**Home Depot 2017.3 Upgrade Discussion**

**Mcollective Load Balancing**

Taking a look at the documentation online about ActiveMQ hubs and Spokes (<https://puppet.com/docs/pe/2017.3/installing/installing_activemq_hubs_and_spokes.html> ) it mentions that ‘**You can add hubs and spokes to large Puppet Enterprise deployments for efficient load balancing and for relaying MCollective messages.’**  Which this is new information

The configuration options for MCollective load balancing haven’t changed too much between 2016.4.z and 2017.3.0. The following KB articles address two common issues and how to configure around them:

[KB#0160 Tune ActiveMQ timeouts to improve MCollective connection reliability in Puppet Enterprise 3.7.2 to 2016.4.5 and 2016.5.x to 2017.2.1](https://support.puppet.com/hc/en-us/articles/115000195013-KB-0160-Tune-ActiveMQ-timeouts-to-improve-MCollective-connection-reliability-in-Puppet-Enterprise-3-7-2-to-2016-4-5-and-2016-5-x-to-2017-2-1)

[KB#0161 ActiveMQ becomes unresponsive in Puppet Enterprise 2016.4.3 and earlier, 2016.5, and 2017.1](https://support.puppet.com/hc/en-us/articles/115000157213-KB-0161-ActiveMQ-becomes-unresponsive-in-Puppet-Enterprise-2016-4-3-and-earlier-2016-5-and-2017-1)

The following tickets address are related to the articles above.

<https://tickets.puppetlabs.com/browse/PA-1168>

<https://tickets.puppetlabs.com/browse/PE-20827>

<https://tickets.puppetlabs.com/browse/PE-19972>

<https://tickets.puppetlabs.com/browse/PA-1168>

Questions for THD:

What about the docs seemed to deviate from your configuration?

Were you interested in potential performance improvements relating to MCO in 2017.3.z?

**Orchestrator Load Balancing**

Taking a look at the following document (<https://puppet.com/docs/pe/2017.3/orchestrator/configuring_puppet_orchestrator.html#configuring_puppet_orchestrator_for_the_command_line> ) it mentions that there are 2 new ports 8142 and 8143 (one of these we knew was coming and prepared for somewhat) however what we didn’t know was how the Orchestrator communicated it turns out anything that wants to run a puppet job through the orchestrator needs to connect to the MoM’s via port 8143 (mentions you can use a load balancer). Puppet clients will need to have pxp-agent configured and connect to the compile masters across port 8142 (mentions you can use load balancer). Again, more new information, and we need to create 2 more load balancer names per ecosystem.

Can find this information here: <https://puppet.com/docs/pe/2017.3/installing/system_configuration.html#firewall-configuration-for-large-environment-installations>

**Tuning Suggestions**

Taking a look at several pages they mention about suggested tuning parameters that can be setup per system type as well and I’m wondering which ones are enabled upon default and which ones are needed.

**Setup items that were not brought up**

In order to setup seeing all the packages on systems you must enable package\_inventory\_enabled via the console and run puppet, will this work if the agent is not on the latest version? I also noticed in documentation stating that some orchestration jobs won’t work unless you run the latest Puppet Agent. What is limited to us if we decide not to upgrade? Is there a quick way that Puppetlabs has to upgrade the agent after we upgrade to the latest? We have to update the Puppet Master classification due to how the pxp-agent is setup, what else is there to setup specifically for the pxp agent and how is that currently managed today?

Questions:

* Can you use package inspector if the agent isn’t on the latest version?
* Will orchestration work if you don’t have the latest Puppet agent?
* If they don’t upgrade (agents?) what will the orchestration capabilities be limited to?
* Is there a quick way to upgrade all agents after we level up agent version?
* What other setup needs to occur when configuring orchestration (specifically around the pxp-agent)?

**What other items are we missing**

The items listed above were to my knowledge not shared with us from our Vendor and items that I found by going out and hunting for them, what items are we missing that we don’t know about? What other features/tuning/configuration do we not know about that needs to be done? What items must be used that we might not have a choice about (like is code manager the only option or can r10k the way we are using it still work)?

* Will r10k still work? Think so but confirm.
* Any other caveats?

**Issue on Puppet compiles and MoMs**

Puppet Compile masters ran out of memory after the upgrade and had to be restarted on the compile masters and on the CA/MoM system in Puppet-Dev.

* Examine memory threshold for CMs.