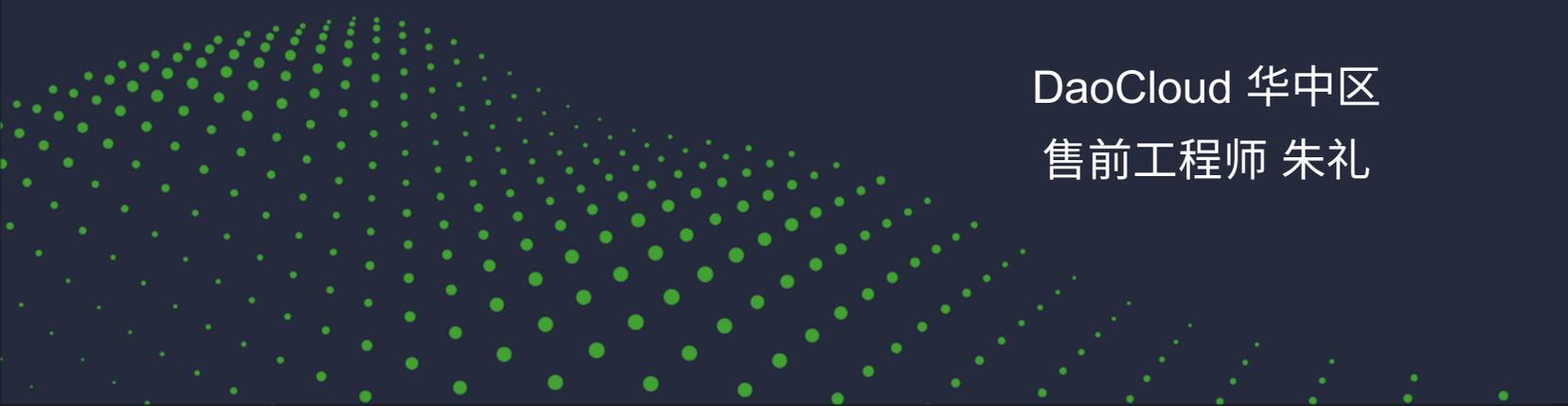




# 聊聊 Packer 和 Dockerfile

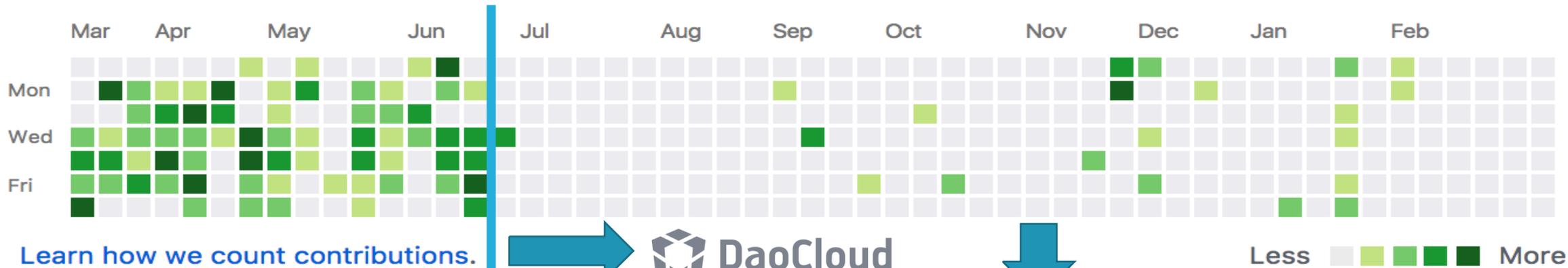
自动化配置 代码段 复用的思考

DaoCloud 华中区  
售前工程师 朱礼



# 简介

GITHUB ID: footearth  
<https://github.com/footearth>



<https://github.com/react-cfx>

- 函数式入门
- Packer + Docker

10年  
会计 -> 运维 -> 研发 -> 售前

10年 真正的开源开发者  
-> or  
真正的开源布道师



# 与 Docker && DaoCloud 结缘

- 14 年 听闻 Docker
  - 媒体上看到 DaoCloud 成立
  - 蠢蠢欲动
- 15 年 Docker 实操
  - 开始学习 docker
  - 开始参与社区活动，在上海 DaoCloud 参加了生日会
- 16 年 投身事业
  - 在武汉 meetup 做了一场开发者使用 Docker 的分享
  - 7月进入武汉团队，做售前工作
- 17 年 成都生日会，我又来了，希望以后还有机会来

# 一个观点一个愿景

观点：

我们正处于配置式自动化时代，下一个阶段是程序式自动化时代

在程序式自动化时代，ops 岗位没有 dev 能力的人是很难生存下去的。

不是愿意不愿意的问题。而是会有大把具有 dev 能力的人竞争这个岗位。

愿景：希望在不远的将来，国内真正迎来真正开源的真正春天。

没有听过大师们怎么讲，资料看的有限

一家之言，如有理解不一致，欢迎线下交流

感谢老板感谢同事，把我逼到了这个高度

没有他们，我需要花更多时间想清楚究竟想传达什么

# 自动化工具链四个阶段

|        |               |    |       |
|--------|---------------|----|-------|
| Ops    | 第一阶段 图形化      | 打碎 |       |
| +      | 第二阶段 描述配置自动化  |    | 争夺控制权 |
| Dev    | 第三阶段 程序配置自动化  | 重构 | 自由、可控 |
| =      |               |    |       |
| DevOps | 第四阶段 自定义图形自动化 | 自主 |       |

