

Event Feed 2016

From ICPC-Contest Control Standard

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This page describes the format of the *CLICS XML Event Feed*. The Event Feed consists of a series of XML elements which provide information on changes in the state of a contest.

The Event Feed described on this page was used at the ICPC World Finals in 2016 (hence the page title, above). It has subsequently been deprecated in favor of a JSON-based event feed which is part of a newer CLICS [Contest API](#). As a result, this page constitutes the specification for the final version of the CLICS XML Event Feed.

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Getting the feed

The Event Feed can come from any of a variety of different server sources; for example, a Contest Control System or a Contest Data Server. Regardless of the source, servers implementing the CLICS XML Event Feed do so by listening on port 4713 and sending the feed out to any client connecting to that port. Thus, to obtain the feed, connect to port 4713 on a server (host) which provides the feed and the entire feed for the contest will be sent to you. When the contest is finalized, the contest tag will be closed and then the connection will be closed.

Typically, connecting to port 4713 requires "authentication credentials" proving that the client is authorized to obtain the complete contest event feed. An alternative is to connect to port 4714; this port provides what is known as a "frozen feed" -- that is, the event feed for the contest, with the exception that no judgement information will be sent for submissions which occurred during the last portion of the contest when the contest scoreboard is "frozen". When the contest is finalized, the contest tag will be closed and the connection closed (but you will still not get judgements for submissions which occurred during the scoreboard freeze period).

Event Feed format

The event feed is structured as an XML document within the root element <contest>.

All events are separate elements at the top level. Elements are considered either *static*, in which case only one such element occurs, or *instances*, in which case different instances are distinguished by a unique id. When an element appears again in the feed, either static or an instance with the same id, it is considered to replace the previous occurrence.

Event feed sources may send extra tags beyond what is documented here; these may be ignored by clients reading the event feed but should not cause client errors.

Event types are:

info

contest information and updates (static)

language

information regarding the programming languages which teams are allowed to use for submissions

region

information on the "groups" defined in the contest (in the ICPC World Finals, "groups" are referred to as "Super Regions", and events of this type are therefore referred to as "region" events). Instances of these events are identified with id 'external-id'

judgement

information regarding a judgement which has been applied to a team submission (instanced with id 'acronym')

problem

information about problems defined in the contest

team

information about teams defined in the contest

clar

information about clarification requests submitted by teams during the contest, along with updates (such as answers from the judges)

run

information and updates about "runs" submitted by teams during the contest; known in other event feed formats as "submissions"

testcase

information about the results (including the judgement) applied to the execution of a submission (run) against an individual test case (instance identified by 'i', the test case number) and contains the resulting 'judgement acronym'; "testcase" is known in other event feed formats as a "run" -- not to be confused with "run" in this XML event feed, which refers to a *submission* by a team

finalized

contest finalization information (static)

If nothing is specified, elements are instances identified by an 'id'.

Time and *timestamp* elements are specified in seconds; time elements are in contest time (relative to contest start, corrected for removed time intervals) while timestamps are in Unix epoch. Both are specified with three decimal places, i.e. with millisecond resolution. Times are truncated, so in a 5 hour contest a submission at 18000 seconds is late. Events have time and timestamp sub-elements

that represent the same real moment in time.

Sample events with inner element descriptions:

<info>

```
<info>
<contest-id>398578</contest-id>
<length>05:00:00</length>
<scoreboard-freeze-length>01:00:00</scoreboard-freeze-length>
<penalty>20</penalty>
<started>False</started>
<starttime>1265335138.260</starttime>
<title>The 2016 World Finals of the ACM International Collegiate Programming
Contest</title>
<short-title>2016 World Finals</short-title>
</info>
```

contest-id

Contest identifier, which is of the form [a-z0-9-]{1,36}, i.e. lowercase letters, digits, and dashes with length at most 36 (this allows a UUID).

length

Length of contest in HH:MM:SS format.

scoreboard-freeze-length

Length of time at the end of the contest when scoreboard is frozen in HH:MM:SS format.

penalty

Penalty time in minutes.

started

Started flag.

starttime

Scheduled starttime as a timestamp in decimal seconds, or <starttime>undefined</starttime> if the scheduled start time is not defined.

title

Contest title string.

short-title

Shortened contest title (from contest.yaml)

<language>

```
<language>
<id>1</id>
<name>C++</name>
</language>
```

id

Language identifier.

name

Language name.

