



What is Ansible?



Content

- What is Ansible?
- Why would you use Ansible?
- Architecture & components
- Design ideas
- Host access
- Installing Ansible



What is Ansible

- Direct from the horses mouth
 - https://docs.ansible.com/ansible/latest/getting_started/introduction.html
- Automate almost any task in a platform agnositic way
 - Abstract away the need to know the underlying command
- Example

Red Hat based operating systems	Debian based operating systems	Ansible
yum or dnf	apt or apt-get	package
rpm	dpkg	

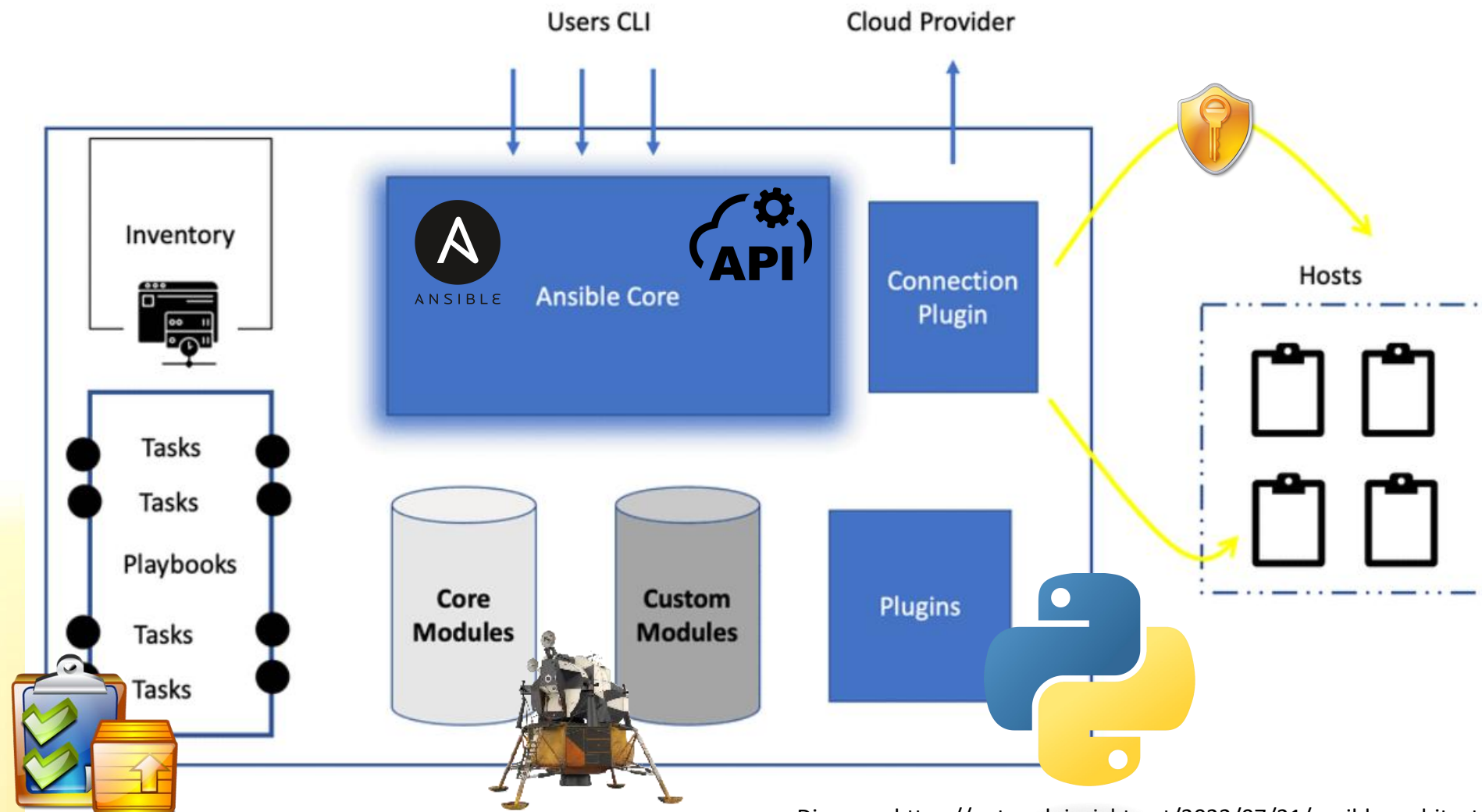


Why use Ansible

- Eliminate repetition
- Rollout changes to your infrastructure
- Manage and maintain system configuration and updates
- DevOps tooling
 - Continuous deployment (DevOps)
 - Manage environments (Dev/QA/Prod) or sites
 - Idempotent/Immutable
- SRE features
 - Scalable and flexible
 - Simplicity
- Manage your infrastructure and hosts like a developer