# DevOps S 典故

## DevOps從比利時萌芽紅遍全球

Patrick Debois把Dev及Ops結合成DevOps，而因為活動有兩天，他決定另外再加上Days，所以活動名稱就成了DevOpsDays，並在當年的10月30及31日在比利時根特城舉行。活動結束後，社群間的對話仍然在推特上持續進行，由於推特公開發文有140字元的限制，社群決定刪掉後面的「Days」，採改用#DevOps在推特上進行討論。

很快的，DevOpsDays走出了比利時，成為定期舉辦及吸引開發社群參與的全球會議，並在John Willis、DTO Solutions創辦人Damon Edwards及Puppet實驗室共同創辦人Andrew Clay Shafer等人的幫助下，美國也舉辦了第一個DevOpsDays。

# 什么是DevOps?

**DevOps** (Development和Operations的组合词) 是一种重视「软件开发人员 (Dev)」和「IT运维技术人员 (Ops)」之间**沟通合作的**文化、运动或惯例。透过**自动化**「软件交付」和「架构变更」的**流程**，来使得构建、测试、发布软件能够更加地**快捷、频繁和可靠**。

**目标：又好又快**

—— Wiki Pedia

# 推演

目标：又好又快

共识：需要DevOps

怎么做？

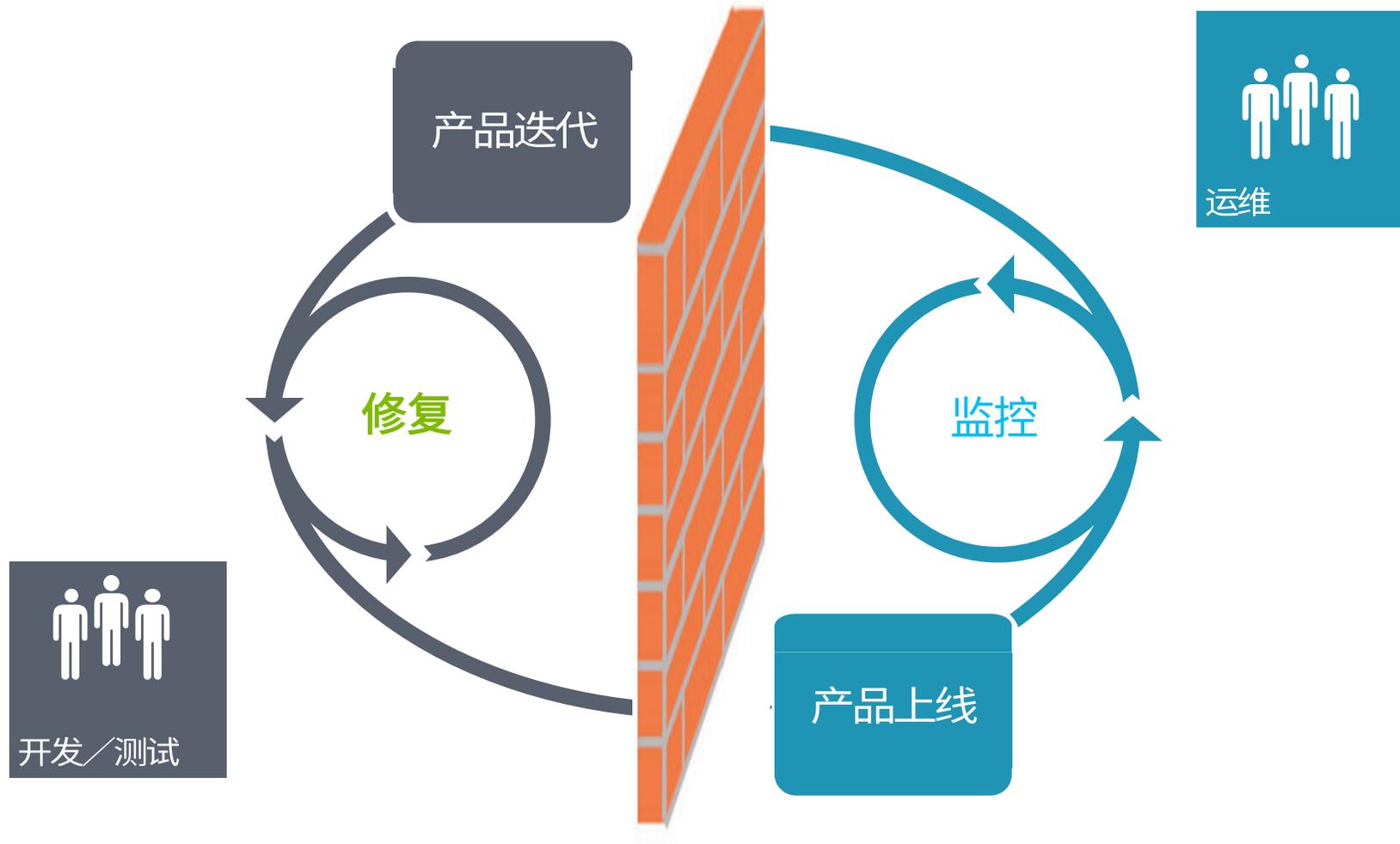


Defined -> Delivered

工具森林

最佳3(合适) 工具链组合

# 流程



# Dev

## 项目实施

# Ops

迭代 敏捷

用户故事

开发

开发

开发

...

提交上线

问题定位, 修复, 提交...  
定位, 修复, 定位, 修复...

