

Managing OS release transitions at Netflix scale

Edward Hunter - Netflix

ehunter@netflix.com

usenix

LISA18

October 29–31, 2018 | Nashville, TN, USA

www.usenix.org/lisa18

#lisa18

EOL

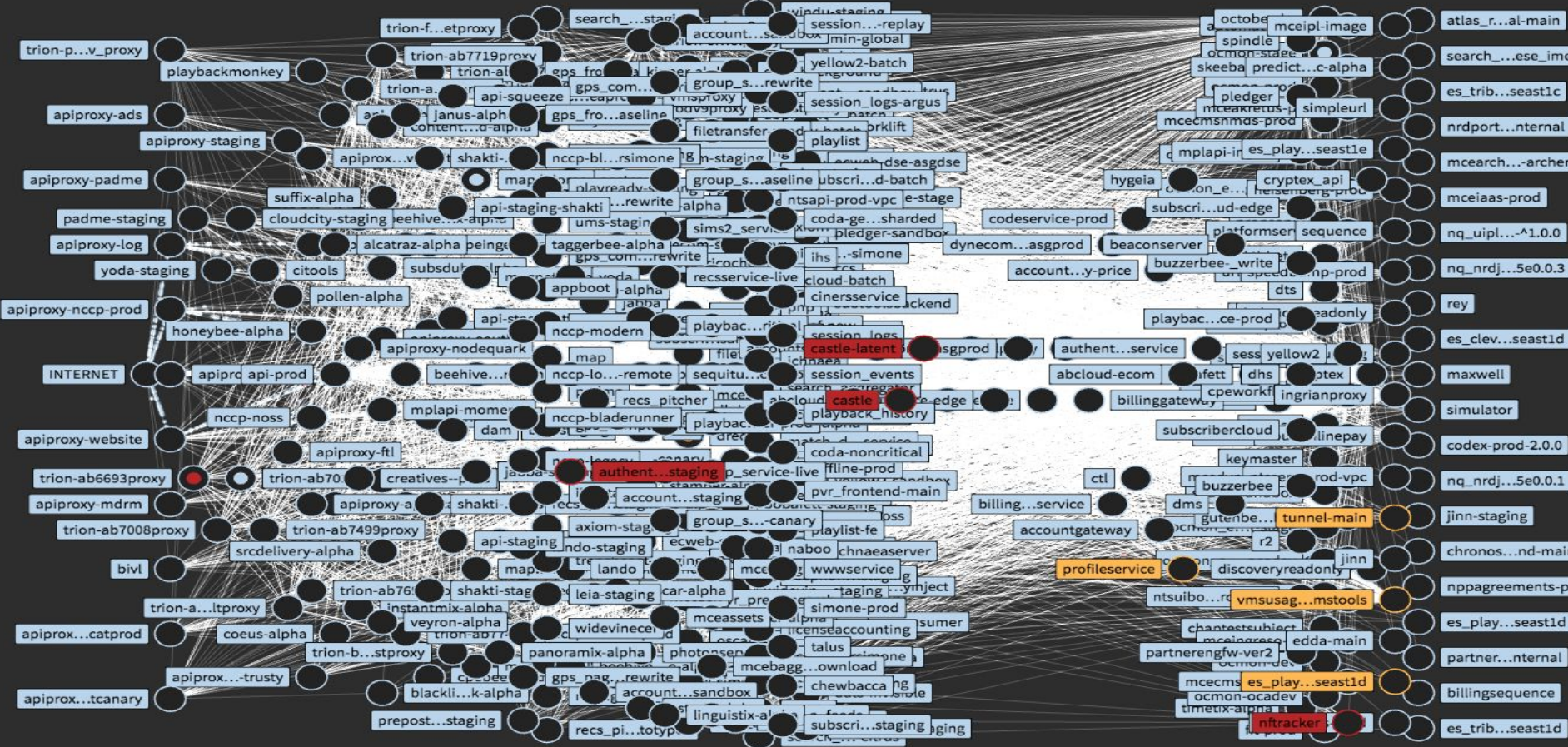
Upgrade

Painless transition

April 2016







**Well over
4,000
deployments
per day**



 **Netflix CS**  @Netflixhelps Oct 1, 2016

Hi all - we are aware of streaming issues and we are working quickly to solve them. We will update you when they are resolved.

 **Jonanak**
@Jonanak 

Is this the Apocalypse, and do I need to start hoarding Blu-Rays?

12:39 PM - Oct 1, 2016

   9 

 **Netflix CS**  @Netflixhelps Oct 1, 2016

Hi all - we are aware of streaming issues and we are working quickly to solve them. We will update you when they are resolved.

 **Mrs M**
@MrsJJMorgan 

@netflix quick my snacks are getting cold & reality is too scary
 pic.twitter.com/zC4kQr8iMu

1:04 PM - Oct 1, 2016



  1  9 

 **Jake Counselbaum**
@jakecbaum 

Netflix is down. I'm running to Costco now, the apocalypse is near.

5:14 PM - Feb 3, 2015

 1  42  76 

 **michelle**
@mishkauf 

Netflix is down so maybe I'll go and talk to my family for the first time..they seem like nice ppl idk

5:08 PM - Feb 3, 2015

 1  42  91 

Strategy



Strategy and planning (in three easy steps)

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1. Only change the stuff you really need to change.

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Planning and prep (in three easy steps)

1. Only change the stuff you really need to change.
2. Get it working internally first
3. Have a set of friends to work with



