



SUSE Expert
Days 2019
SUSE专家日

利用开源驱动创新
开放由我

中国 北京
7月11日

中国 北京

Arthur Yang 杨冬冬

Sales Engineer, China

2019.07.11

黄金赞助

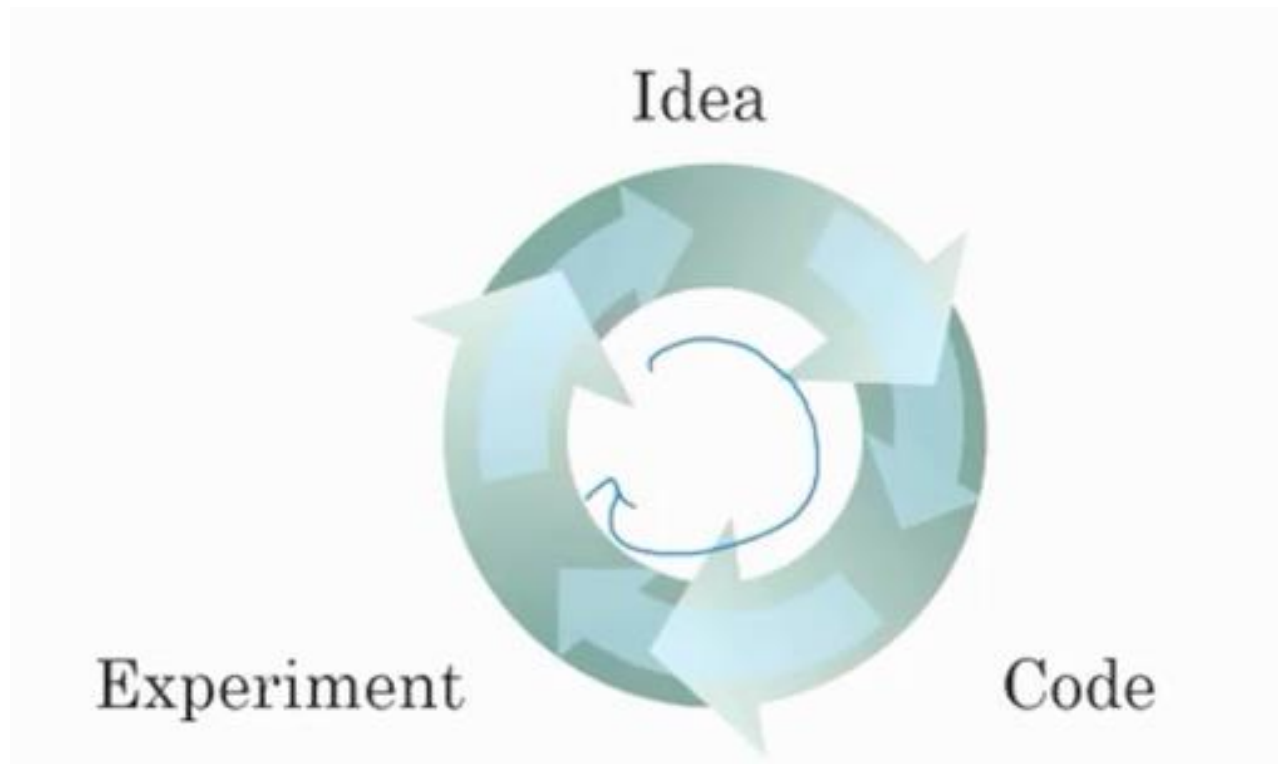
Microsoft Azure

NWCD 西云数据
云网融合·成就所托

青铜赞助



客户需要**加快创新速度**以保持竞争力



敏捷
加速创新

现代应用程序开发

- 企业更注重为其业务构建及开发应用
- 尽可能自动化和抽象化基础架构

容器型应用快速增长

\$5亿

2015



\$27亿

2020

容器市场5年增长5倍以上

Source: [http://www.informationweek.com/cloud/infrastructure-as-a-service/451-research-containers-a-\\$27-billion-market-by-2020/d/d-id/1327868](http://www.informationweek.com/cloud/infrastructure-as-a-service/451-research-containers-a-$27-billion-market-by-2020/d/d-id/1327868)