资源规划

存储 / 网络

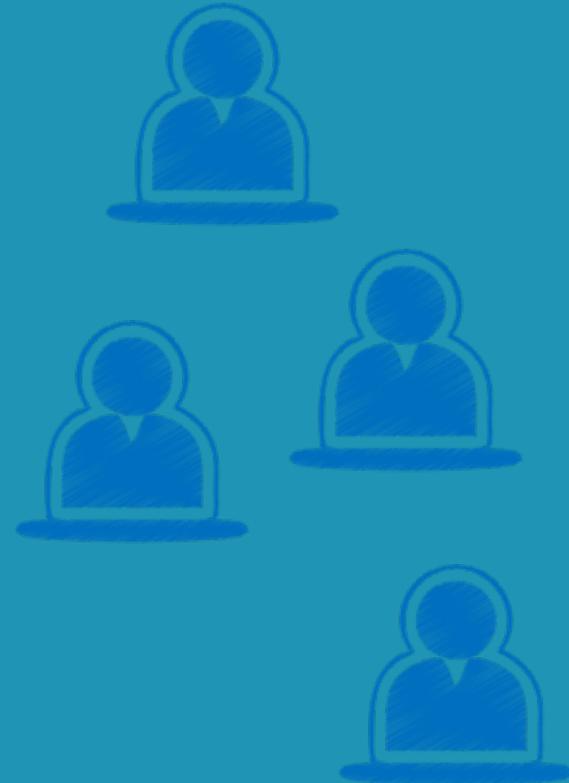
高可用

CMDB

标准监控

...

生产部署, 失败, 再... 部署成功  
压测, 失败, 推回开发... “成功”...  
500错误, 拒绝服务, 系统崩溃, 重启...



# Dev

# 技能

# Ops



程序语言

脚本语言

Java、Ruby、Python  
PHP、Node、Go

Shell、Perl

版本控制  
框架、库

监控、安全、日志

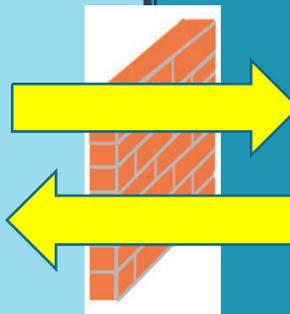
OOP、FP、  
同步、异步

基础架构、存储、网络

封装、模块

依赖  
包管理

命令、环境、配置





# PERIODIC TABLE OF DEVOPS TOOLS (V2)

开源 源码管理 数据库管理 构建  
 免费 集成 制品管理 测试  
 自由 部署 配置/服务开通 容器化  
 付费 资源 发行管理 协作  
 企业级 智能监控 日志 安全

- Os Open Source
- Fr Free
- Fm Freemium
- Pd Paid
- En Enterprise
- SCM
- CI
- Deployment
- Cloud / IaaS / PaaS
- BI / Monitoring

- Database Mgmt
- Repo Mgmt
- Config / Provisioning
- Release Mgmt
- Logging
- Build
- Testing
- Containerization
- Collaboration
- Security