Optional Apache
front end,
memcached,
non-java apps

Atlas Monitoring

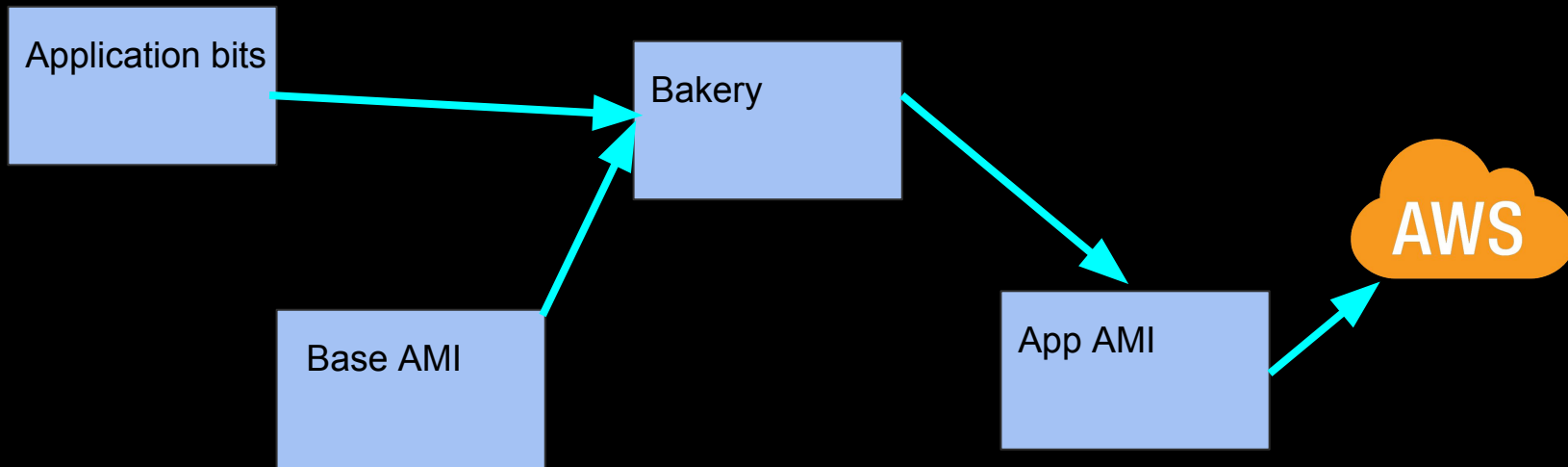
Java

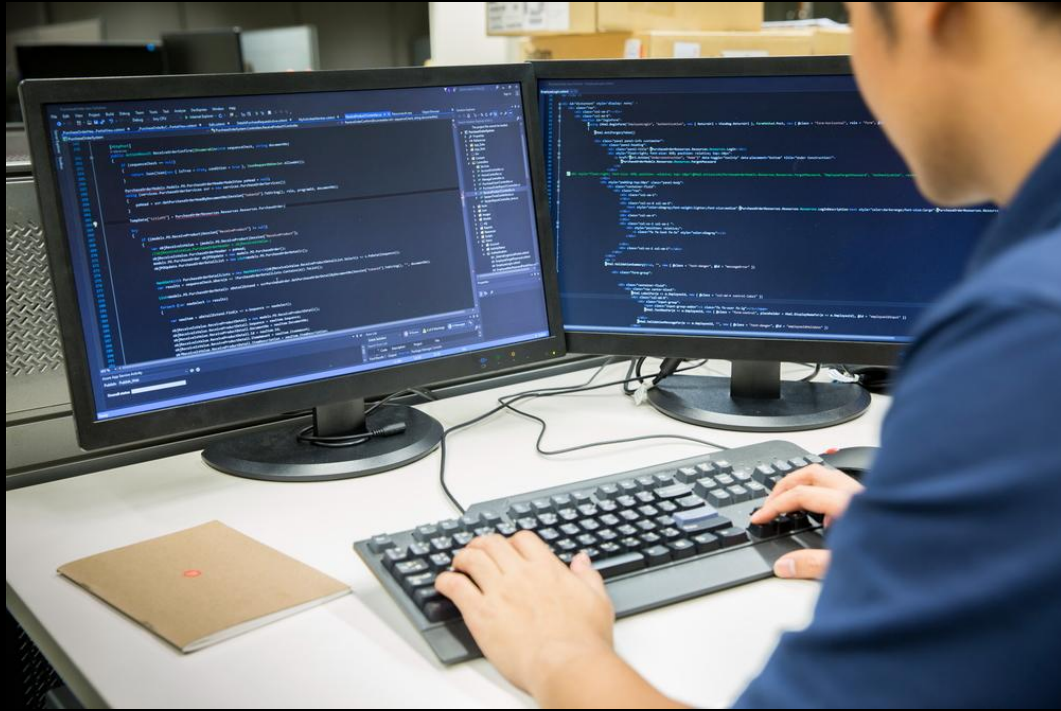
GC and thread
dump logging

Tomcat

Application
servlet, base
server,
platform,
interface jars
for dependent
services

Healthcheck,
status servlets,
JMX interface





Configuration

- Ezconfig - helps configure Apache, Tomcat, Java etc.

