A JOURNEY TO DEVOPS IN THE BRITISH ARMY

Lessons Learnt for Successful Automation

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The plan...
Information Application Services (IAS)
Military
Civil Servants
IT Contractors

100+ Staff

200+ Services

Public
Official
Sensitive
Secret

3 Security Domains

Army, Navy & Air Force
Training Recruits

Families

Injured

Regular

Reserves

Veterans

~10

~300,000
Public Cloud

Official Sensitive Private Cloud

Secret Private Cloud

Army Hosting Environments
MY JOURNEY TO “DEVOPS”
Year 2000 – “UNICOM” Project
Typical UNICOM System Administrator

- Soldier in the Army
- Not necessarily technical
- Part time Sys-Admin

“Heather”
You also have to deal with situations with an “Army” twist to them.
Tip #1: KEEP IT SIMPLE (for the end user)
Complexity + Stress = Misunderstandings
Year 2015 – Army HQ DevOps
Automation Framework

- OS Patching
- Platform Installs
- Oracle Patching
- Oracle Upgrades
IAS ‘DEVOPS’ EXPECTATIONS

- Empowering users (developers and operations)
- Reducing the lead time to get platforms up and running
- Removing the dependency on lots of different people to build a platform
- Enabling consistency across domains
- Reducing system downtime
- Simplifying processes and, therefore, documentation
Tip #2:

LEGACY CAN BE “DEVOPS’d”
(Don’t throw away existing code or platforms)
THE DEVOPS PLAN

Users interact with Ansible.

Ansible layer interacts with existing scripts and extended to fully automate jobs.

DevOps Utopia!
Started with "pure" Ansible

Quickly decided we needed a GUI
Tip #3: USE ANSIBLE TOWER FROM THE START (If you think you’ll need a GUI)
Supported by Red Hat

**RED HAT®**

**ANSIBLE®**

**Tower**

[https://www.ansible.com/products/tower](https://www.ansible.com/products/tower)

[https://github.com/ansible/awx](https://github.com/ansible/awx)

Open Source!

CloudForms (or "ManageIQ" for Open Source version)
KEY COMPONENTS

SCM – Playbook Code

Hypervisor – VM Control

Artefact Server – Software ISOs

Password Management

MatterMost – Job Status Info

Service Catalogue – Virtual Hardware provisioning
Tip #4:

ANSIBLE TOWERCLI
(Because we love the command line)
Our Ansible Tower installation and configuration is 100% Software Defined...
Tip #5:

TOWER JOB SURVEYS
(Keeping It Simple)
JOB SURVEYS

Drop downs or Pick Lists limit what users can select
User promotes a release using a Tower job.

Playbook scans the artefact server for changes.

Survey is regenerated with new options against all relevant job templates.
MISSION DEBRIEF
KEY TAKE-AWAYS

- Keep It Simple
- Recycle existing automation code
- Decide early on if you need a GUI
- Automate GUI configuration
- Give users the power, but retain control
ACHIEVEMENTS

All major new Linux based software deployed using Tower

Zero patch related downtime during working hours

Development, Test, Pre-Production and Production all aligned

Documentation complexity reduced

Happy Users!
“I’m seriously impressed at how quickly and smoothly you guys are able to get the Oracle CPUs rolled out across all the environments”

IAS Lead DBA
“‘Legacy’ no longer refers to the platform itself, but the way you deliver and maintain the platform”
https://www.ansible.com/videos-ansiblefest-london-2017
THANK YOU

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