Managing sensitive data with Ansible vault

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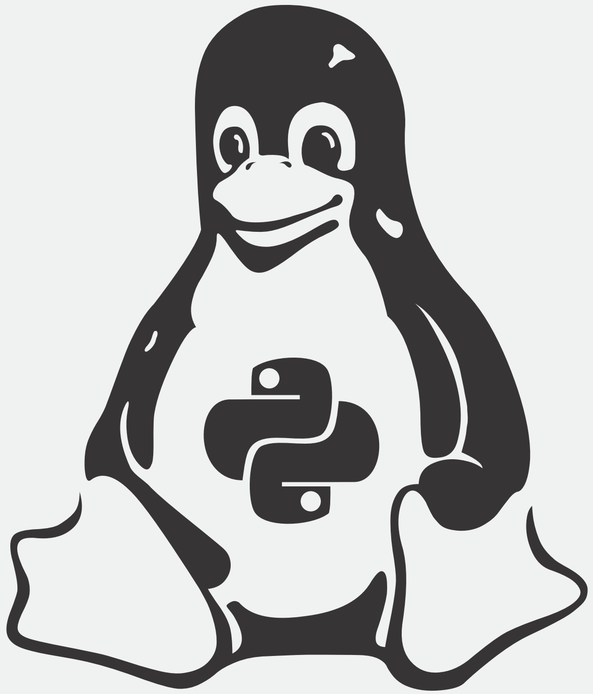
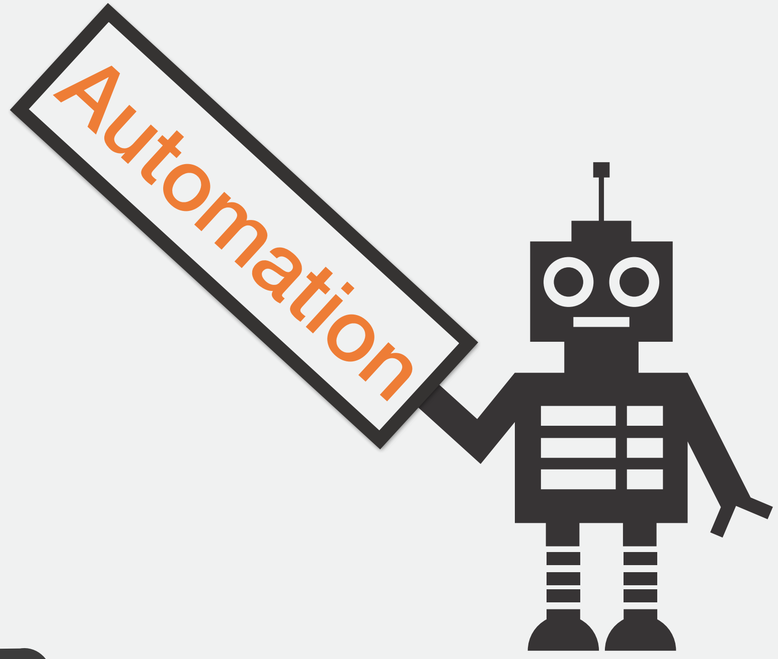
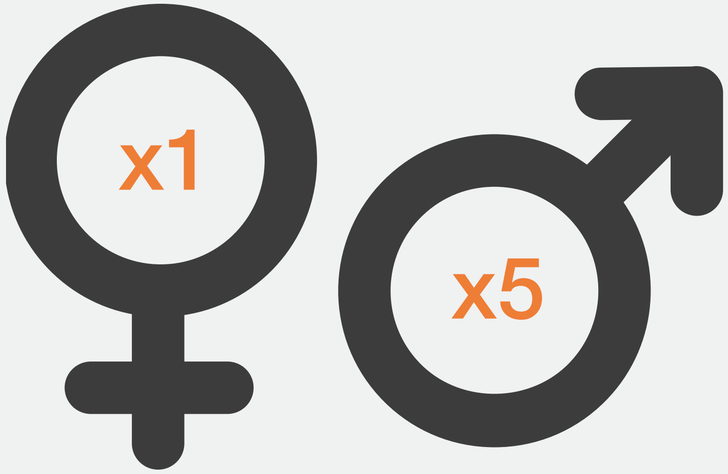
Introduction

About me and our company



About Me





About Us

- Linux & AIX **consulting** with **DevOps** experience
- Infrastructure **Automation**
- official Ansible **Partner**
- **consulting** & **training** for Ansible, Python & git

What we offer

Ansible Vault

getting started

Vault is a feature of ansible that allows **keeping sensitive data** such as passwords or keys in **encrypted files**, rather than as plaintext in your playbooks or roles.

What is Ansible vault

- Binary included in the **Ansible core** package
- **AES-256** algorithm encrypted
- Decrypted **on runtime**
- **Limitation**: one Vault password per Ansible playbook

Tech Specs

ansible-vault <option>

create	Create new encrypted file
encrypt	Encrypt existing file
edit	Edit encrypted file
rekey	Change encryption password
view	View encrypted file

How to use it

1. Create **ansible-vault** variable file
2. Use it in your Ansible Project
3. Run ansible / ansible-playbook with
    - --**ask-vault-pass** Option
    - or define a **password file**
        - define in ansible.cfg **vault_password_file** path
        - **--vault-password-file** Option
        - as variable **ANSIBLE_VAULT_PASSWORD_FILE**

- encrypt **YAML files**
  - e.g. group_vars
  - e.g. host_vars
- since Ansible v2.3 **single encrypted variables**
  - use the **!vault tag**

What can be encrypted

- sensitive data for automated deployments
  - SSL private keys
  - SSH private keys
  - secrets / credentials

What should be encrypted

Tips & Tricks

make your life easier

- **layer of indirection**
- **prefix** your variables **vault_**<variablename>
- **save variables** into vault files or directories

implicit		explicit
group_vars/dev/vault.yml	vs	vault_vars/dev.yml
group_vars/prod/vault.yml		vault_vars/prod.yml

Define your variables

- set ”**no_log: true**” per task
- use **different passwords per environments**
- only **encrypt sensitive data**
- use a **strong encryption password**
- always use a **private git repo / restrict access**

Best Practices

- technically could be **still compromised**
- what **pushed to git, stays on git**
- secure your password file
  - **owner** & file **permissions**
  - **outside** the git repo / .gitignore

Are we safe now?

Demo

managing SSL private keys

use case

managing database credentials

use case

single encrypted variable

short demo

The End

Thank you for listening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- http://docs.ansible.com/ansible/playbooks_best_practices.html#variables-and-vaults
- https://blog.confirm.ch/deploying-ssl-private-keys-with-ansible
- http://docs.ansible.com/ansible/playbooks_vault.html
- http://docs.ansible.com/ansible/playbooks_vault.html#single-encrypted-variable

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