The how's and why's of automation with Ansible/Tower

@Euroclear

“Automation from zero to hero”
Agenda

- Euroclear: who are we?
- Our automation mission statements and drivers
- the how’s and why’s
Who we are?

Euroclear group is the financial industry’s trusted provider of post trade services.
Your global trusted partner

The Euroclear network consists of over 2000 financial institutions across the globe. This international and diverse customer base includes all leading investment banks, treasuries, global custodians, central banks and CCPs. Our open model enables us to work with a multitude of parties as we strive to strengthen, grow and reshape our network.
Automation mission and drivers

The mission statement from our management:
«Develop our own private cloud and become a cloud service broker»

The mission statement of Linux Engineering team:
«Automate all recurring work, provide automated services to our customers»

Automation drivers:
• Infrastructure agility
• Speed of delivery
• Customer satisfaction
• Service Ability
• Reliability / Quality / Consistency
The Legacy

- Resource delivery and execution tool
  - Limited configuration data library
  - Scripts
  - Files
  - High complexity in maintaining
The humble **beginnings**

- A tool introduced by middleware team
- Supported/maintained by Linux Engineering team
- Custom inventories maintained by operators
How the **West Was Won**

- Take ownership of Inventory
- Custom script to sync internal CMDB
- Stabilize the environment
- Define standards
- Roadshows
- Educate people
A brand **New Start**

- New Linux Software Catalogue based on RHEL7
  - Re-evaluate all RHEL related products and their ownership
  - Deployment options
- Newly introduced security guidelines for network segregation
  - Connectivity between zones reduced/eliminated
  - Introduction of Jump and Bastion hosts
What to do

• AaaS // Ansible as a service
  and
  ATaas // Ansible Tower as a Service

• Introduction of Jump- and Bastion hosts

• Allow 3rd parties to contribute to the inventory

• Application teams allowed to automate their own apps

• Interfacing from company “Orchestrator” tool with a one-stop shop for any resource provisioning
• Application teams request same DIY approach on Windows systems
  ► Bad experiences with ‘Windows’ packaging quality
  ► Re-use (acquired) Ansible knowledge

• Network team decided to use Ansible
  ► Custom script replacement
  ► Insufficient vendor tooling support
Tower: the sequel

- Re-interpretation of security guidelines
- A new Tower design
  - Instance groups
  - Isolated Instance Groups
Automation/Orchestration cases

- System deployments
- System resource management
- System updates
- System reporting
- KVM guest storage migration
- KVM hypervisor migration to VMware
What happens in Vegas…

Or does it?
  • Make friends
  • Describe your requirements
  • Describe your infra
  • Standardize, but don’t be afraid of exceptions
  • Involve knowledgeable people
  • Version control
Governance

- Everything is a playbook
- Create guidelines
- Playbook versioning
- Separate Git branches
- Adopt 4 eye principle
- Daily test builds
Technical stuff…

- Create reusable content, not one-off playbooks
  - Roles
  - Modules
  - Plugins

- Create, deploy and remove playbooks at the same time

- Do not incorporate remediation steps in your deployment projects
Thanks!

Thank you to all for attending this break-out session. Thank you to Red Hat for inviting us on stage.