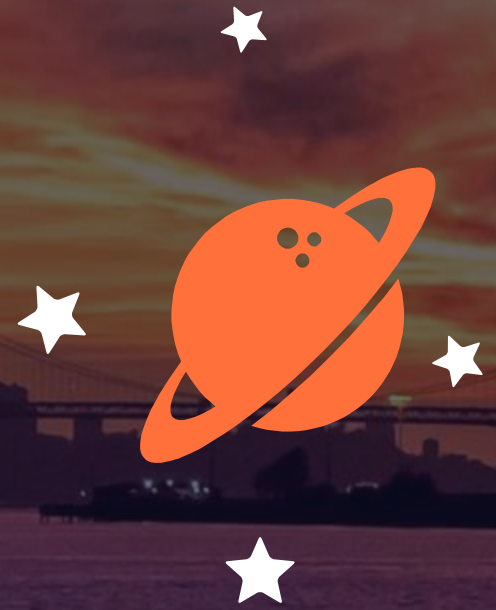
What are we going to see in this session?

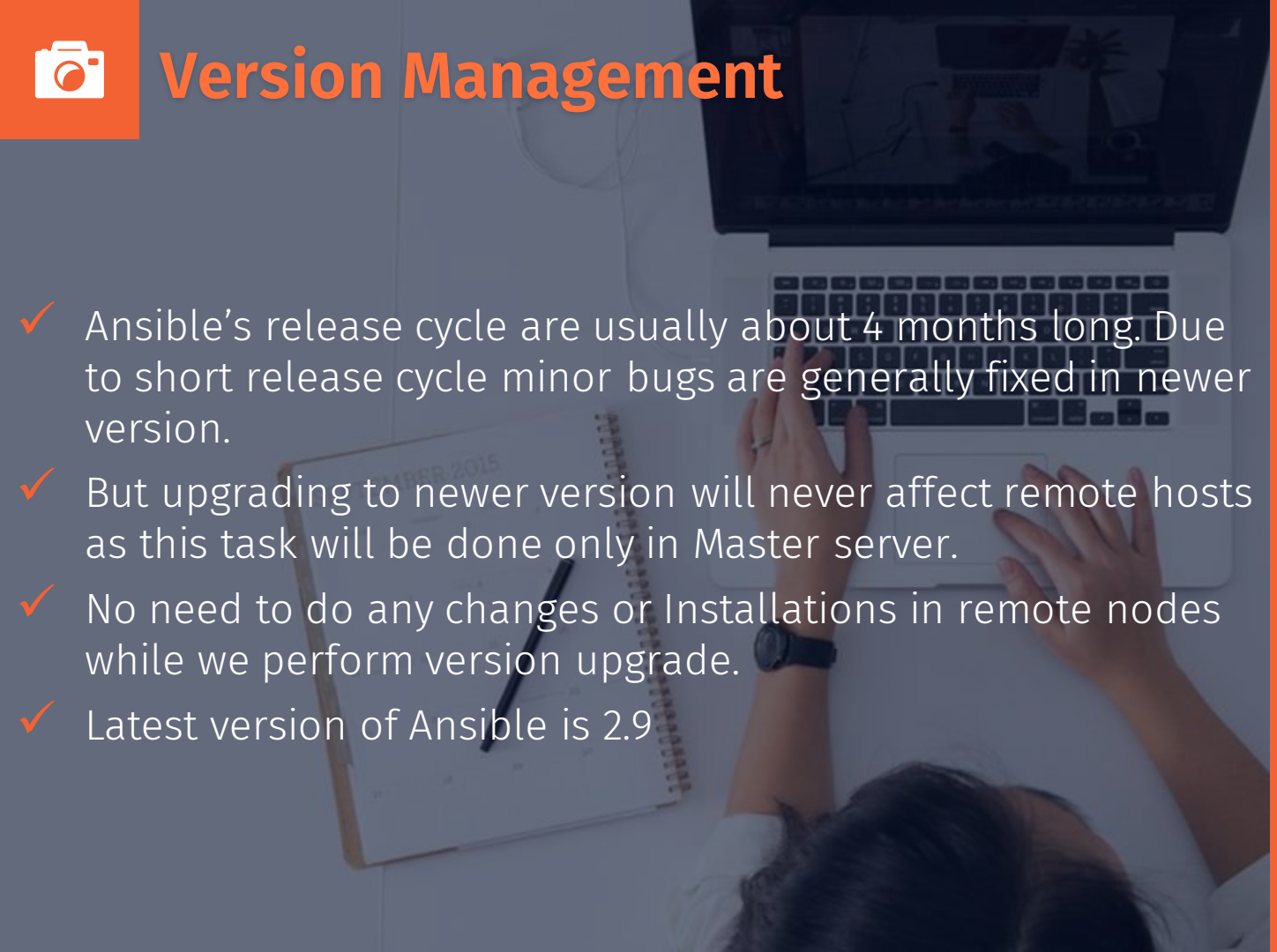
- Ansible Installation
  - What will be installed?
  - Version Management
  - Infrastructure Prerequisites
  - Prerequisites
  - Types of Installation
    - Through YUM
    - Through PIP
- Install SSH Pass
- Exploring Ansible Configuration file
- How, What and Where?



