

First Experiences with TIRA for Reproducible Evaluation in Information Retrieval

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Open Search Lab

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Public search engine for the ClueWeb collection.

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Cluster with 200 cores today, with 1,000 cores next year.



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Open source experimentation platform.

TIRA

Why we started

To compile one of our group's papers:

- ❑ Checkout the \LaTeX resources.
- ❑ Open the frame file with a \LaTeX editor.
- ❑ Click on 'Compile'.
- ❑ Click on 'View PDF'.

Is the same possible for our experiment software?

TIRA

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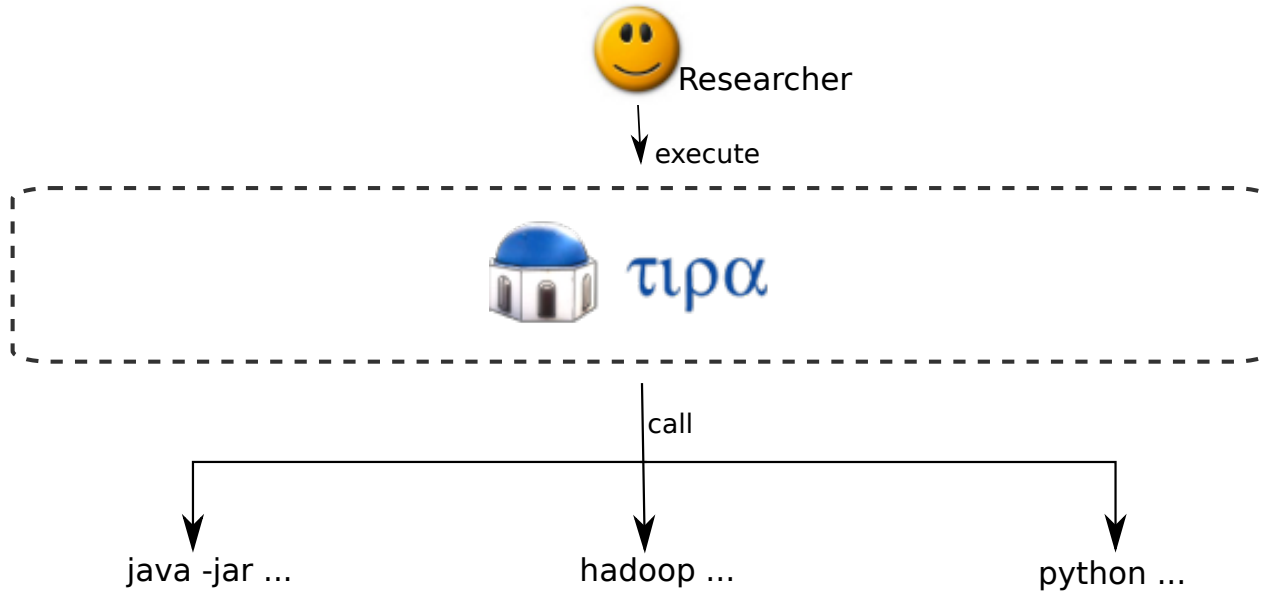
- ❑ Checkout the experiment resources.
- ❑ Open the experiment with TIRA.
- ❑ Click on 'Execute'.
- ❑ Click on 'View Results'.

How do we get there?

TIRA

Logical View

One program to rule them all:



TIRA

Technical View

Challenge:

- ❑ Experiment software may have system requirements your local computer does not meet.
- ❑ Experiment may require a non-trivial amount a data to be present.

Solution:

- ❑ Implement TIRA as a platform for the Web.
- ❑ Deploy experiment programs onto a dedicated machine with TIRA installed.
- ❑ Provide remote access to the experiment.

