This section discusses the behavioral changes between Ansible 2.3 and Ansible 2.4.

Ansible 2.4 will not support Python 2.4 or 2.5 on the target host Python 2.6+ will be required on targets

[**Persistent Connection**](http://docs.ansible.com/ansible/latest/porting_guide_2.4.html#id17)

The configuration variables connection\_retries and connect\_interval which were added in Ansible 2.3 are now deprecated. For Ansible 2.4 and later use connection\_retry\_timeout. To control timeouts use command\_timeout rather than the previous top level timeout variable under [default]

[**Plugins**](http://docs.ansible.com/ansible/latest/porting_guide_2.4.html#id12)

A new way to configure and document plugins has been introduced. This does not require changes to existing setups but developers should start adapting to the new infrastructure now.

[**Vars plugin changes**](http://docs.ansible.com/ansible/latest/porting_guide_2.4.html#id13)

There have been many changes to the implementation of vars plugins, but both users and developers should not need to change anything to keep current setups working. Developers should consider changing their plugins take advantage of new features.

The most notable difference to users is that vars plugins now get invoked on demand instead of at inventory build time. This should make them more efficient for large inventories, especially when using a subset of the hosts.

[**Configuration**](http://docs.ansible.com/ansible/latest/porting_guide_2.4.html#id18)

The configuration system has had some major changes. Users should be unaffected except for the following:

* All relative paths defined are relative to the *ansible.cfg* file itself. Previously they varied by setting. The new behavior should be more predictable.
* A new macro {{CWD}} is available for paths, which will make paths relative to the ‘current working directory’, this is unsafe but some users really want to rely on this behaviour.

Developers that were working directly with the previous API should revisit their usage as some methods (for example, get\_config) were kept for backwards compatibility but will warn users that the function has been deprecated.

**Ansible 2.4, the most notable additions include the following:**

**Resource modules:**

2.4 release, Ansible modules will begin providing modules with a focus on building device configurations declaratively. Unlike modules that define a sequence of steps to achieve an end state,resource modules allow playbook designers to define the desired end configuration state

**Aggregate resources:**

The declarative modules developed for Ansible 2.4 support this inherently. Assuming there is a finite set of VRFsthat should be present on a given network element, the declarative modules can be used to declare this intent.

**Declarative intent**

focusing on adding intent or behavior driven arguments to network modules for validating device ephemeral state. The updated module now allows network operations teams to define both configuration state and intended state. It will now first validate the active configuration and make appropriate changes to the network element as necessary to achieve the desired configuration state.

These are the windows modules newly present in 2.4

1. **win\_defrag** - Consolidate fragmented files on local volumes.

2. **win\_domain\_group** - creates, modifies or removes domain groups

3. **win\_domain\_user** - Manages Windows Active Directory user accounts

4**. win\_dsc** - Invokes a PowerShell DSC configuration

5. **win\_eventlog** - Manage Windows event logs

6. **win\_eventlog\_entry** - Write entries to Windows event logs

7**. win\_firewall** - Enable or disable the Windows Firewall

8. **win\_group\_membership** - Manage Windows local group membership

9. **win\_hotfix** - install and uninstalls Windows hotfixes

10. **win\_mapped\_drive** - maps a network drive for a user

11. **win\_pagefile** - Query or change pagefile configuration

12. **win\_psmodule** - Adds or removes a Powershell Module.

13. **win\_rabbitmq\_plugin** - Manage RabbitMQ plugins

14. **win\_route** - Add or remove a static route.

