Working on Software That is Older Than You

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Once upon a time…

So what is NetApp and what did I do there?

NetApp

- Established in 1992
- Data storage
- Data ONTAP

Sally

- At NetApp from 2012 - 2021
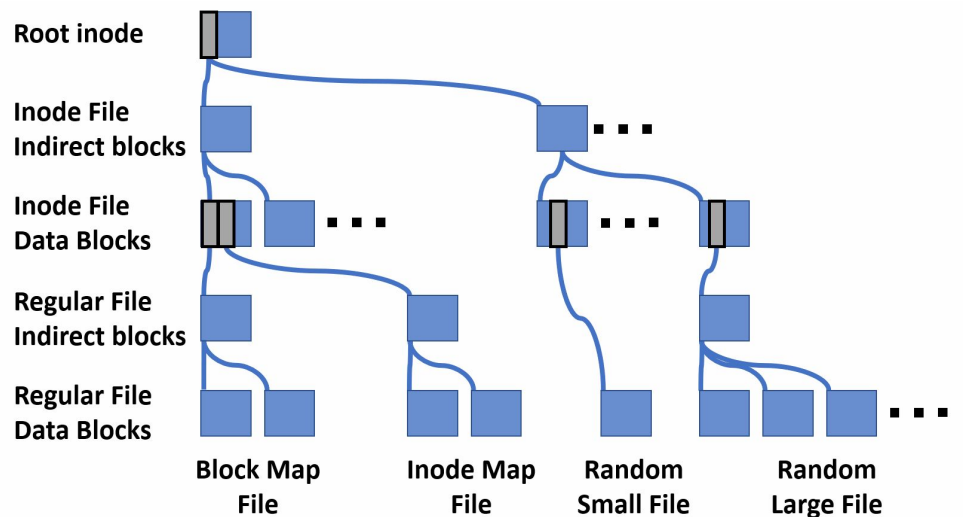- Performance Engineering Group
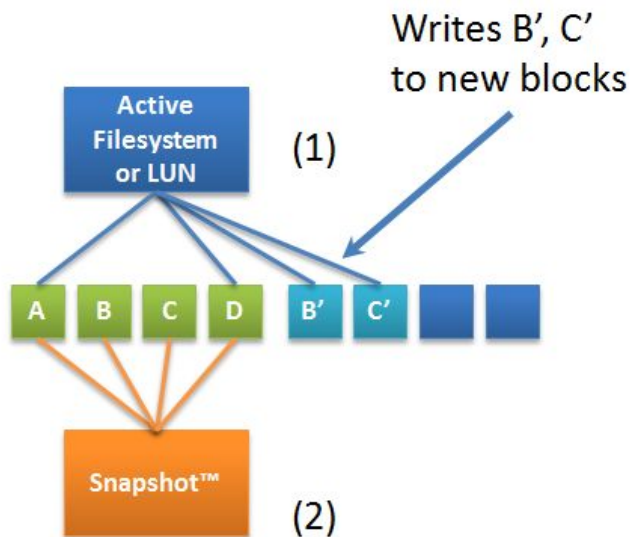- Astra

Lesson 1

Beware...
Your design is here to stay

Your design is here to stay – the great

WAFL

Your design is here to stay – the great
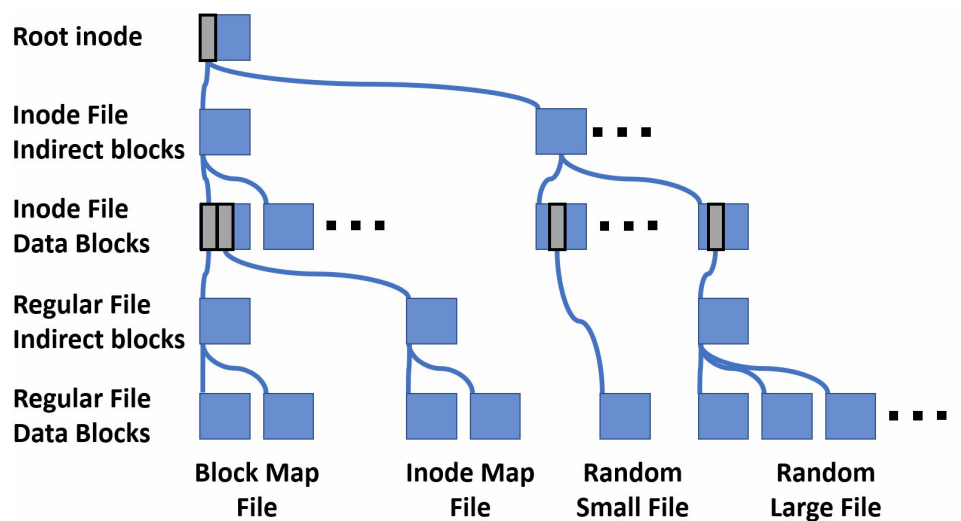
Snapshots

Writes B', C'
to new blocks

Redirect on Write (RoW)
Apply changes to blocks B and C

1) Active Filesystem after new
    writes = A + B' + C' + D
2) Snapshot (original) = A+ B + C +D

