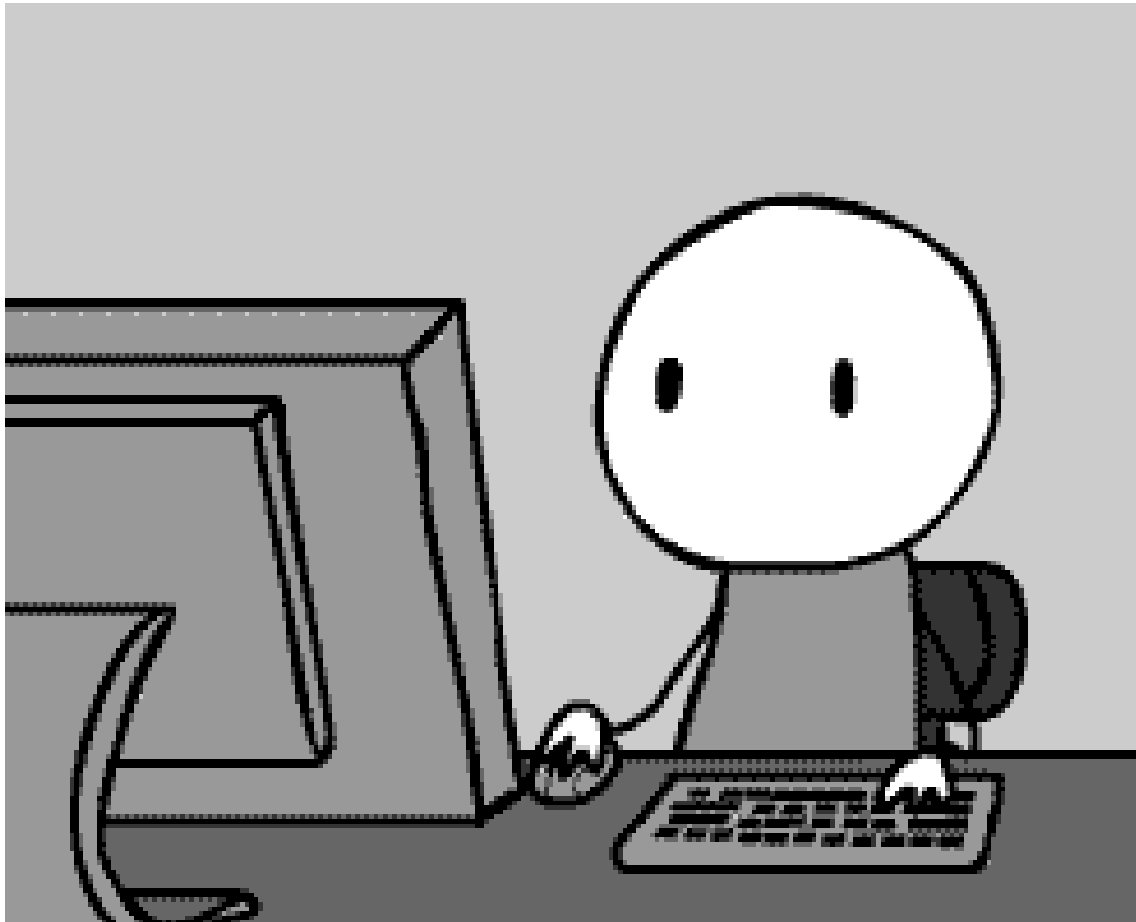# The Six Stages of systemd

1 - Denial

2 - Anger

3 - Bargaining

- Bargaining normally requires leverage.
- Leverage would probably involve a distro staying with SysV.
- They aren't.

4 - Depression

5 - Acceptance

- This is where I ended up.

- Until I had to start actually using the damn thing.

- Rather against my will, this took me to...

6 - Enthusiasm

"Knuth is right: computer programming is not a science, but an art. System administration is an art too, and a black one at that."

Adam J. Thornton

I'll Tell You What I Want...

- I Want Reliability.

- I Want a Deterministic View.

- I Want to Enforce Policy.

- I Want To Use Cool Stuff The Kernel Provides.

- And I Want it to be Easy. I Want the Computer to do the Work.

Life is Too Short for Boilerplate

- So it's way to short to write the same scripts over and over.

- "Enterprise" software rarely ships with init scripts.

- And neither do trendy new frameworks.

Life is Too Short for Boilerplate

```
[Service]

ExecStart=/bin/npm start --production /var/www/ghost-tony/

Restart=always

StandardOutput=syslog

SyslogIdentifier=ghost

User=ghost

Group=nobody


[Install]

WantedBy=multi-user.target
```

Life is Too Short for Boilerplate

```
.include /usr/lib/systemd/system/postgresql.service


[Unit]

Description=PostgreSQL dev database server

Requires=var-lib-pgsql.mount


[Service]

# Port number for server to listen on

Environment=PGPORT=5434


# Location of database directory

Environment=PGDATA=/var/lib/pgsql/data-dev


OOMScoreAdjust=-500

BlockIOWeight=500
```

But Wait, There's More!

```
.include /usr/lib/systemd/system/postgresql.service


[Unit]

Description=PostgreSQL dev database server

Requires=var-lib-pgsql.mount


[Service]

# Port number for server to listen on

Environment=PGPORT=5434


# Location of database directory

Environment=PGDATA=/var/lib/pgsql/data-dev


OOMScoreAdjust=-500

BlockIOWeight=500
```

Computers (are supposed to) make my life easier...

- ...but instead I end up working for them.
- "Easy things should be easy, and hard things should be possible" - Larry Wall

I Need *Service* Views

I Want to Manage Multi-Tenant Unix Systems

...not multi-VM hordes like some sort of Windows animal

- We don't manage multi-user systems.

- Unix tools for service control are limited.

- We've ended up delegating to the hypervisor.

- systemd helps us cure this.

Maximise Reliability and Efficiency

- Minimise overhead by reducing guest sprawl.

- Make services co-resident.

- cgroups make this a lot easier.

- systemd makes cgroups easier.

I Want it to be Easy to Measure.

- Services vs Processes vs System views
- Not just functional monitoring...
- ...cost transparency and recharge

Linux: the Lowest Common Denominator?

- Linux is a tragedy of wasted opportunities!

- ACLs. Capabilities. Attributes. There's more...

Linux: the Lowest Common Denominator?

- We Don't Want to be the DOS Floppy of the Unix World

When Tradition is Slavery

- UNIX has some great ideas.

- SysV/POSIX were descriptive of ugly hacks that evolved over time.

- They shouldn't be a straitjacket.

- BSDs, Solaris are not begging for our permission to implement improvements.

- Slavish devotion to POSIX will kill us.