Case study: using Ansible to automate Network Operations

(by OpenTable NetOps team, 2017)

Things to talk about

- What is success?
- Ansible as Network Operations tool
- Stats about our project
- Ansible as s/w development project
- Ansible as a part of bigger infrastructure
- Conclusion

Organizational impact

Saving money:

- by saving provisioning time
- approximately 1h for new device to be fully provisioned

Quality & Consistency:

- reduces snow-flakiness
- predictability: same concept applied via code

Better security:

- all local passwords are under control
- critical updates pushed to a family of devices

Better culture:

- changes history/versions (git)
- easier to review and approve
- promotes collaboration (other teams own parts of network configs)

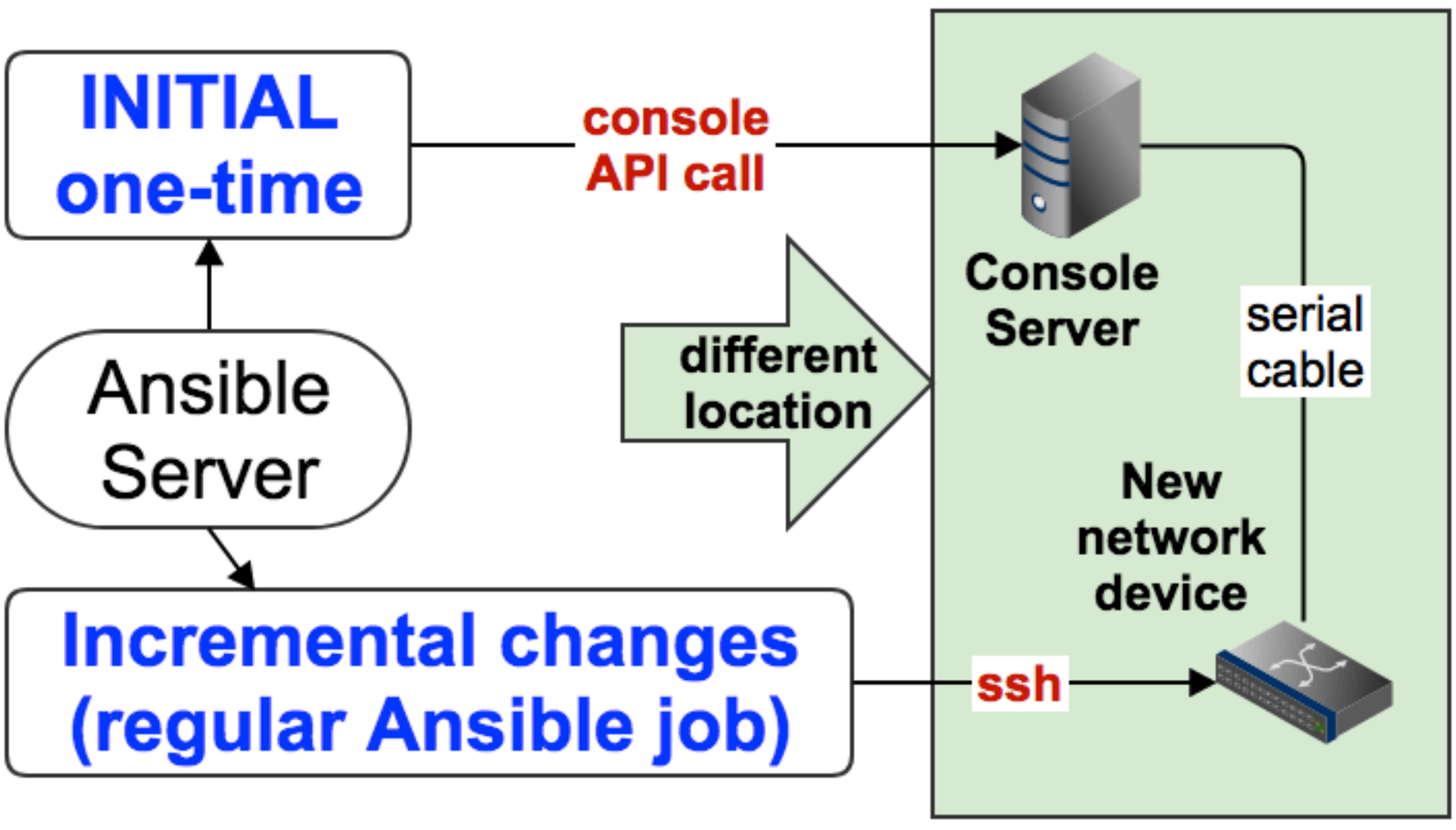
Ansible as Network Operations Tool

Scalability:

- ability to deploy changes globally
- SNMP, SYSLOG, SSH, whatever…

New network devices:

- consistent & fast provisioning



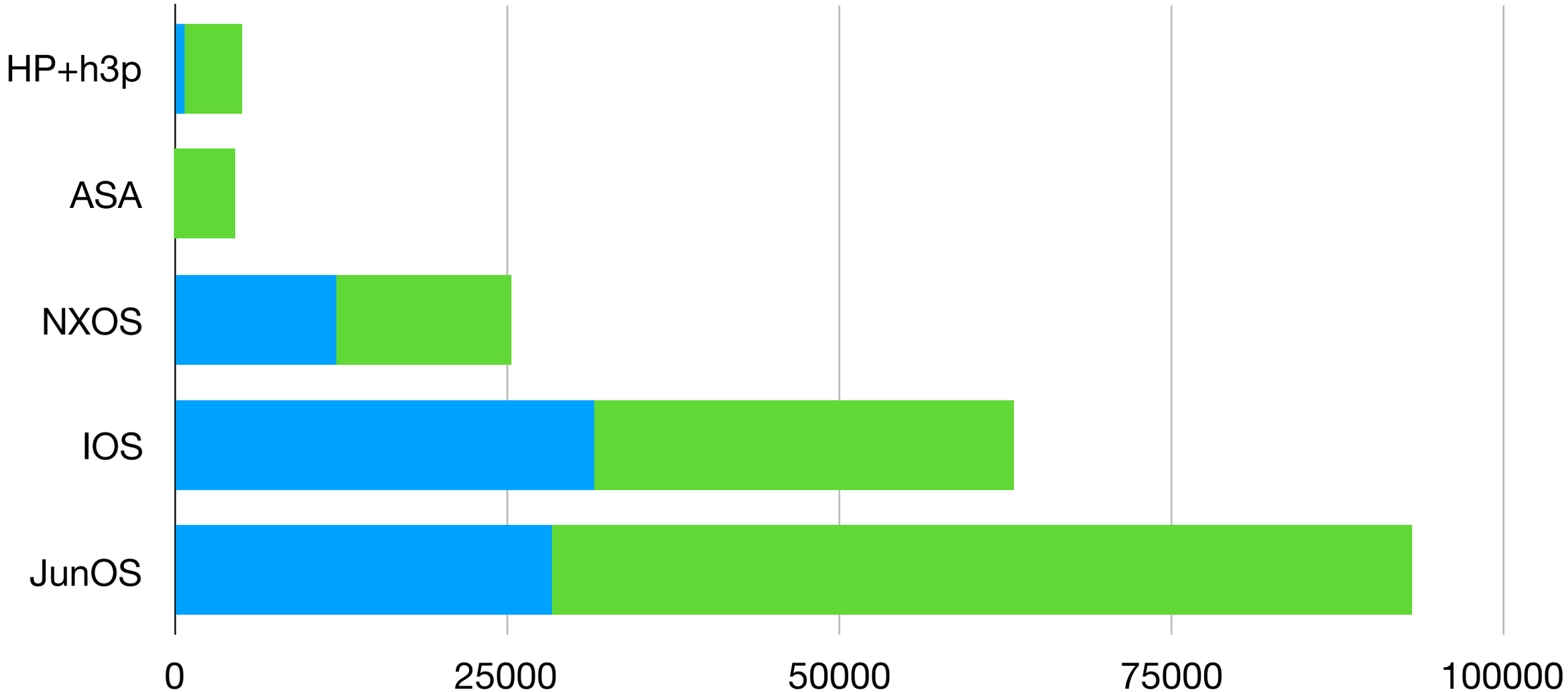
Handles complexity (for you):

