Continuous Integration for mainline Real-Time Linux

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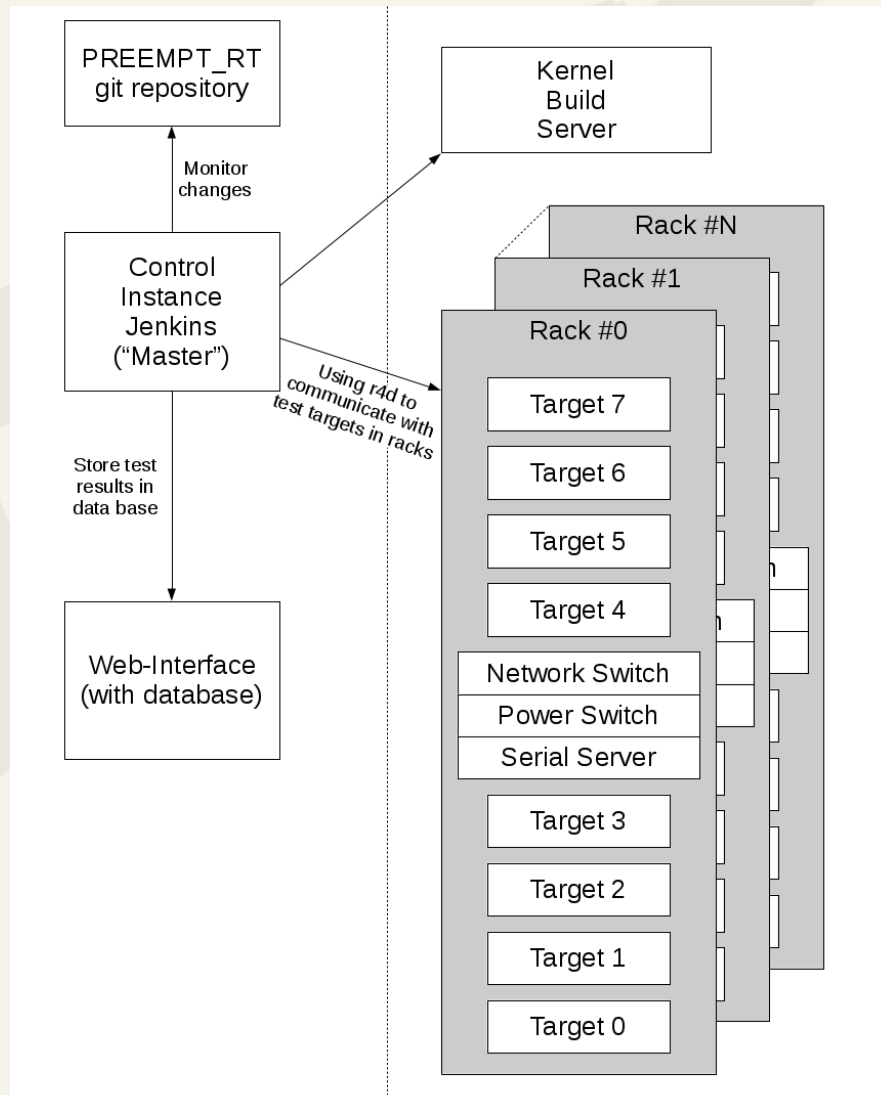
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CI-RT

- Jenkins-based test system

- Tailored towards the specific RT test needs

- One known lab at Linutronix with hardware provided by RT project members

- RT developers manage their tests via configuration in git

- Test results are published on ci-rt.linutronix.de

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PREEMPT_RT
git repository

Kernel
Build
Server

Monitor
changes

Control
Instance
Jenkins
("Master")

Using r4d to
communicate with
test targets in racks

Store test
results in
data base

Web-Interface
(with database)

Rack #N

Rack #1

Rack #0

Target 7

Target 6

Target 5

Target 4

Network Switch

Power Switch

Serial Server

Target 3

Target 2

Target 1

Target 0

Overview over CI-RT's structure

CI-RT for mainline Linux

- The test system can be used as-is

- Boot, cyclictest with idle and stressed systems

- Additional trees to test
    - Current RC
    - linux-next
    - Stable trees, once RT is in a stable release

- Test frequency and duration (nightly, 8 hours?)

RT for Other CI systems

- No other CI systems for Linux run RT tests

- RT-enabled mainline configurations should be tested in other labs
  - Cover more hardware
  - Raise RT awareness among kernel hackers

- Which CI systems should we provide RT test support for? – KernelCI, ...