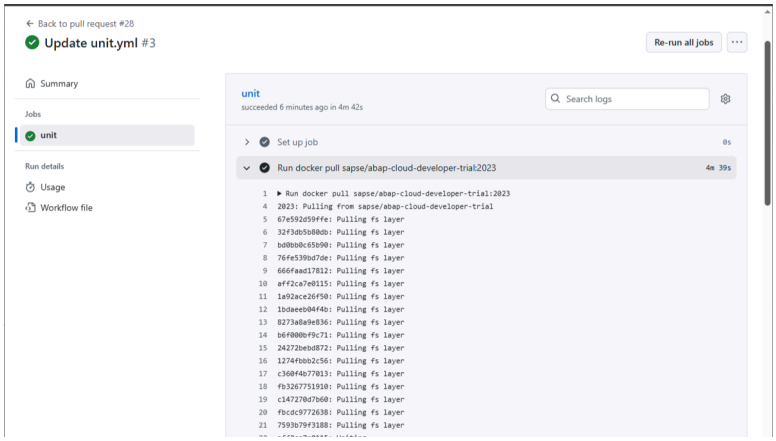


# Sustainable + scalable + isolated ABAP Continuous Integration

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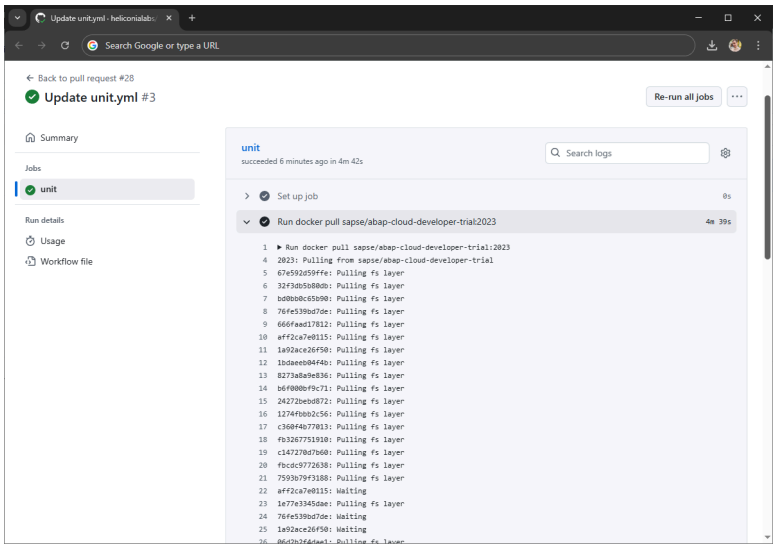
GitHub introduced hosted runners with 96 vCPU and 384 GB RAM back in April. This should be enough to spin up a S/4 HANA system on GitHub Actions for continuous integration.

At around USD 0.8 per minute, it easily adds up if having multiple ABAP developers pushing changes to git every hour. Developers should push often to get the automated feedback they need.

In the open source abapGit project we have a monthly budget of USD = 0, so compromises has been made to run a mocked open-abap system instead of a full SAP system. On every push from anybody in the world, Actions is triggered to run the unit tests. This takes around 50 seconds on the free Actions tier.

## Downloading the Developer Trial

For non-scientific comparison I tried downloading https://hub.docker.com/r/sapse/abap-cloud-developer-trial on a 8-core 32 GB RAM · 300 GB SSD instance,




Almost 5 minutes to pull the docker image

abapGit running unit tests on 2-core 8 GB RAM · 75 GB SSD in 54 seconds

Downloading image on 8-core 32 GB RAM · 300 GB SSD in 4m 39s not starting the image, not running any code

Thats **5 times faster** doing everything vs doing nothing, on a system that is **4 times larger** 🤔

## What to do

Always run fast inexpensive checks first when setting up Continuous Integration, if there are any errors later in the pipelines work on shifting these left for faster and cheaper feedback.

Run the slow and expensive tests late in the pipeline, potentially just before deploying the changes.

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