

# Installing GDB on MacOS

## Step 1: Install GDB from the latest GitHub HEAD, using Homebrew

If not already done, install Homebrew from a terminal window with:

```
/bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"
```

Once Homebrew is installed, install GDB with:

```
brew install gdb --HEAD
```

Then, get a coffee, as this could take some time!

After the installation has finished, check that the gdb binary exists with:

```
which gdb
```

(It should be in /usr/local/bin)

## Step 2: Codesign the gdb binary

This is an Apple security thing ... and the process is somewhat involved. On the upside, one of the reasons

that it is somewhat more difficult to install malware on Apple systems is because of this type of thing. So, yeah ...

Follow the instructions found at:

<https://sourceware.org/gdb/wiki/PermissionsDarwin>

Under Section 1. Procedure, you will notice that there are four steps (Create/Trust/Sign/Refresh) that are hyperlinked. Go through each of those steps carefully ... THERE IS A CHANGE NECESSARY IN STEP 1.3!!!!

Use the following file for the required gdb-entitlement.xml, rather than what they have in step 1.3:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple//DTD PLIST 1.0//EN"
"http://www.apple.com/DTDs/PropertyList-1.0.dtd">
<plist version="1.0">
<dict>
  <key>com.apple.security.cs.allow-jit</key>
  <true/>
  <key>com.apple.security.cs.allow-unsigned-
executable-memory</key>
  <true/>
  <key>com.apple.security.cs.allow-dyld-environment-
variables</key>
  <true/>
  <key>com.apple.security.cs.disable-library-validation</
key>
```

```
<true/>
<key>com.apple.security.cs.disable-executable-page-
protection</key>
<true/>
<key>com.apple.security.cs.debugger</key>
<true/>
<key>com.apple.security.get-task-allow</key>
<true/>
</dict>
</plist>
```