<region>

```
<region>
<external-id>3012</external-id>
<name>Europe</name>
</region>
```

external-id

Identifier from the registration system.

name

Super region name.

<judgement>

```
<judgement>
<acronym>CE</acronym>
<name>Compile Error</name>
</judgement>
```

acronym

Short name

name

descriptive name

<problem>

```
<problem>
<id>1</id>
<label>A</label>
<name>APL Lives!</name>
<color>red</color>
<rgb>#FF0000</rgb>
</problem>
```

id

Problem identifier

label

problem label on the scoreboard

name

descriptive name

color

problem color name (optional, from [problemset.yaml](#))

rgb

problem color [RGB hex value](#) (optional, from [problemset.yaml](#))

<team>

```
<team>
<id>1</id>
<name>American University of Beirut</name>
```

```
<nationality>LBN</nationality>
<university>American University of Beirut</university>
<university-short-name>U Beirut</short-name>
<region>Europe</region>
<external-id>23412</external-id>
</team>
```

id
Team identifier and at World Finals the team seat number.

name
Team name

nationality
nationality as [ISO 3166-1 alpha-3](#)

university
university affiliation.

university-short-name
shortened university name (from [teams.csv](#))

region
super region name.

external-id
team id from registration system.

Additional information may be provided. Note that for the World Finals the team name is set to the university name, but this need not be the case at ICPC regionals or other contests.

<clar>

```
<clar>
<answer>The number of pieces will fit in a signed 32-bit integer.</answer>
<answered>True</answered>
<id>1</id>
<question>What is the upper limit on the number of pieces of chocolate
requested by the friends?</question>
<team>0</team>
<problem>1</problem>
<time>118.480</time>
<timestamp>1265335256.480</timestamp>
<to-all>True</to-all>
</clar>
```

answer
answered
Answered flag

id
Clarification identifier

question

team
Team ID

problem
Problem ID

time
timestamp
to-all
 to-all flag

<run>

```
<run>
<id>1410</id>
<judged>True</judged>
<language>C++</language>
<penalty>True</penalty>
<problem>4</problem>
<result>WA</result>
<solved>False</solved>
<team>74</team>
<time>17960.749</time>
<timestamp>1265353100.749</timestamp>
</run>
```

id
 Run identifier
judged
 Judged flag
language
 language name
penalty
 penalty flag
problem
 problem ID
result
 result short name
solved
 solved flag
team
 team ID
time
 official submission time used for scoring.
timestamp

<testcase>

```
<testcase>
<i>1</i>
<judged>True</judged>
<judgement>WA</judgement>
<n>1</n>
<run-id>1</run-id>
<solved>False</solved>
<time>939.752</time>
```

```
<timestamp>1265336078.752</timestamp>
</testcase>
```

```
i
    testcase number
judged
judgement
    Judgement acronym
n
    Total number of testcases
run-id
solved
time
timestamp
```

<finalized>

```
<finalized>
<timestamp>1265336078.015</timestamp>
<last-gold>4</last-gold>
<last-silver>8</last-silver>
<last-bronze>12</last-bronze>
<comment>Finalized by John Doe and Jane Doe</comment>
</finalized>
```

```
timestamp
last-gold
    integer, last rank to receive a gold (should always be 4 for a compliant system)
last-silver
    integer, last rank to receive a silver (should always be 8 for a compliant system)
last-bronze
    integer, last rank to receive a bronze (should often be 12 but could very possibly be something
    else)
comment
    text
```

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