- build entire new office in advance (plug-n-play: **true story!**

Pass-through OS specific

- in-place config changes (replace)
- checkpoint/rollback

Jinja2 code (bytes), 1 year



Ansible as Software development project

Python-based

- libraries, versions
- python virtual environment

Combination skills

- as Network Engineer: ability to identify patterns (subject area)
- as Software Developer: ability to code them well enough

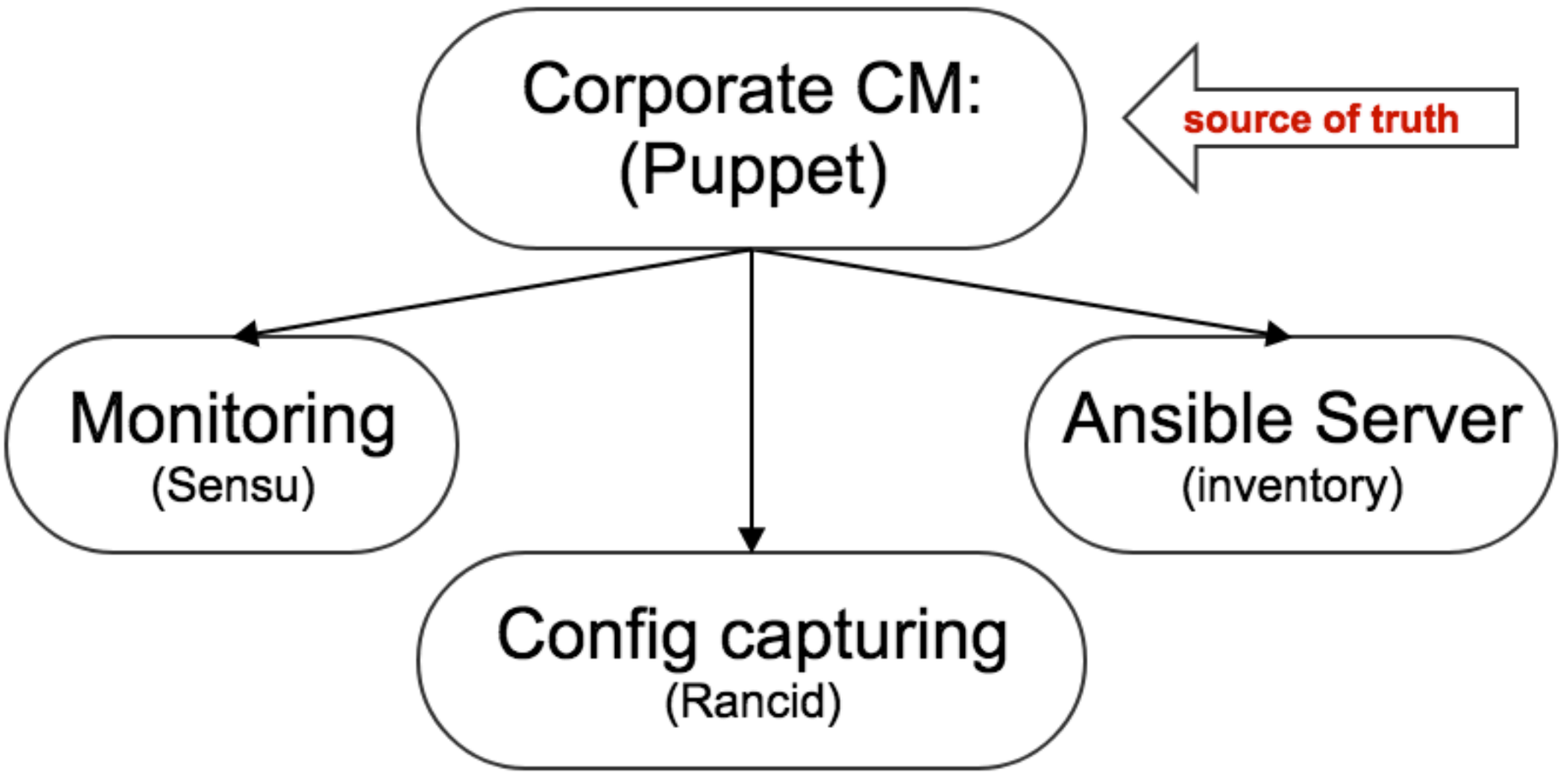
Understanding WEB

- dynamic inventory is a WEB server
- understanding REST, JSON, etc

Follow s/w best practices

