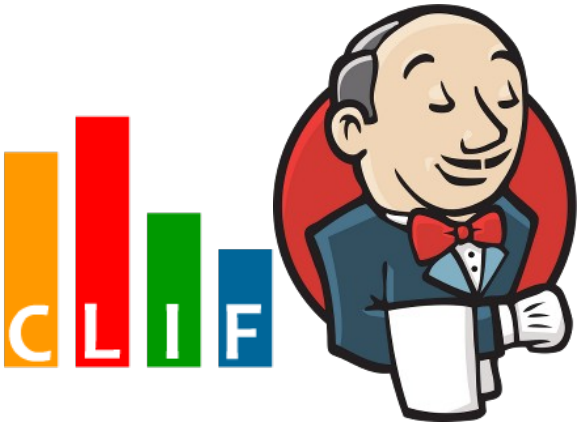
CLIF meets Jenkins

Performance testing
in continuous integration,
and more...



Bruno Dillenseger - Orange Labs

CLIF is OW2's load testing framework project, featuring outstanding adaptation capabilities. Among its possible integrations (such as Eclipse or Maven), this presentation focuses on CLIF's plug-in for the Jenkins Continuous Integration Server. This integration may be seen as a simple web-based user interface for running performance tests, enabling automatic testing and reporting. Beyond continuous integration, applications include monitoring applications quality of service in complex network topologies.

CLIF: OW2's load testing framework

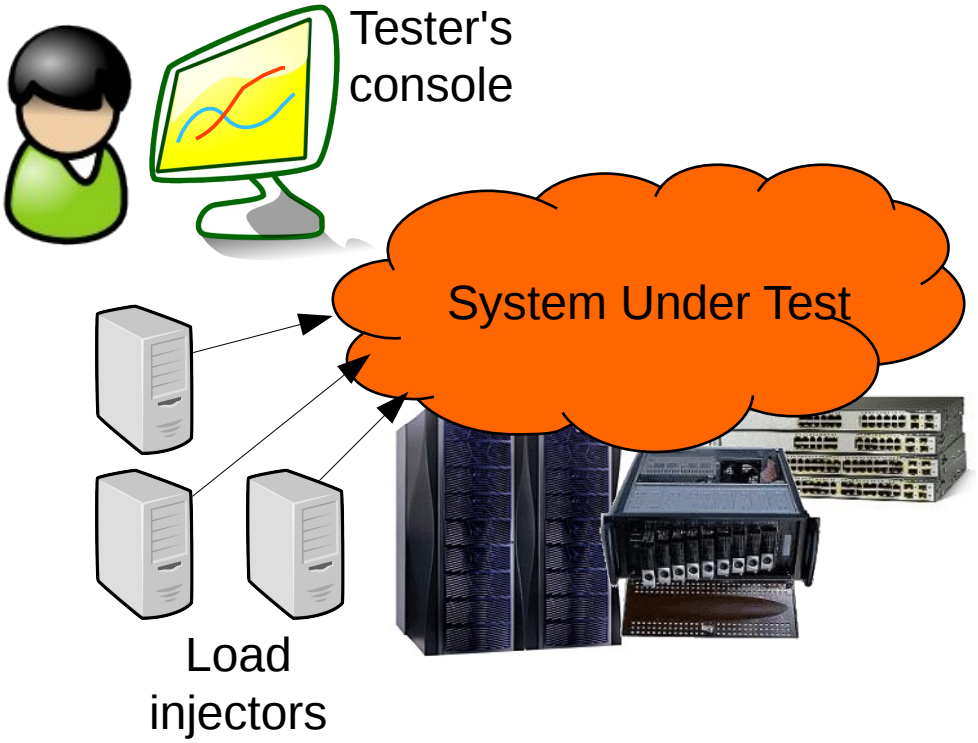
- generic/extensible

  IP, VoIP, database, mobile networks, custom protocols...