TIRA

Experiments as a Service

1 <http://tira.de/programs/examples/MyProgram>

2

Parameter 1: +

Parameter 2: +

Parameter 2: -

Search Execute

3 `tira@node1:~$./myprogram.sh -p1 42 -p2 "method1"`

4 `tira@node2:~$./myprogram.sh -p1 42 -p2 "method2"`

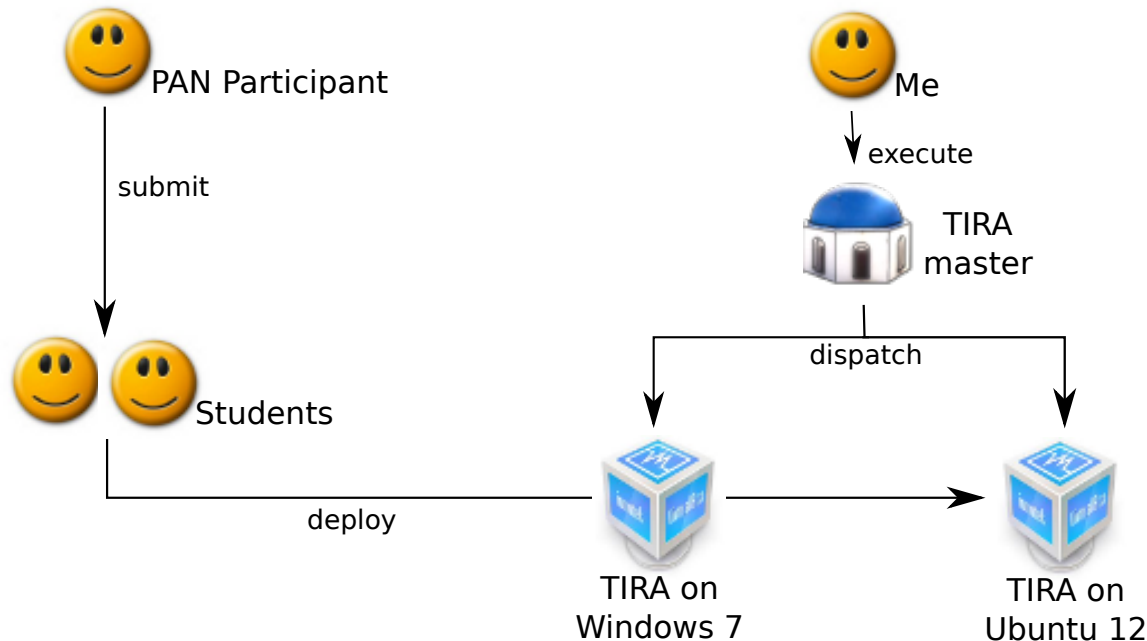
5

Parameter 1	Parameter 2	Output Directory	Performance
42	Method1	output-directory	0.89
42	Method2	output-directory	0.71

TIRA

TIRA @ PAN 2012

- ❑ TIRA was installed on two virtual machines (Windows and Ubuntu).
- ❑ A dispatcher (third TIRA instance) connected the virtual machine instances.
- ❑ Assistants deployed the competition software to the correct TIRA hosts.
- ❑ The supervisor pressed the run button to evaluate the submissions.

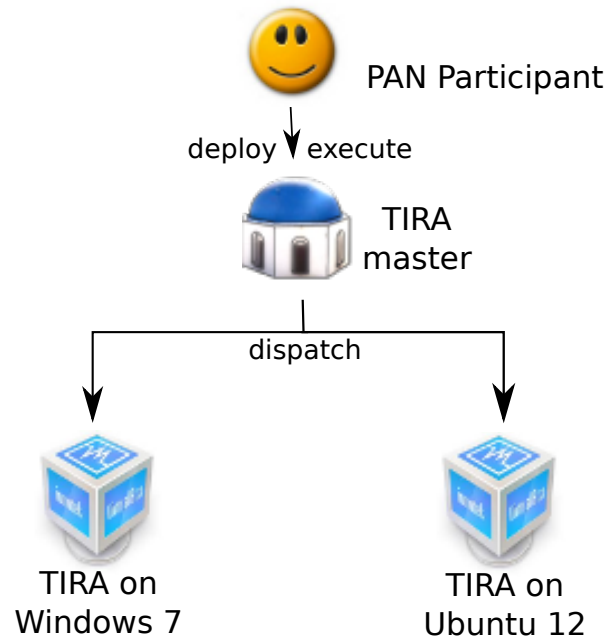


TIRA

TIRA @ PAN 2013

Goal for next year:

- No longer require student assistant support.
- Support automated deployment of software submissions.
- Keep the TIRA host running continuously.



Hope to see you at the poster session.

Thank you!