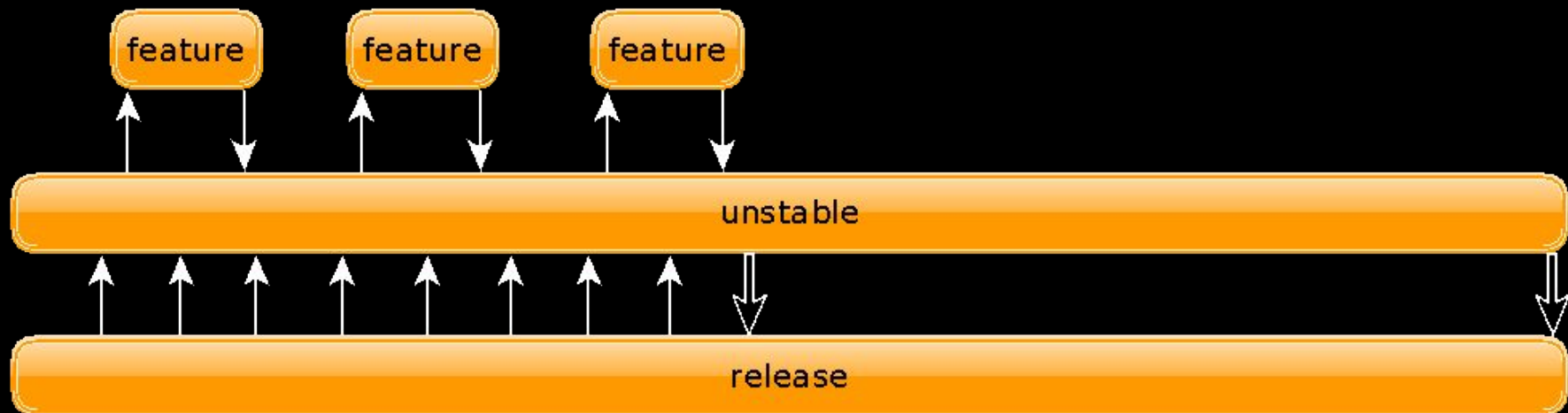
Configuration

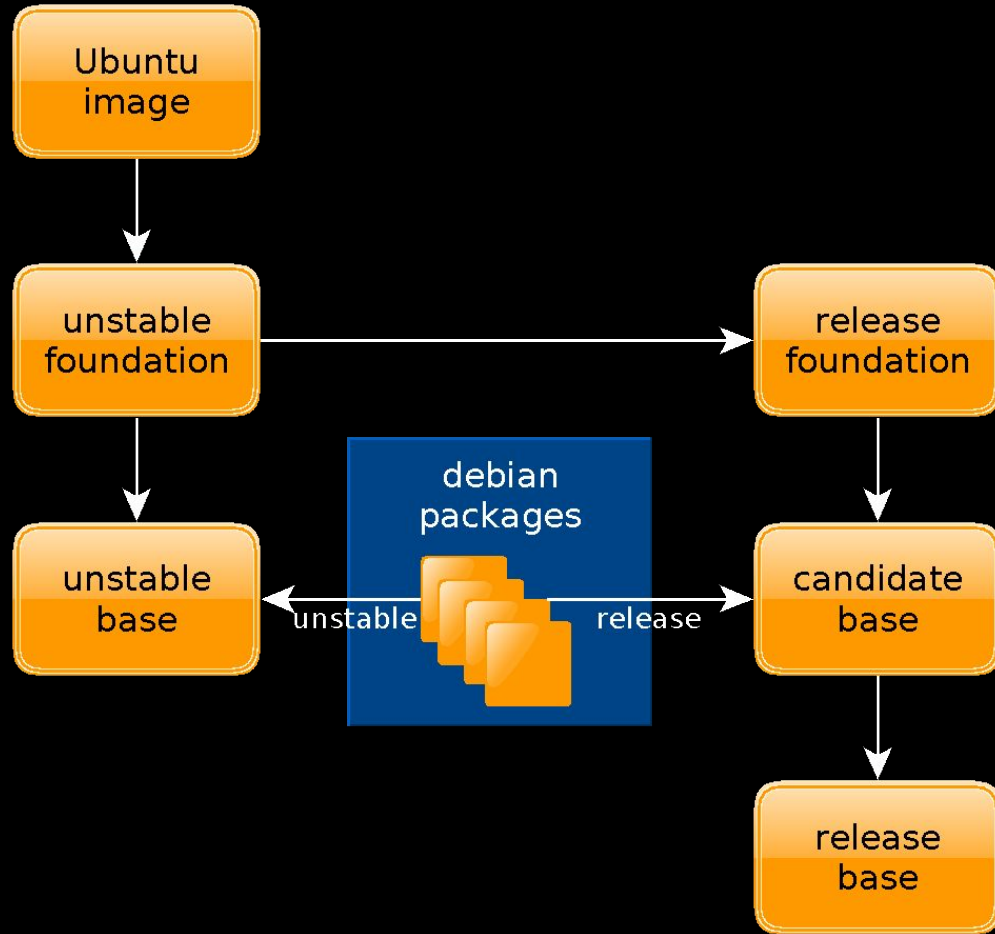
- Ezconfig - helps configure Apache, Tomcat, Java etc.
 - No init scripts
 - sysvinit? daemontools? upstart? systemd?
 - Factor these away - devs hate it