- flexible

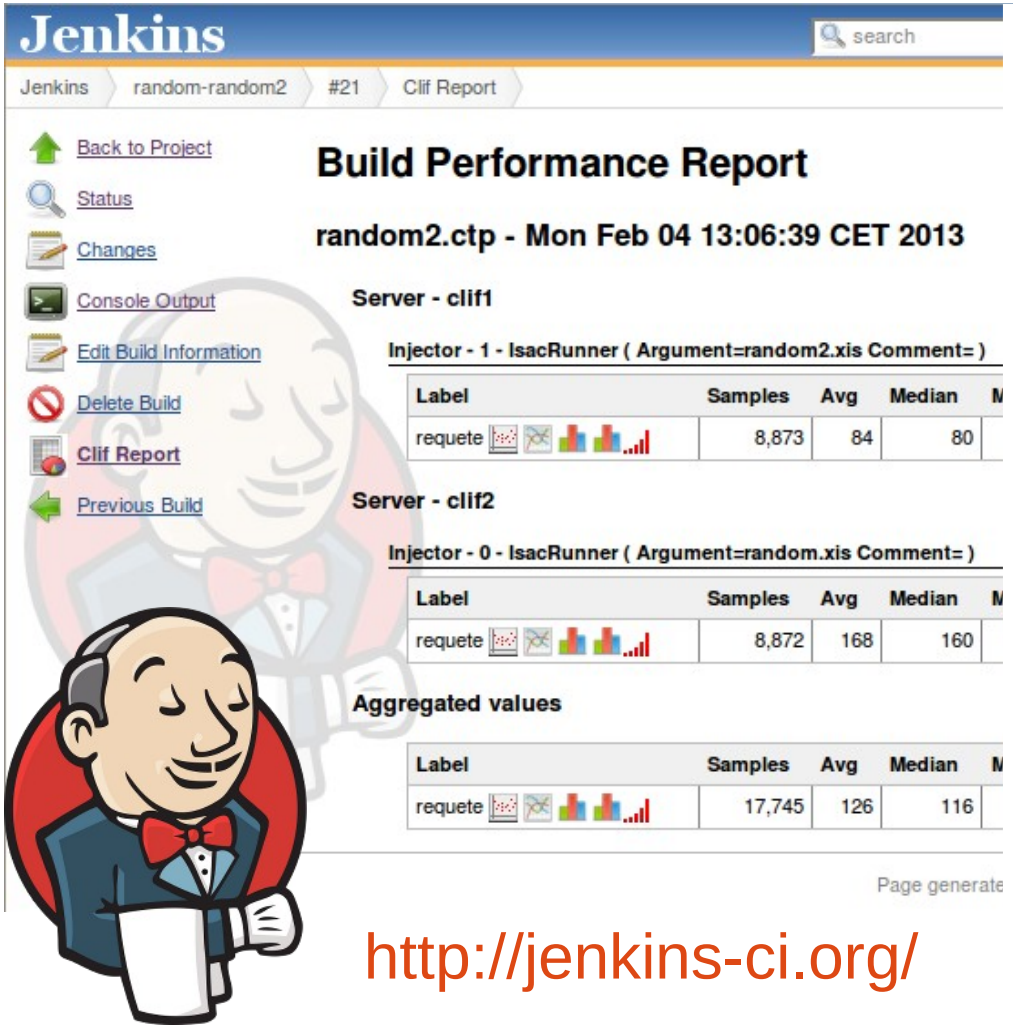
  Eclipse, Java Swing, command line, Maven, Jenkins

- advanced
  - Millions of virtual users
  - 1000+ distributed load injectors
  - continuous research transfer
- mature
  - 10 years feedback



