
wandelbots

Ansible in a Cloud Native World

A Presentation for Chemnitzer Linuxtage 2022

Ansible in a Cloud Native World

Agenda

1. Introduction
2. Poll
3. What is Cloud (Native)
4. Why to use Ansible
5. When to use Ansible
6. How to use Ansible
7. Demo
8. Q&A

Introduction
Who am I and what am I doing?

Introduction

That's me...

Daniel Schier

Vision

Building a simple, intuitive and easy to use Open Source ecosystem, that brings beginners, experts, professionals and enthusiasts together.

Doing

- Code
  - GitHub
- Community
  - while-true-do.io
  - Dresden OpenSource UserGroup
  - Ansible Meetup Dresden
- Work
  - Wandelbots GmbH

Introduction

Wandelbots GmbH

Vision

Enabling everybody to use a robot and automate tasks, that nobody really wants to do.

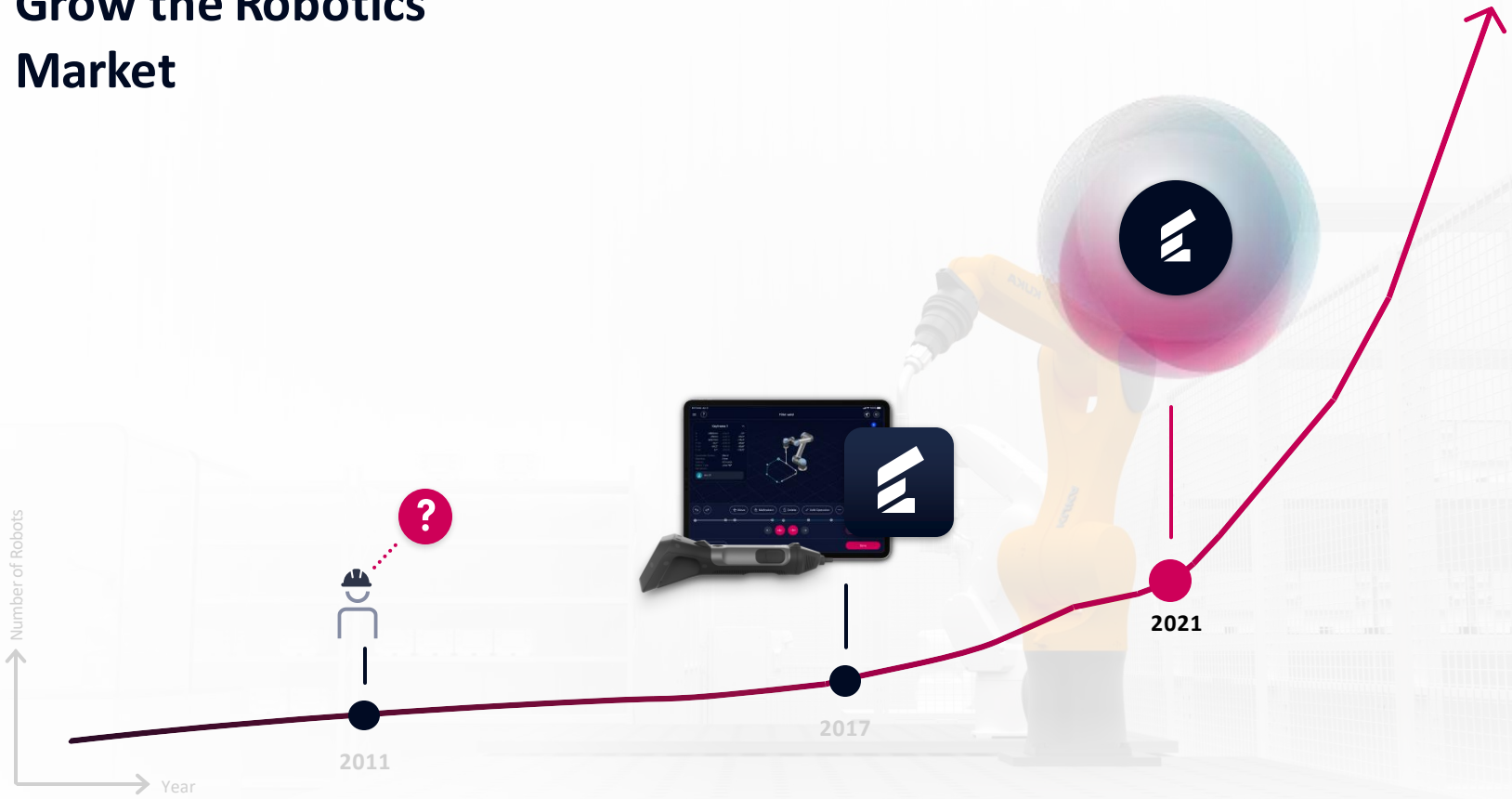
Doing

- Teaching Solution – No-Code Robotics
- Developer Platform – Unified Robotics Development

Contact

- https://wandelbots.com

Grow the Robotics Market



Poll

Let's see what you already do

What is Cloud (Native)
Buzzword Bingo anyone?

