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TF-A Project OpenCI

Introduction & Status

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February 2021

TF-A OpenCI System Introduction

- **TF-A Project CI (Continuous Integration) System Challenges**
  - TF-A was originally an Arm project before establishing as a Trustedfirmware.org project
  - TF-A project has relied on Arm Servers to provide a TF-A project CI
  - CI invocation and reporting to contributors is a manual process
  - CI results reporting is opaque to broader project membership
  - Barrier to efficient processing of contributor patches
  - Limited opportunities for contributor community to extend

- **OpenCI System Solution**
  - Migrate the existing CI onto Trustedfirmware (Linaro Hosted) Servers in phases
    - Funded as part of Trustedfirmware.org board budget allocation
    - Redesigned and secured for more public use/access
    - CI results available directly to project contributors
    - Leads to a more transparent reporting of the quality assurance performed on the project code base
    - All CI scripts and Jenkins jobs shared in opensource repositories, so extensible by the community

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- Current OpenCI Capabilities
  - Daily runs of the CI on the Integration branch.
  - Manual gerrit instigated CI runs on patches under review. Two levels of tests (L1 and L2)
  - Relies on Jenkins and LAVA to coordinate build/tests jobs
  - Static Analysis checking
  - Makes heavy use of FVP models and the Arm Juno board as test targets
  - Uses TF-A Tests and Boot tests to test various Feature and System build combinations
  - Builds all platform code upstreamed, however these are not runtime tested

- Status
  - OpenCI undergoing public availability commissioning
    - Identifying functional and performance faults
    - Rolling out fixes for items identified
  - Arm TF-A CI running in parallel while OpenCI stabilizes

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- Future Evolution
  - Developer guidance and documentation for work flow usage
  - As OpenCI stabilizes ArmCI will be decommissioned
    - Will occur in phases
  - Future ArmCI items under consideration at different priority levels
    - Missing public FVP's + test enablement
    - Windows Build Server
    - Code Coverage
    - Quality Metric Tracking
  - Partner Platform Testing
    - Project platform contributors engage with Trustedfirmware.org

- References
  - https://ci.trustedfirmware.org
  - https://review.trustedfirmware.org/q/project:TF-A/trusted-firmware-a
  - https://git.trustedfirmware.org/ci/tf-a-ci-scripts.git/
  - https://git.trustedfirmware.org/ci/tf-a-job-configs.git/

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Thank You
Danke
Gracias
谢谢
ありがとう
Asante
Merci
감사합니다
धन्यवाद
Kiitos
شكرًا
ধন্যবাদ
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