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...
"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
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
cgroups
cgroups everywhere
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.
• systemctl 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.