GDB tests, CI & Buildbot BoF

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Nomenclature

- Worker: The node that performs the "build". Usually one per physical machine/VM. For example, `fedora-x86_64-1` or `ubuntu-aarch64`.
- Factory: A recipe of how to perform a build.
- Builder: An instance of a factory. For example, `Fedora-x86_64-m64` or `Ubuntu-Aarch64-native-extended-gdbserver-m64`.
- Scheduler: Dispatches jobs to a set of builders. Can be triggered by specific events like a commit in a repository, a *try build* request or like a cronjob.

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- Initially it stored the test results in a git repository. This proved too inefficient over time...

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  - Alan Hayward (ARM): 2 machines (Ubuntu `ARM` 32 and 64)
  - Rainer Orth (CeBiTec.Uni-Bielefeld.DE): 2 machines (Solaris `amd64` and `sparcv9`)
  - David Edelsohn: 3 machines (RHEL 7.1 `s390x`, AIX `POWER8` and Debian Jessie `s390x`)
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- Test results are stored directly on-disk, and "garbage-collected" every week (tests older than 4 months are deleted).

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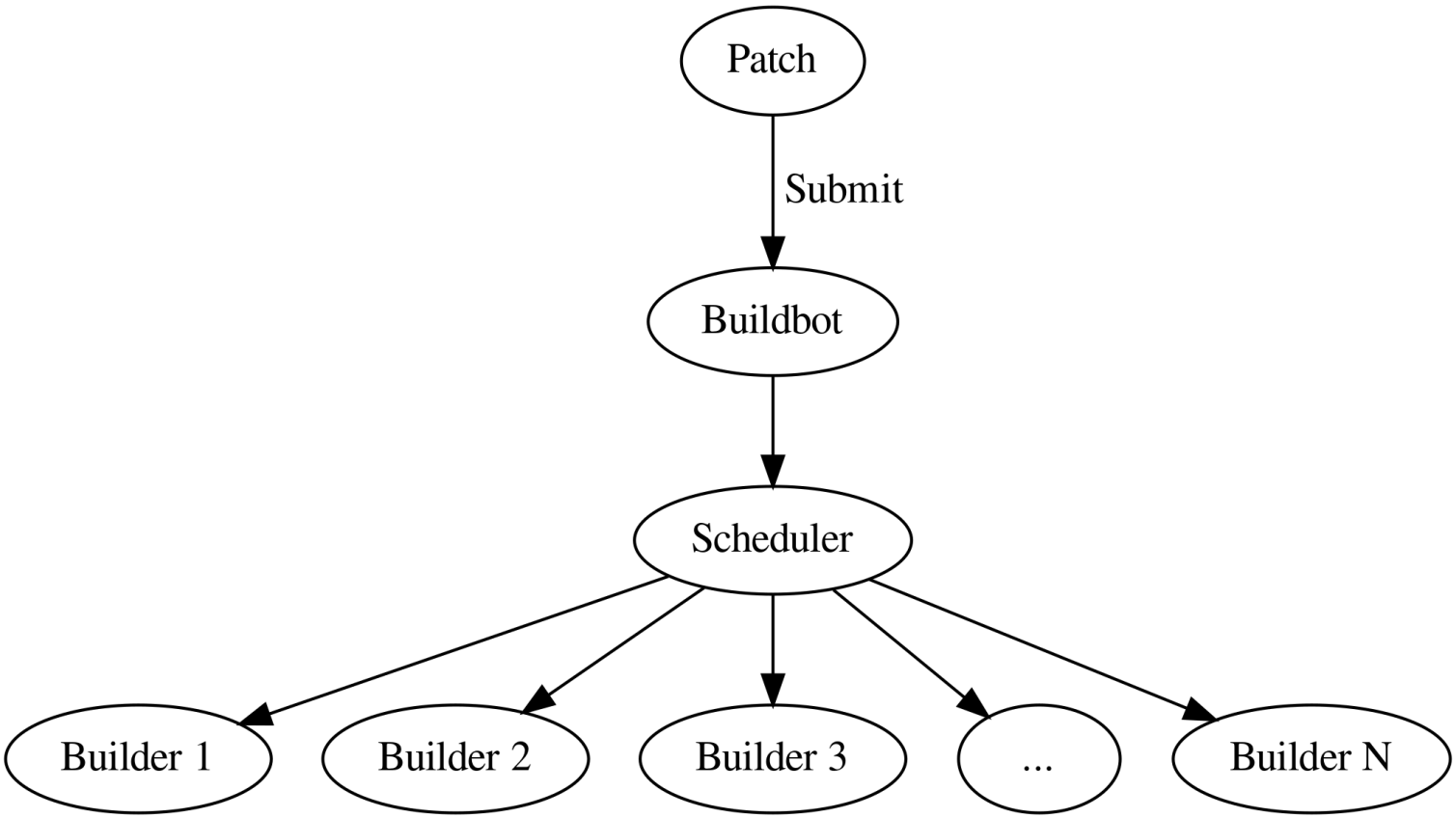
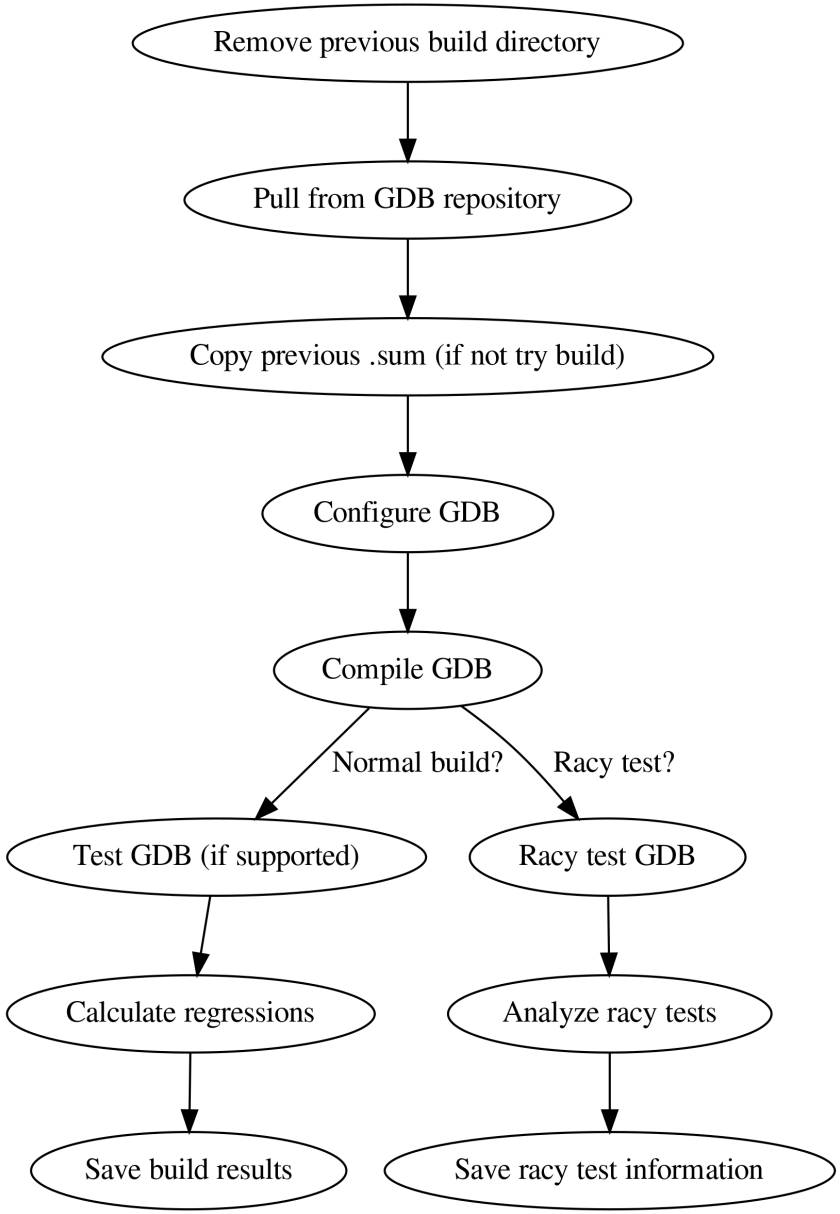


How does it work? [2]



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- We then ignore them when doing normal test builds. However... whac-a-mole.

Test analysis (a.k.a. finding regressions)

- Transform the current `.sum` file into a Python dict:
  - `{ 'gdb.base/test1.exp: name1' : 'PASS',`
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    - If it changed from `FAIL` to `PASS`, good. Update the baseline.
  - If the current key doesn't exist in the new dict:
    - If it's a `PASS`, good. Update the baseline.
    - If it's a `FAIL`, bad. Report as a new failure.

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- Breakage notifications are usually reliable. Regression notifications are not (just look at *gdb-testers*).

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- `make -jN`, racy tests and `gdb.threads`.