2013

2015

2016

2018

Docker项目发布

1亿个下载

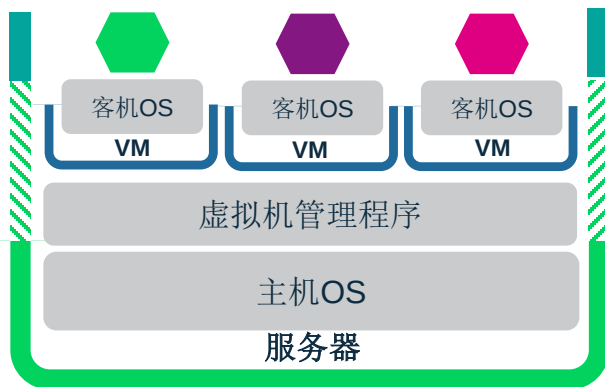
24亿个下载

500亿个下载

来源: <http://www.informationweek.com/cloud/infrastructure-as-a-service/as-docker-turns-3-ceo-predicts-unabated-growth/d/d-id/1324745>
<https://expandedramblings.com/index.php/docker-statistics-facts/>

为何容器使用如此惊人？

容器VS虚拟化



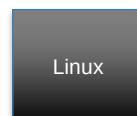
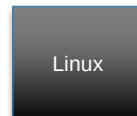
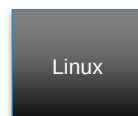
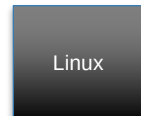
容器VS虚拟化

特性	容器	虚拟机
启动	秒级	分钟级
硬盘使用	一般为 MB	一般为 GB
性能	接近原生	虚拟机内核需要额外的开销
系统支持量	单机支持上百个容器	一般10个左右
安全性	差	强
用途	应用打包分发部署	提供IaaS服务