http://clif.ow2.org

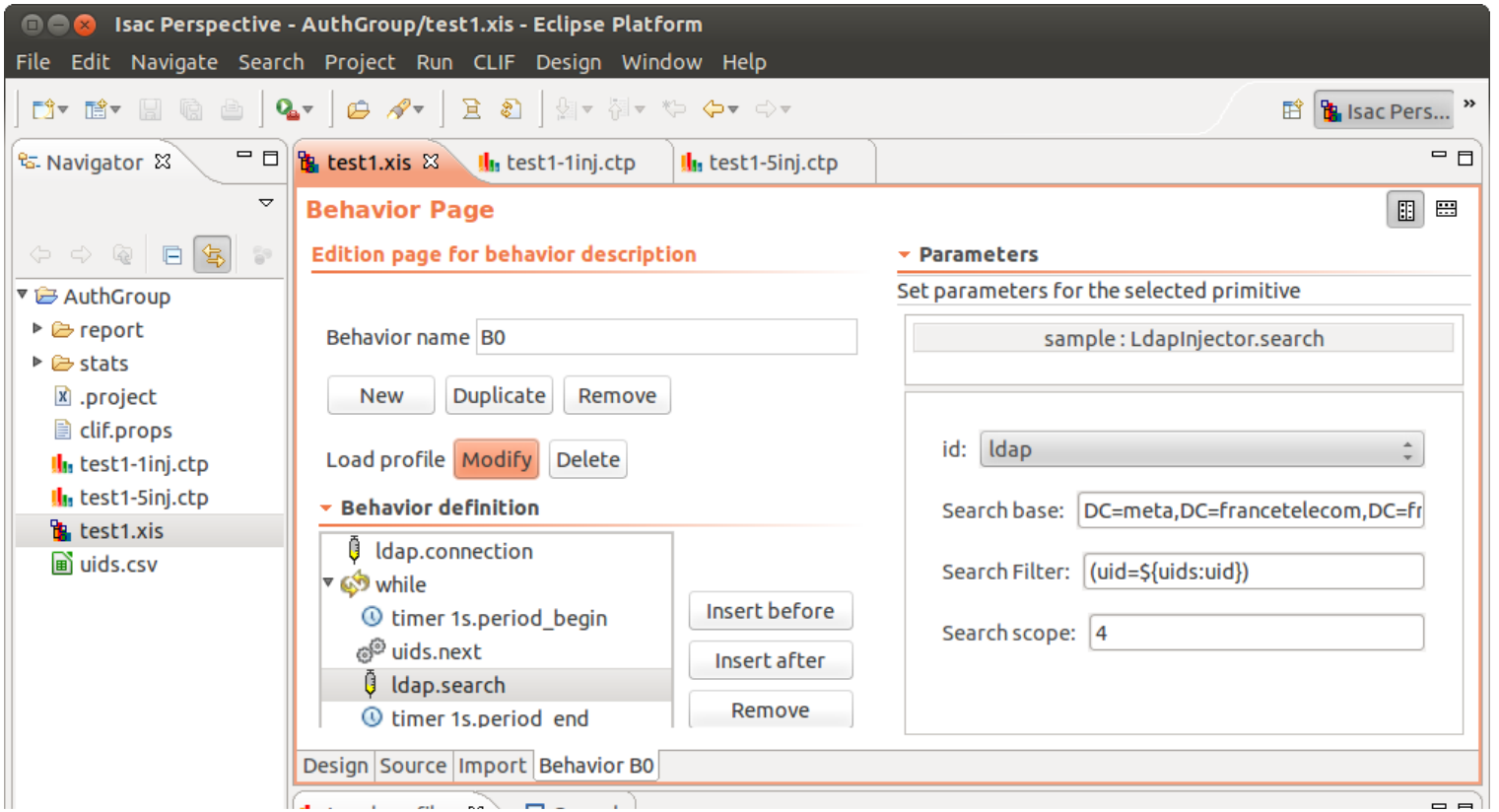
Jenkins continuous integration



http://jenkins-ci.org/

- automated testing
- automated reporting
  - per-test report
  - trends through tests
- extensible by plug-ins
  - the CLIF plug-in brings load testing and performance monitoring capabilities

Using CLIF with Jenkins (1)



