MONITORING GERRIT

STEPHEN V WILLIAMS
INTRODUCTION

The usual blurb

- Git & Gerrit Admin at Qualcomm
- Admin Team:
  - Earl Gresh, Aaron Crossland
- Developer Team:
  - Nasser Grainawi, Martin Fick, Kevin Degi, Craig Chappel, Raviteja Sunkara
MONITORING PHILOSOPHY

to Err is Human ... to really foul things up requires a computer

• Inventory Suppliment
• Operation Center
• Fast and Loud
• 1% is better than 0%
MONITORING SOLUTIONS

a little bit of everything

• CheckMK / Nagios
• Splunk
• Elastic Search
• Cron Jobs
CRON JOBS

• Basic / Rudimentary / Step 1
• Email Warnings

# gerrit user crontab
MAILTO=lords-of-gerrit@qualcomm.com

# check for corrupt repositories daily
15 5 * * * /srv/admin/gerrit-fsck.sh
CHECK_MK / NAGIOS

*Std Admin Toolkit*

- Standard Monitoring of Hardware
  - CPU Usage
  - Memory
  - Disk
  - I/O
  - Network
- Better form of cron job monitors
CHECK_MK / NAGIOS

Gerrit Admins Toolkit

- Greedy Upload-Packs
- Stuck Threads
- Long Running Jobs

Developer: “hmmm I need this really fast, I’m in a hurry... repo update –j 100000000000”

Developer: “I don’t like my regional mirror... lets clone from the other side of the globe”

Developer: “I’m going to create a cron tab to sync code every hour... no need to make sure it completes”
Data Mining Logs
MONITORING SLAVES

- Runtime
- Upload Pack Count
- Receive Pack Count
- Runtime vs Session Time
RUN TIME

host=git-sd*
sourcetype=ssherror_gerrit | search cmd_gerrit!="gerrit ls-projects" | timechart
span=15min
avg(runtime_seconds) by host
host=git-sd*
sourcetype=ssherrror_gerrit
cmd_gerrit="git-upload-pack" |
stats count as gerrit-fetch by host
host=git-sd-*
sourcetype="syslog"
"Request receive-pack for" | timechart count as recieve-pack by host
RUNTIME VS SESSION TIME

host=git-sd*
sourcetype=ssherror_gerrit
cmd_gerrit="git-upload-pack" | timechart span=5m
  avg(runtime_seconds) as runtime_duration
  avg(runtime_total) as session_duration
MASTER MONITORING

- Commands
- Query Wait Times
- Connection Rates
- Connection Runtimes
- Java GC
- Repacking
COMMANDS

Host=master
ers=vsherror_gerrit
cmd_gerrit=* |
timechart span=5min count by cmd_gerrit
Host=master
sourcetype=ssherror_gerrit | search cmd_gerrit="*" | search cmd_gerrit!="gerrit stream-events" | timechart max(wait_seconds) | avg(wait_seconds)
host=master
sourcetype=ssherror_gerrit | search cmd_general="LOGIN" | timechart count by username
host=master
sourcetype=ssherror_gerrit |
search cmd_gerrit="*" |
search cmd_gerrit!="gerrit stream-events" |
timechart sum(runtime_seconds) by username
JAVA GC

host=master
sourcetype=jvm_gerrit "Full GC" |
timechart span=1m
  max(YoungGen_before)
  max(YoungGen_after)
  max(OldGen_before)
  max(OldGen_after)
  max(PermGen_before)
  max(PermGen_after)

-verbose:gc -XX:+PrintGCDateStamps -XX:+PrintGCDetails
REPACKING

Host=master
sourcetype=repacking_git
repack_keeps_before=* OR repack_packs_before=* |
timechart span=1d
  min(repack_keeps_after),
  max(repack_keeps_before),
  min(repack_packs_after),
  max(repack_packs_before)