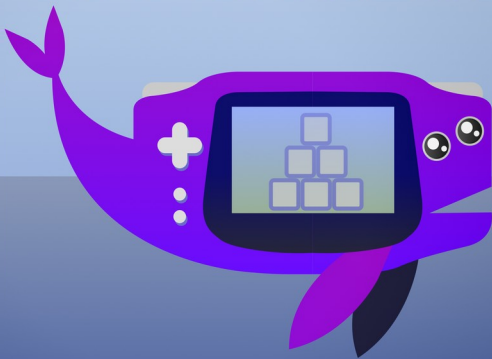


HOMEBREW

# GRADEV CONTAINERS



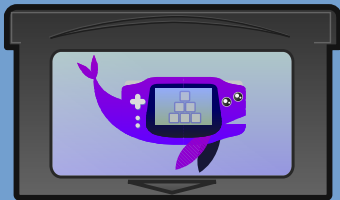
Created by  
BreadMakesYouFull

## gbadev-containers

Container scripts for a GBA dev environment  
& ROM compile workflow.

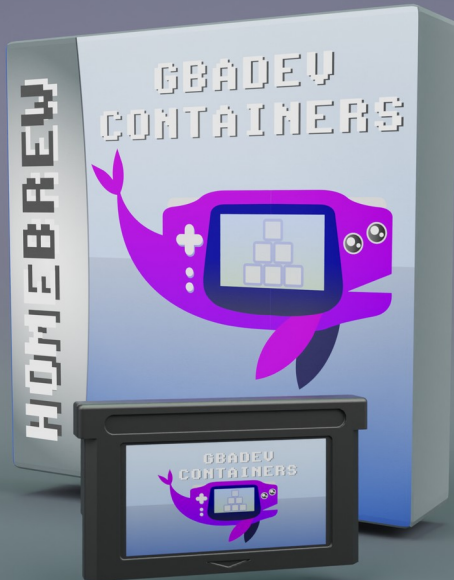
Powered by OCI containers to create immutable  
build environments, via podman or docker.

Created for GBA Jam 2024.



# Preview





## Requires

- **podman**

OR docker via ``make BUILDER=docker``

- **bash**
- **make**

## Provides - containers

Container images created by this project:

- **gbadev-base**  
debian + devkitproARM + gba dev packages
- **gbadev**  
Used to compile the ``in`` folder  
via butano + devkitproARM
- **gbadev-examples**  
Compiled gba examples from butano / natu

## Provides - packages

Installed packages include:

- **butano** - C++ gba game engine
- **devkitPro** (ARM / gba) - build toolchain
- **natu** - nim gba toolkit
- **mgba** - gba emulator
- **debian** - userspace tools and packages
- **doxygen** - code documentation
- **cpplint** - c++ linting
- **clang-{tidy,format}** - auto lint/format
- **slate** - pixel editor
- **gimp 2.0** - image editor
- [experimental] gimp to butano export plugin

## Quickstart

```
# Build the gbadev-base container,  
# compile the demo ROM,  
# and run demo:  
make && make run
```

```
# See available commands:  
make help
```

```
# Packages configured via the ``env`` file.  
# Build gbadev-base container image:  
make base
```

```
# Run example from butano and natu:  
make examples && make run-examples
```



# Licenses

See ``README.md``, ``LICENSE`` and ``licenses/\*``

- I am not a lawyer, this is not legal advice
- DO NOT distribute container images you build with this project. Do not upload them to docker.io or similar services. To understand why, read the report by the linux foundation.
- ONLY source code of this project, the demo example (in folder) and the included ROM file is covered by the LICENSE file and licenses folder. NOT created container images, NOT all assets.
- The container scripts (often referred to as Dockerfiles) themselves ARE included in this, but NOT resulting container images you build.
- basic-studio.blend by FnaX <https://blendswap.com/blend/30270> CC-0 "No Rights Reserved"
- Gameboy Advance Cartridge (GBA Cart) STL by @Dave [printables.com](https://printables.com) CC BY 4.0
- GBA Jam Logos and banners GBA Jam 2024 Organizers, CC BY-NC 4.0
- "JAM 2024" logo text font – Over Drive by Graphic Arts Unit
- Font bescii - Damian Vila) CC0 1.0
- Other assets BreadMakesYouFull CC BY
- The project itself was created FOR, but NOT BY GBA Jam 2024 / gbadev.net
- This project is NOT affiliated with Nintendo in any way.

