

# **Ansible Package Management – Dev Environment**

This project demonstrates the use of Ansible ad-hoc commands to manage system packages across multiple Linux servers in a development environment. Using a centralized control node, package updates are executed remotely with privilege escalation to ensure consistency and compliance across hosts.

The workflow leverages Ansible's yum module (backed by dnf on modern RHEL-based systems) to verify and apply the latest available updates. Each managed host reports its package state, confirming whether changes were required or if systems were already fully up to date.

This project highlights practical skills in:

Remote configuration management with Ansible

Managing multiple hosts via inventory groups

Using privilege escalation securely

Validating idempotent operations (“nothing to do” when systems are current)

Interpreting Ansible output and warnings without impacting execution

Overall, this repository showcases a real-world automation task focused on system maintenance, reliability, and consistency, aligning with best practices used in enterprise Linux and DevOps environments.

An Ansible ad-hoc command was executed to update all packages (name=\*, state=latest) on the dev-eg3 inventory group using the yum module with privilege escalation. Both target hosts responded successfully using dnf, and no changes were required because all packages were already up to date. A warning indicates that invalid characters exist in a group name, but it did not affect execution.

```
[egarrido@dev-ansible ~]$ ansible dev-eg3 -m yum -a "name='*' state=latest" -b -K
BECOME password:
[WARNING]: Invalid characters were found in group names but not replaced, use -vvvv to see details
dev-app-eg3.procure.prod1 | SUCCESS => {
    "ansible_facts": {
        "pkg_mgr": "dnf"
    },
    "changed": false,
    "msg": "Nothing to do",
    "rc": 0,
    "results": []
}
dev-performance-eg3.procure.prod1 | SUCCESS => {
    "ansible_facts": {
        "pkg_mgr": "dnf"
    },
    "changed": false,
    "msg": "Nothing to do",
    "rc": 0,
    "results": []
}
[egarrido@dev-ansible ~]$
```

## Summary

An Ansible ad-hoc command was used to check and apply system package updates across multiple development hosts. The command executed successfully with privilege escalation, confirmed the use of dnf for package management, and verified that all systems were already fully up to date. No changes were required, demonstrating idempotent behavior and consistent package state across the environment.