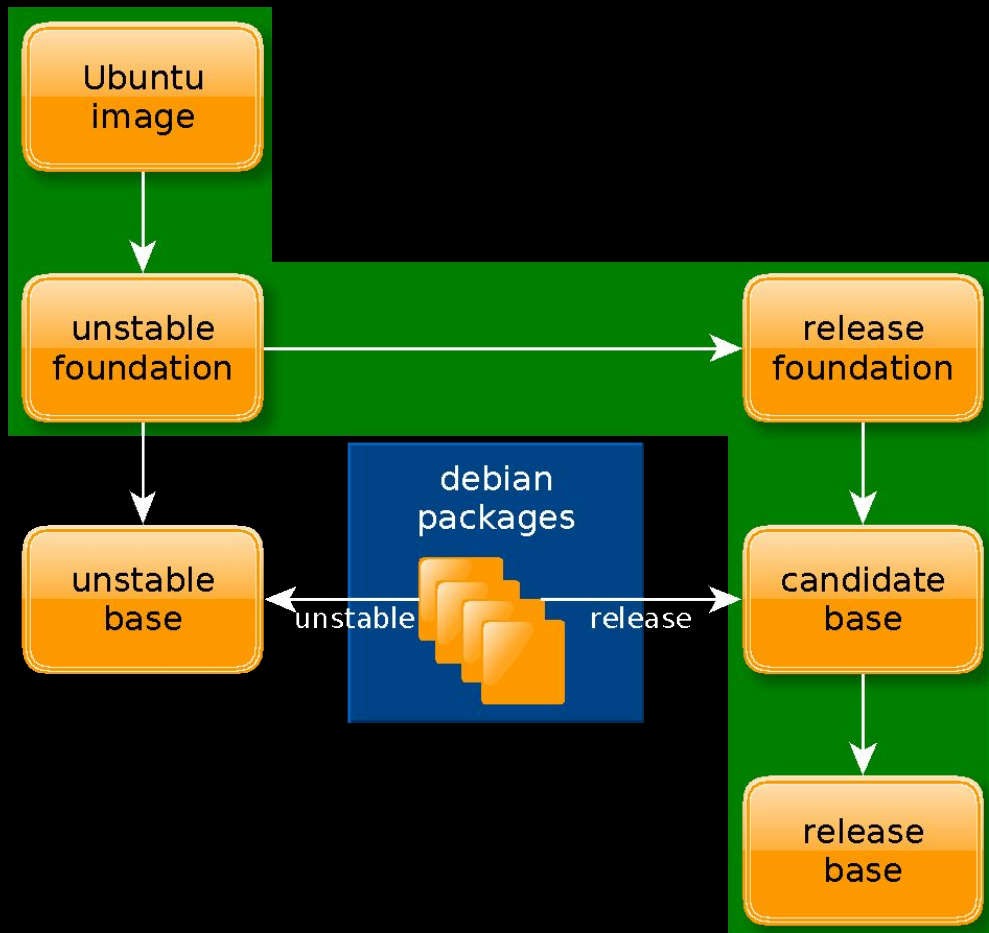
Configuration

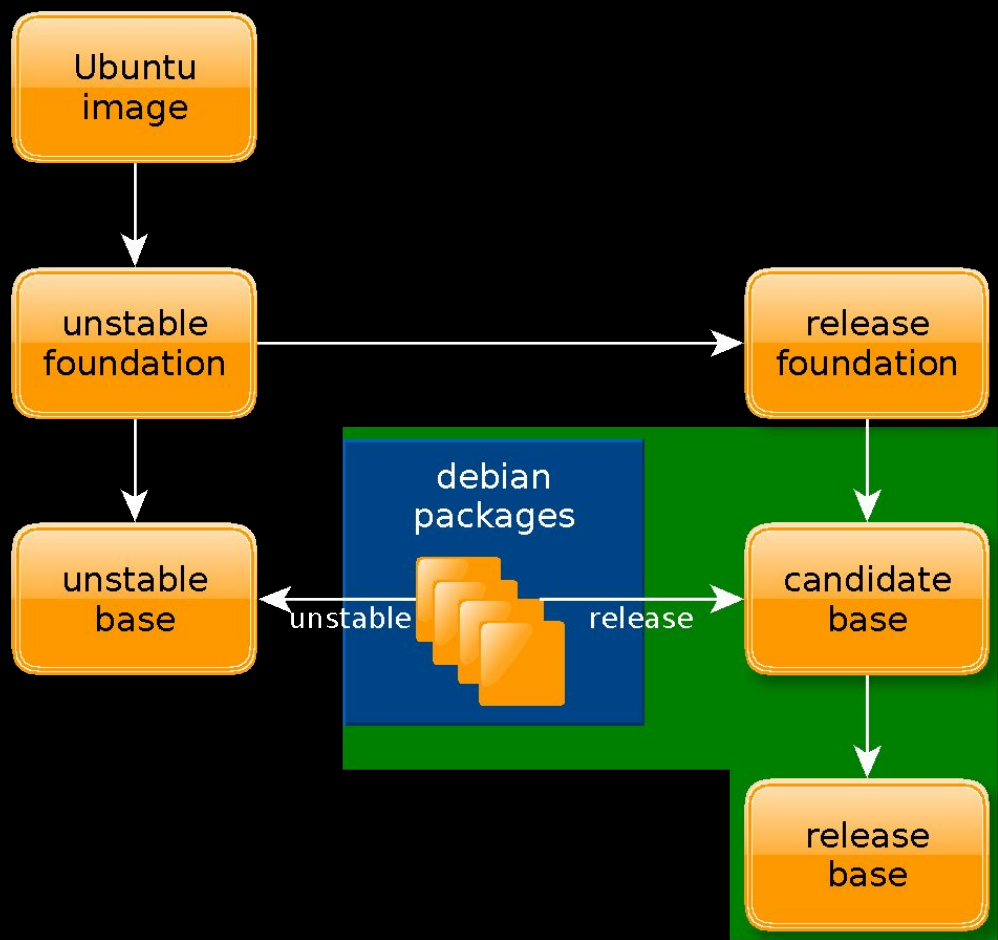
- Ezconfig - helps configure Apache, Tomcat, Java etc.
 - No init scripts
 - sysvinit? daemontools? upstart? systemd?
 - Factor these away - devs hate it
 - Generate configuration files
 - Apache, Tomcat, etc
 - Java GC settings







