Dear Manager,

Due the increase of our infrastructure the deployment and configuration tasks have been very time consuming and more prone to errors. As a result, we should consider an infrastructure automation tool that will automate our deployment and configuration processes and provide analytical overview of our infrastructure.

The two most popular tools are Chef and Salt. Both are using Server/Client architecture. Chef also uses a master-agent setup where a Chef installation also requires a workstation to control the master. Chef uses Ruby, Erlang as programming language and Ruby as configuration language. Salt uses Python as programming language and YAML as configuration language.

Chef use Pull based Configuration Management that, meaning its always the agent/client that initiates communication, not the main server while Salt uses Push based Configuration Management where it is it’s the main server that starts the communication and sends the configuration data to the nodes without the nodes asking for it.

Chef uses JSON format for output and configuration where Salt uses YAML. Chef require a PostgreSQL database in its architecture for storing confirmation parameters, ports, etc. while Salt organizes configs and setups into YAML output files called “states” and centrally-located base configs called “pillars”.

A largely extremely dynamic infrastructure, like ours, will benefit more from a Pull Based Configuration where it is easier to bootstrap new nodes and have scalability. Also, using a database where all configuration files are stored centrally, allows for among other things separate backup of these files. Additionally, we have in our company many experienced database and Ruby engineers.

As a result, I would recommend adapting Chef tool.

Regards,

Damianos