What will be Installed?

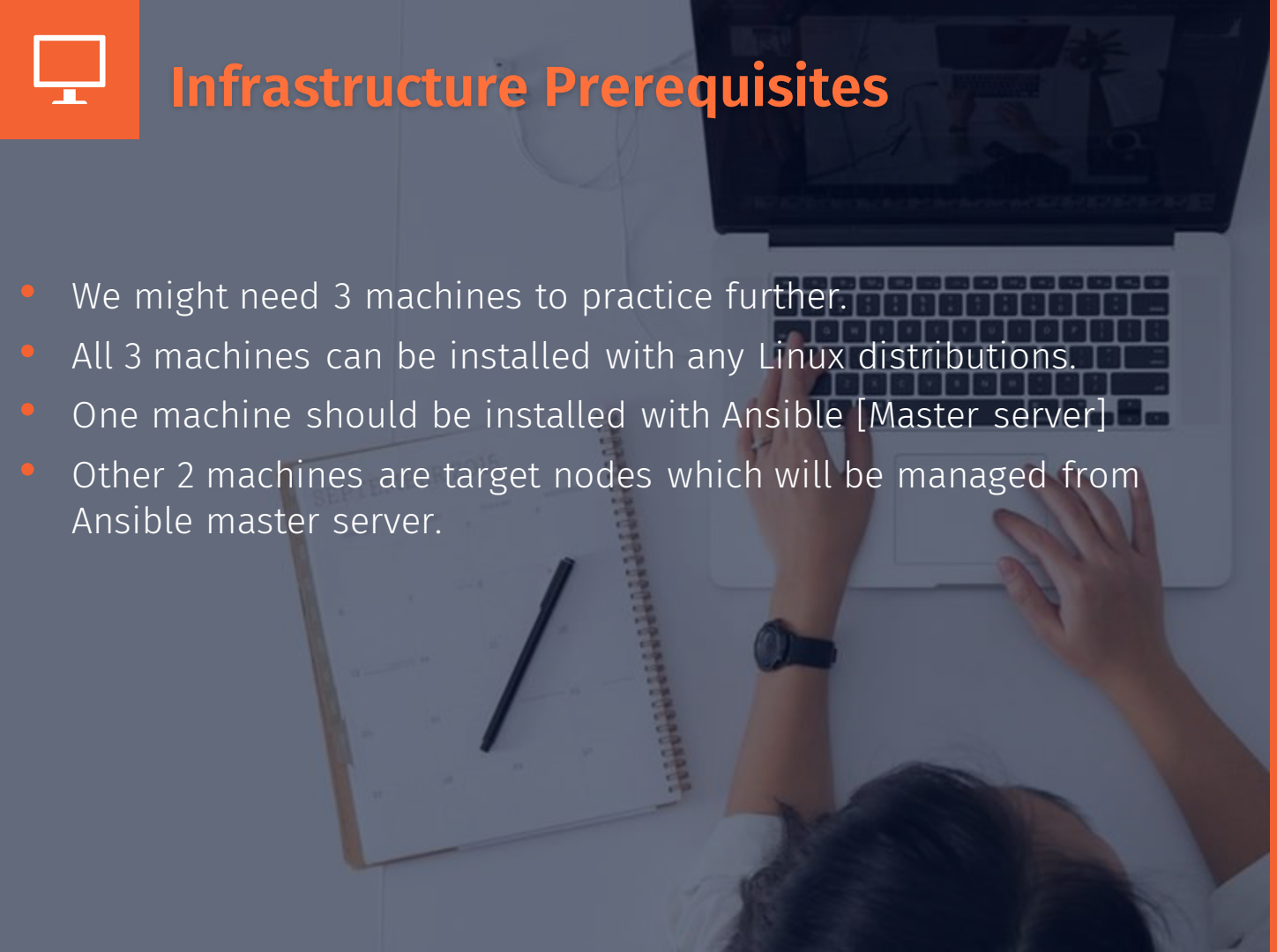
- ✓ Ansible by default manages machines over the SSH protocol.
- ✓ Once Ansible is installed, it will not add any database, and there will be no daemons to start or keep running.
- ✓ You only need to install it on one machine, and it can manage an entire other remote machines.
- ✓ It does not leave any software/agent installed or running on remote machines, so there's no real question about how to upgrade Ansible when moving to a new version.