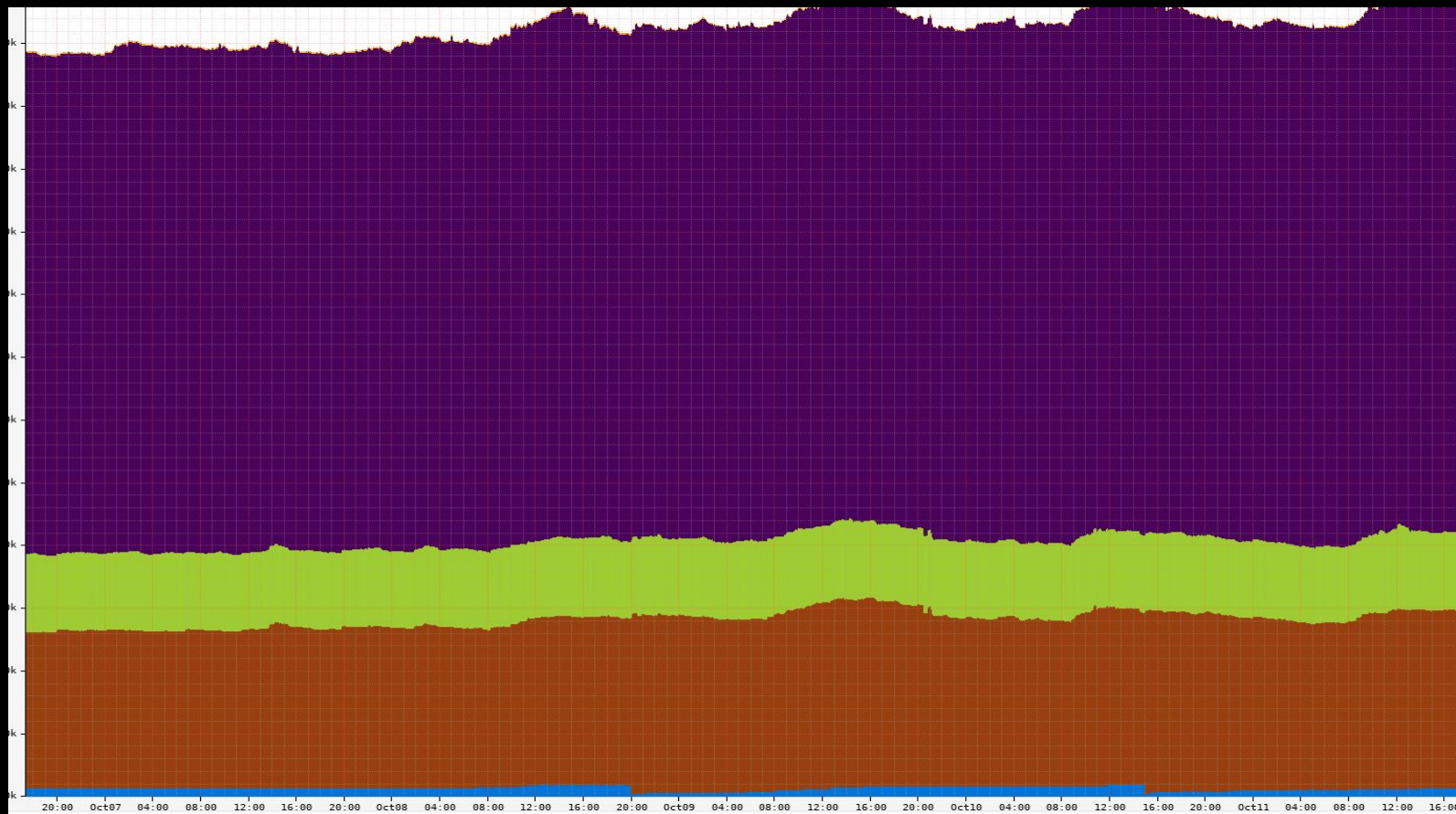




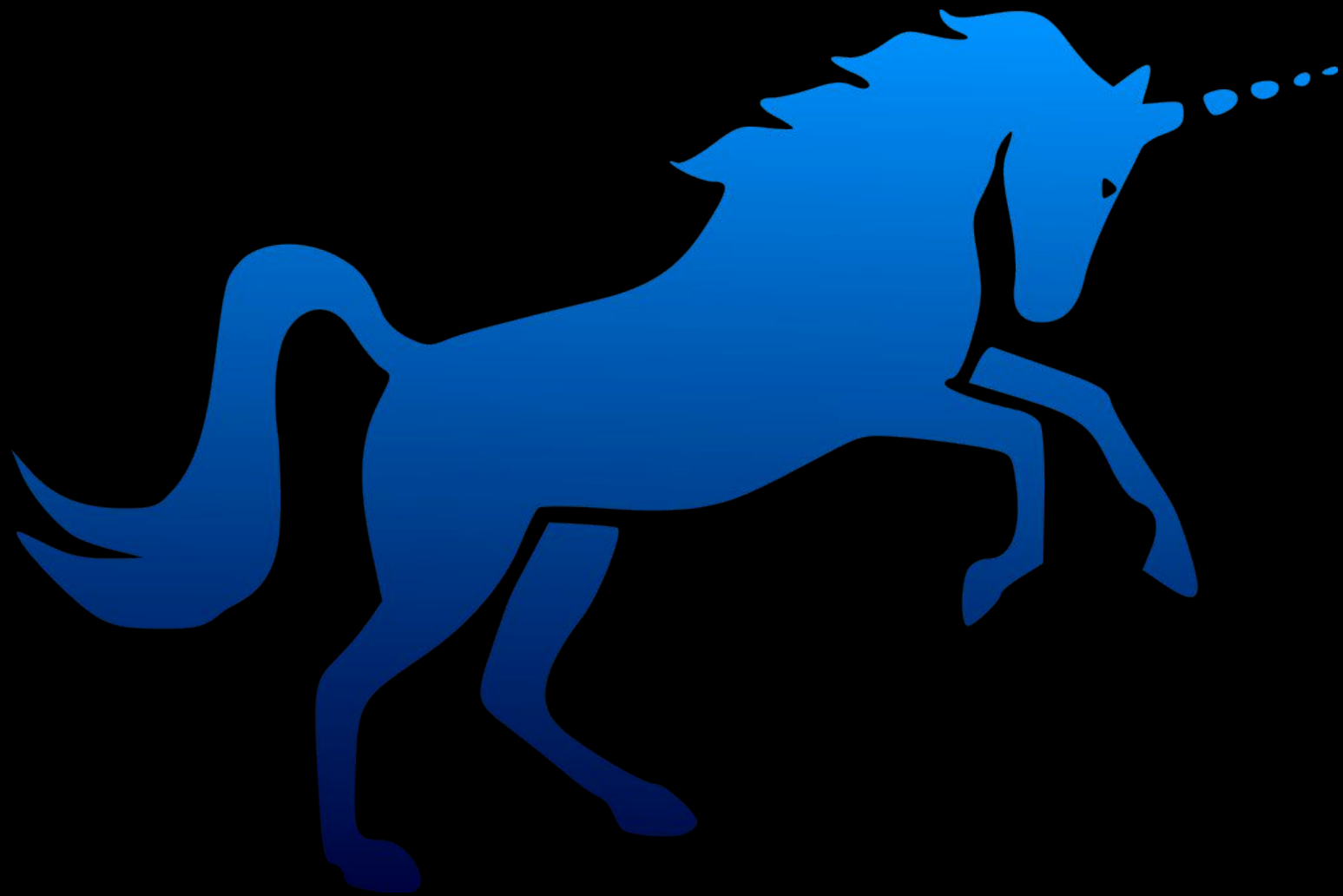
Automate

- Automated image builds
- Automated image tests
- Automated changelog generation
- Automated performance testing

