ANSIBLE COMPATIBILITY TESTING

WHAT TO EXPECT

// ansible - a short story

// functional testing with molecule

// compatibility testing - what's that?

// compatibility testing for ansible

PRESS "S" FOR ADDITIONAL INFORMATION

The presentation is enriched with speaker notes that can be revealed right in your browser

ANSIBLE

a short story

automation happens when you meet a problem
you never want to solve again

Congrats!

you established a new tool

Dev

Sec

Ops

not all automation is created equal

THIS IS YOUR INFRASTRUCTURE CODE
IT´S ROTTEN TO THE CORE
imgflip.com

RULES OF THE GAME

write ansible roles

// destinct purpose

// configurable

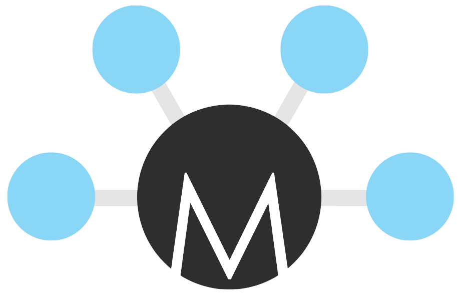
// test it

// reusable

// share it with the community

FUNCTIONAL TESTING

// check whether your code is working as expected



MOLECULE

Molecule encourages consistently developed roles that are

// well-written

// easily understood

// maintainable

Molecule supports testing with multiple

// instances

// operating systems and distributions

// virtualization providers

// test frameworks

// testing scenarios

simple tests with assertions in python

```
# Example role
- name: create /tmp/hello-world.txtcopy:
    dest: "/tmp/hello-world.txt"content: "hello world"tags:
  - example
  - example.hello-world
```

```
# Testsdeftest_file_exists(host):
    f = host.file('/tmp/hello-world.txt')
    assert f.exists

deftest_file_content(host):
    content = host.file('/tmp/hello-world.txt').content
    assertb'hello world' in content
```

COMPATIBILITY TESTING

// check whether your code is capable of running on different

- hardware
- operating systems
- applications
- networks
- versions

version compatibility testing

// backward compatibility

// forward compatibility

PYTHON 2 IS OFFICIALLY END OF LIFE...

ARE YOU READY?

HOW TO SURVIVE

ansible + molecule x python   2.7 - production ansible + molecule x python

2.5 - backward compatibility

2.7 - production

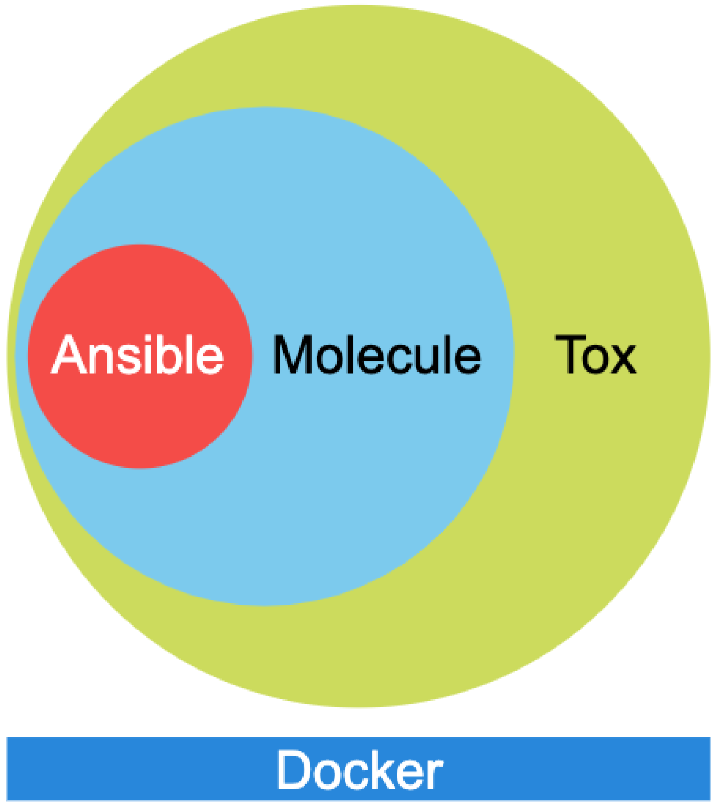
3.8 - forward compatibility

tox

// virtualenv management and test command line tool

// vision: standardize testing in Python

Survival Strategy



// automation via ansible

// functional tests via molecule

// multiple python versions via tox

// container as target environment

Why stop here?

// add various ansible versions

- can I savely update to a newer ansible version?
- which ansible version do I need at the very least?

// add multiple linux flavors

- verify that your role can run on RHEL 7 and RHEL 8
- Debian 9 and 10, Ubuntu 16.04 and 18.04, …

Well, I couldn't stop myself...

// ansible - latest, 2.9, 2.8

// OS

- alpine - latest, 3.10, 3.9, 3.8
- centos - latest, 8, 7
- clearlinux - latest
- debian - latest, 10, 9, 8
- fedora - latest, 31, 30, 29, 28
- opensuse - latest, 15,
- ubuntu - latest, 20.04, 19.04, 18.04, 16.04

// python - 3.x, 3.8, 3.7, 3.6

COMPLETION TIME

7 hrs 27 min 2 sec

RECAP

// you meet a problem you never want to solve again

// you establish a new tool - congrats!

// it gets adopted

// jointly define the rules of the game

- create reusable ansible roles
- functional testing with molecule
- version compatibility testing
- choose purposeful compatibility scenarios

GEPARD WHO?

THAT'S US

// office: vienna / linz

// size: ~ 40 people

// avg age: 31

// we do what we love..

- custom software solution
- cloud transformation
- devOps automation

Red Hat

Premier

Business Partner

JBoss® by Red Hat

OPENSHIFT

..and we are extremly good at it

THANK YOU

// slides: https://gepardec.github.io/presentations/ansible-compatibility-testing

// code: https://github.com/gepardec/ansible-role-example

// author: Clemens Kaserer

SCAN ME