Red Hat Summit

AnsibleFest

# Volvo Cars uses Ansible Automation Platform on Microsoft Azure to accelerate time to automation.

Martin Hallin

Infrastructure engineer at Volvo Cars

VOLVO

Red Hat

# Agenda

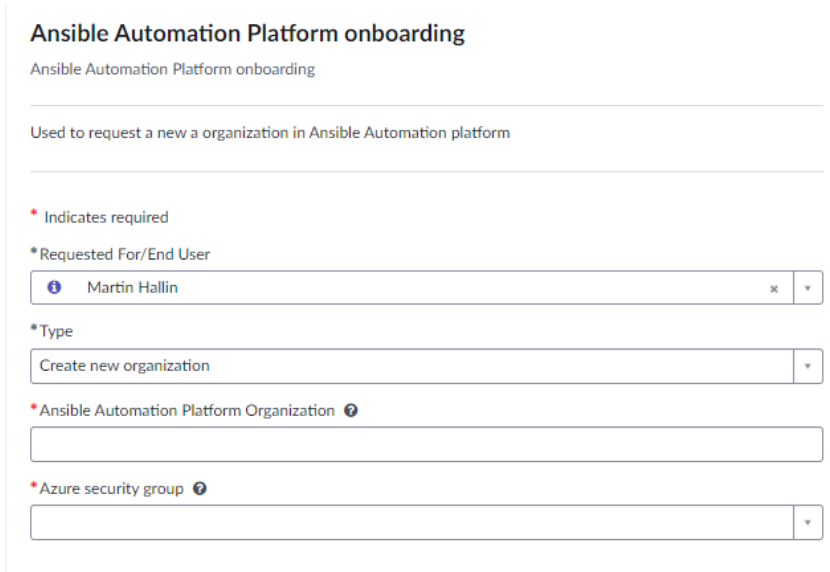
- Ansible Automation Platform as a managed application.
- Onboarding process
- Speed up development
- Collections and automations
- Issues
- Key results
- Q & A

# Ansible Automation Platform as managed application on Microsoft Azure

- Started on prem.
- Benefits with using the managed application.
- Less administration.

# Automated onboarding

- Self service request catalog.
- Reduces delivery time.
- Microsoft Entra integration.




VOLVO

Red Hat

# Onboarding automation

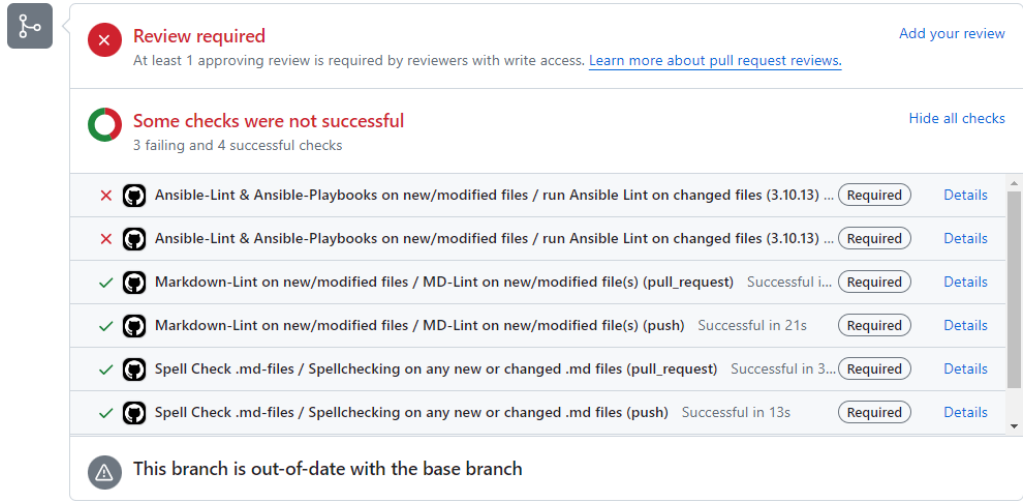
1. Create Organization.
2. Set Galaxy credentials
3. Create Team.
4. Configure role permissions.
5. Update SAML Team Attribute Mapping configuration.