重要原因：解决开发生产应用环境的一致性



开发



vmware



生产

容器平台



Kubernetes 集群

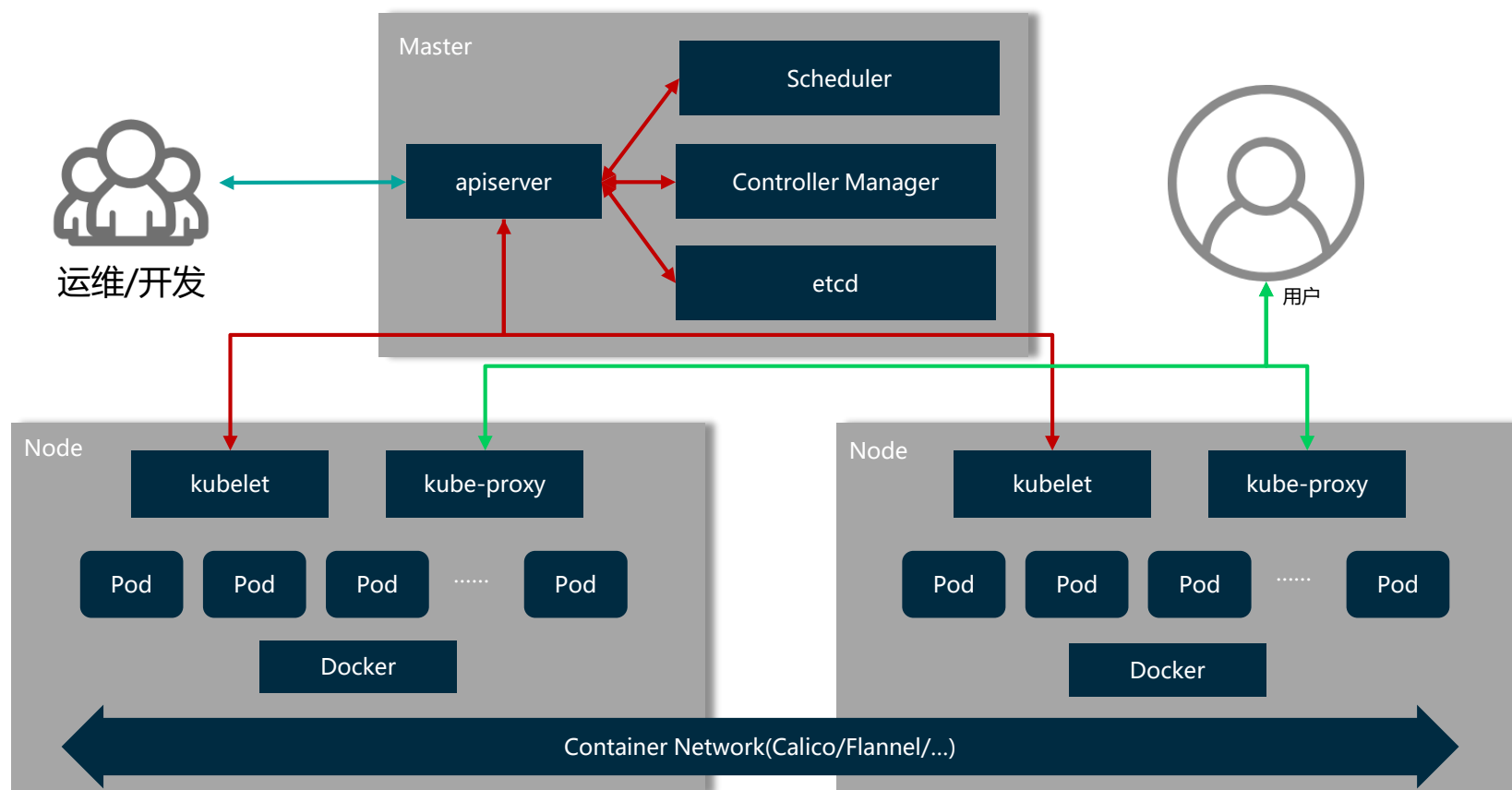
Linux

Linux

Linux

Linux

Kubernetes 架构



企业如何选择容器平台？

容器管理平台 – 复杂性



容器管理平台应该

- 组成
- 安全
- 加固
- 可支持
- 安装
- 操作
- 规模
- 维护



并不是所有人都可以
从零开始构建容器平
台的。

SUSE CaaS Platform

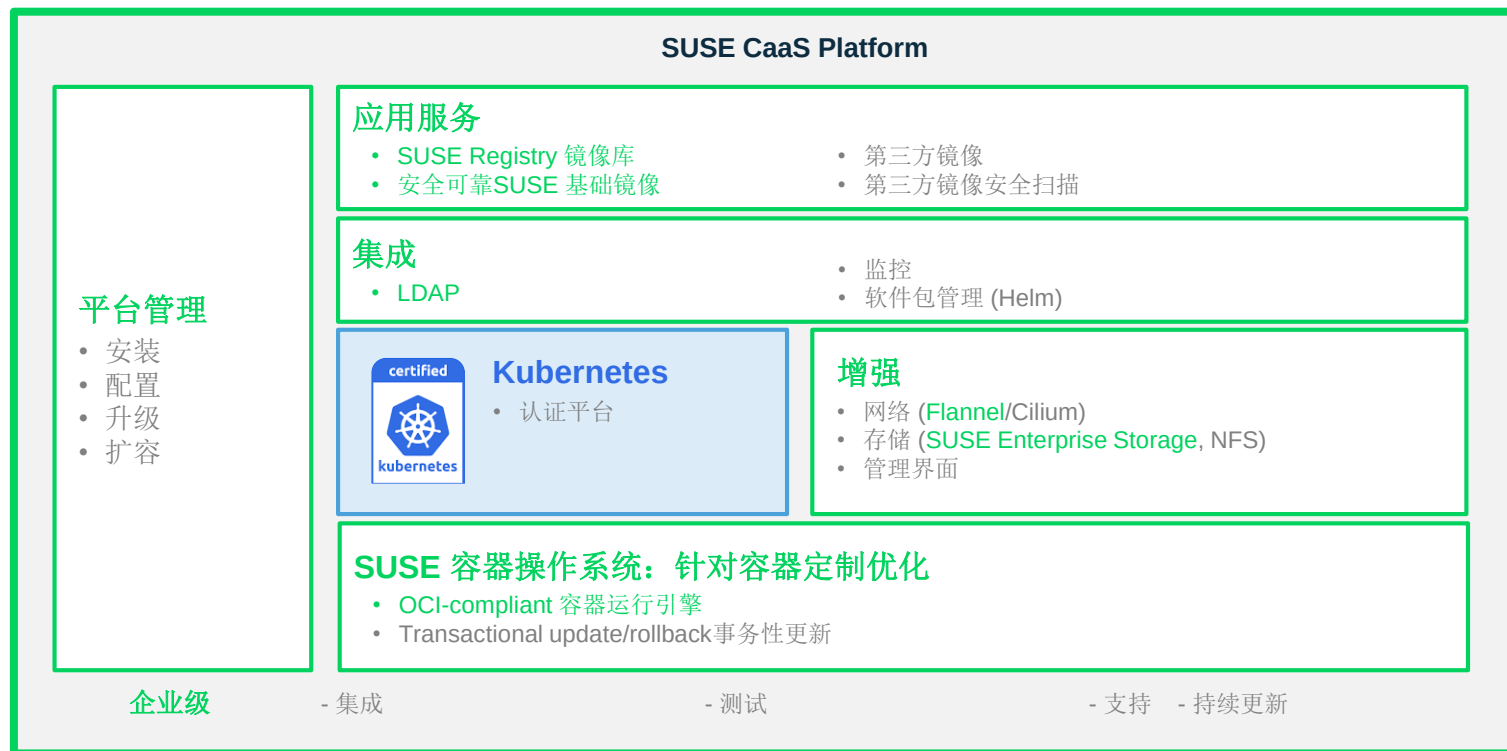
加速应用部署提高敏捷性

SUSE CaaS Platform 是基于k8s的容器管理解决方案，主要用于应用研发和DevOps团队去**部署、管理、扩展**容器应用和服务



SUSE CaaS Platform: 企业级Kubernetes

企业级容器管理平台



灵活部署

Public Cloud	Private Cloud	Virtual Machines	Bare Metal
Amazon, Google, Microsoft	SUSE OpenStack Cloud	KVM, Xen, VMware, Microsoft	SLES supported hardware

Bare Metal

Run on Machines that are dedicated CaaS Platform and Kubernetes
Deploy new node from installation via PXE or iso/dvd

