Troubleshooting

Troubleshooting Cargo build issues

This project has a large set of dependencies and they are all bundled together in a root Cargo.lock file. This means that sometimes, when upgrading some of our dependencies, Cargo will do something unexpected which causes build errors which can be very time consuming to figure out.

Example: failed to select a version for xyz

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Copy error: failed to select a version for fvm_sdk. ... required by package frc42_dispatch v5.0.0 ... which satisfies dependency frc42_dispatch = "^5.0.0" of package fil_actor_account v12.0.0 (/home/fridrik/workspace4/builtin-actors/actors/account) ... which satisfies path dependency fil_actor_account (locked to 12.0.0) of package fil_actor_miner v12.0.0 (/home/fridrik/workspace4/builtin-actors/actors/miner) ... which satisfies path dependency fil_actor_miner (locked to 12.0.0) of package fil_actors_integration_tests v1.0.0 (/home/fridrik/workspace4/builtin-actors/integration_tests) ... which satisfies path dependency fil_actors_integration_tests (locked to 1.0.0) of package test_vm v12.0.0 (/home/fridrik/workspace4/builtin-actors/test_vm) versions that meet the requirements ~4.0 are: 4.0.0

all possible versions conflict with previously selected packages.

previously selected package fvm_sdk v4.1.1 ... which satisfies dependency fvm_sdk = "^4.1.0" (locked to 4.1.1) of package fil_actors_runtime v12.0.0 (/home/fridrik/workspace4/builtin-actors/runtime) ... which satisfies path dependency fil_actors_runtime (locked to 12.0.0) of package fil_actor_account v12.0.0 (/home/fridrik/workspace4/builtin-actors/actors/account) ... which satisfies path dependency fil_actor_account (locked to 12.0.0) of package fil_actor_miner v12.0.0 (/home/fridrik/workspace4/builtin-actors/actors/miner) ... which satisfies path dependency fil_actor_miner (locked to 12.0.0) of package fil_actors_integration_tests v1.0.0 (/home/fridrik/workspace4/builtin-actors/integration_tests) ... which satisfies path dependency fil_actors_integration_tests (locked to 1.0.0) of package test_vm v12.0.0 (/home/fridrik/workspace4/builtin-actors/test_vm)

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If you get this error, then it means that Rust could not find a version of the xyz crate which fulfills the requirements of the package and other packages that depend on it. To debug this, look what dependencies of xyz package are, and check if they need to be updated.

This error can happen for example when upgrading to a new major/minor FVM versions without upgrading also other dependencies like frc_dispatch which requires fvm as well. In that case we must upgrade the frc_dispatch package to use the same FVM version as we are using.

Unexplained transitive dependencies in wasm32 target after upgrading FVM version

When upgrading FVM dependency (from 4.0 to 4.1) it resulted in our fendermint/actors/build.rs script to fail due Cargo including multiple new dependencies in the wasm32 target which did not occur before and caused build errors since these new dependencies did not support Wasm target.

By running cargo tree we saw that these dependencies were pulled in from the filecoin-proofs-api required by fvm_shared . This dependency is pulled in when requiring fvm_shared with the crypto feature. Looking at our different Cargo.toml files, we noticed that contracts/binding/Cargo.toml file was the only one setting that feature. We needed to remove the crypto feature, compile, and then add it back in for the wasm build (and tests) to succeed.

Troubleshooting Misc Cargo related issues

Unexplained behaviour due to local changes in ~/.cargo/registry

Example: Failing integration tests due to local changes in ~/.cargo/registry If you are seeing weird unexplained behaviour that you kind of can't wrap your head around, then you may want to delete your ~/.cargo/registry and run cargo build . Here is why, you might have accidentally changed some of the crates's source files that cargo is using in your project. There is no way to know if you had made any local changes to any of these crates as `Cargo`` does not maintain hash of these dependencies and there is no git repo available to compare against.

Was this helpful? Edit on GitHub