15. **win\_security\_policy** - changes local security policy settings

16. **win\_toast** - Sends Toast windows notification to logged in users on Windows 10 or later hosts

17. **win\_user\_right** - Manage Windows User Rights

18. **win\_wait\_for** - Waits for a condition before continuing

19. **win\_wakeonlan** - Send a magic Wake-on-LAN (WoL) broadcast packet

**Linux Modules**

**telnet** - Executes a low-down and dirty telnet command

**syslogger** - Log messages in the syslog

**Network Modules**

**aci\_aep** - Manage attachable Access Entity Profile (AEP) on Cisco ACI fabrics (infra:AttEntityP)

**aci\_ap** - Manage top level Application Profile (AP) objects on Cisco ACI fabrics (fv:Ap)

**aci\_bd** - Manage Bridge Domains (BD) on Cisco ACI Fabrics (fv:BD)

**aci\_bd\_subnet** - Manage Subnets on Cisco ACI fabrics (fv:Subnet)

**aci\_bd\_to\_l3out** - Bind Bridge Domain to L3 Out on Cisco ACI fabrics (fv:RsBDToOut)

**aci\_config\_rollback** - Provides rollback and rollback preview functionality for Cisco ACI fabrics (config:ImportP)

**aci\_config\_snapshot** - Manage Config Snapshots on Cisco ACI fabrics (config:Snapshot, config:ExportP)

**aci\_contract** - Manage contract resources on Cisco ACI fabrics (vz:BrCP)

**aci\_contract\_subject** - Manage initial Contract Subjects on Cisco ACI fabrics (vz:Subj)

**aci\_contract\_subject\_to\_filter** - Bind Contract Subjects to Filters on Cisco ACI fabrics (vz:RsSubjFiltAtt)

**aci\_epg** - Manage End Point Groups (EPG) on Cisco ACI fabrics (fv:AEPg)

**aci\_epg\_monitoring\_policy** - Manage monitoring policies on Cisco ACI fabrics (mon:EPGPol)

**aci\_epg\_to\_contract** - Bind EPGs to Contracts on Cisco ACI fabrics (fv:RsCons and fv:RsProv)

**aci\_epg\_to\_domain** - Bind EPGs to Domains on Cisco ACI fabrics (fv:RsDomAtt)

**aci\_filter** - Manages top level filter objects on Cisco ACI fabrics (vz:Filter)

**aci\_filter\_entry** - Manage filter entries on Cisco ACI fabrics (vz:Entry)

**aci\_intf\_policy\_fc** - Manage Fibre Channel inaci\_tenant\_span\_dst\_group - Manage SPAN destination groups on Cisco ACI fabrics (span:DestGrp)terface policies on Cisco ACI fabrics (fc:IfPol)

**aci\_intf\_policy\_l2** - Manage Layer 2 interface policies on Cisco ACI fabrics (l2:IfPol)

**aci\_intf\_policy\_lldp** - Manage LLDP interface policies on Cisco ACI fabrics (lldp:IfPol)

**aci\_intf\_policy\_mcp** - Manage MCP interface policies on Cisco ACI fabrics (mcp:IfPol)

**aci\_intf\_policy\_port\_channel** - Manage port channel interface policies on Cisco ACI fabrics (lacp:LagPol)

**aci\_intf\_policy\_port\_security** - Manage port security on Cisco ACI fabrics (l2:PortSecurityPol)

**aci\_l3out\_route\_tag\_policy** - Manage route tag policies on Cisco ACI fabrics (l3ext:RouteTagPol)

**aci\_rest** - Direct access to the Cisco APIC REST API

**aci\_taboo\_contract** - Manage taboo contracts on Cisco ACI fabrics (vz:BrCP)

**aci\_tenant** - Manage tenants on Cisco ACI fabrics (fv:Tenant)

**aci\_tenant\_action\_rule\_profile** - Manage action rule profiles on Cisco ACI fabrics (rtctrl:AttrP)

**aci\_tenant\_ep\_retention\_policy** - Manage End Point (EP) retention protocol policies on Cisco ACI fabrics (fv:EpRetPol)

**aci\_tenant\_span\_src\_group** - Manage SPAN source groups on Cisco ACI fabrics (span:SrcGrp)

**aci\_tenant\_span\_src\_group\_to\_dst\_group** - Manage SPAN source group to destination group bindings on Cisco ACI fabrics (span:SpanLbl)