SAML Team Attribute Mapping

```
{
  "remove": false,
  "saml_attr": "http://schemas.microsoft.com/ws/2008/06/identity/claims/groups",
  "team_org_map": [
    {
      "team": "[redacted]",
      "team_alias": "Windows Hosting Server Admin Team",
      "organization": "Managed Servers"
    },
    {
      "team": "[redacted]",
      "team_alias": "Linux Hosting Server Admin Team",
      "organization": "Managed Servers"
    },
```

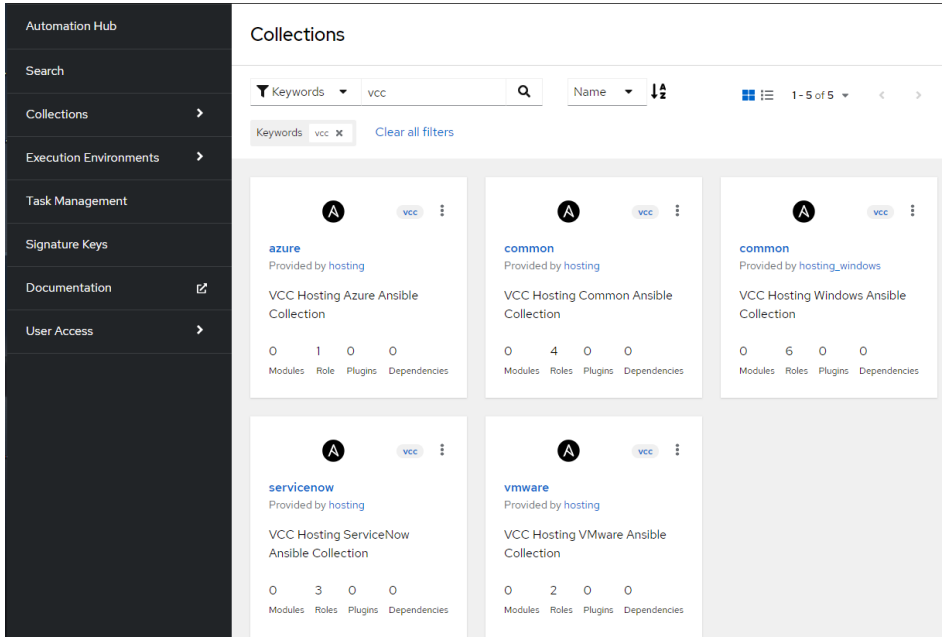
# Automated code review

- Ensures the code is following Ansible guidelines.
- Spellchecking.
- Runs automatically on pull and push requests.
- Blocks pull/push requests when errors is found.



# Code sharing

- Private Automation Hub.
- Community-based development.
- Custom Namespaces and collections.
  - hosting.common.
  - hosting.servicenow.
  - hosting_rhel.azure.
  - hosting_windows.vmware.
- 70 Roles to be used by other teams.




VOLVO

Red Hat

# The benefit of using inhouse built roles and collections

- Easier to read the main playbook.
- Easy to share.
- Well documented.
- Maintained in one place.
- Version controlled.
- Can be published to Automation hub.