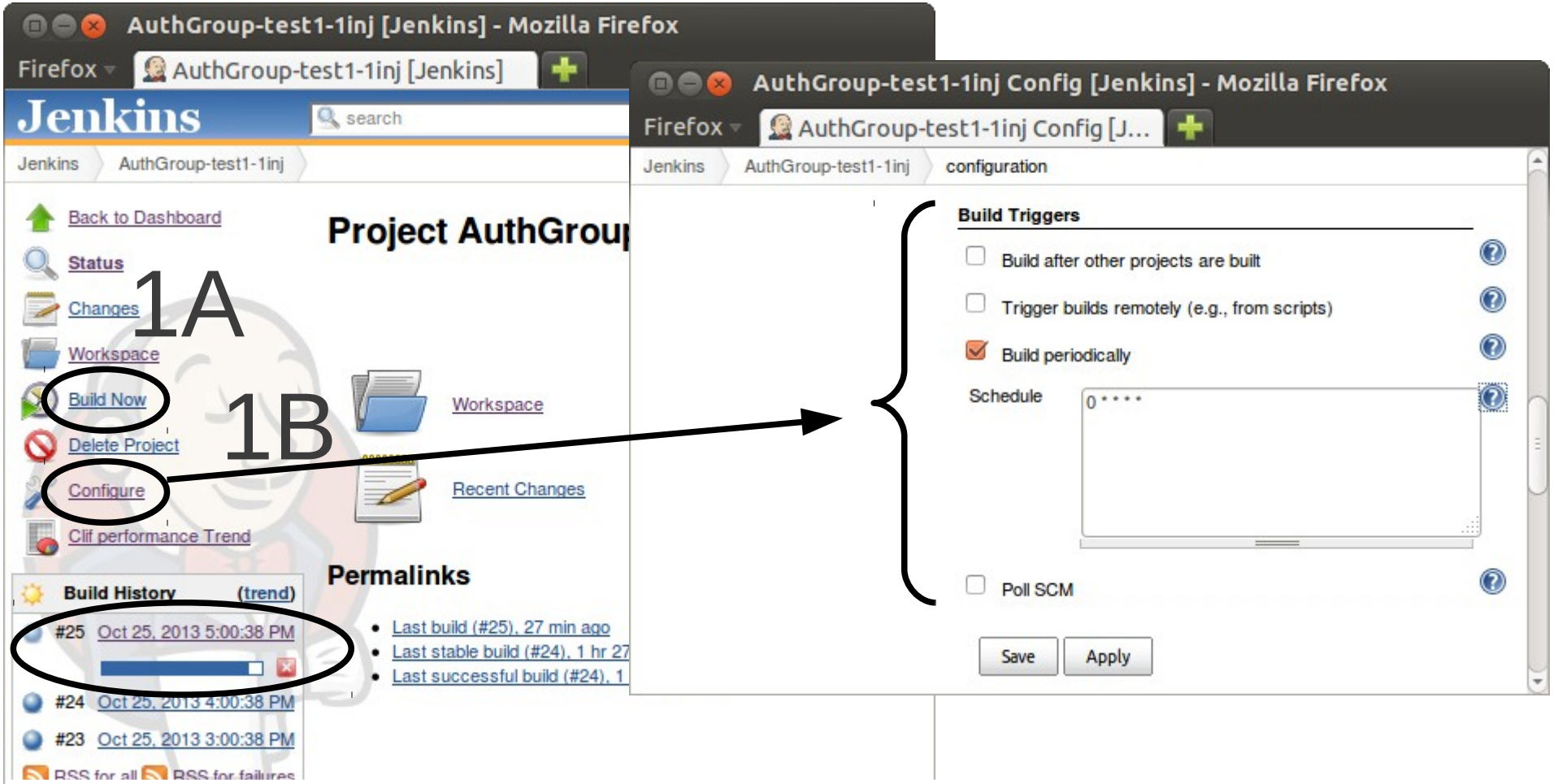
- Define your CLIF test project (test plans and scenarios) with the usual Eclipse-based CLIF console
- Export as a .zip file

Using CLIF with Jenkins (2)

Import the .zip file in Jenkins (steps 1, 2)

