



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



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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.

Ansible Automation Platform onboarding

Ansible Automation Platform onboarding

Used to request a new organization in Ansible Automation platform

* Indicates required

* Requested For/End User

× ▾

* Type

▾

* Ansible Automation Platform Organization ⓘ

* Azure security group ⓘ

▾

Onboarding automation

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

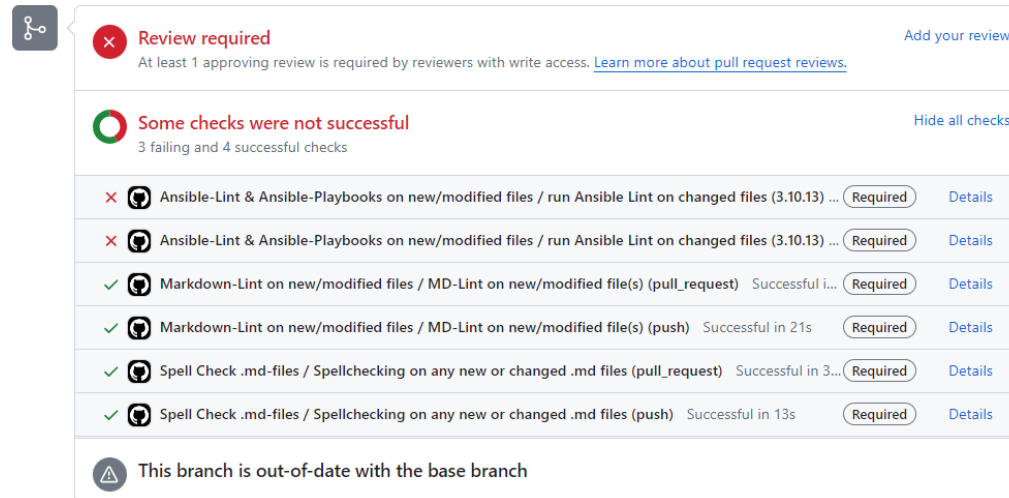
SAML Team Attribute Mapping ⓘ

```
1 {
2   "remove": false,
3   "saml_attr": "http://schemas.microsoft.com/ws/2008/06/identity/claims/groups",
4   "team_org_map": [
5     {
6       "team": "[REDACTED]",
7       "team_alias": "Windows Hosting Server Admin Team",
8       "organization": "Managed Servers"
9     },
10    {
11     "team": "[REDACTED]",
12     "team_alias": "Linux Hosting Server Admin Team",
13     "organization": "Managed Servers"
14    },
15  ]
16 }
```

Speed up development

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.



The screenshot displays a pull request interface with the following elements:

- Review required:** A red 'x' icon and text indicating that at least one approving review is required by reviewers with write access. A link to "Learn more about pull request reviews" is provided.
- Some checks were not successful:** A green circle with a red outline icon and text indicating that 3 failing and 4 successful checks were performed. A "Hide all checks" link is present.
- Checklist of automated checks:**
 - Two failing checks: "Ansible-Lint & Ansible-Playbooks on new/modified files / run Ansible Lint on changed files (3.10.13) ...". Each has a red 'x' icon, a "Required" status, and a "Details" link.
 - Four successful checks: "Markdown-Lint on new/modified files / MD-Lint on new/modified file(s) (pull_request)", "Markdown-Lint on new/modified files / MD-Lint on new/modified file(s) (push)", "Spell Check .md-files / Spellchecking on any new or changed .md files (pull_request)", and "Spell Check .md-files / Spellchecking on any new or changed .md files (push)". Each has a green checkmark icon, a "Required" status, and a "Details" link.
- Out-of-date branch:** A warning icon and text stating "This branch is out-of-date with the base branch".

Speed up development

Code sharing

- Private Automation Hub.
- Community-based development.
- Execution Environments
- Task Management
- Signature Keys
- Documentation
- User Access
- Custom Namespaces and collections.
 - hosting.common.
 - hosting.servicenow.
 - hosting_rhel.azure.
 - hosting_windows.vmware.
- 70 Roles to be used by other teams.

The screenshot shows the Automation Hub interface. On the left is a dark sidebar with navigation options: Automation Hub, Search, Collections, Execution Environments, Task Management, Signature Keys, Documentation, and User Access. The main content area is titled 'Collections' and features a search bar with 'vcc' entered. Below the search bar, there are five collection cards displayed in a grid. Each card includes a logo, a namespace, a provider, a title, and a statistics row (Modules, Roles, Plugins, Dependencies).

Namespace	Provider	Title	Modules	Roles	Plugins	Dependencies
azure	hosting	VCC Hosting Azure Ansible Collection	0	1	0	0
common	hosting	VCC Hosting Common Ansible Collection	0	4	0	0
common	hosting_windows	VCC Hosting Windows Ansible Collection	0	6	0	0
servicenow	hosting	VCC Hosting ServiceNow Ansible Collection	0	3	0	0
vmware	hosting	VCC Hosting VMware Ansible Collection	0	2	0	0

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.

```
- 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
```


Speed up development

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.

```
github > mhallin2 > Hosting-Ansible-Collections > playbooks > demo.yml
3  - name: My demo play
8  pre_tasks:
38 - name: demo task    All names should start with an uppercase letter.
39   ansible.builtin.debug:
40     var: my_var      Wrong indentation: expected 8 but found 10
41     Trailing spaces
42
```

PROBLEMS 3 OUTPUT DEBUG CONSOLE TERMINAL PORTS 1 COMMENTS Filter (e.g. text, **/*).

demo.yml mhallin2/Hosting-Ansible-Collections/playbooks 3

- ⊗ All names should start with an uppercase letter. ansible-lint(name[casing]) [Ln 38, Col 1]
- ⊗ Wrong indentation: expected 8 but found 10 ansible-lint(yaml[indentation]) [Ln 40, Col 1]
- ⊗ Trailing spaces ansible-lint(yaml[trailing-spaces]) [Ln 41, Col 1]

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.

Q/A?

V O L V O





Thank you



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