Version Management



- ✓ Ansible's release cycle are usually about 4 months long. Due to short release cycle minor bugs are generally fixed in newer version.
- ✓ But upgrading to newer version will never affect remote hosts as this task will be done only in Master server.
- ✓ No need to do any changes or Installations in remote nodes while we perform version upgrade.
- ✓ Latest version of Ansible is 2.9

Infrastructure Prerequisites



- We might need 3 machines to practice further.
- All 3 machines can be installed with any Linux distributions.
- One machine should be installed with Ansible [Master server]
- Other 2 machines are target nodes which will be managed from Ansible master server.

Prerequisites

Control Node prerequisites :

- Python 2 (version 2.7) or Python 3 (versions 3.5 and higher).
- SSHPASS
- Windows isn't supported for the control node.

Target Node prerequisites :

- Python 2 (version 2.7) or Python 3 (versions 3.5 and higher).
- SSH should be up and running.
- If that's not available, you can switch to SCP in [ansible.cfg],

Types of Installation

Installation can be done in 2 ways

- ✓ Through Package Manager [Yum]
- ✓ Through Python PIP installer

Through YUM

Installing Ansible through package manager such as YUM :

- If incase you machine is RHEL [7&8], You need to enable repos :

  subscription-manager repos --enable ansible-2.8-for-rhel-8-x86_64-rpms

  subscription-manager repos --enable rhel-7-server-ansible-2.8-rpms

- Centos :

  Setup “epel” repo to install Ansible

  yum install https://dl.fedoraproject.org/pub/epel/epel-release-latest-8.noarch.rpm

  yum install https://dl.fedoraproject.org/pub/epel/epel-release-latest-7.noarch.rpm

- Install using root :

  yum install ansible

- Install from non-root user :

  sudo yum install ansible

Ubuntu distribution

Installing Ansible through package manager such as APT :

- ✓ Install using root :

```
apt update
apt install software-properties-common
apt-add-repository --yes --update ppa:ansible/ansible
apt install ansible
```

- ✓ Install from non-root user :

```
sudo apt update
sudo apt install software-properties-common
sudo apt-add-repository --yes --update ppa:ansible/ansible
sudo apt install ansible
```

Install Ansible through Python PIP

Using PIP module you can install Ansible.

- ✓ First Install pip package [if it is not available]

  yum install python3-pip

- ✓ Then install the ansible package using PIP

  pip3 install ansible

Note : Both yum & pip is going to install ansible under root directories, You can see that using commands

ansible-config –version (or) ansible --version

What if you want to install ansible under customized directory ?

For this you need to use python virtual environment.

Install Ansible under virtual environment

What is Virtual Environment ?

- ✓ Virtualenv is used to manage Python packages for different projects.
- ✓ Virtualenv allows you to avoid installing Python packages globally which could brake system tools or other projects.

Configure Virtual Environment in your custom directory.

- ✓ Install virtual env using pip [if its is not there]

```
pip3 install virtualenv
virtualenv ansible
source ansible/bin/activate
pip3 install ansible
ansible –version (or) ansible-config --version
```

Install SSH Pass

- ✓ yum install -y https://dl.fedoraproject.org/pub/epel/epel-release-latest-7.noarch.rpm
- ✓ yum-configuration-manager --enable epel
- ✓ yum install sshpass

Use of SSHPASS is to enable non-interactive SSH connections

Exploring Ansible Configuration file

Creating/Managing Ansible configuration file :

- ✓ If installing ansible from a package manager, the latest ansible.cfg file should be present in /etc/ansible.
- ✓ If you installed ansible from pip or from source, you may want to create this file in order to override default settings in ansible an example file available in Github
- ✓ You can get all this details by using command

  ansible-config –version

Major things to notice in configuration file :

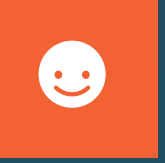
- ✓ Your default hosts directory if you install it through YUM :

  inventory = /etc/ansible/*
- ✓ It can be modified based on your requirement.

How, What & Where?

This image clearly shows how ansible works.

- ✓ ANSIBLE.CFG file is going to instruct ansible how to work.
- ✓ PLAYBOOK is to hold the instructions of what to do.
- ✓ INVENTORY has the information of where to do.



End of this topic !

Any questions?