1 Fm  
Gh  
Github

3 Os  
Gt  
Git

11 Fm  
Bb  
Bitbucket

4 En  
Dm  
DBmaestro

12 Os  
Lb  
Liquibase

19 Os  
Gl  
GitLab

20 En  
Rg  
Redgate

21 Os  
Mv  
Maven

22 Os  
Gr  
Gradle

23 Os  
At  
ANT

24 Os  
Fn  
FitNesse

25 Fr  
Se  
Selenium

26 Os  
Ga  
Gatling

27 Fr  
Dh  
Docker Hub

28 Os  
Jn  
Jenkins

29 Pd  
Ba  
Bamboo

30 Os  
Tr  
Travis CI

31 Pd  
Gd  
Deployment Manager

32 Os  
Sf  
SmartFrog

33 Os  
Cn  
Consul

34 Os  
Bc  
Bcfg2

35 Os  
Mo  
Mesos

36 En  
Rs  
Rackspace

37 Os  
Sv  
Subversion

38 En  
Dt  
Datical

39 Os  
Gt  
Grunt

40 Os  
Gp  
Gulp

41 Os  
Br  
Broccoli

42 Fr  
Cu  
Cucumber

43 Os  
Cj  
Cucumber.js

44 Fr  
Qu  
Qunit

45 Os  
Npm  
npm

46 Fm  
Cs  
Codeship

47 Pd  
Vs  
Visual Studio

48 Fm  
Cr  
CircleCI

49 Fr  
Cp  
Capistrano

50 Fr  
Ju  
JuJu

51 Os  
Rd  
Rundeck

52 Os  
Cf  
CFEngine

53 Fr  
Ds  
Swarm

54 Os  
Op  
OpenStack

55 Os  
Hg  
Mercurial

56 En  
Dp  
Delphix

57 Fr  
Sb  
sbt

58 Os  
Mk  
Make

59 Os  
Ck  
CMake

60 Fr  
Jt  
JUnit

61 Fr  
Jm  
JMeter

62 Fr  
Tn  
TestNG

63 Os  
Ay  
Artifactory

64 Fm  
Tc  
TeamCity

65 Fm  
Sh  
Shippable

66 Os  
Cc  
CruiseControl

67 En  
Ry  
RapidDeploy

68 Fm  
Cy  
CodeDeploy

69 En  
Oc  
Octopus Deploy

70 En  
No  
CA Nolio

71 Os  
Kb  
Kubernetes

72 Fm  
Hr  
Heroku

73 En  
Cw  
ISPW

74 En  
Id  
Idera

75 Os  
Msb  
MSBuild

76 Os  
Rk  
Rake

77 Fr  
Pk  
Packer

78 Os  
Mc  
Mocha

79 Fr  
Km  
Karma

80 Os  
Jm  
Jasmine

81 Os  
Nx  
Nexus

82 Os  
Co  
Continuum

83 Fm  
Ca  
Continua CI

84 Pd  
So  
Solano CI

85 En  
Xld  
XL Deploy

86 En  
Eb  
ElasticBox

87 Fm  
Dp  
Deploybot

88 En  
Ud  
UrbanCode Deploy

89 Os  
Nm  
Nomad

90 En  
Os  
OpenShift

91 En  
Xlr  
XL Release

92 En  
Ur  
UrbanCode Release

93 En  
Bm  
BMC Release Process

94 En  
Hp  
HP Codar

95 En  
Au  
Automic

96 En  
Pl  
Plutora Release

97 En  
Sr  
Serena Release

98 Pd  
Tfs  
Team Foundation

99 Fm  
Tr  
Trello

100 Pd  
Jr  
Jira

101 Fm  
Rf  
HipChat

102 Fm  
Sl  
Slack

103 Fm  
Fd  
Flowdock

104 Pd  
Pv  
Pivotal Tracker

105 En  
Sn  
ServiceNow

106 Os  
Ki  
Kibana

107 Fm  
Nr  
New Relic

108 En  
Dt  
Dynatrace

109 Os  
Ni  
Nagios

110 Os  
Zb  
Zabbix

111 En  
Dd  
Datadog

112 Os  
El  
Elasticsearch

113 Fm  
Ad  
AppDynamics

114 En  
Sp  
Splunk

115 Fm  
Le  
Logentries

116 Fm  
Sl  
Sumo Logic

117 Os  
Ls  
Logstash

118 Os  
Sn  
Snort

119 Os  
Tr  
Tripwire

120 En  
Ff  
Fortify

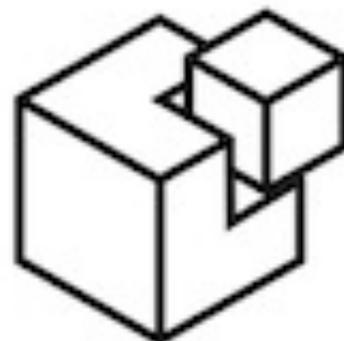
## Xebialabs

Follow @xebialabs

# 工具森林



# 配置/服务开通 工具



SALTSTACK



ANSIBLE

静态环境定义 → 动态环境调整  
OS 搭建 → 应用部署

# PERIODIC TABLE OF DEVOPS TOOLS (V2)



**开源** 免费 自由 付费 企业级

**源码管理** 集成 部署 资源 智能监控

**数据库管理** 制品管理 配置/部署 发行管理 日志

**构建** 测试 容器化 协作 安全

Os Open Source, Fr Free, Fm Freemium, Pd Paid, En Enterprise

SCM, CI, Deployment, Cloud / IaaS / PaaS, BI / Monitoring

Database Mgmt, Repo Mgmt, Config / Provisioning, Release Mgmt, Logging

Build, Testing, Containerization, Collaboration, Security

|                    |
|--------------------|
| 1 Fm Gh Github     |
| 3 Os Gt Git        |
| 4 En Dm DBmaestro  |
| 11 Fm Bb Bitbucket |
| 12 Os Lb Liquibase |

|                     |                  |                   |                 |                   |                   |                      |                  |                      |                    |                        |                        |                             |                     |                         |                           |                     |                    |
|---------------------|------------------|-------------------|-----------------|-------------------|-------------------|----------------------|------------------|----------------------|--------------------|------------------------|------------------------|-----------------------------|---------------------|-------------------------|---------------------------|---------------------|--------------------|
| 19 Os Gl GitLab     | 20 En Rg Redgate | 21 Os Mv Maven    | 22 Os Gr Gradle | 23 Os At ANT      | 24 Os Fn FitNesse | 25 Fr Se Selenium    | 26 Os Ga Gatling | 27 Fr Dh Docker Hub  | 28 Os Jn Jenkins   | 29 Pd Ba Bamboo        | 30 Os Tr Travis CI     | 31 Pd Gd Deployment Manager | 32 Os Sf SmartFrog  | 33 Os Cn Consul         | 34 Os Bc Bcfg2            | 35 Os Mo Mesos      | 36 En Rs Rackspace |
| 37 Os Sv Subversion | 38 En Dt Datical | 39 Os Gt Grunt    | 40 Os Gp Gulp   | 41 Os Br Broccoli | 42 Fr Cu Cucumber | 43 Os Cj Cucumber.js | 44 Fr Qu Qunit   | 45 Os Npm npm        | 46 Fm Cs Codeship  | 47 Pd Vs Visual Studio | 48 Fm Cr CircleCI      | 49 Fr Cp Capistrano         | 50 Fr Ju JuJu       | 51 Os Rd Rundeck        | 52 Os Cf CFEngine         | 53 Fr Ds Swarm      | 54 Os Op OpenStack |
| 55 Os Hg Mercurial  | 56 En Dp Delphix | 57 Fr Sb sbt      | 58 Os Mk Make   | 59 Os Ck CMake    | 60 Fr Jt JUnit    | 61 Fr Jm JMeter      | 62 Fr Tn TestNG  | 63 Os Ay Artifactory | 64 Fm Tc TeamCity  | 65 Fm Sh Shippable     | 66 Os Cc CruiseControl | 67 En Ry RapidDeploy        | 68 Fm Cy CodeDeploy | 69 En Oc Octopus Deploy | 70 En No CA Nolio         | 71 Os Kb Kubernetes | 72 Fm Hr Heroku    |
| 73 En Cw ISPW       | 74 En Id Idera   | 75 Os Msb MSBuild | 76 Os Rk Rake   | 77 Fr Pk Packer   | 78 Os Mc Mocha    | 79 Fr Km Karma       | 80 Os Jm Jasmine | 81 Os Nx Nexus       | 82 Os Co Continuum | 83 Fm Ca Continua CI   | 84 Pd So Solano CI     | 85 En Xld XL Deploy         | 86 En Eb ElasticBox | 87 Fm Dp Deploybot      | 88 En Ud UrbanCode Deploy | 89 Os Nm Nomad      | 90 En Os OpenShift |