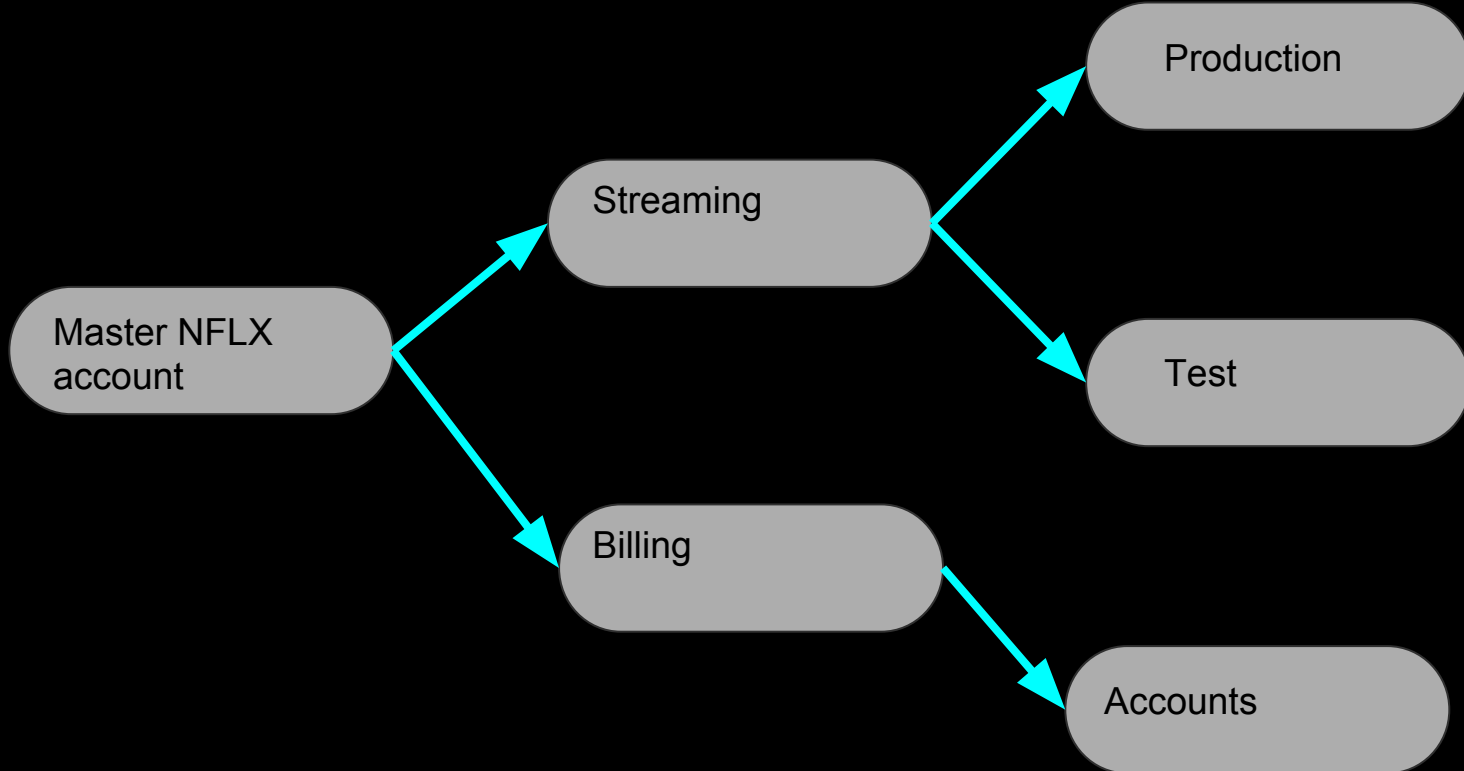
Tracking progress



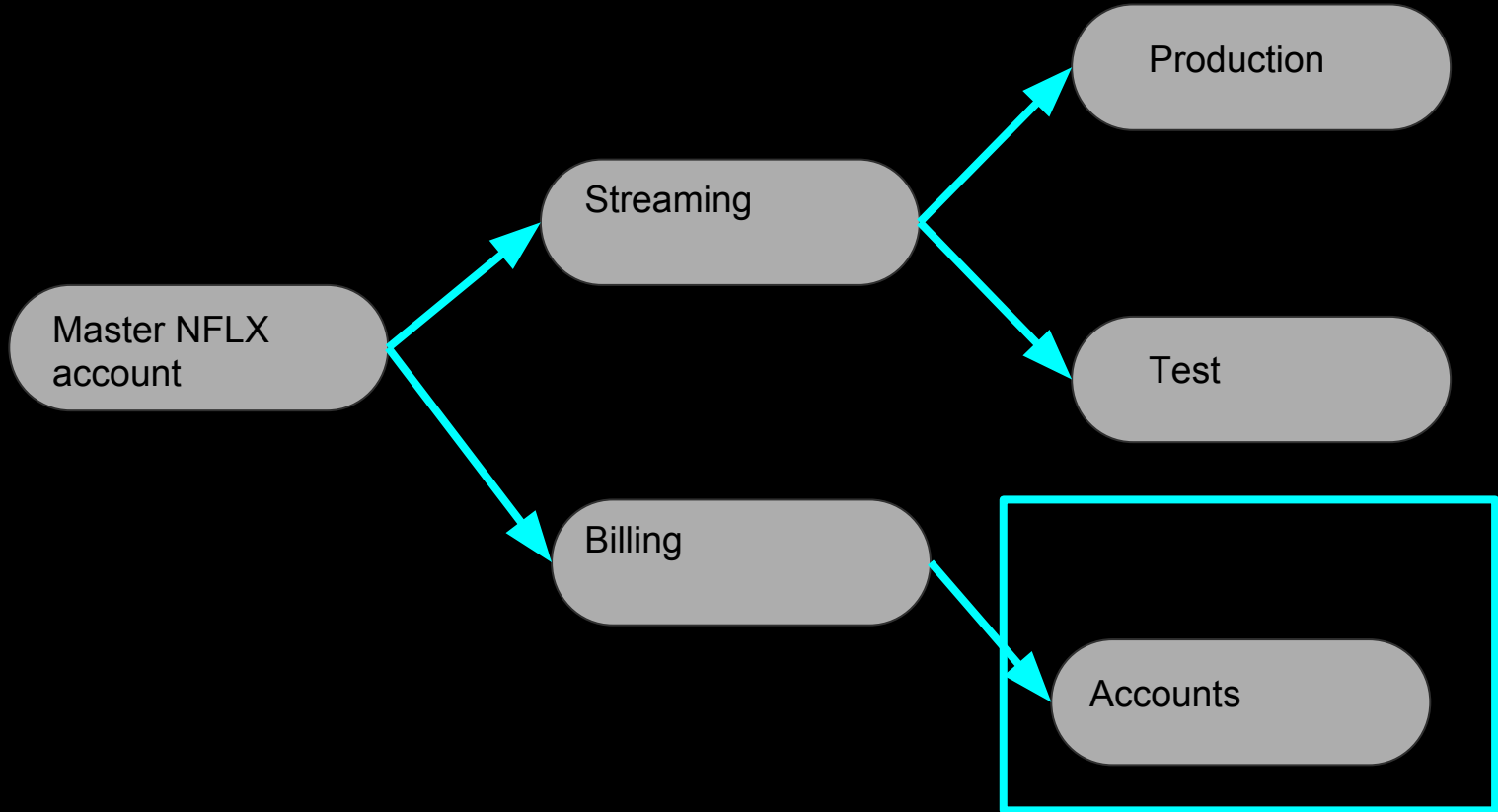




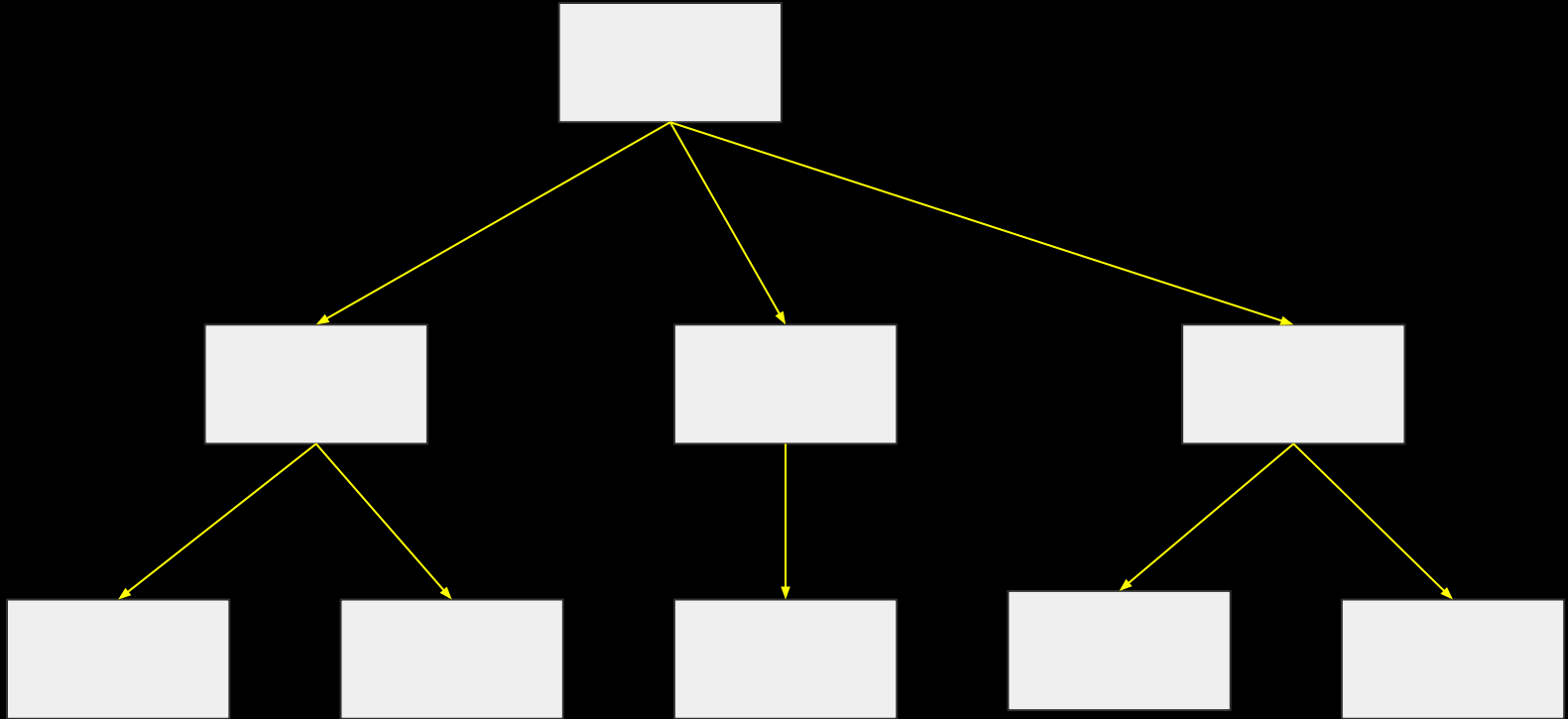
