Ansible Network Resource Module

Quick reference

Installing Ansible Network Collections

Network Collections of note containing resource modules

Vendor	Network Platform	Collection	Galaxy	Automation Hub
Arista	EOS	arista.eos	red.ht/g_eos	red.ht/eos
Cisco	IOS / IOS-XE	cisco.ios	red.ht/g_ios	red.ht/ios
Cisco	NX-OS	cisco.nxos	red.ht/g_nxos	red.ht/nxos
Cisco	IOS-XR	cisco.iosxr	red.ht/g_iosxr	red.ht/iosxr
Cisco	ASA	cisco.asa	red.ht/g_asa	red.ht/asa
Juniper	Junos OS	junipernetworks.junos	red.ht/g_junos	red.ht/junos

Installing an Ansible Collection

```
ansible-galaxy collection install namespace.collection_name
ansible-galaxy collection install cisco.ios
ansible-galaxy collection install arista.eos
```

Collection Repositories

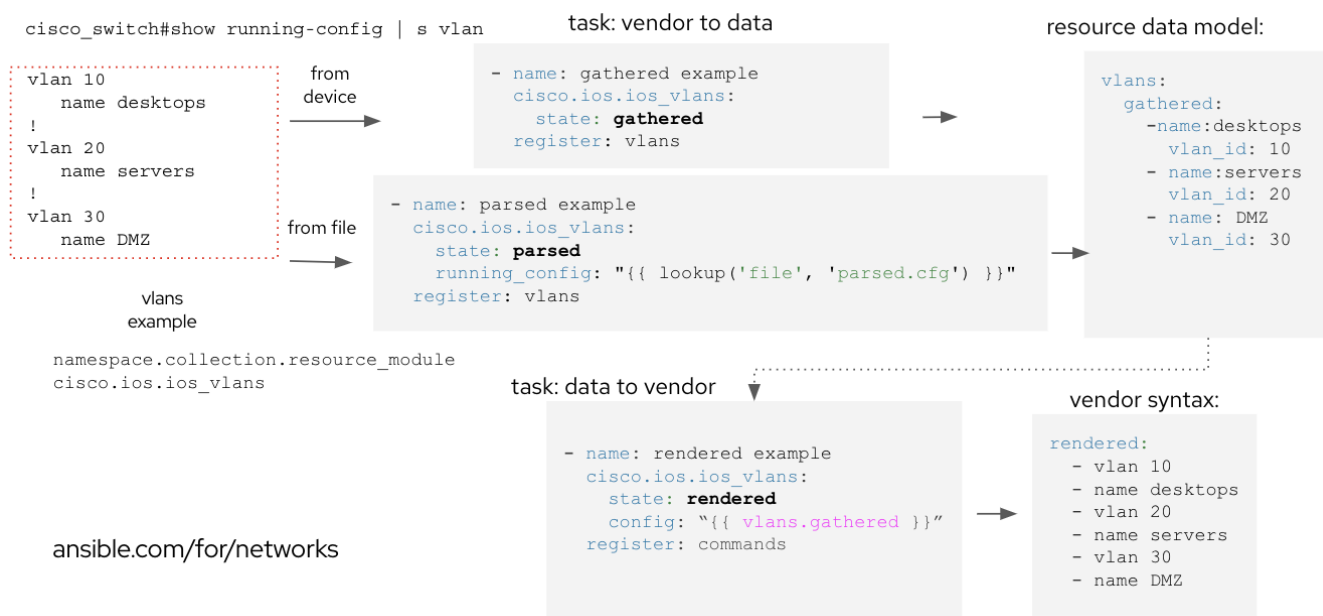| Name	Type	URL
Ansible Galaxy	Community / Upstream	galaxy.ansible.com/
Automation Hub	Supported / Downstream	cloud.redhat.com/ansible/automation-hub

Ansible Network Resource Module Parameters

States

State	Modifies Device	Description
merged	yes	Ensures specified data model exists on remote network device.
replaced	yes	Ensures only specified data model exists on network device. Removes parameters that are not specified.

overridden	yes	Ensures only specified data model exists on network device, remove extraneous resources.
deleted	yes	Delete all specified resources.
gathered	no	Retrieves resource and transforms into structured data model. Same data collected as fact gathering.
rendered	no	Transforms specified resource data model to platform specific commands (e.g. Cisco IOS commands)
parsed	no	Transforms specified configuration data (off-box) and transforms into resource data model.

Return Values

Key	Returned	Description
after	when changed	The configuration as structured data after module completion
before	always	The configuration as structured data prior to module invocation
commands	always	The set of commands pushed to the remote device (vendor syntax)

Ansible Network Resource Module Cheatsheet

```
cisco_switch#show running-config | s vlan
```
task: vendor to data

resource data model:

```
vlan 10
    name desktops
!
vlan 20
    name servers
!
vlan 30
    name DMZ
```
from device

from file

vlans example

```
- name: gathered example
  cisco.ios.ios_vlans:
    state: gathered
  register: vlans
```

```
- name: parsed example
  cisco.ios.ios_vlans:
    state: parsed
    running_config: "{{ lookup('file', 'parsed.cfg') }}"
  register: vlans
```

```
vlans:
  gathered:
    -name:desktops
     vlan_id: 10
    - name:servers
     vlan_id: 20
    - name: DMZ
     vlan_id: 30
```

```
namespace.collection.resource_module
cisco.ios.ios_vlans
```

task: data to vendor

vendor syntax:

ansible.com/for/networks

```
- name: rendered example
  cisco.ios.ios_vlans:
    state: rendered
    config: "{{ vlans.gathered }}"
  register: commands
```

```
rendered:
  - vlan 10
  - name desktops
  - vlan 20
  - name servers
  - vlan 30
  - name DMZ
```

Red Hat

Ansible Network Resource Module States

Network Practical Example

Current Running Config:

```
vlan 10
    name desktops
!
vlan 30
    name DMZ
    state suspend
!
vlan 40
    name durham
```

User-provided values:
(**not** gathered)

```
vlans:
  - name: desktops
    vlan_id: 10
  - name: servers
    vlan_id: 20
  - name: DMZ
    vlan_id: 30
```

YAML format

Example Merged

```
- name: merged example
  cisco.ios.ios_vlans:
    state: merged
    config: "{{ vlans }}"
```

Adds vlan 20

```
vlan 10
    name desktops
!
vlan 20
    name servers
!
vlan 30
    name DMZ
    state suspend
!
vlan 40
    name durham
```

Configuration After

Example Replaced

```
- name: replaced example
  cisco.ios.ios_vlans:
    state: replaced
    config: "{{ vlans }}"
```

Adds vlan 20 and removes state suspend from vlan 30

```
vlan 10
    name desktops
!
vlan 20
    name servers
!
vlan 30
    name DMZ
!
vlan 40
    name durham
```

Configuration After

Example Overridden

```
- name: overridden example
  cisco.ios.ios_vlans:
    state: overridden
    config: "{{ vlans }}"
```

Adds vlan 20 and removes vlan 40

```
vlan 10
    name desktops
!
vlan 20
    name servers
!
vlan 30
    name DMZ
```

Configuration After

Example Deleted

```
- name: rendered example
  cisco.ios.ios_vlans:
    state: deleted
    config: "{{ vlans }}"
```

Removes vlan 10, 20 and 30

```
vlan 40
    name durham
```

Configuration After