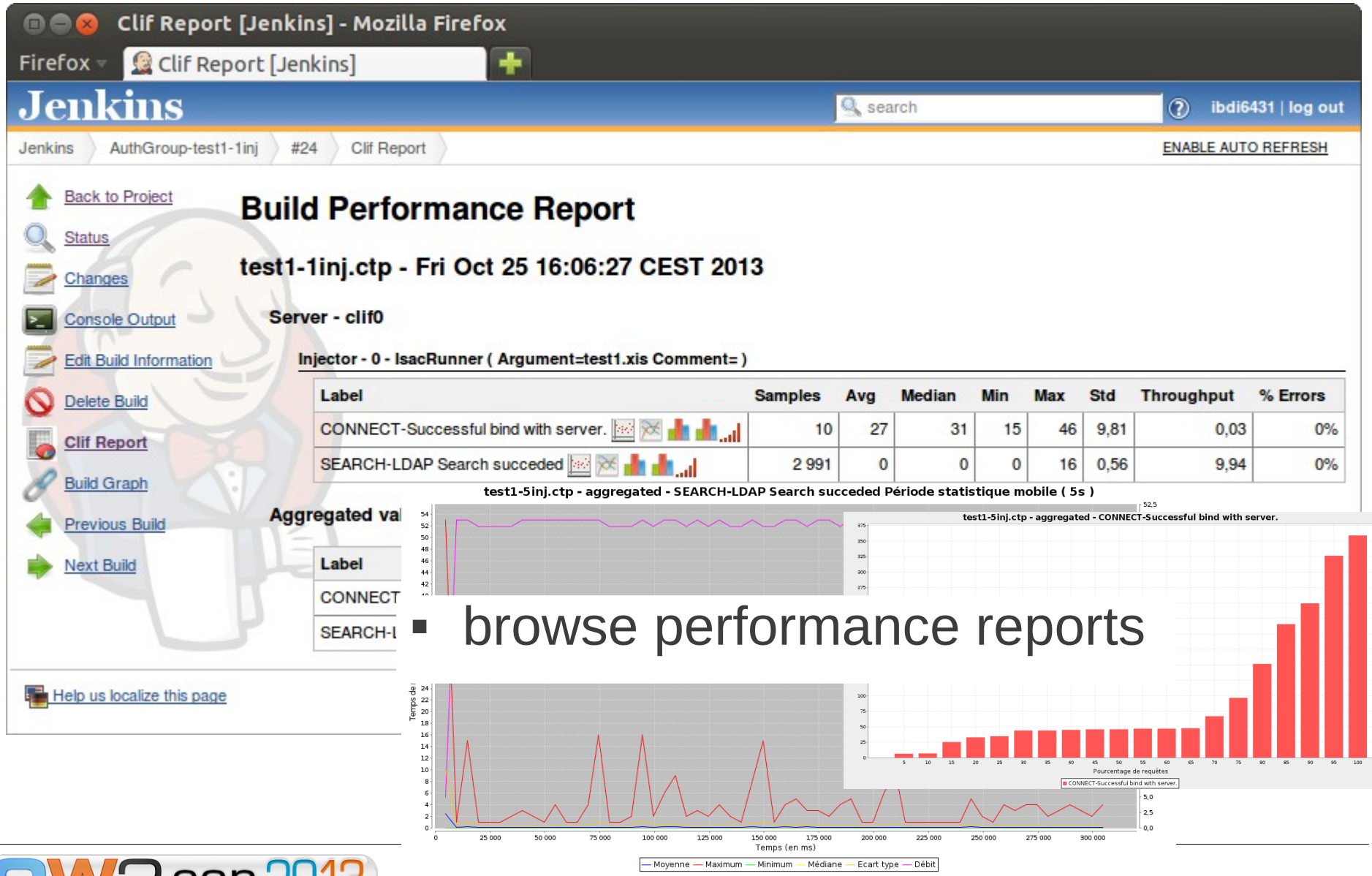
=> a Jenkins job is automatically created for each test plan (step 3)

Using CLIF with Jenkins (3)



