Cellular Network Infrastructure - Feature #4040

Use "COPY --from" in Dockerfiles to avoid cloning from scratch again and again

06/04/2019 09:48 AM - laforge

Status:	New	**Start date:**	06/04/2019
Priority:	Low	**Due date:**	
Assignee:	sysmocom	**% Done:**	0%
Category:			
Target version:			
Spec Reference:			

Description

Some of our Dockerfiles clone a lot of git repositories (e.g. those for the ttcn3 tests), and due to the sequential nature of docker cache invalidation, a change in osmo-ttcn3-hacks.git not only means we will re-clone that git repository from scratch, but we also will clone all of the 'deps' repositories from scratch.

If we had a docker container hosting pre-created clones of those repositories, we could use the "COPY --from" syntax in our Dockerfile, copying those initial clones of the git repositories over. We'd then only have to pull whatever changes (if any) over the network.

See https://docs.docker.com/develop/develop-images/multistage-build/ for a description of this feature towards the bottom.

This would

- significantly reduce the network traffic on the buildhost during re-generation of images
- reduce the load to the respective git servers
- speed up the build process

The container hosting the "pre cloned git repos" could then be updated only once per week or even once per month. It should **not** be rebuilt too often, as otherwise it will have to be pulled all the time, avoiding the benefits stated above and just move traffic from git to docker.

History

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The section on the docker documentation is *Use an external image as a "stage"*