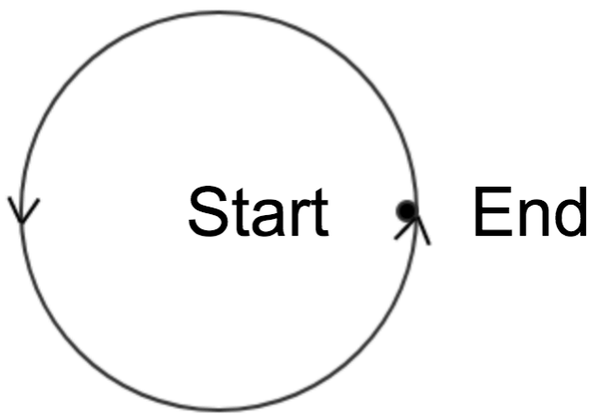
- keep code separate from data
- move fast (solve particular problem)
- refactor later
- create reusable code
- separate concerns

Integration with other IT infrastructure

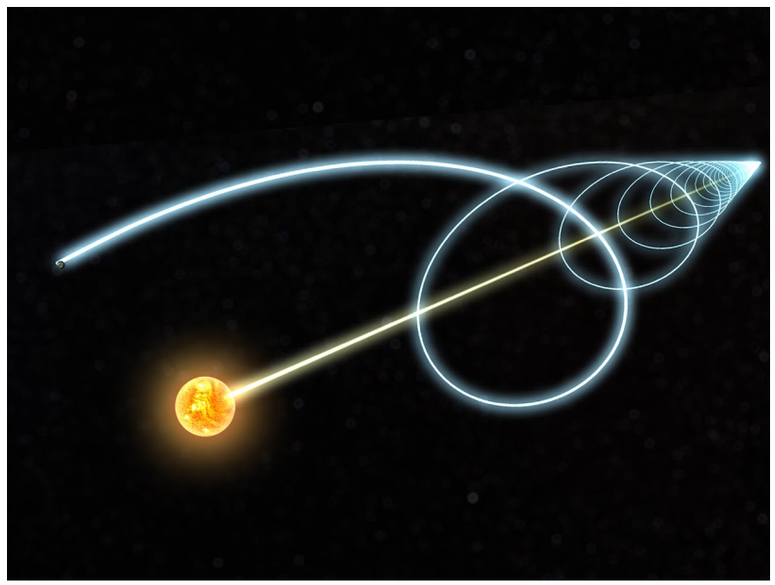


Conclusion

	BEFORE	ANSIBLE
WHAT	unstructured config - plain text	**CODE** + **structured DATA** => plain text based on attributes
HOW	copy/paste manually	Deploys new config via SSH with ability to see the DIFF



Find the direction!



Thanks for watching!

https://github.com/opentable/ansible-examples

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