**6/28/2017**

Call with Patrick, Charlie

NP \*\* Reporting in once a day ~ 3k systems

2502 in Datacenter

Store 775

MCO Calls are taking a very long time

Abrupt

Just turned on Puppet in their lower lifecycle

Been adding more and more modules as well to the environment

Environment size grows daily

Could be Git related (i.e. garbage that builds up)

* Prior to 2016.4 the Ruby library to interface with Git didn’t have a prune or update/GC

Started looking at Control Repo size (80MB)

GitHub Enterprise

Increase in r10K deployments, around 5+ min in Production

Approx 4,000 / 5,000 lines in one of the control repos (Puppetfile)

Does mco r10k deploy from the CA

Two hosts that it deploys on

Ranges between 2-5 minutes for completion

In the past it’s taken 30 seconds

Also looked through the r10k logs

R10k version is not the 2015.3.x → r10k 2.1.1

In the thd\_mco module

Enable logging (r10k)

Git GC materials

Updated copy of mc\_r10k agent

R10k cache

Will take patrick a few days

Consider non-prod as production, so will have to wait to turn on logging as it’ll turn off r10k and that is being used by the business

MCO Tweaks that we can apply to 2016.4.2

Curious about running remote commands through Puppet

Summary of current Home Depot state.

The Home Depot purchased Puppet to replace HPSA. Their primary use case is using Puppet to deploy applications. To do that, they use a series of mcollective commands. They have been doing this successfully in their internal datacenter environment for more than a year.

Recently, they have extended this workflow to their retail store environments. The deadline for developers to deploy their store applications through Puppet rather than HPSA was November 1st. As a result, the number of endpoints mcollective was hitting increased rapidly over the course of the last 2 weeks. The maximum number of endpoints is over 8k.

Last week Thursday 10/27, Home Depot opened a support ticket due to machines dropping connections during deployments. When mcollective sent messages to a large number of geodiverse endpoints, mcollective was not consistently hearing back from the entire set.

Due to the complex nature of their mcollective topology, we have not been able to isolate where the connections are being lost. Furthermore, the component that is driving these connections is ActiveMQ, which mcollective is built on top of, and is not our tooling. Charlie, Adrien Thebo and Elizabeth spent several hours trying to diagnose this last night, and were able to rule out network latency as the issue, but could not determine the source of the lost connections due to lack of activemq expertise.

Most of our larger customers use Mcollective to drive their orchestration. Mcollective is included and supported in the LTS version, and our new orchestrator is also built on top of ActiveMQ. We will continue to experience these issues, and need the expertise to troubleshoot complex ActiveMQ topologies at scale with geo-diverse endpoints.

<https://puppetlabs.zendesk.com/agent/tickets/22298>

As of February 2017 2 million unique changes with Puppet

Total # Stores 2,274

Question for John

* How many nodes are running Puppet?
  + Stores?
  + DCs?
  + Home Office?
  + Data centers?