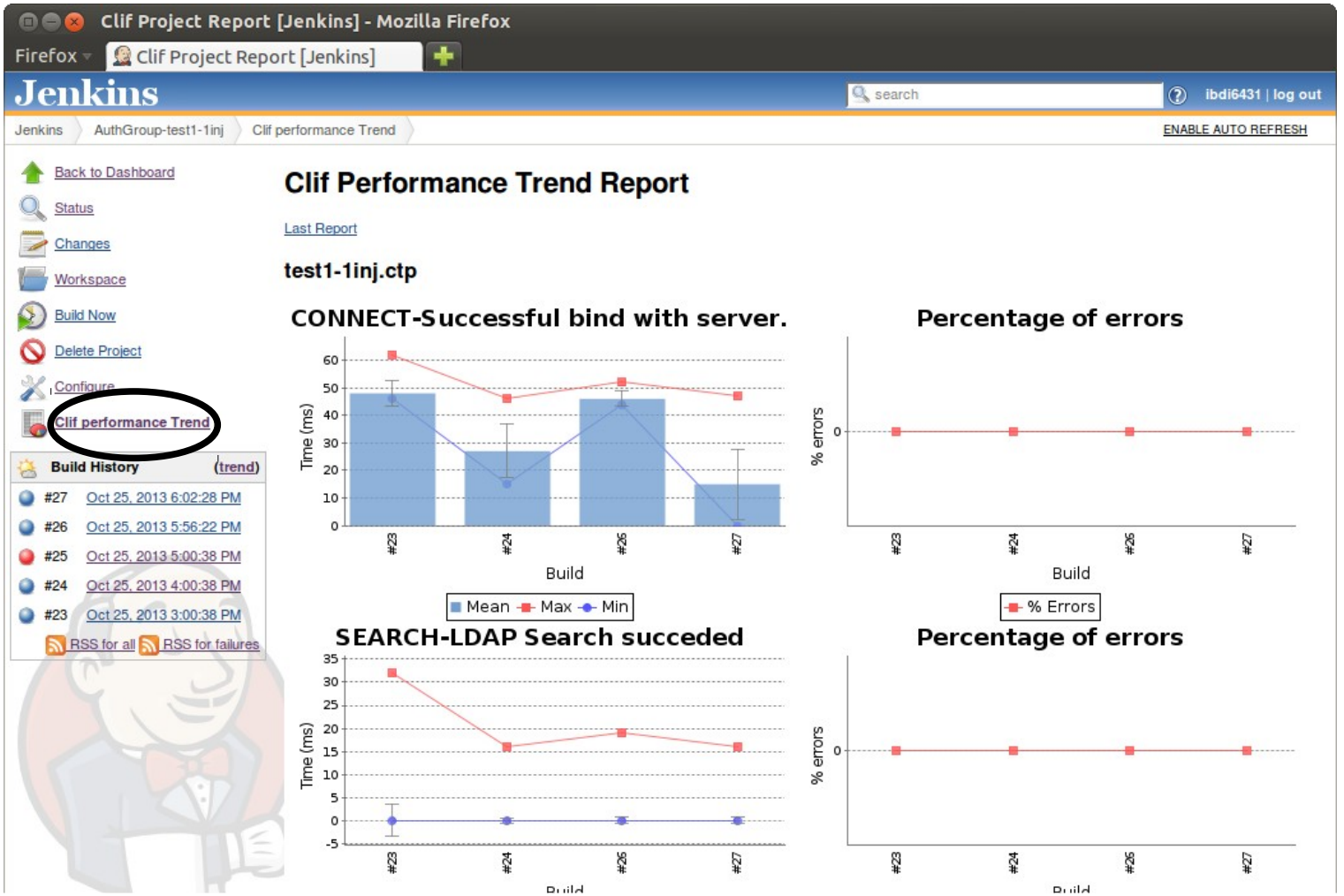
- Run a test: manually (1A) or automatically (1B)
- Wait for test termination (2)

