

My Op5 experience

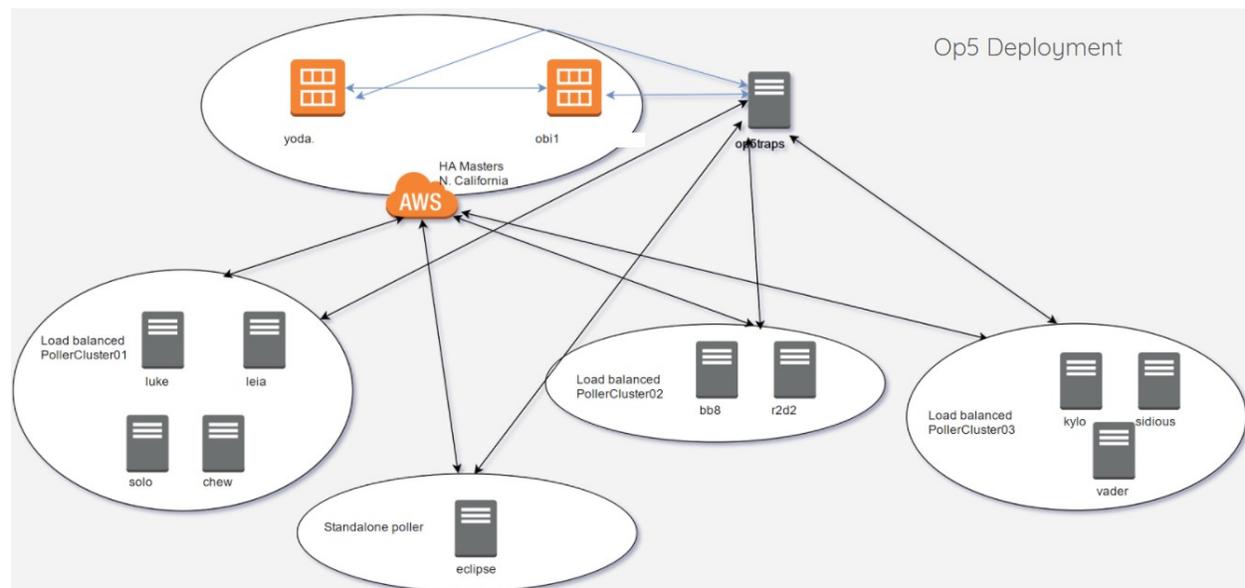
I was in charge of research, plan, deploy and migrate to a new monitoring system that could be scalable enough to support the monitoring of our 4k+ hosts and 25k+ services with the existent available resources we had in our data center.

I had contact with some vendors and tested systems like Icinga2, Nagios XI, Opsview Monitor and CheckMK, before I discovered an op5 AMI in the AWS Marketplace. Then I asked for more information at the op5 portal and got the support I needed from Jason Hagood and Jon Cavanaugh.

I started with 4 virtual servers running CentOS 6 under 2 physical servers running KVM on Ubuntu 14.04. I realized that the configuration of a distributed architecture was way simpler than Opsview and any of the other systems, but performance was still poor because of the virtualization layer.

I then freed more servers by migrating other KVM Virtual Machines, reformatted the servers, and used bare metal CentOS 6 on all of them, the performance improved significantly. I used the Amazon VPC EC2 instances as master systems and the servers in our datacenter as poller systems. The preliminary result was an architecture strong enough to support a gradual migration and I reformatted and installed the Opsview servers as more poller systems.

The final result is as follows.



- 3 Master Peered Systems, 2 of them in Amazon VPC EC2 in different Availability Zones. The other peered master is the only one in charge of receiving traps with op5 Trapper.
- 3 Peered Poller Clusters and 1 standalone poller to support old network equipment that only allow 1 IP in their SNMP Access List.

I was also responsible for the team that developed our internal dashboard that pulls information from op5 using the REST API. And also directly connected the op5 Monitor MySQL database to other systems for some integrations.

The screenshot displays a monitoring dashboard with three main sections:

- Op5:** A list of network interfaces and their status. Each entry shows the device name, interface name, and a green status indicator "is Up".

Device	Interface	Status
L2VPN Huawei: L3_Jabil-Calix_PTP	Eth-Trunk4.1604 Virtual Circuit 41604	is Up
L2VPN Huawei: L3_Jabil-Bodega_PTP	Eth-Trunk4.1603 Virtual Circuit 41603	is Up
L2VPN Huawei: L3_CHInahua_Allstream	Eth-Trunk4.653 Virtual Circuit 3710	is Up
L2VPN Huawei: L3_Api-Technologies_PTP	Eth-Trunk7.1613 Virtual Circuit 21613	is Up
L2VPN Huawei: L3_Allstream_Chih	Eth-Trunk4.1602 Virtual Circuit 3711	is Up
L2VPN Huawei: L3-Ottawa-Bermudez	Eth-Trunk4.679 Virtual Circuit 46679	is Up
L2VPN Huawei: Keytronic_ELP-3RZ_PTP	Eth-Trunk0.113 Virtual Circuit 3713	is Up
L2VPN Huawei: KASTRDNHGHT	Eth-Trunk2.777 Virtual Circuit 1234567	is Up
L2VPN Huawei: Inteva	GigabitEthernet2/0/3.3300 Virt	is Up
- Graphinator:** A section showing network performance metrics. It includes three "Dia" (Daily) graphs, each with a "Max capacity: 20.0 Mbps" and a "Graph" showing data points. The first graph has ID 1-13787613, the second 1-13792898, and the third 20.0 Mbps.
- Graylog:** A log viewer showing several entries from 2017-01-20. The logs include messages about denied TCP requests, failed SNMP logins, and source IP locking.

To achieve this I had to know:

- How a Nagios based monitoring system works.
- How to write Nagios configuration.
- How to use Linux based OS.
- About relational and non-relational databases.
- How op5 works.
- How Merlin works and how to set up a distributed environment.
- How to write scripts/custom plugins for op5 in different languages.
- Common network ports and protocols used for monitoring.
- How to use the HTTP REST API for integrations.
- How to set up and use the op5 Trapper module.