Ansible infrastructure



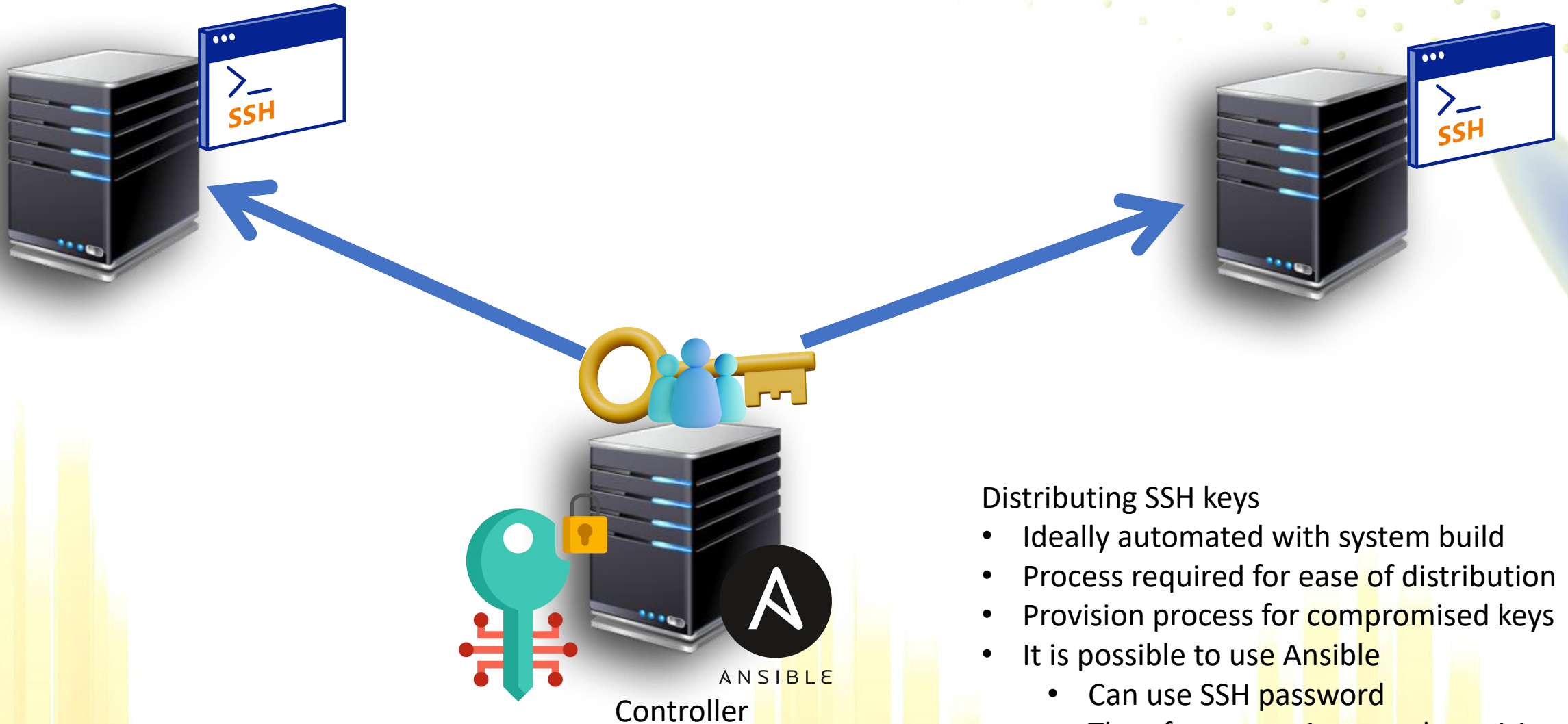


SSH Keys and Passwords

- Ansible requires SSH to work
- Your choice on SSH keys or passwords
 - Default is SSH keys
- A user with **sudo** access is required by Ansible
 - No password for sudo
- Keys must be distributed to all managed nodes
 - No password on the private key
 - If you use a password the key must be loaded into the ssh-agent
- Ideally part of your Kickstart process