Using CLIF with Jenkins (4)



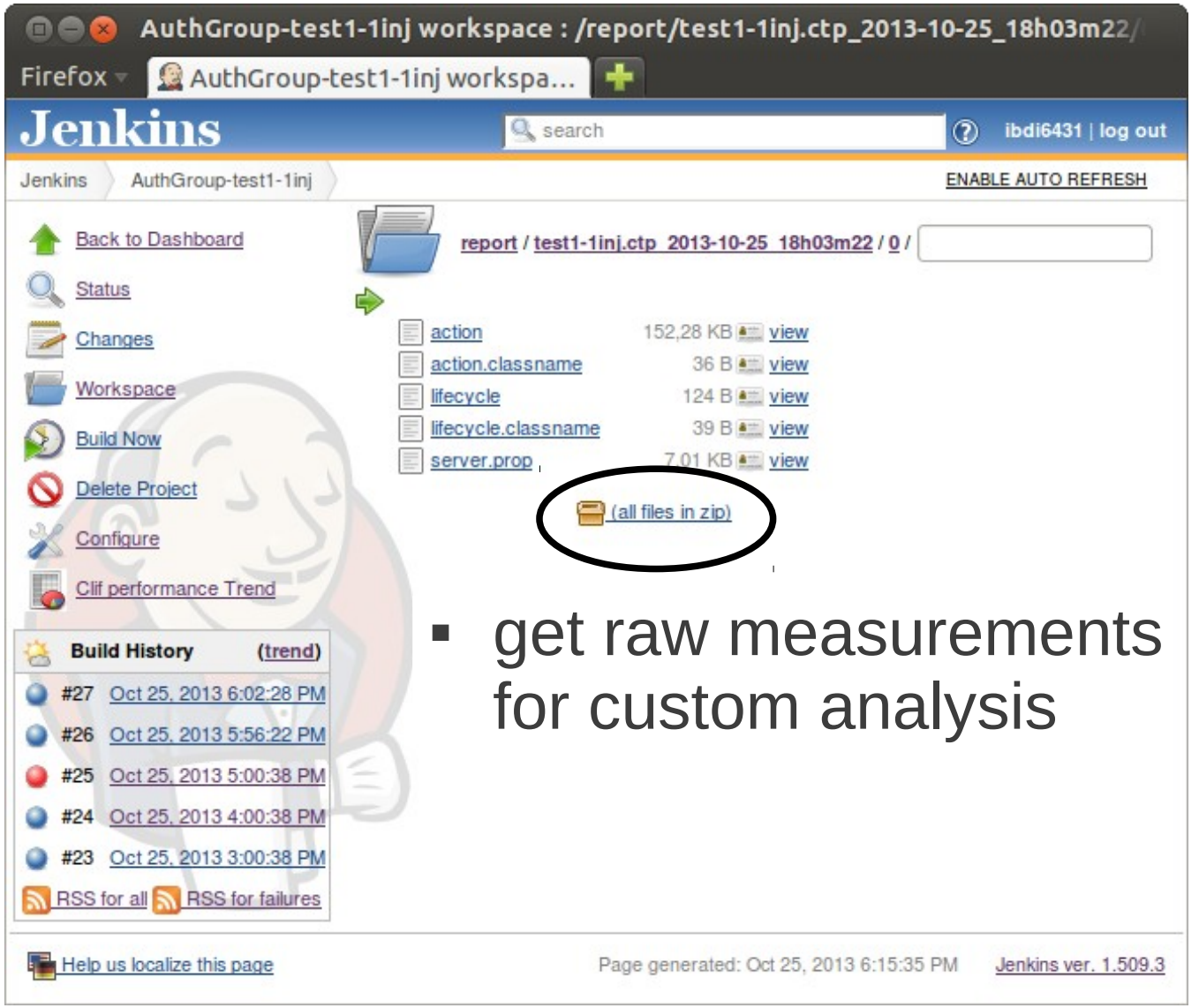
- browse performance reports

Using CLIF with Jenkins (5)



- observe performance trend through test runs

Using CLIF with Jenkins (6)

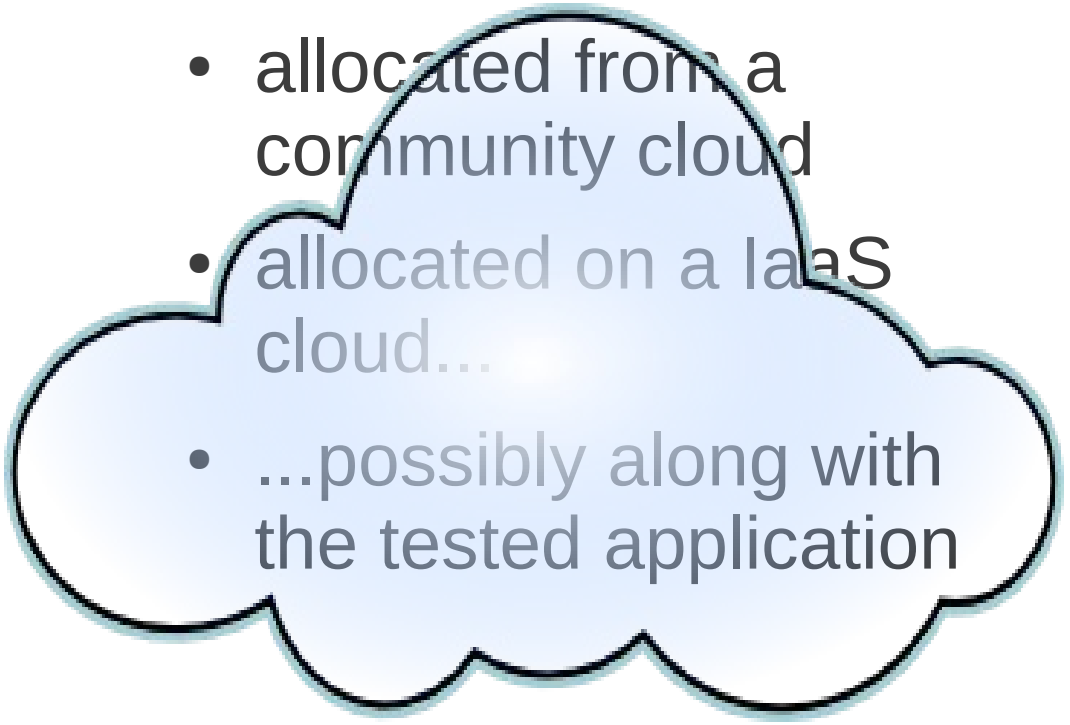


- get raw measurements for custom analysis

Allocating distributed load injectors

Remote CLIF load injection servers may be:

