeSF01.ans
10	largeSR01.in	largeSR01.ans
11	largeSR02.in	largeSR02.ans
12	large_fail_end.in	large_fail_end.ans
13	large_fail_mid.in	large_fail_mid.ans
14	large_fail_start.in	large_fail_start.ans
15	large_zigzag.in	large_zigzag.ans
16	roundB.in	roundB.ans
17	roundBfail.in	roundBfail.ans
18	roundT.in	roundT.ans
19	roundTfail.in	roundTfail.ans
20	smallBF01.in	smallBF01.ans
21	smallBR01.in	smallBR01.ans
22	smallSF01.in	smallSF01.ans
23	smallSR01.in	smallSR01.ans
24	small_slope_fail.in	small_slope_fail.ans
25	small_slope_pass.in	small_slope_pass.ans
26	two_needles_fail.in	two_needles_fail.ans
27	two_needles_pass.in	two_needles_pass.ans

Also another error I am facing is with the CDP method, where when I run pc2server or any other command from any other directory except the bin folder, it shows”:

ERROR: Could not locate scripts.

Please set the variable PC2INSTALL to the location of

the VERSION file (ex: c:\pc2-9.0.0)

Press any key to continue . . .

I did put PC² bin and WTI bin into my path, but this error keeps showing. My system runs Windows 10 Pro. Also another issue I'm facing is that the teams that form from the CDP (after importing contest.yaml from the administrator panel "import config" tab), don't show up in the scoreboard, and I can't log in into them using the WTI.

From a command prompt, you should be able to type "pc2ver" if that doesn't work then something in the path is wrong.

```
C:\>pc2ver

CSUS Programming Contest Control System
Version 9.11build 20250619 (Thursday, June 19th 2025 16:48 UTC) build 7796
Java version 1.8.0_321
OS: Windows 11 10.0 (amd64)

mailto:pc2@ecs.csus.edu

C:\>
```

You can also try: "where pc2ver"

Note that the "pc2v9.ini" file must exist in whatever folder you are trying to run any PC2 tools from. You can copy it from the pc2 installation folder.

I'm pretty sure I messed up somewhere, but don't know where. Could you help me? Can you please tell me how to put PC² into my path? Just to make sure I did it right. I did put both the 'bin' folders into the path





Once again, really sorry to bother you with these many issues. I just wanted to host a good competition along with my friends in our school. The competition won't be until mid-November, but I just wanted to learn and figure out how this works, since PC² is simpler than the other softwares, and I liked its Web Team Interface more than the others.

Thank you so much for your support. Good luck in your endeavours as chief judge in ICPC.
Hope this helps.

On Thu, 19 Jun 2025 at 19:05, John Buck <buckj_at_icpc.global_jthweb@duck.com> wrote:

[Quoted text hidden]

4 attachments

-  **teams2.tsv**
5K
-  **institutions.tsv**
3K
-  **groups.tsv**
1K
-  **accounts.tsv**
4K