Distributing Keys

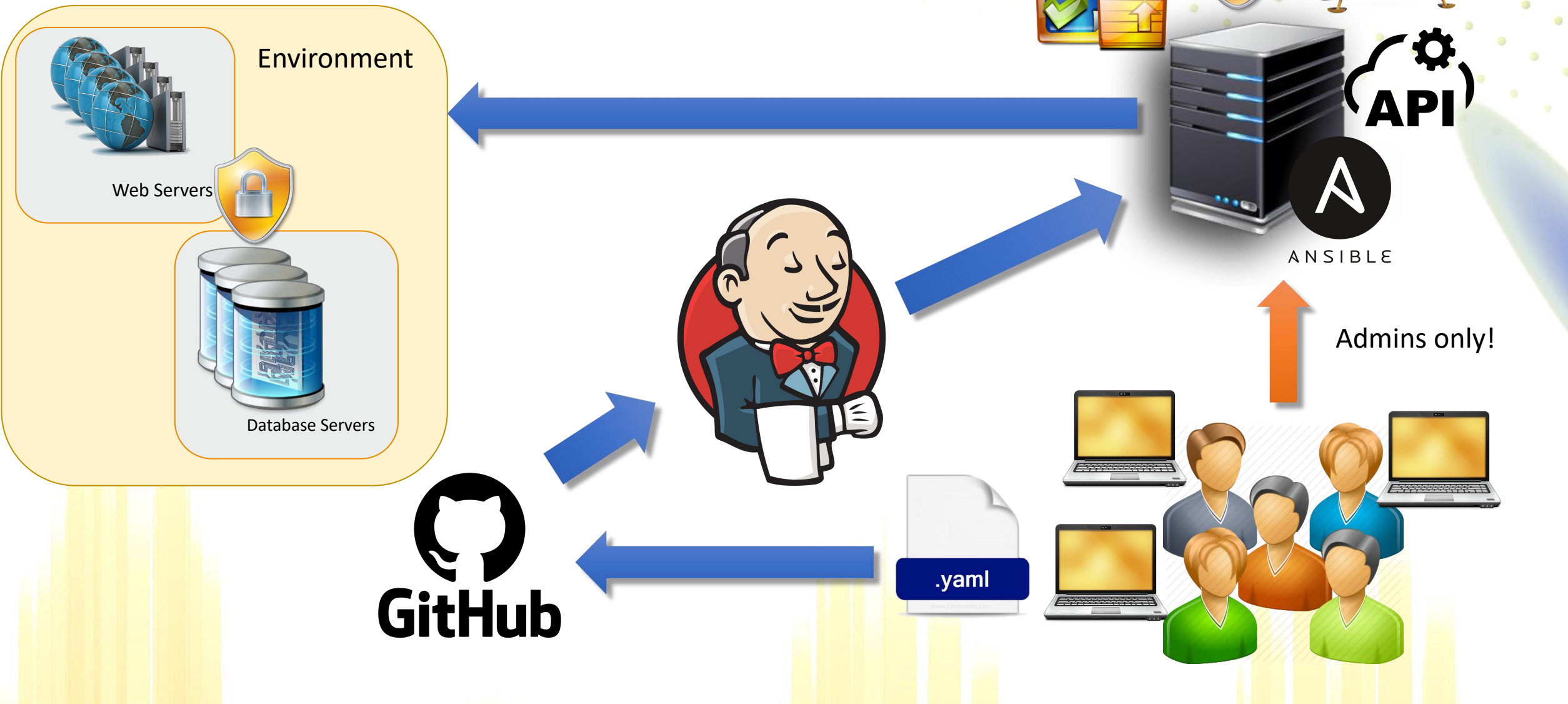


Distributing SSH keys

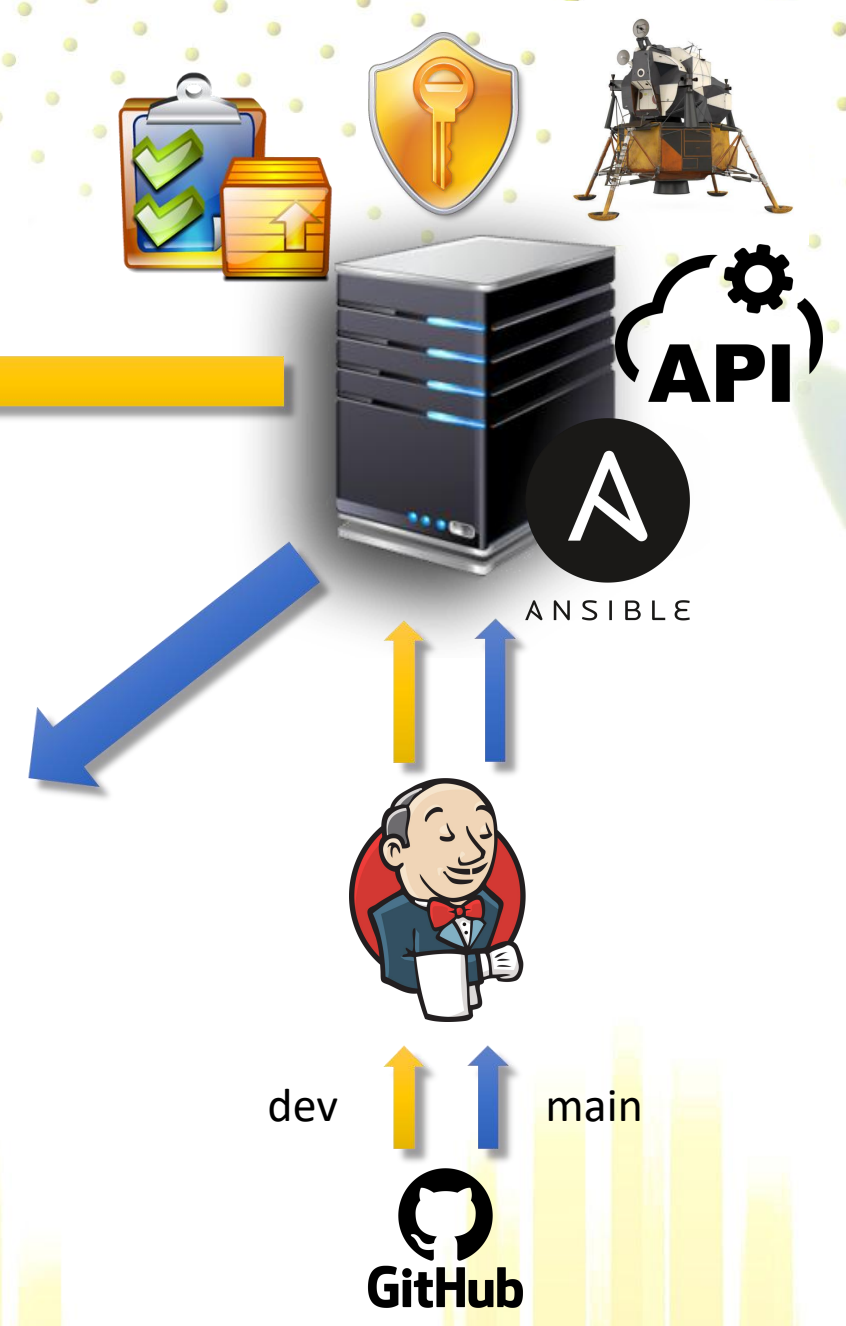
- Ideally automated with system build
- Process required for ease of distribution
- Provision process for compromised keys
- It is possible to use Ansible
 - Can use SSH password
 - Then future use is normal provision