**aci\_vrf** - Manage VRF (private networks aka. contexts) on Cisco ACI fabrics (fv:Ctx)

**vyos\_user** - Manage the collection of local users on VyOS device

**vyos\_static\_route** - Manage static IP routes on Cisco VyOS network devices

**vyos\_logging** - Manage logging on network devices

**vyos\_lldp\_interface** - Manage LLDP interfaces configuration on VyOS network devices

**vyos\_lldp** - Manage LLDP configuration on VyOS network devices

**vyos\_linkagg** - Manage link aggregation groups on VyOS network devices

**vyos\_l3\_interface** - Manage L3 interfaces on VyOS network devices

**vyos\_interface** - Manage Interface on VyOS network devices

**vyos\_banner** - Manage multiline banners on VyOS devices

**vmware\_guest\_tools\_wait** - Wait for VMware tools to become available

**vmware\_guest\_find** - Find the folder path(s) for a VM by name or UUID

**vdirect\_file** - Uploads a new or updates an existing runnable file into Radware vDirect server

**vcenter\_license** - Manage VMware vCenter license keys

**sensu\_silence** - Manage Sensu silence entries

**rundeck\_acl\_policy** - Manage Rundeck ACL policies.

**rundeck\_project** - Manage Rundeck projects.

**sensu\_client** - Manages Sensu client configuration

**sensu\_handler** - Manages Sensu handler configuration

**redshift\_facts** - Gather facts about Redshift cluster(s)

**purefa\_volume** - Manage volumes on Pure Storage FlashArrays

**purefa\_snap** - Manage volume snapshots on Pure Storage FlashArrays

**purefa\_pg** - Manage protection groups on Pure Storage FlashArrays

**purefa\_host** - Manage hosts on Pure Storage FlashArrays

**purefa\_hg** - Manage hostgroups on Pure Storage FlashArrays

**panos\_security\_rule** - Create security rule policy on PAN-OS devices or Panorama management console.

**panos\_sag** - Create a static address group.

**panos\_object** - create/read/update/delete object in PAN-OS or Panorama

**panos\_nat\_rule** - create a policy NAT rule

**ovirt\_storage\_vms\_facts** - Retrieve facts about one or more oVirt/RHV virtual machines relate to a storage domain.

**ovirt\_storage\_templates\_facts** - Retrieve facts about one or more oVirt/RHV templates relate to a storage domain.

**ovirt\_storage\_connections** - Module to manage storage connections in oVirt

**ovirt\_scheduling\_policies\_facts** - Retrieve facts about one or more oVirt scheduling policies

**ovirt\_host\_storage\_facts** - Retrieve facts about one or more oVirt/RHV HostStorages (applicable only for block storage)

**openssl\_csr** - Generate OpenSSL Certificate Signing Request (CSR)

**openssl\_certificate** - Generate and/or check OpenSSL certificates

**oneview\_san\_manager** - Manage OneView SAN Manager resources

**oneview\_network\_set\_facts** - Retrieve facts about the OneView Network Sets

**oneview\_network\_set** - Manage HPE OneView Network Set resources

**oneview\_fcoe\_network\_facts** - Retrieve the facts about one or more of the OneView FCoE Networks

**oneview\_fcoe\_network** - Manage OneView FCoE Network resources

**oneview\_fc\_network\_facts** - Retrieve the facts about one or more of the OneView Fibre Channel Networks

**oneview\_fc\_network** - Manage OneView Fibre Channel Network resources.

**oneview\_ethernet\_network\_facts** - Retrieve the facts about one or more of the OneView Ethernet Networks

**oneview\_ethernet\_network** - Manage OneView Ethernet Network resources

**office\_365\_connector\_card** - Use webhooks to create Connector Card messages within an Office 365 group

**oc** - Manage OpenShift Resources

**aix\_lvol** - Configure AIX LVM logical volumes

**aruba\_command** - Run commands on remote devices running Aruba Mobility Controller

**aruba\_config** - Manage Aruba configuration sections