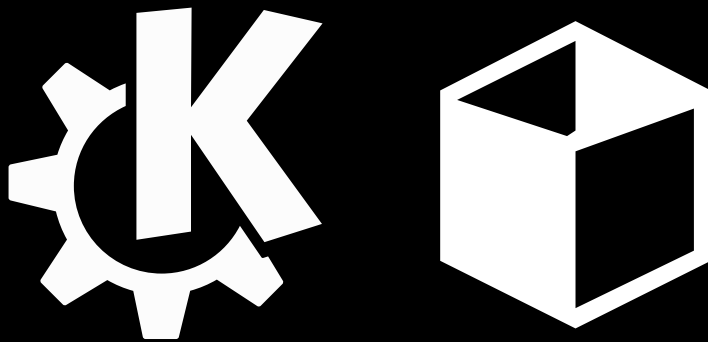




# Developing on Flatpak



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# Developers!

## Developers!

### Developers...



**HOW DO YOU DO, FELLOW KIDS?**



# All of the KDE Goals!

-  2018: Streamlined onboarding of new contributors
-  2020: All about the apps
-  2022: ???
-  2024: Streamlined Application Development Experience





**What if you could...?**

**So that...**

**For example:**

**And that's not all!**





...

-  And Kinoite
-  And SteamOS
-  And LTS distros



# How do I work on it?



Focus on `.flatpak-manifest.json`



# Building locally

```
flatpak-builder app .flatpak-manifest.json --install
```



# Building locally

```
flatpak-builder app .flatpak-manifest.json --repo repo --force-clean --ccache \  
--install --disable-updates
```



Could *probably* improve on that...





```
{
  "id": "org.kde.kookito",
  "branch": "master",
  "runtime": "org.kde.Platform",
  "runtime-version": "6.9",
  "sdk": "org.kde.Sdk",
  "command": "kookito",
  "finish-args": [
    "--share=ipc", "--socket=fallback-x11", "--socket=wayland",
    "--device=dri", "--share=network"
  ],
  "modules": [
    {
      "name": "kookito",
      "buildsystem": "cmake-ninja",
      "config-opts": [ "-DENABLE_TESTING=OFF" ],
      "sources": [
        {
          "type": "dir",
          "path": "."
        }
      ]
    }
  ]
}
```



```
{
  "name": "kirigami-addons",
  "buildsystem": "cmake-ninja",
  "sources": [
    {
      "type": "dir",
      "path": "../kirigami-addons"
    }
  ]
}
```



# Tampering with the build

```
flatpak-builder --run app .flatpak-manifest.json <program & args...>
```



# Got a crash!

`flatpak-coredumpctl org.kde.neochat`



# Practice!



# Testing an MR

 `git switch work/...`

 `flatpak-builder ...`

 Profit 



# Testing an MR@framework + other app

- 🐧 Add temporarily the other directory on the manifest
- 🐧 ...or weird flatpak-builder dance



# Tip

**You can build remotely on an external computer!**



# Tip

**.flatpak-builder, app, etc. shouldn't get parsed  
by your IDE!**



# IDE integration: Going the extra mile



```
FLATPAK_ENABLE_SDK_EXT=org.freedesktop.Sdk.Extension.llvm20 \  
flatpak-builder --run app .flatpak-manifest.json /usr/lib/sdk/llvm20/bin/clangd
```

```
flatpak-builder --run app .flatpak-manifest.json gdb
```



# Further integration in your workflow



# Integrating with Kate

**See MR !1876**



# Integrating with vscode





# clangd-from-container.sh

```
#!/bin/bash  
export FLATPAK_ENABLE_SDK_EXT=org.freedesktop.Sdk.Extension.llvm20  
flatpak-builder --run app .flatpak-manifest.json /usr/lib/sdk/llvm20/bin/clangd "$@"
```



# .vscode/settings.json

```
{
  "clangd.path": "${workspaceFolder}/dev-tools/clangd-from-container.sh",
  "qml.languageServerCommand": "${workspaceFolder}/dev-tools/qmls-from-container.sh",
  "launch": {
    "configurations": [
      {
        "name": "Debug with GDB in Flatpak",
        "type": "cppdbg",
        "request": "launch",
        "program": "${workspaceFolder}/build/kalgebra",
        "args": [],
        "stopAtEntry": false,
        "cwd": "${workspaceFolder}",
        "externalConsole": false,
        "MIMode": "gdb",
        "miDebuggerPath": "${workspaceFolder}/dev-tools/gdb-from-container.sh"
      }
    ]
  }
}
```



# Use KDevelop



# How are we set up?



`.flatpak-manifest.json`  
`github.com/flathub/org.kde.appname`



**Q: How do I do X with flatpak?**



# What's next?

-  Keep your app's `.flatpak-manifest.json` fresh
-  Sync it with flathub's when we release
-  Join upstream, be upstream



?

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