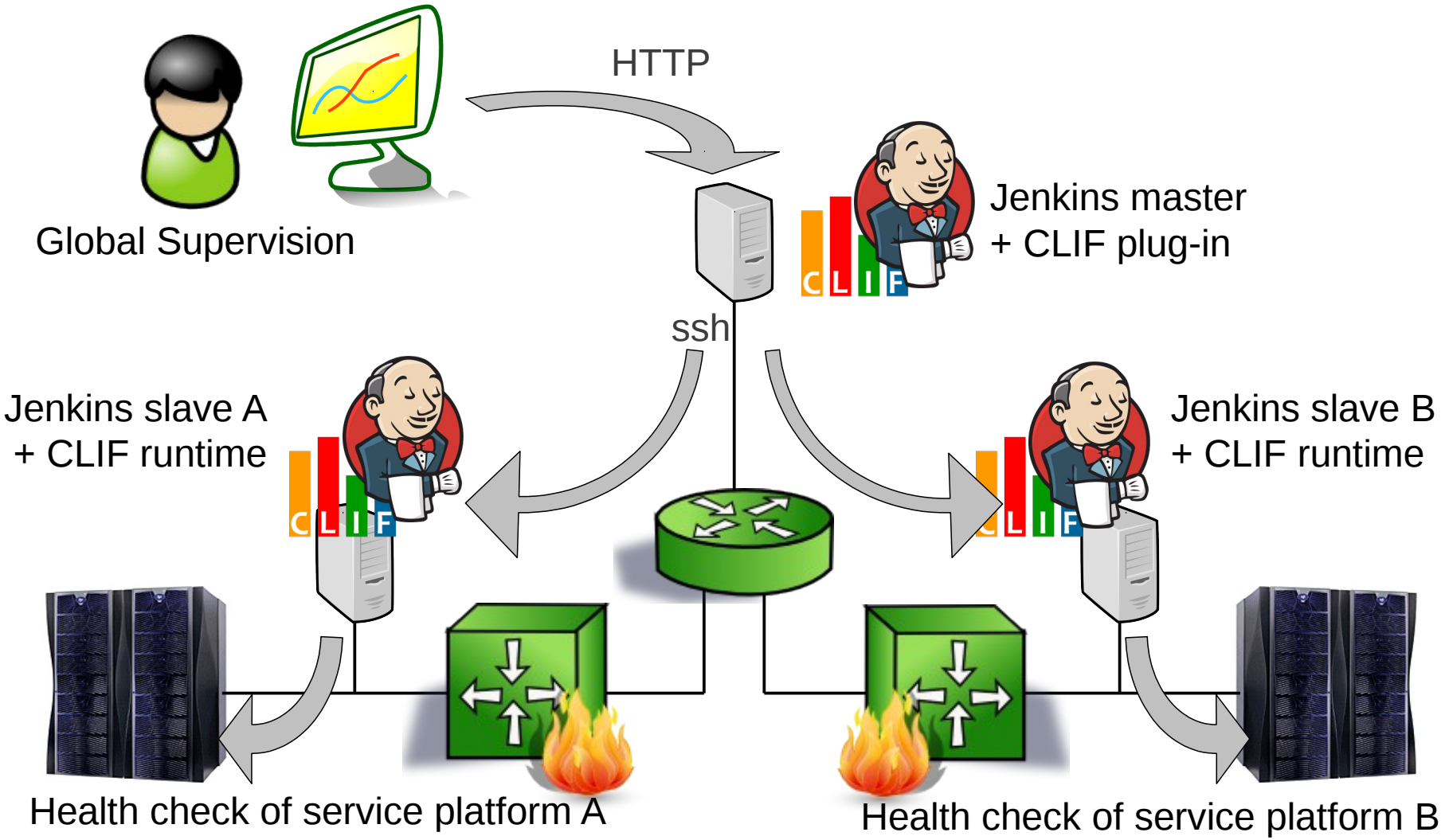
- manually launched
- allocated from a community cloud
- allocated on a IaaS cloud...
- ...possibly along with the tested application



references

- *Using Community Clouds for Load Testing: the ProActive CLIF solution.*
  OW2Con '12 (Special Prize from OW2's Technical Committee)
- Load testing in continuous integration on a PaaS:
  see OpenCloudware project
  http://www.opencloudware.org
- *Self-scalable Benchmarking as a Service with Automatic Saturation Detection*.
  Middleware Conference 2013
  (cooperation with LIG)

Using Jenkins' distributed mode for complex network topologies



Conclusion

- CLIF is mature, stable but lively
- The Jenkins integration brings:
  - a friendly web-based GUI for running CLIF tests
  - automated test runs and advanced reports
  - a suitable tool for monitoring platforms' quality of service
- On-going activities
  - CLIF as a Service with multi-cloud load injection (OpenCloudware)
  - Friendly User Test of load injection on users' desktops at Orange Labs
  - cooperation with the ProActive team for advanced networking
  - mavenization of code base to be completed

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