Further documentation on Flutter's build infrastructure can be found in <a href="https://github.com/flutter/flutter/blob/master/dev/bots/README.md">https://github.com/flutter/flutter/blob/master/dev/bots/README.md</a>.

## Requirements for a Flutter/LUCI build

A general outline of the requirements that a Flutter CI test shard has:

- 1. On LUCI, test shards map to builders. Each test shard must have its own LUCI builder. For the Framework, these are defined in <u>framework config.star</u>. Generally you will need to have both a pre-submit ("try" in LUCI terminology) builder and a post-submit ("prod") builder.
- 2. This LUCI builder will specify a "recipe" to run. These are <u>starlark</u> scripts that determine the actual CI steps to run, and are defined in <u>flutter.googlesource.com/recipes</u>. Most Framework tests use the <u>flutter/flutter\_drone.py</u> recipe. To learn how to edit these, see <a href="https://github.com/flutter/flutter/blob/master/dev/bots/README.md#editing-a-recipe">https://github.com/flutter/flutter/blob/master/dev/bots/README.md#editing-a-recipe</a>.
- 3. Builders are then added to <u>.ci.yaml</u>. These files are read by <u>Flutter's build dashboard</u>, and are used for scheduling builds.

## Steps to add a new Framework Test Shard

It is important to land these changes in order to prevent any failing builds during the migration period:

- 1. Framework tests are run by a Dart test runner called <u>test.dart</u> that lives in the framework repository. Any new test shards must first be added to this file. Merge this framework change.
- 2. Next, add pre-submit ("try") and post-submit ("prod") builders to <u>framework config.star</u>. More detailed instructions <u>in the infra README</u>. Ensure that the "shard" and "subshard"/"subshards" properties match what was added to test.dart in the previous step. Merge this infra change.
- 3. Update <u>.ci.yaml</u> in the Framework tree to include the newly added builder. Verify that the entry is marked as bringup: true. New shards should always be marked in bringup to verify they are passing on master before being able to block the tree. When opening this PR, a pre-submit check for the new test shard should be triggered. Merge this framework change.
- 4. Monitor the CI results of the new shard on the <u>Flutter build dashboard</u>. After 10 consecutive passing builds, you can remove the <u>bringup</u>: true parameter from .ci.yaml in the Framework tree. This will allow the test to block the tree, preventing breakages.

Note: if a new post-submit target is renamed from an existing target, there is no need to follow the bringup process.