Design ideas

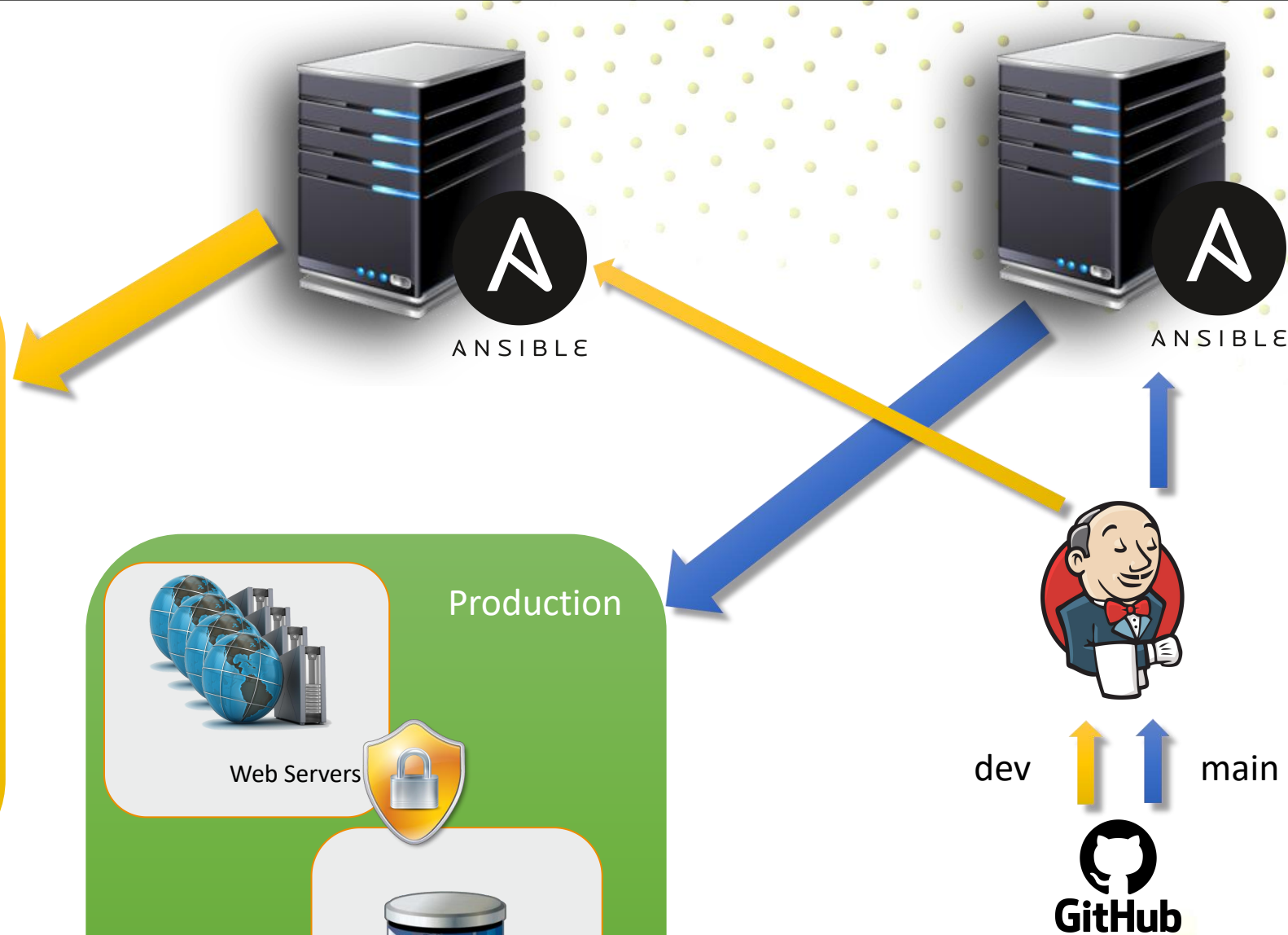


Design ideas





Design ideas





Host access

- Ansible is agentless
 - Unlike Puppet and Chef that require extra set up
- Ansible uses SSH or local connection by default
 - There is a **telnet** module (more later)
- Passwords or SSH keys can be used
 - You will need to deploy SSH keys yourself
 - Initial set up should be through your images or kickstart if on-premise
 - Cloud based should use your VM assigned SSH key for Ansible
- Ansible requires **root** access for most tasks



Installing Ansible

- Pre-requisites
 - A host that will be your Ansible controller running Linux
 - The will perform the orchestration of your node estate
 - Can use any Linux flavour
 - Ubuntu and RHEL based systems have Ansible package
 - Python
 - Ansible is written using Python
 - Ansible can be installed using **pip** on any Linux platform
 - SSH key or password for **ansible** user
 - Ansible user is not a specific user, you can use a username of your choice
 - The Ansible user must be able to SSH to the nodes to be configured
 - The Ansible user must be able to **sudo**
 - SSH Fingerprints
 - Either ssh on to all hosts from the controller first to store keys
 - Better still configure Ansible to ignore fingerprint



Questions