Account structure



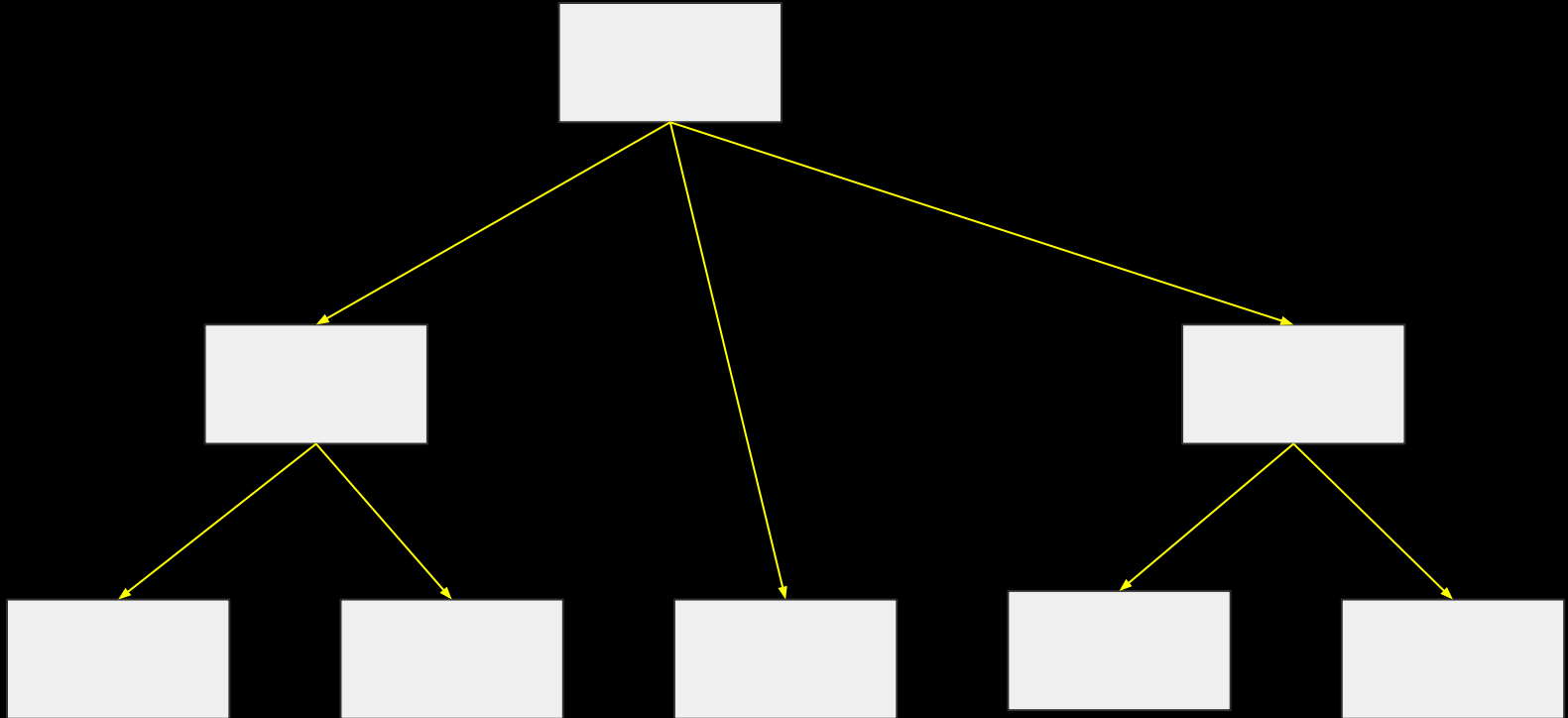
Account structure



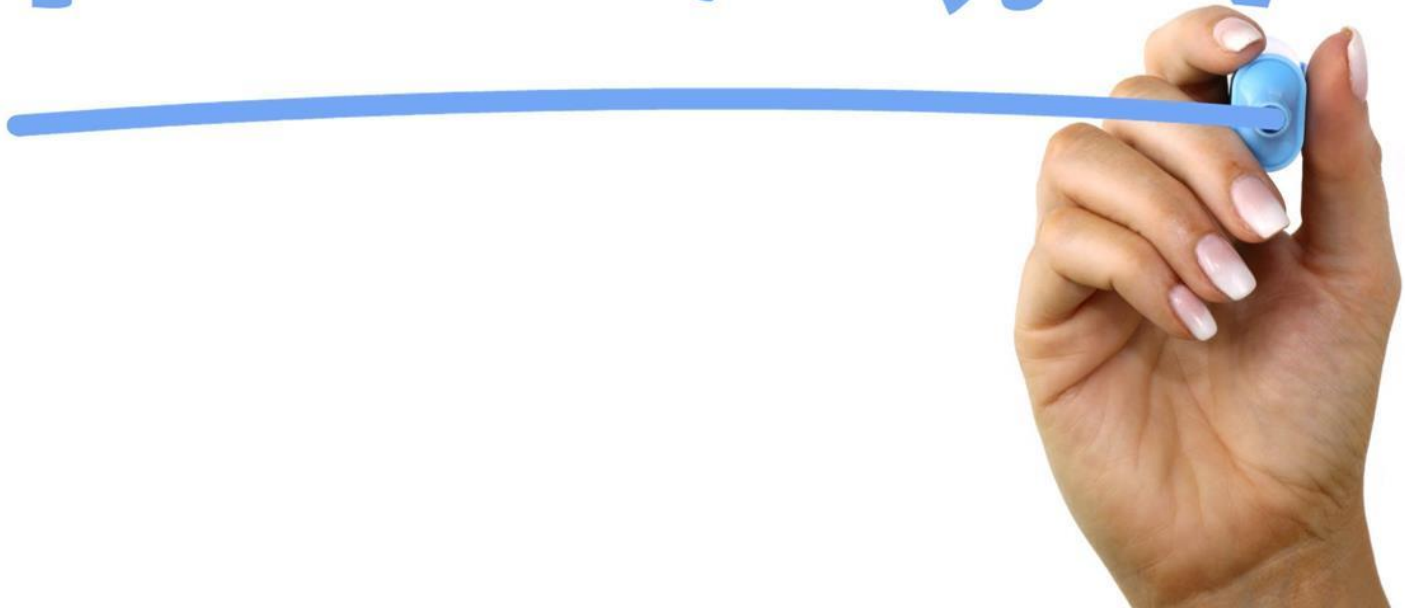
Org Structure