# Project structure

.	
— gbadev-containers.gba	- Pre-built ROM
— containers/	- Container instructions
— scripts/	- Bash scripts
— env	- Build options
— Makefile	- Entry point for builds
— in	- ROM source code
— out	- ROM output location
— LICENSE	- License for this project
— licenses	- Third party licenses
— README.md	- Essential info

## Project structure - in → out

The ``in`` folder contains source for a homebrew demo, which makes use of the "butano" game engine.

The container images created by the ``Containerfile`` scripts are ``gbadev-base`` and ``gbadev``. Which provide tools for development and run a ROM build respectively.

The resulting ``.gba`` ROM file is compiled to the ``out`` folder.

## Use case 1

### Using as a template for homebrew

Simply build from the existing example,  
the ``in`` folder,  
and play with iterative changes!

You must comply with ``LICENSE`` and  
\*\*ALL\*\* of the ``licenses`` folder.

## Use case 2

### Build an existing project

Example building homebrew game, "sips", by Jono Shields (foopod), also written with "butano".

```
# Clone source
git clone https://github.com/foopod/sips.git
# Point to the container image butano
sed -i \
's|LIBBUTANO:=.*|LIBBUTANO=/opt/butano/butano|' \
./sips/Makefile

# Enter the container build repo
cd gbadev-container
# Configure butano version
sed -i 's|BUTANO:=.*|BUTANO=16.2.0/' env

# Re-build dev env + sips
make base; make IN=`pwd`/../../sips
```

## Use case 3

### Cross platform development

Podman can be installed on linux, windows and mac.

On linux, distrobox simplifies this further:

```
# Make gbadev-base podman container
make base
# Convert container to distrobox
distrobox-create \
    --name gbadev-distrobox \
    --image gbadev-base
# Enter distrobox
distrobox-enter gbadev-distrobox
# Run mgba GUI
mgba /opt/mgba/cinema/gba/irq/keyirq/test.gba
```

## Special thanks

### GBA Jam 2024 hosts

[exelotl](https://exelotl.itch.io)  
[destoer](https://destoer.itch.io)  
[evanbowman](https://evanbowman.itch.io)  
[Nikku4211](https://nikku4211.itch.io)  
[Pyro\_Pyro](https://pyro-pyro.itch.io)  
[Jono Shields](https://foopod.itch.io)  
[GValiente](https://gvaliente.itch.io)  
[Xilefian](https://xilefian.itch.io)  
[kva64](https://kva64.itch.io)  
[avivace](https://avivace.itch.io)

Particularly GValiente for the Butano engine.

## Thanks to open source and GBA homebrew communities

- \* [GBA Jam 2024](https://itch.io/jam/gbajam24)
- \* [gbadev.net](https://gbadev.net/)
- \* [Butano](https://github.com/GValiente/butano)
- \* [natu](https://natu.exelo.tl/index.html)
- \* [Devkitpro](https://github.com/devkitPro)
- \* [mgba](https://mgba.io/)
- \* [podman](https://podman.io/)
- \* [docker](https://www.docker.com/)
- \* [Open containers](https://opencontainers.org/)
- \* [GNU](https://www.gnu.org/)
- \* [Linux](https://www.kernel.org/)
- \* [debian](https://www.debian.org/)
- \* [doxygen](https://www.doxygen.nl/)
- \* [cpplint](https://github.com/cpplint/cpplint)
- \* [clang](https://clang.llvm.org/)
- \* [slate](https://github.com/mitchcurtis/slate)
- \* [gimp](https://www.gimp.org/)