Introduction of Ansible

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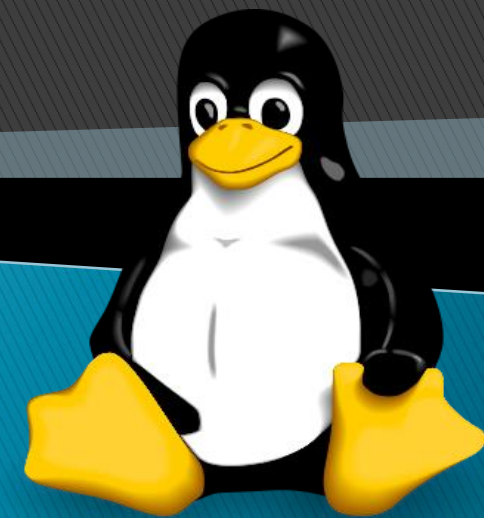

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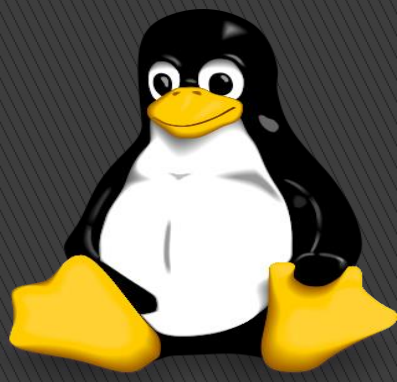
Automation & Linux Administration

- From many years, most system administration and infrastructure management has relied on manual tasks, System administrators often work from checklists, other documentation, or a memorized routine to perform standard tasks.

- This approach is error-prone. It is not easy for a system administrator to perform that steps every time.

- Ansible comes out as the favorite due to its ease Automation can help avoid the problems caused by manual system administration and infrastructure management. As a system administrator, you can use automation to ensure that all your systems are quickly and correctly deployed and configured.

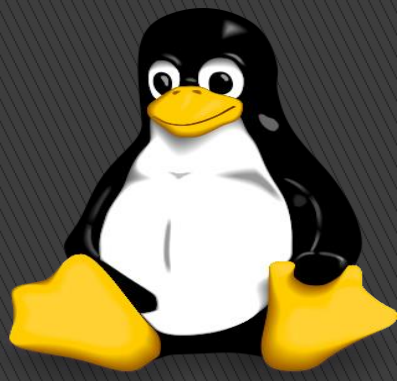


What is Ansible?

- Ansible is a free and open source automation tool that allows system administrators to configure and control hundreds of nodes from a central server without the need of installing any agents on the nodes.

- It relies on the SSH protocol to communicate with the remote nodes. Compared to other management tools such as Puppet and Chef, Ansible comes out as the favorite due to its ease of use, and installation.

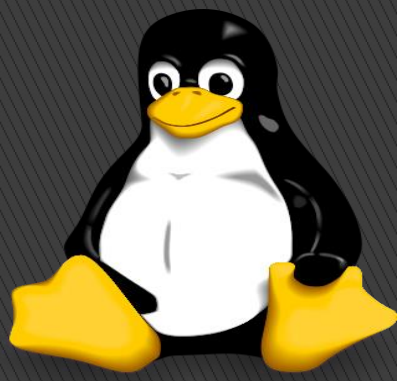
- If you take other configuration management tools like puppet, chef, and CFEngine, server software is installed on one machine, and client machines are managed through the agent.
- Wherein Ansible, the nodes are managed by controlling machine (Ansible server) over SSH, so there won't be any agent running on node machines.



Importance of ansible

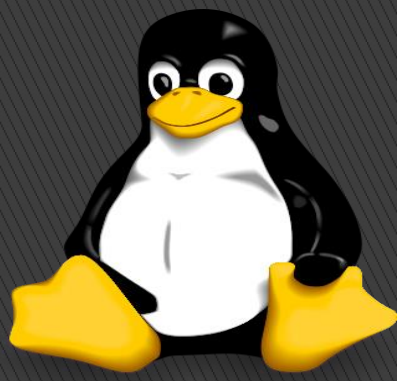
- Ansible is a software tool that provides simple but powerful automation for cross-platform computer support. It is primarily intended for IT professionals, who use it for application deployment, updates on workstations and servers, cloud provisioning, configuration management, intra-service orchestration, and nearly anything a systems administrator does on a weekly or daily basis.