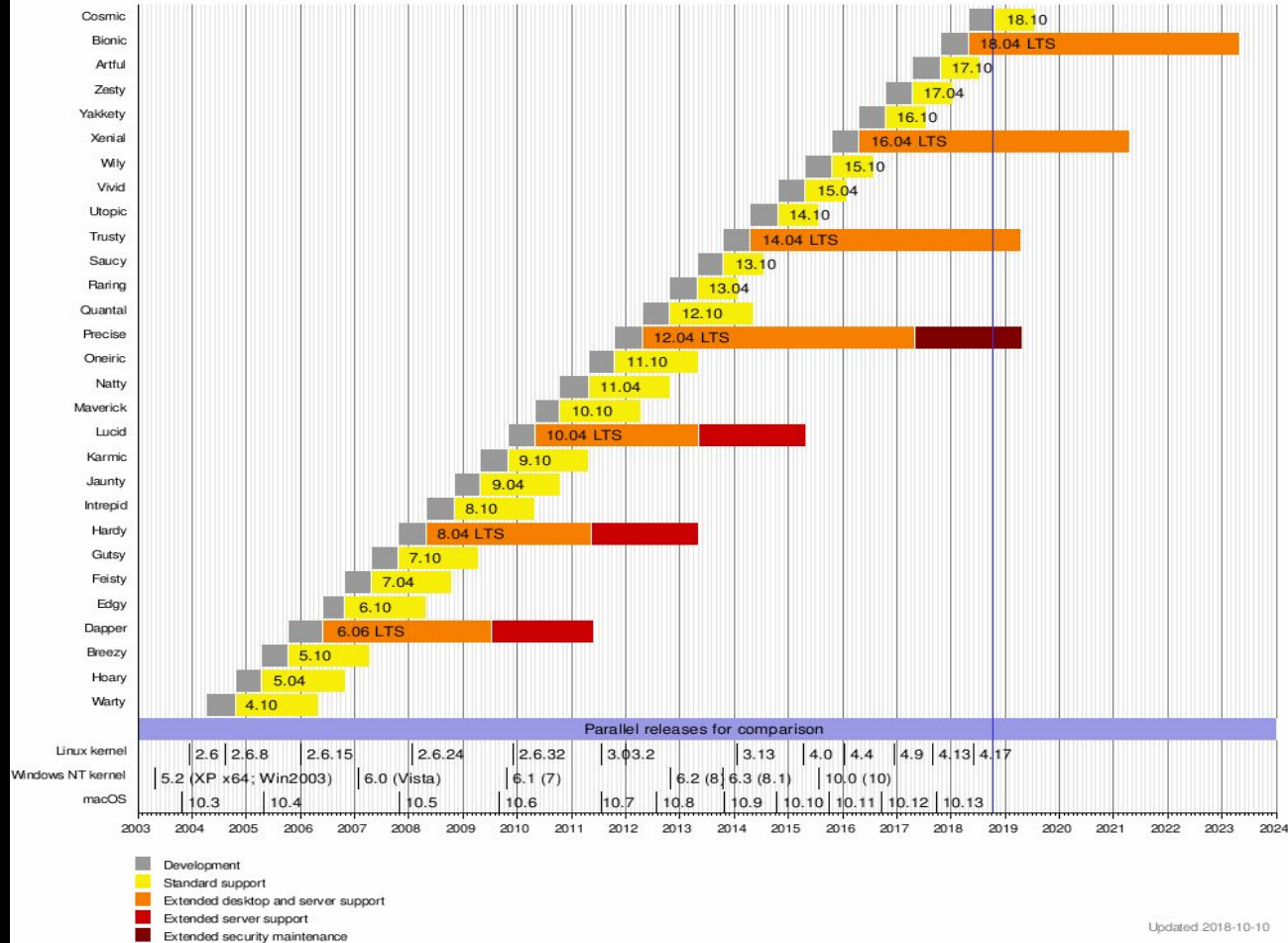
Org Structure



PLAN



Ubuntu release timeline









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