XebiaLabs

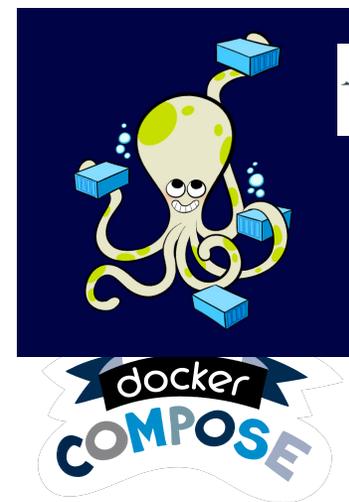
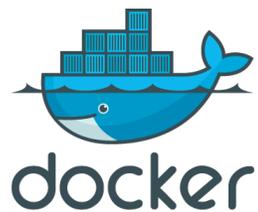
Follow @xebialabs

|                      |                            |                              |                   |                  |                          |                         |                           |                  |                      |                      |                    |                    |                           |                      |
|----------------------|----------------------------|------------------------------|-------------------|------------------|--------------------------|-------------------------|---------------------------|------------------|----------------------|----------------------|--------------------|--------------------|---------------------------|----------------------|
| 91 En Xlr XL Release | 92 En Ur UrbanCode Release | 93 En Bm BMC Release Process | 94 En Hp HP Codar | 95 En Au Automic | 96 En Pl Plutora Release | 97 En Sr Serena Release | 98 Pd Tfs Team Foundation | 99 Fm Tr Trello  | 100 Pd Jr Jira       | 101 Fm Rf HipChat    | 102 Fm Sl Slack    | 103 Fm Fd Flowdock | 104 Pd Pv Pivotal Tracker | 105 En Sn ServiceNow |
| 106 Os Ki Kibana     | 107 Fm Nr New Relic        | 108 En Dt Dynatrace          | 109 Os Ni Nagios  | 110 Os Zb Zabbix | 111 En Dd Datadog        | 112 Os El Elasticsearch | 113 Fm Ad AppDynamics     | 114 En Sp Splunk | 115 Fm Le Logentries | 116 Fm Sl Sumo Logic | 117 Os Ls Logstash | 118 Os Sn Snort    | 119 Os Tr Tripwire        | 120 En Ff Fortify    |

# 工具森林



# Docker



Docker Engine

Docker Image

Docker Container

Docker Registry

Dockerfile

基础设施标准化

应用交付标准化

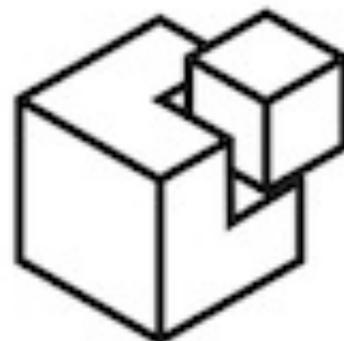
运维管理标准化

分发部署标准化

- 文本配置 -> 简单高效
- 源码管理 -> 协作历史可追溯

- Write once
- build everywhere
- run everywhere

# 配置/服务开通 工具



SALTSTACK



ANSIBLE

静态环境定义 → 动态环境调整

外部宿主机环境 →  应用环境  
docker

只换不修

# Cloud Native Landscape v0.9.3



Application Definition & Development

Languages & Frameworks



Databases



Streaming



Source Code Management



Application Definition



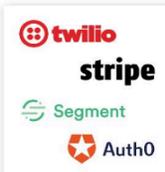
Registry Services



CI / CD



3rd Party APIs



Orchestration & Management

Scheduling & Orchestration



Coordination & Service Discovery



Service Management



Runtime

Cloud-Native Storage



Container Runtime



Cloud-Native Network



Provisioning

Infrastructure Automation



Host Management / Tooling



Secure Images



Infrastructure



Platforms



Observability & Analysis



Monitoring

Logging

Tracing



# 配置/服务开通 工具



静态环境定义 → 动态环境调整

外部宿主机环境 →  应用环境  
docker

# PERIODIC TABLE OF DEVOPS TOOLS (V2)

开源  
免费  
自由  
付费  
企业级

Os Open Source  
Fr Free  
Fm Freemium  
Pd Paid  
En Enterprise

源码管理  
集成  
部署  
资源  
智能监控

SCM  
CI  
Deployment  
Cloud / IaaS / PaaS  
BI / Monitoring

数据库管理  
制品管理  
配置资源  
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Database Mgmt  
Repo Mgmt  
Config / Provisioning  
Release Mgmt  
Logging