- While Ansible may be at the forefront of automation, systems administration, and DevOps, it's also useful to everyday users. Ansible allows you to configure not just one computer, but potentially a whole network of computers at once, and using it requires no programming skills. Instructions written for Ansible are human-readable.



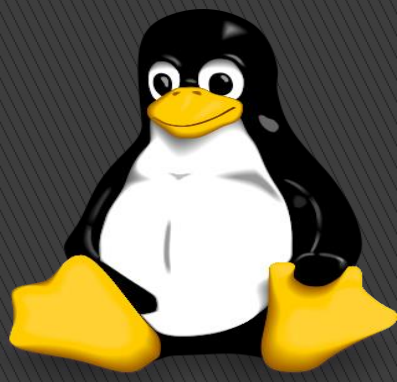
History of Ansible

- In February 2012 the Ansible project began. It was first developed by Michael DeHaan, the creator of Cobbler and Func, Fedora Unified Network Controller.
- Initially called AnsibleWorks Inc, the company funding the ansible tool was acquired in 2015 by RedHat
- In the present, Ansible comes included in distributions like Fedora Linux, RHEL, Centos and Oracle Linux.

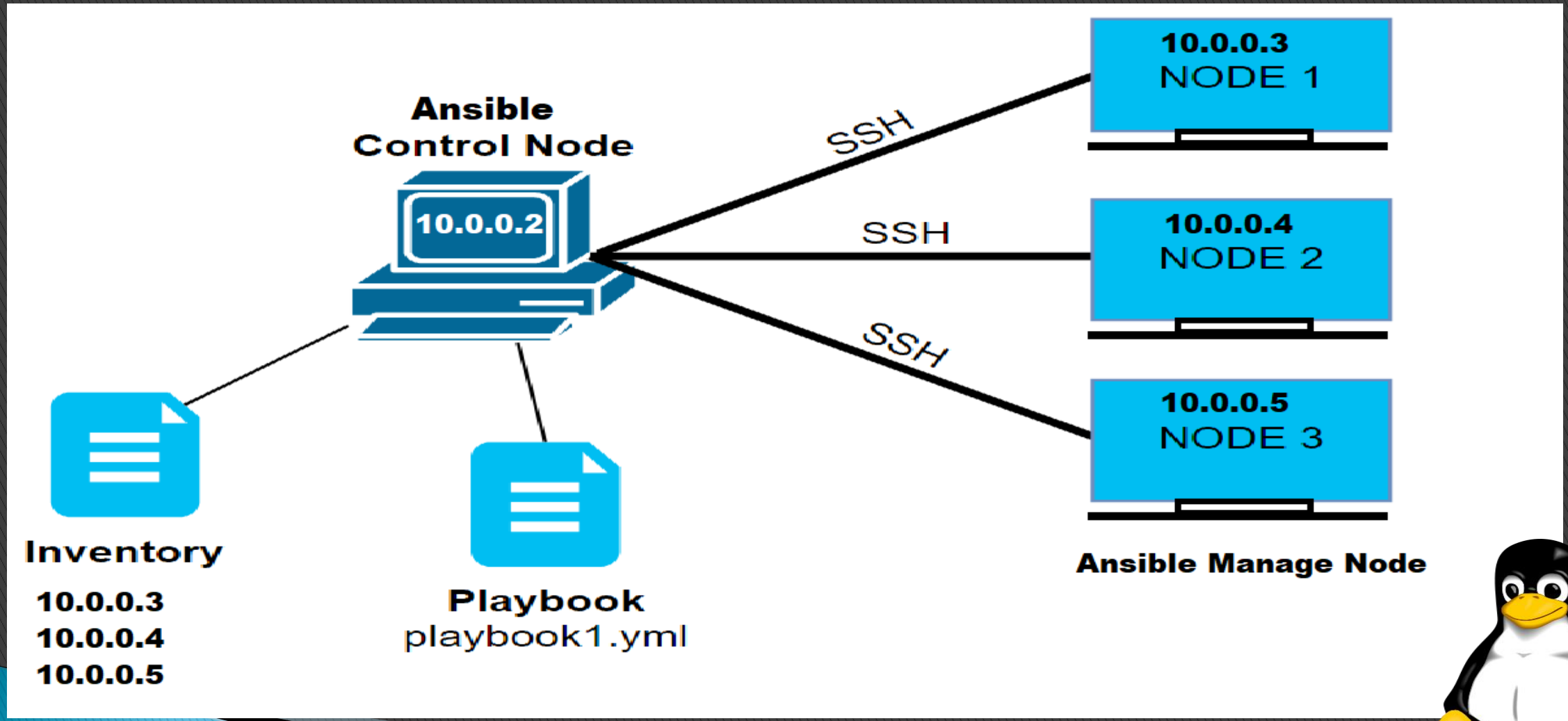


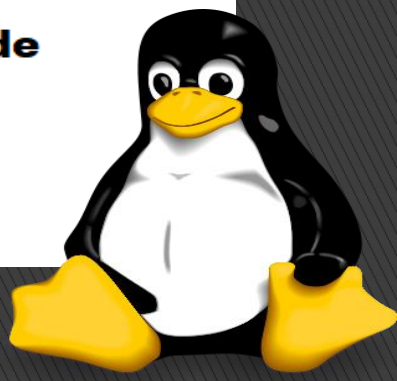
Advantages of Ansible

- Ansible is free to use everyone
- Ansible is Simple
- Ansible is Powerful
- Ansible is Agentless
- Ansible is work on Cross platform Support
- Ansible is Human Readable Automation
- Ansible Think Declaratively
- Ansible is allow Break Complexity
- Ansible is Very Secure