What is Cloud (Native)
Cloud Providers

Everything (?) moves to the cloud

Public Cloud Providers

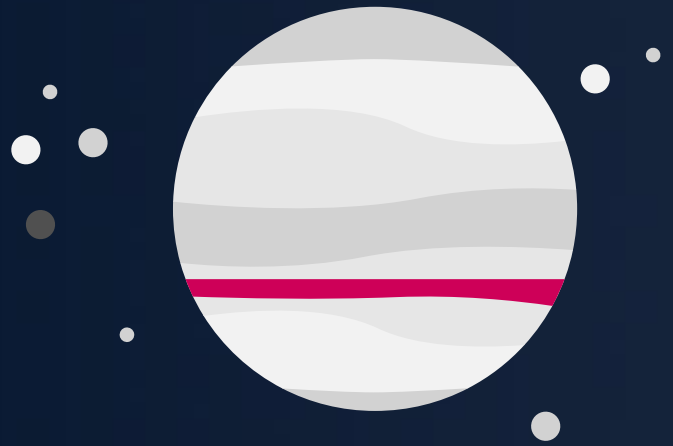
- AWS
- Azure
- GCP
- AliCloud

Private Cloud Providers

- OpenStack
- CloudStack
- VMWare

But there are also

- Local machines
- Datacenter Infrastructure



What is Cloud (Native)
Kubernetes and Containers

- And even more interesting

Container Orchestration

- Kubernetes (k8s, k3s, k0s)
- Rancher
- OpenShift
- AKS, EKS, SKS, …

Container Engines

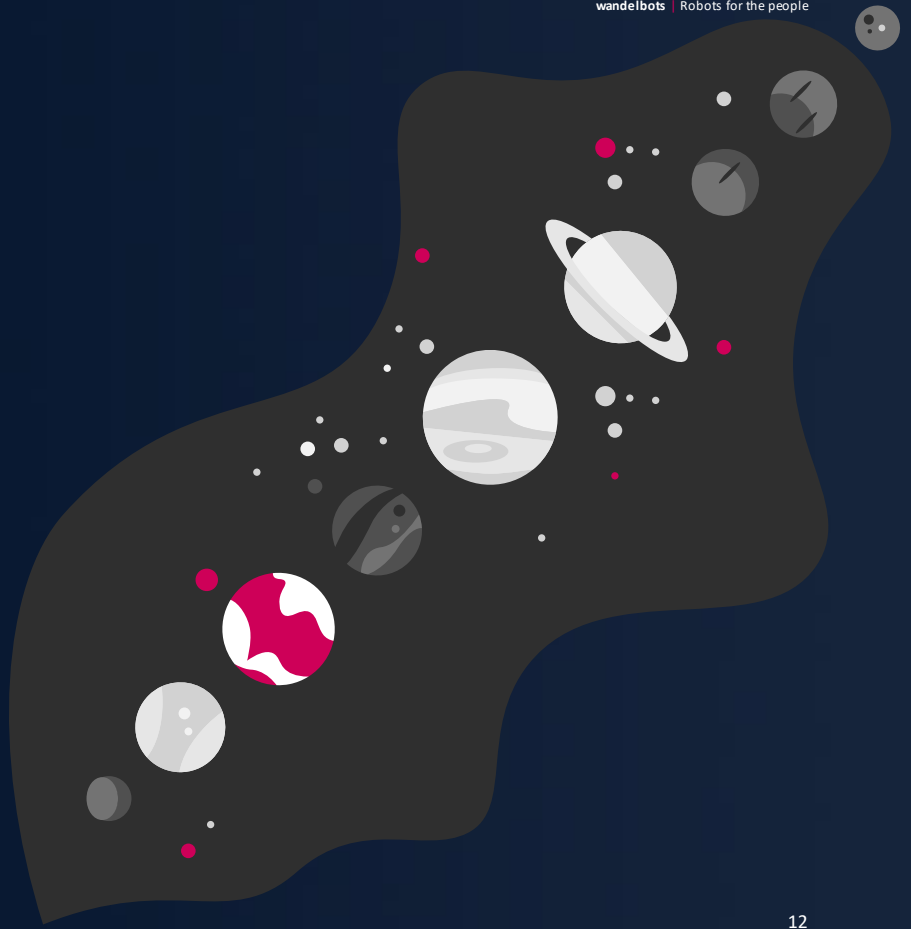
- Docker
- Podman
- Cri-o
- containerd

What is Cloud (Native)

Cloud Providers

And a vast ecosystem…

- Heroku
- Grafana
- Prometheus
- GitHub, GitLab
- Datadog
- Object Storage
- Block Storage
- (un)managed Databases
- Security Policies
- Virtual Network



Why to use Ansible
Reasons and Features

Why to use Ansible
Reasons and Features

Low-Code Automation

- YAML
- JINJA2

Easy to learn

- We will configure Kubernetes AND deploy an App today
- Start simple
- Start on your Workstation

Ecosystem

- AWX/Automation Platform
- ARA, CMDB
- Navigator, Runners, Container Workflows

Why to use Ansible
Reasons and Features

Thousands of Modules and Plugins

- AWS, Azure RM, …
- Kubernetes, Docker, Podman, …
- Linux, Windows, Unix, macOS
- Packages, Services, Configuration
- SSH, Telnet, RAW
- Network, Firewall