构建  
测试  
容器化  
协作  
安全

Build  
Testing  
Containerization  
Collaboration  
Security



|                   |      |                |                      |                       |                       |                    |                     |                   |                    |                 |                      |                      |                     |                        |                     |                    |                       |                                |                       |                    |                   |                   |                       |                        |                     |                   |                  |                      |                      |                         |                   |                  |                      |                           |                      |                        |                  |                     |                      |                   |                       |                       |                     |                 |                  |                   |                   |                    |                    |                         |                      |                       |                           |                         |                        |                            |                      |                        |                    |                  |                   |                      |                  |                   |                   |                     |                   |                       |                         |                       |                        |                        |                       |                              |                   |                       |
|-------------------|------|----------------|----------------------|-----------------------|-----------------------|--------------------|---------------------|-------------------|--------------------|-----------------|----------------------|----------------------|---------------------|------------------------|---------------------|--------------------|-----------------------|--------------------------------|-----------------------|--------------------|-------------------|-------------------|-----------------------|------------------------|---------------------|-------------------|------------------|----------------------|----------------------|-------------------------|-------------------|------------------|----------------------|---------------------------|----------------------|------------------------|------------------|---------------------|----------------------|-------------------|-----------------------|-----------------------|---------------------|-----------------|------------------|-------------------|-------------------|--------------------|--------------------|-------------------------|----------------------|-----------------------|---------------------------|-------------------------|------------------------|----------------------------|----------------------|------------------------|--------------------|------------------|-------------------|----------------------|------------------|-------------------|-------------------|---------------------|-------------------|-----------------------|-------------------------|-----------------------|------------------------|------------------------|-----------------------|------------------------------|-------------------|-----------------------|
| 1 Fm Gh<br>Github | 2 Fm | 3 Os Gt<br>Git | 4 En Dm<br>DBmaestro | 11 Fm Bb<br>Bitbucket | 12 Os Lb<br>Liquibase | 19 Os Gl<br>GitLab | 20 En Rg<br>Redgate | 21 Os Mv<br>Maven | 22 Os Gr<br>Gradle | 23 Os At<br>ANT | 24 Os Fn<br>FitNesse | 25 Fr Se<br>Selenium | 26 Os Ga<br>Gatling | 27 Fr Dh<br>Docker Hub | 28 Os Jn<br>Jenkins | 29 Pd Ba<br>Bamboo | 30 Os Tr<br>Travis CI | 31 Pd Gd<br>Deployment Manager | 32 Os Sf<br>SmartFrog | 33 Os Cn<br>Consul | 34 Os Bc<br>Bcfg2 | 35 Os Mo<br>Mesos | 36 En Rs<br>Rackspace | 37 Os Sv<br>Subversion | 38 En Dt<br>Datical | 39 Os Gt<br>Grunt | 40 Os Gp<br>Gulp | 41 Os Br<br>Broccoli | 42 Fr Cu<br>Cucumber | 43 Os Cj<br>Cucumber.js | 44 Fr Qu<br>Qunit | 45 Os Npm<br>npm | 46 Fm Cs<br>Codeship | 47 Pd Vs<br>Visual Studio | 48 Fm Cr<br>CircleCI | 49 Fr Cp<br>Capistrano | 50 Fr Ju<br>JuJu | 51 Os Rd<br>Rundeck | 52 Os Cf<br>CFEngine | 53 Fr Ds<br>Swarm | 54 Os Op<br>OpenStack | 55 Os Hg<br>Mercurial | 56 En Dp<br>Delphix | 57 Fr Sb<br>sbt | 58 Os Mk<br>Make | 59 Os Ck<br>CMake | 60 Fr Jt<br>JUnit | 61 Fr Jm<br>JMeter | 62 Fr Tn<br>TestNG | 63 Os Ay<br>Artifactory | 64 Fm Tc<br>TeamCity | 65 Fm Sh<br>Shippable | 66 Os Cc<br>CruiseControl | 67 En Ry<br>RapidDeploy | 68 Fm Cy<br>CodeDeploy | 69 En Oc<br>Octopus Deploy | 70 En No<br>CA Nolio | 71 Os Kb<br>Kubernetes | 72 Fm Hr<br>Heroku | 73 En Cw<br>ISPW | 74 En Id<br>Idera | 75 Os Msb<br>MSBuild | 76 Os Rk<br>Rake | 78 Os Mc<br>Mocha | 79 Fr Km<br>Karma | 80 Os Jm<br>Jasmine | 81 Os Nx<br>Nexus | 82 Os Co<br>Continuum | 83 Fm Ca<br>Continua CI | 84 Pd So<br>Solano CI | 85 En Xld<br>XL Deploy | 86 En Eb<br>ElasticBox | 87 Fm Dp<br>Deploybot | 88 En Ud<br>UrbanCode Deploy | 89 Os Nm<br>Nomad | 90 En Os<br>OpenShift |
|-------------------|------|----------------|----------------------|-----------------------|-----------------------|--------------------|---------------------|-------------------|--------------------|-----------------|----------------------|----------------------|---------------------|------------------------|---------------------|--------------------|-----------------------|--------------------------------|-----------------------|--------------------|-------------------|-------------------|-----------------------|------------------------|---------------------|-------------------|------------------|----------------------|----------------------|-------------------------|-------------------|------------------|----------------------|---------------------------|----------------------|------------------------|------------------|---------------------|----------------------|-------------------|-----------------------|-----------------------|---------------------|-----------------|------------------|-------------------|-------------------|--------------------|--------------------|-------------------------|----------------------|-----------------------|---------------------------|-------------------------|------------------------|----------------------------|----------------------|------------------------|--------------------|------------------|-------------------|----------------------|------------------|-------------------|-------------------|---------------------|-------------------|-----------------------|-------------------------|-----------------------|------------------------|------------------------|-----------------------|------------------------------|-------------------|-----------------------|