Your design is here to stay – the NOT so great

- Shift left
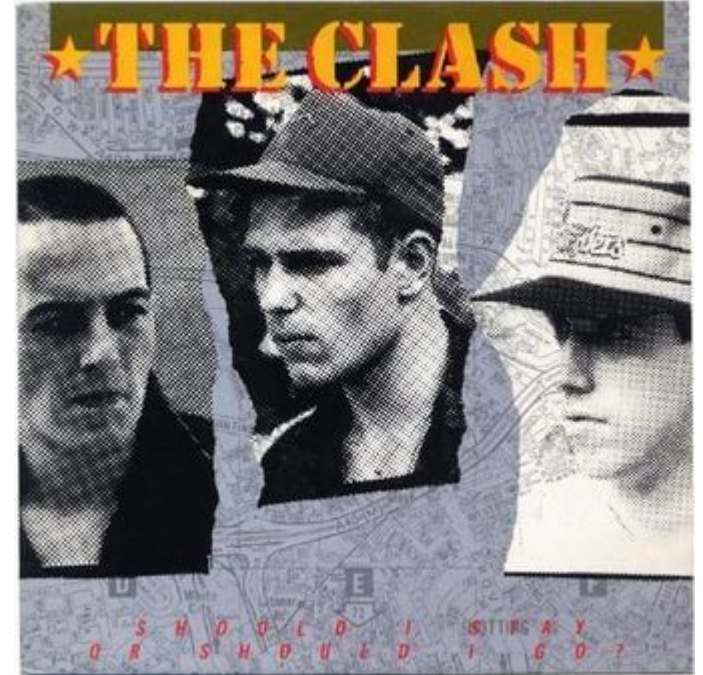- In-build unit tests
  - WAFL buffer and WAFL volume

Lesson 2

Assimilating startups is hard

Should I build or should I buy?

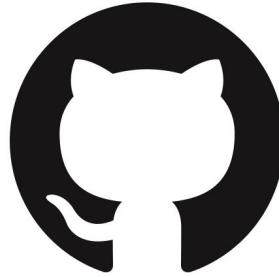- Why buy in the first place?
- The buy:
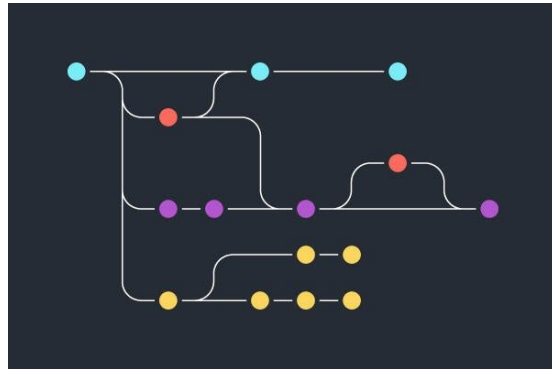 - Spinnaker - 2003

Lesson 3

Modernize where it makes sense

Shiny objects

- Source code management
- Branching strategy
- Continuous integration
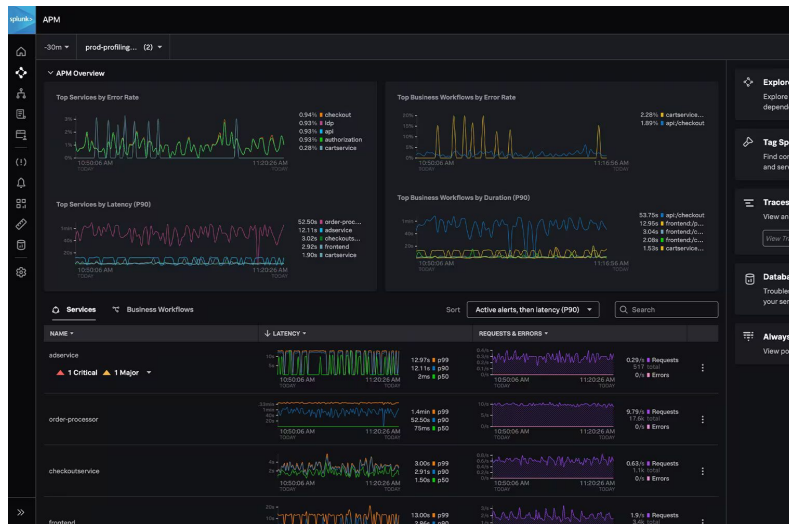
Let's translate

to Splunk

So what is Splunk and what do I do there?

Splunk

- Established in 2003
- Making sense of data

Sally

- At Splunk since 2021
- Observability suite

Lesson 1

Beware…
Your design is here to stay

What the HEC?

- HEC format
- Log observer
- HTTP 429 - Too many requests
- HTTP 503 - Service Unavailable

Lesson 2

Assimilating startups is hard

5 startups

- The observability startup mix
- Joining the mother ship

Lesson 3

Modernize where it makes sense

OTel

- To instrument, generate, collect, and export telemetry data
- SignalFx Smart Agent

Lessons

- Beware, your design is here to stay
- Assimilating startups is hard
- Modernize where it makes sense

Image and Code References

- FAS system: https://www.netapp.com/data-storage/fas/
- Waffle: https://kristineskitchenblog.com/our-best-buttermilk-waffles-recipe/
- WAFL: https://en.wikipedia.org/wiki/Write_Anywhere_File_Layout
- WAFL Snapshots: https://en.wikipedia.org/wiki/Write_Anywhere_File_Layout
- The Clash: https://genius.com/The-clash-should-i-stay-or-should-i-go-lyrics
- Perforce Logo: https://brandfolder.com/perforce/public-logos#
- Github Logo: https://github.com/logos
- Perl Logo: https://en.wikipedia.org/wiki/Perl#/media/File:Perl_language_logo.svg
- Python Logo: https://www.python.org/static/community_logos/python-logo-master-v3-TM.png
- Code branches: https://www.perforce.com/blog/vcs/git-branching-model-multiple-releases
- Splunk APM: https://www.splunk.com/en_us/products/apm-application-performance-monitoring.html
- Otel Logo: https://cncf-branding.netlify.app/projects/opentelemetry/

Thank you