- Ansible is consistent and lightweight



Ansible Architecture





Terms use in Ansible

Ansible Server: (control Node)

- The machine where ansible is installed and from which all tasks and playbook will be ran.

Module:

- Basically, a module is command or set of similar commands meant to be executing on the client-side.

Task:

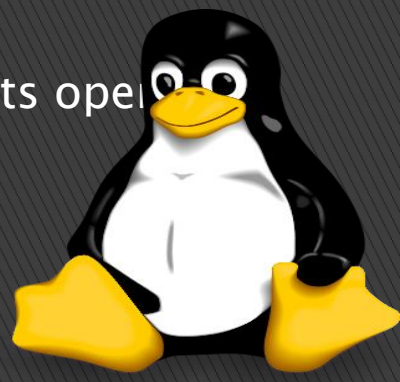
- A task is a section that consists of a single procedure to be completed.

Role:

- A way of organizing task related file to be later called in a playbook.

Fact:

- Information fetched from the client system from the global variables with the gather-facts oper



Terms use in Ansible

Inventory:
- File containing data about the ansible client servers.

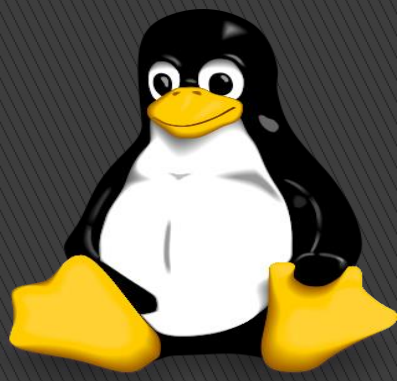
Play:
- Execution of a playbook

Handler:
- Task which is called on of a notifier is present.

Notifier:
- Section attributed to tasks calls a handler if the output is changed.

Playbooks:
- It consist code in YAML format, which describe tasks to be executed.

Hosts: (Managed Nodes)
- Nodes, which are automated by ansible server.



Red Hat Ansible Automation Platform