**XebiaLabs**

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|                         |                               |                                 |                      |                     |                             |                            |                              |                    |                   |                      |                    |                       |                              |                         |                     |                        |                        |                     |                     |                      |                            |                          |                     |                         |                         |                       |                    |                       |                      |
|-------------------------|-------------------------------|---------------------------------|----------------------|---------------------|-----------------------------|----------------------------|------------------------------|--------------------|-------------------|----------------------|--------------------|-----------------------|------------------------------|-------------------------|---------------------|------------------------|------------------------|---------------------|---------------------|----------------------|----------------------------|--------------------------|---------------------|-------------------------|-------------------------|-----------------------|--------------------|-----------------------|----------------------|
| 91 En Xlr<br>XL Release | 92 En Ur<br>UrbanCode Release | 93 En Bm<br>BMC Release Process | 94 En Hp<br>HP Codar | 95 En Au<br>Automic | 96 En Pl<br>Plutora Release | 97 En Sr<br>Serena Release | 98 Pd Tfs<br>Team Foundation | 99 Fm Tr<br>Trello | 100 Pd Jr<br>Jira | 101 Fm Rf<br>HipChat | 102 Fm Sl<br>Slack | 103 Fm Fd<br>Flowdock | 104 Pd Pv<br>Pivotal Tracker | 105 En Sn<br>ServiceNow | 106 Os Ki<br>Kibana | 107 Fm Nr<br>New Relic | 108 En Dt<br>Dynatrace | 109 Os Ni<br>Nagios | 110 Os Zb<br>Zabbix | 111 En Dd<br>Datadog | 112 Os El<br>Elasticsearch | 113 Fm Ad<br>AppDynamics | 114 En Sp<br>Splunk | 115 Fm Le<br>Logentries | 116 Fm Sl<br>Sumo Logic | 117 Os Ls<br>Logstash | 118 Os Sn<br>Snort | 119 Os Tr<br>Tripwire | 120 En Ff<br>Fortify |
|-------------------------|-------------------------------|---------------------------------|----------------------|---------------------|-----------------------------|----------------------------|------------------------------|--------------------|-------------------|----------------------|--------------------|-----------------------|------------------------------|-------------------------|---------------------|------------------------|------------------------|---------------------|---------------------|----------------------|----------------------------|--------------------------|---------------------|-------------------------|-------------------------|-----------------------|--------------------|-----------------------|----------------------|

# 工具森林



# 新的选择：面向程序自动化

Python



**Fabric**

Dev的一些尝试

Harp: 239 stars

<https://github.com/bom-d-van/harp>

Perl



**(R)?ex / rexify**

Flightplan: 1516 stars

<https://github.com/pstadler/flightplan>

*Sup*

1400 stars

<https://github.com/pressly/sup>

Gopistrano: 98 stars

<https://github.com/alanchavez88/gopistrano>

<https://goo.gl/evPsKI>

# 配置/服务开通 工具



**Fabric**



**(R)?ex / rexfify**



静态环境定义 → 动态环境调整

外部宿主机环境 → 应用环境



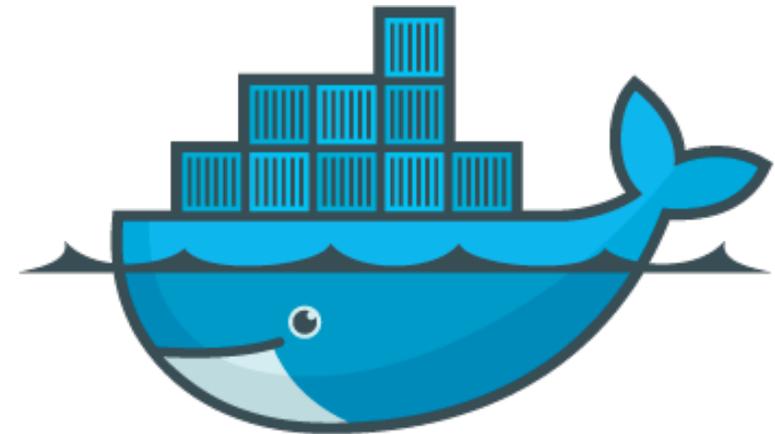
# Packer + Docker



Base OS ENV



VAGRANT



docker

App OS ENV

# 工作中典型场景

- SE: Demo、POC
- No docker on docker
- Docker on VM

# HashiCorp

DevOps Delivered

docker DaoCloud IT大咖说 不止于技术

PROVISION SECURE AND RUN ANY INFRASTRUCTURE FOR ANY APPLICATION.

PROVISION



## Vagrant

Create and configure portable development environments



## Packer

Create platform specific machine images from a single source



## Terraform

Create, combine and manage infrastructure across multiple providers

SECURE



## Vault

Centrally store, secure and control access to distributed secrets

RUN



## Nomad

Cluster manager and scheduler to deploy applications across any infrastructure



## Consul

Distributed highly available tool for service discovery, configuration and orchestration



HashiCorp

HashiCorp is an open-source software company based in San Francisco, California. HashiCorp provides open source tools and commercial products for datacenter management: application development, delivery, and maintenance. It was founded in 2012 by Mitchell Hashimoto and Armon Dadgar.



# HashiCorp



## APPLICATION DELIVERY LIFECYCLE

## TEAMS IN PARALLEL

**RUN**  
Applications

### DEVELOPERS

Vagrant | Nomad | Consul

**SECURE**  
Application Infrastructure

### SECURITY

Vault

**PROVISION**  
Infrastructure

### OPERATORS

Packer | Terraform

- MONITOR • Consul
- DEPLOY • Nomad
- SECURE • Vault
- PROVISION • Terraform
- PACKAGE • Packer
- TEST • Vagrant
- BUILD • Vagrant