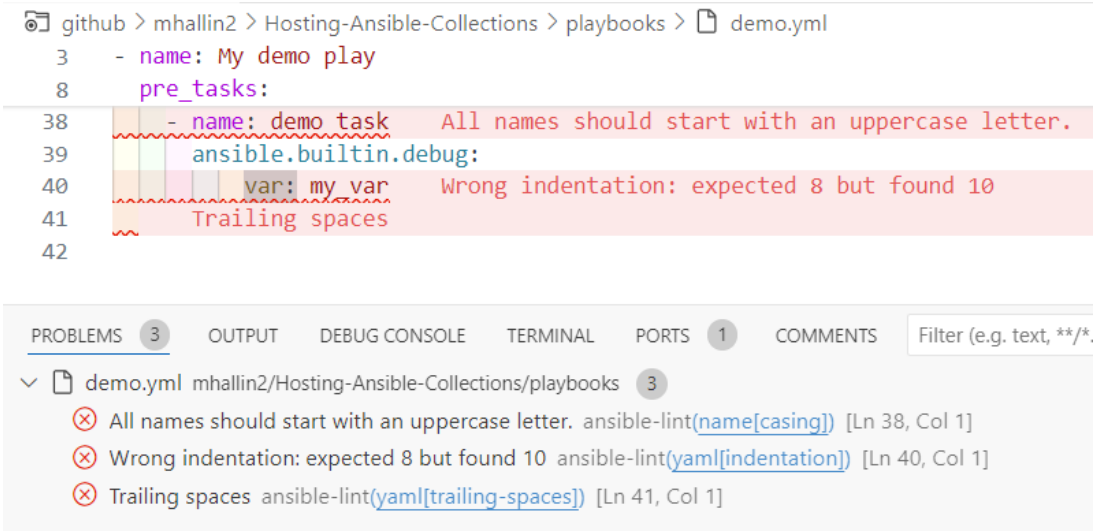
```yaml
- name: Inplace upgrade of windows server
  hosts: windows_server
  roles:
    - name: Run OS inplace upgrade
      role: hosting_internal.windows.upgrade_os
      vars:
        Upgrade_OS_Binary_Path: "{{ Mount_Isofile_Mounted_Drive.mount_paths[0][:3] }}"
        Upgrade_OS_Target_Version: "{{ TargetOS }}"
      when: PreUpgradeOSVersion != TargetOS

    - name: Patch server
      role: hosting_windows.common.patch_server
```

# Work smarter with the right tools

Suggestions on extensions to VS Code

- Ansible.
- GitHub Copilot.
- Code Spell Checker.
- Markdownlint.
- Error Lens.
- LTeX – LanguageTool grammar/spell checking.
- Indent-rainbow.
- WSL.




VOLVO

Red Hat

# Importance of documentation

- Documented folder structure.
- Common naming convention.
- Playbooks must start with a description.
- Document common input variables.

```
# code: language=ansible
# Description:
# This Playbook will update a Server CI in CMDB
# Usage:
#  - extra_vars:
#     {
#         - ServiceNowEnv: "Test"/"Dev"/"QA"/"Prod"  #required
#         - ServerCI: {{ NetbiosHostname }} #required
#         - ServerCI_Comment: "<string>" #required
#         - ServerCI_Status: "Installed"/"In Maintenance" #required
#         - ServerCI_Substatus: "In Use"/"Powered Off"/"In Maintenance" #required
#     }
```

# Highlighted playbooks and collections

**Highlighted Automations:**

- Provisioning.
- Baseline configuration.
- Patching.
- Start/stop.
- Decommissioning.
- VM resize.

**Collections:**

- ansible.controller
- ansible.windows
- azure.azcollection
- community.general
- community.vmware
- community.windows
- infoblox.nios_modules
- infra.controller_configuration

# Issues we have encountered

- Issues encountered during initial setup.
- Issues encountered while using AAP.
- Required FW openings.

# Key results

- Less administration with Ansible Automation Platform.
- Reduced time for onboarding to Ansible Automation platform.
- Automated code review that reduces work for code reviewers.
- Predefined processes with shared code.
- Shorter time for provisioning and standardized resource deployments.
- Automated resource resizing for optimal cost efficiency.
- Scheduled server patching.
- Reduced work for operations team.

VOLVO

Red Hat

# Q/A?

VOLVO

Red Hat

Red Hat Summit

AnsibleFest

# Thank you

 linkedin.com/company/VolvoCars

 facebook.com/VolvoCars

 youtube.com/VolvoCars

 twitter.com/VolvoCars

Red Hat