

Blog

Written words that are often helpful

[Google App Engine Made Easy](#)

Posted by chathaway on March 28, 2020, 7:39 a.m.

Google App Engine made easy

Turns out, GAE can run a Docker container, which makes life super easy. Some basic rules:

- EXPOSE 8080 # GAE will only talk to port TCP/8080 to serve web traffic
- All build files (i.e., everything in the folder app.yaml is in) gets uploaded and built

So its very limited in what it can do, but basically with the structure

```
.■■■■ app.yaml■■■■ Dockerfile
```

You can easily make an app. You might need to add persistence (i.e., databases) through their service, but you could at least bring small apps to play with for very ...

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[Paxos Algorithm, in English](#)

Posted by chathaway on Jan. 14, 2020, 7:20 a.m.

The Paxos Algorithm

The Paxos algorithm is used to handle decision making in a decentralized way, which is tolerant of faults and other such problems. It is usually applied to network programming and distributed systems.

(For background, see the Background section at the end of this post.)

High-level

The thing that tripped me up most was understanding how to apply this algorithm to an actual problem.

Part of the difficulty is that it is usually thought about as a single 'round' in a larger machination; that is, when people describe the Paxos algorithm, they describe the algorithm that is used ...

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[Chef Client on Ubuntu ARM \(arm64\)](#)

Posted by chathaway on Jan. 3, 2019, 6:39 p.m.

We use some arm boxes at work for testing, and do our provisioning with Chef. Chef bootstrap doesn't work because ARM is not an official supported platform for Chef.

To work around this, I installed a few packages:

```
apt install rubyapt build-dep ruby-yajl
```

Then Installed Chef as a Gem:

```
sudo gem install chef
```

With this done, I could use knife bootstrap as normal :).

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[Rust crate for OpenSSL on Arch Linux](#)

Posted by chathaway on Dec. 24, 2018, 10:44 p.m.

Attempting to build a Rust package on Arch, I ran into a problem that the version of the openssl crate depended on by one of the dependencies didn't correctly detect the latest OpenSSL, 1.1.1. To solve this, I ensure a previous version (OpenSSL 1.0) was installed, and setup my environment with:

```
#!/bin/bash# Only needed on Arch to use an older openssl versionexport PKG_CONFIG_PATH=/usr/lib/openssl-1.0/pkgconfig/export C
```

And then things built :).

The error message the started me on this:

```
error: failed ...
```

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[FindYOTTADB.cmake Example](#)

Posted by chathaway on Aug. 22, 2018, 7:58 p.m.

To use libraries with CMake, its much easier if there is a package for it. Below is a script which can be used to locate YottaDB using CMake, and make it much easier to build with.

In your CMakeLists.txt, add:

```
SET(CMAKE_MODULE_PATH ${CMAKE_MODULE_PATH} "${CMAKE_SOURCE_DIR}/cmake/" )find_package(YOTTADB REQUIRED)
```

In cmake/FindYOTTADB.cmake:

```
# This is free and unencumbered software released into the public domain.# # Anyone is free to copy, modify, publish, use, com
```

[Read more...](#)

[Using Eclipse with CMake Projects](#)

Posted by chathaway on Aug. 9, 2018, 3:14 p.m.

For a long time, I was using the cmake CDT generator to make cmake projects. I started getting very strange errors in the most recent version of Eclipse, and stumbled upon this [thread](#) which explained the CDT generator was super old.

To do this with a modern Eclipse version, you basically want to:

1. File -> New -> New C/C++ Project
2. Select "Empty or Existing CMake Project"
3. Uncheck "Use default location", and navigate to your project

Then things should magically work.

Pictures for those who need them:

[Read more...](#)

[Performance Testing: Threads vs. Processes](#)

Posted by chathaway on April 22, 2018, 9:30 p.m.

Recently, I spotted a line in *Distributed Systems: Principles and Paradigms* that caught my interest because it ran counter to my understanding of thread performance on a Linux system.

Instead of using processes, an application can also be constructed such that different parts are executed by separate threads. Communication between those parts is entirely dealt with by using shared data. Threadswitching can sometimes be done entirely in user space, although in other implementations, the kernel is aware of threads and schedules them. The effect can be a dramatic improvement in performance. (Tanenbaum, A. S., & Van Steen, M. (2007

...

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[Doing Elixir Development in Windows using Docker](#)

Posted by chathaway on April 12, 2018, 2:23 a.m.

This guide documents the steps I took to setup my Elixir/Phoenix/Docker environment on my Windows 10 machine. It might be worth nothing that I'm running Windows 10 Educational, which includes the Hyper-V supervisor; this is required for Docker.

Install Docker

Rather than repeat stuff here: go search Google, and follow the official guide.

This will probably require a restart.

Setup a Dockerfile and docker-compose file

To get started, we need a Dockerfile to build the web host. In addition to elixir, we will need NodeJS and some extras. This should do it:

```
FROM elixirADD . /codeWORKDIR ...
```

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[dex auto start search list](#)

Posted by chathaway on March 29, 2018, 5:39 p.m.

This doesn't seem to be documented anywhere, but just a quick tadbit; the dex autostart program (<https://github.com/jceb/dex>) looks in:

- \$XDG_CONFIG_HOME/autostart or \$HOME/.config/autostart
- for dir in \$XDG_CONFIG_DIRS; \$dir/autostart or /etc/xdg/autostart/

For things to run. You can look for yourself at [github link](#)

[Read more...](#)

[Getting Started with GT.M](#)

Posted by chathaway on Jan. 24, 2018, 11:01 p.m.

GT.M is a high performance, NoSQL database coupled with a MUMPS runtime. In this guide, we will install it on a fresh Ubuntu system, verify that it works, and build a sample database.

Installing GT.M through the package manager

The easiest way to install GT.M is using the Ubuntu package manager; apt.

```
chathaway@blaze:~$ sudo apt install fis-gtmReading package lists... DoneBuilding dependency treeReading state information... D
```

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