Defined | Delivered

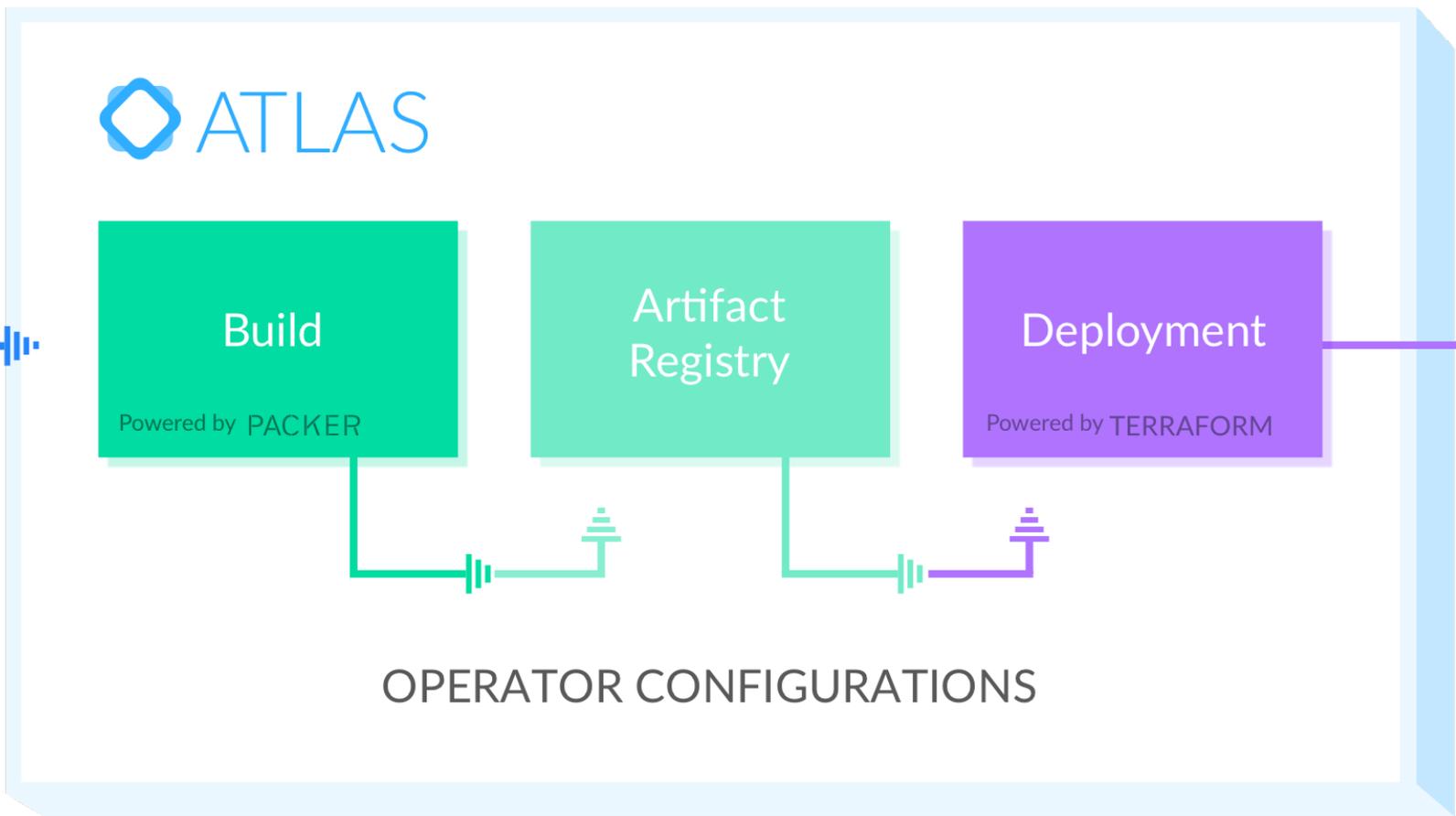
# DevOps



**Application Code**

- git push
- vagrant push
- CI push
- FTP

DEVELOPER WORKFLOW



**Application**

- elastic
- portable
- scalable

Powered by CONSUL





# 基因很重要，船大难掉头

- 微软
- Vmware
- Facebook
- 腾讯
- 阿里

# 任重而道远



HashiCorp

We make open source tools for automating the modern data center.

San Francisco, CA <https://www.hashicorp.com> [hello@hashicorp.com](mailto:hello@hashicorp.com)



DaoCloud.io

Shanghai DaoCloud Co.,Ltd

Shanghai <https://www.daocloud.io> [info@daocloud.io](mailto:info@daocloud.io)

Repositories

People 21

Repositories

People 52

Teams 15

Projects 1

Search repositories...

Type: All

Language: All

Search repositories...

Type: All

Language: All

## terraform

Terraform is a tool for building, changing, and combining infrastructure safely and efficiently.



Top languages

- Go
- Ruby
- Shell
- HCL
- JavaScript

## dce-jenkins-plugin

JavaScript 4 Updated 3 hours ago



Top languages

- Shell
- Go
- Python
- JavaScript
- PHP

People

21 >



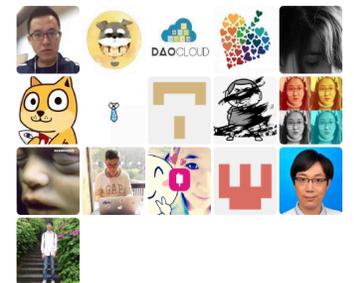
## docker-demo-spring-boot

Java 3 26 Updated a day ago



People

52 >



## consul

Consul is a tool for service discovery, monitoring and configuration.



## portcheck

Go 1 Updated 3 days ago



## nomad

A Distributed, Highly Available, Datacenter-Aware Scheduler



## ecar

Private

Java 1 Updated 3 days ago



## vault

A tool for managing secrets.



## go-bitbucket

Forked from drone/go-bitbucket

Go bindings for the Bitbucket API

Go 17 Updated 7 days ago



真心希望真正的开源时代早点到来!!!



谢谢大家!!!

By FooTearth

Email: [footearth@gmail.com](mailto:footearth@gmail.com)

