



Automate On-Premise and Cloud Infrastructure

— The



Way

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Safe Harbor

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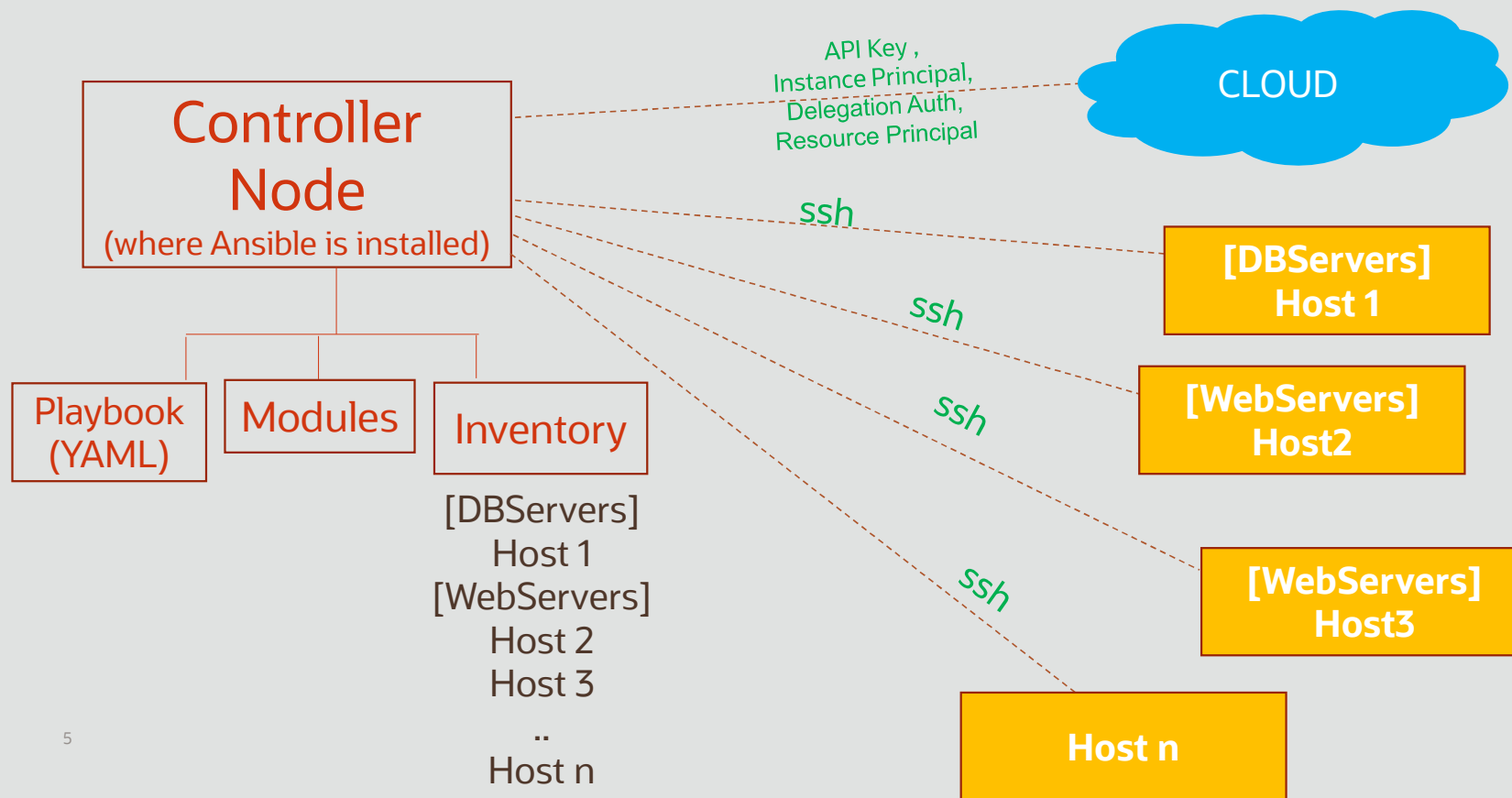
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What is Ansible ?

Ansible is an open source IT automation tool that automates provisioning, configuration management, application deployment, orchestration, and many other manual IT processes (source : [redhat.com](https://www.redhat.com))

*Agentless
Push-Type configuration tool*

Ansible Architecture



Ansible– Building Blocks

- **Control Node** : Any machine with Ansible installed. Ansible commands and playbooks can be executed by invoking the `ansible` or `ansible-playbook` command from any control node. Requires Python . Windows machines cannot be control node
- **Managed nodes** : The network devices (and/or servers) managed with Ansible. Managed nodes are also sometimes called "hosts". Ansible is not required to be installed on managed nodes.
- **Inventory**: A list of managed nodes. An inventory file is also sometimes called a "hostfile". Inventory can specify information like IP address for each managed node. An inventory can also organize managed nodes, creating and nesting groups for easier scaling.
- **Modules** : The units of code Ansible executes. Each module has a particular use, from creating a services to manage VLAN interface. Either a single module can be invoked with a task or invoke several different modules in a playbook.
- **Tasks**:The units of action in Ansible. You can execute a single task once with an ad hoc command
- **Playbooks**: Ordered lists of tasks, saved so you can run those tasks in that order repeatedly. Playbooks can include variables as well as tasks.
- **Collections**:are a distribution format for Ansible content that can include playbooks, roles, modules, and plugins.

DEMO and USE CASES

Demo Setup

2 Oracle Linux 8.5 servers (1 Controller and 1 managed node)

Software requirements

Python

Ansible

OCI Ansible Collection

Oracle cloud free tier account

<https://www.oracle.com/cloud/free/>

Best Practices

Write less , do more

-- Use Ansible Roles

Ansible roles allow you to develop reusable automation components by grouping and encapsulating related automation artifacts, like configuration files, templates, tasks, and handlers.

-- Use variables

Use the “name” attribute for Tasks and Plays

-- this provides clarity for each task in the play

Security and Compliance

-- Controller node needs to be secured with privileged access

-- Sensitive data should not go in playbooks or execution output

