



TAM Service Engineer Engagement Check

Puppet Server Side Infrastructure Assessment Report

for

Acme Corp

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Document Summary

This Technical Account Management Service Engineer (TSE) quarterly assessment check report has been prepared after obtaining Puppet Server diagnostic and log information and focusing on server side infrastructure specific items. The Puppet TSE and Solution Architect teams have reviewed your specific environment details against Puppet Best Practices associated with Puppet Enterprise server side infrastructure.

This report will be presented during a customer advisory session to review the noted findings, suggested Puppet environment changes / updates and other Puppet recommendations. Optionally, your Puppet account team will follow-up with a SOW for a Puppet Professional Services Engineer or Puppet Solutions Architect to implement the recommendations if your team is unable to perform the suggested changes.

Engagement Check Contacts

	Puppet TAM	Puppet TSE	Puppet Architect
Name:	[Insert TAM Name]	[Insert TSE Name]	[Insert Architect Name]
Email:	[Insert TAM Email]	[Insert TSE Email]	[Insert Architect Email]

Engagement Check Summary

The Puppet Enterprise Server Side Infrastructure assessment check will review your current Puppet Enterprise server (PE Primary, PE Replica(s), PE compilers and any Postgres nodes) to check inter-node reporting, service running status and restarts, node log errors, PE build comparison checks and assess any thundering herd problems within the server side infrastructure.

Recommendations

The following recommendations are suggested based on the performed Server Side assessment check:

1. PE Server side infrastructure configuration validation:
 - a. PE Services check: all services are running, with no unexpected restarts.
 - b. At an initial review of the Puppet Primary Server's logs, only compilers are checking in to the primary server, as expected
 - c. Puppet Enterprise Primary server has sufficient CPUs, and RAM.
2. Server side issue:
 - a. Reviewing the activity on your two US based compilers, one compiler manages more nodes than the other. This is inefficient and not as expected. This could be caused by load balancer rules, or an issue in your Hiera configuration.
 - b. In the last 7 days of logs, there have been Out Of Memory (OOM) errors on your EMEA compiler. The RAM on this compiler might need to be increased.
3. Thundering Herd issues:

- a. Reviewing the output from the thundering herd check, there are signs of thundering herds (see the table below). This should be addressed to ensure all nodes are able to check in every 30 minutes.
 - b. There are a number of tools you can use to fix and prevent herds using the [puppet support task](#), or configuration settings for [max-queued-requests](#), [splay](#) or the [fgdn_rand function](#). See [KB#0052](#) for details on how to generate this report yourself, and for links to resources for mitigating thundering herd conditions to decide which solution is best for you.
4. Other Noted Items:
- a. The indication of thundering herds can be caused by PE performance issues. If it's due to long catalog compilation times, a Puppet code review may identify code changes that will make PE more efficient, rather than adding additional resources to compilers.

Thundering herd output:

The Thundering Herd output, shown below, lists the count of nodes checking into Puppet Enterprise during a 30 minute period. This table demonstrates how evenly distributed your nodes are, at checking in during each cycle. Highlighted is a spike where a significantly higher proportion of your nodes try to check in, compared to the average number of nodes per minute. This can lead to a range of performance related issues including catalog compilations failing.

Month	Day	Hour	Minute	Count
1	13	16	0	2
1	13	16	1	1
1	13	16	2	3
1	13	16	3	5
1	13	16	4	7
1	13	16	5	4
1	13	16	6	9
1	13	16	7	12
1	13	16	8	13
1	13	16	9	6
1	13	16	10	8
1	13	16	11	15
1	13	16	12	11

1	13	16	14	13
1	13	16	15	5
1	13	16	16	6
1	13	16	17	2
1	13	16	18	3
1	13	16	19	3
1	13	16	20	76
1	13	16	21	45
1	13	16	22	2
1	13	16	23	1
1	13	16	24	12
1	13	16	25	7
1	13	16	26	9
1	13	16	27	5
1	13	16	28	3
1	13	16	29	4
1	13	16	30	3