Low dependencies

- Python
- Agentless
- Git is your state

When to use Ansible
Knowledge and Scaling

When to use Ansible

Knowledge and Scaling

Ever faced this situation?

- Kubernetes: Helm, operators, manifests
- AWS: CloudFoundry, Terraform
- Datacenter: Puppet, Chef, Salt, Ansible

Or this?

- I need to learn C for D?
- X for Infrastructure
- Y for LoadBalancer
- A for Day-0
- B for Day-1

Learning new things is fun, but also cumbersome.

When to use Ansible
Knowledge and Scaling

Building Knowledge is expensive

- Domain Knowledge
- "Used it once"
- Do you re-use your code?

Consistent Testing

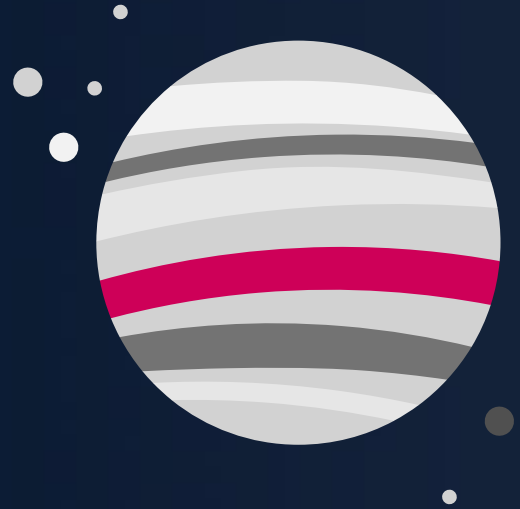
- Tests can be as close to real integration as you want
- Shift Left or Shift Right is possible
- Collections carry tests, plugins, roles, playbooks

Becoming an Ansible expert is also fun, and 2 experts can learn from each other.

How to use Ansible
Workflow and Coding

How to use Ansible
Workflow and Coding

- Create the required environment
  - Network
  - Storage Backend
- Create the needed workload resource
  - Virtual Machine
  - Bare Metal
- Configure something on it
  - Kubernetes
  - Podman
- Deploy your Application
  - Wordpress
    - Including s3 object storage?
  - Nextcloud
    - Including RDS?



Demo
Bring the action

Thank you

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