

v1.14 LTS Branch Maintenance Process

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The Zephyr Project is hosted on GitHub at:

<https://github.com/zephyrproject-rtos/zephyr>

The above repo is where all Open Source Community development happens.

The Intel Zephyr team maintains an INTERNAL GitLab repo at:

<https://gitlab.devtools.intel.com/zephyrproject-rtos/zephyr>

This internal repo is a full mirror of the external (upstream) repo on GitHub, with the addition of Intel specific branches that are for INTERNAL use ONLY. i.e. They are not to be exposed to the community for various reasons until ready to be "upstreamed."

The internal mirrored tree is refreshed approximately every 30 minutes from the upstream GitHub repo. This does not, obviously, affect internal Intel specific branches. We manage those directly in GitLab.

Terminology

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PR = pull request

MR = merge request, common in gitlab documentation and is equivalent to PR

Intel Branches

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There are two ways for Intel code to be integrated into the internal GitLab repo.

- Submitted upstream to the appropriate branch (i.e. v1.14-branch) in GitHub repo, and then merged back to the internal-only v1.14-branch-intel branch in GitLab by DevOPS C/I process. This "local" merge not in place yet, but will be in the near future. Developer will not need to do anything special to get code submitted upstream into the internal branches.

- By submitting a Pull Request (PR) to the GitLab project on a development branch.

The PR method is the current focus of this document.

General Process

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To submit code to the internal GitLab repo, you must have an account on GitLab and request developer access to the Zephyr repo. You may request to the project within GitLab.

Once you have access, you will need to push your code someplace suitable in GitLab. This can be a development branch in the Zephyr tree, your own repo, a team development repo, etc.

Then you can proceed to make a merge request by going here:
https://gitlab.devtools.intel.com/zephyrproject-rtos/zephyr/merge_requests

This is also accessible via the sidebar menu in GitLab.

Once on the merge request page, you simply click "New Merge Request" and follow the prompts to select the source branch and the target.

As you go through, fill in the appropriate labels, etc., and select reviewers.

After your code has been reviewed, any required changes made, and approved, a maintainer will merge it accordingly.

More documentation, with useful details and screenshots for creating merge requests:
<https://docs.gitlab.com/ee/gitlab-basics/add-merge-request.html>

DevOPS/CI Process

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PR Process

When a PR is submitted, Gitlab is configured to immediately trigger a CI job on the source branch to ensure that it "builds" and is suitable for merging.

As of WW36 '19, the PR CI job consists of the following tasks:

1. Report "Pending" job status to gitlab@devtools.intel.com
2. Initialize a clean build environment
3. Checkout the source branch
4. Run `west -l /source_branch` to pull-in all dependencies
5. Execute sanitycheck against ALL architectures and platforms.
6. Report job result to gitlab@devtools.intel.com

Other steps may be added upon request.

The CI jobs takes approx 30 minutes and status can be monitored from the PR page in gitlab.

When the CI job completes, gitlab will display status next to the PR title- a green check for pass or red X for failures. Depending on your notification preferences in gitlab, you may also receive an email with the status.

If the CI job passes

The PR moves to code-review. After code review happens, and merge approval is given and CI will again automatically trigger a “merge accepted” CI job. After this final check, the maintainer will merge the code to the target branch. That will, in turn, trigger a build against the target branch to ensure nothing unexpected happened.

If the CI job fails

All CI job output is stored on the Jenkins CI master & is accessible to all of Intel. The PR submitter is expected to monitor the status of the CI job and address any sanitycheck failures by examining the Jenkins build logs:

V1.14-branch-intel:

https://zerobot-stg.ostc.intel.com/job/zephyrci_v1.14-branch-intel

(Full CI is only on staging for the rest of WW36)

To trigger additional CI runs on the same merge request, add the following comment to your MR notes (no quotes):

“zephyrci please retry a build”

Eventually the merge process for upstream v1.14-branch and v1.14-branch-intel will also be automated by DevOPS.

DevOPS Team

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