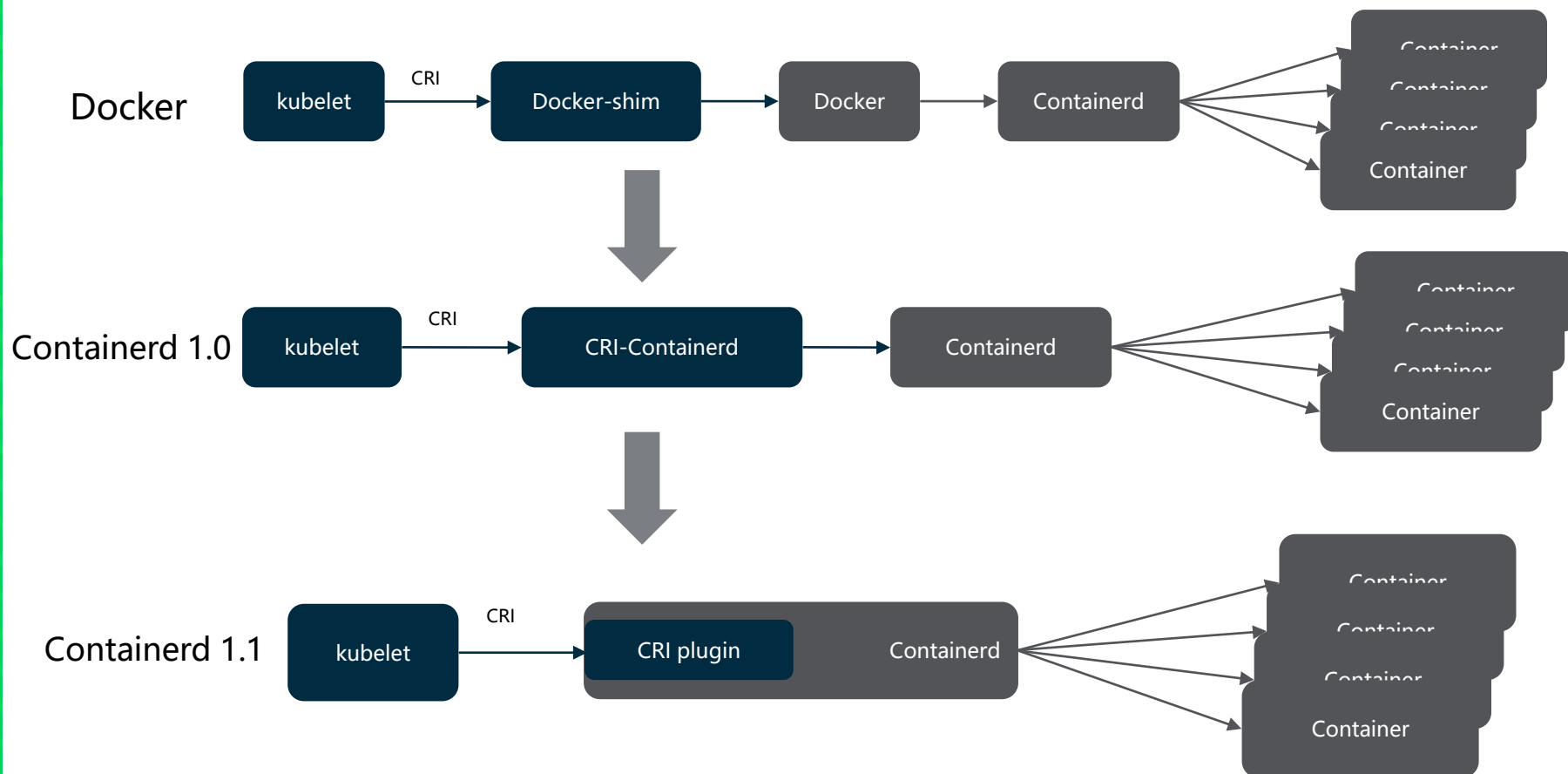
SUSE OpenStack Cloud

Deploy CaaS Platform nodes as workloads on the Cloud
Deploy new nodes via cloud images using cloud-init for config

Public Cloud

Ready to Run

容器引擎选择: Docker vs CRI-O



SUSE CaaS Platform 4

New Features



Platforms: OpenStack, VMware EXSi



Running On: SUSE Linux Enterprise 15 SP1

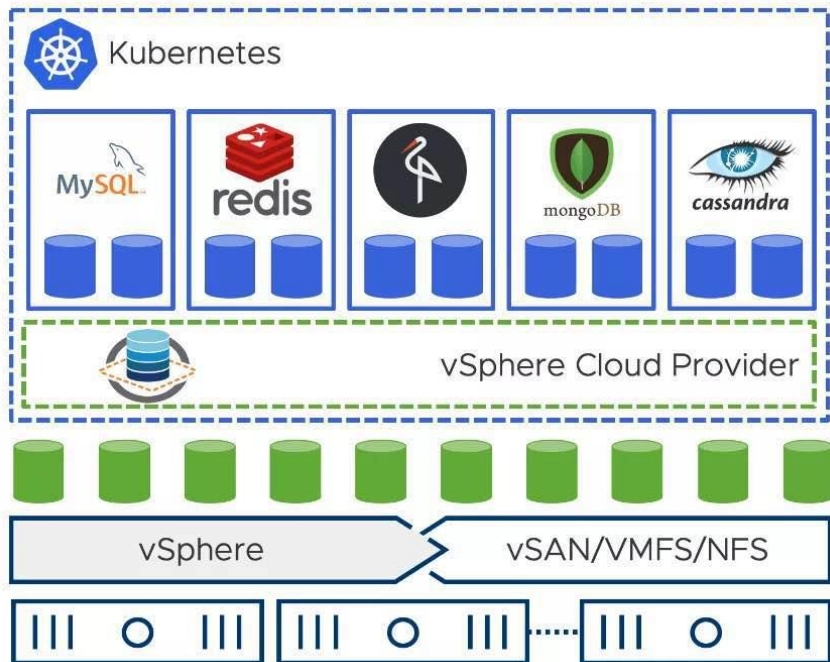


Kubernetes version update (1.14.1)

SUSE CaaS Platform 4 增强

- 提供更多的OS管理
- Kubernetes更新不需要重启集群 (组件容器化)
- 支持Kubernetes社区安装方式
- 集群规模支持5000+个节点
- 支持复杂网络
- 更方便部署容器应用
- 监控

VMware+CaaS4.0



New Virtual Machine

- ✓ 1 Select a creation type
- ✓ 2 Select a name and folder
- ✓ 3 Select a compute resource
- 4 Select storage**
- 5 Select compatibility
- 6 Select a guest OS
- 7 Customize hardware
- 8 Ready to complete

Select storage

Select the storage for the configuration and disk files

VM Storage Policy: Datastore Default

Name	Capacity	Provisioned	Free	Type
3PAR	5.37 TB	116 TB	4.73 TB	VM
jazz14	178.75 GB	973 MB	177.8 GB	VM
jazz15	365 GB	974 MB	364.05 GB	VM
jazz16	551.25 GB	975 MB	550.3 GB	VM
jazz19	499.75 GB	1.29 GB	498.46 GB	VM
jazz20	499.75 GB	3.49 GB	496.26 GB	VM
jazz22	499.75 GB	41.29 GB	458.46 GB	VM
VMWARE	243.98 GB	62.65 GB	181.33 GB	NF

Compatibility

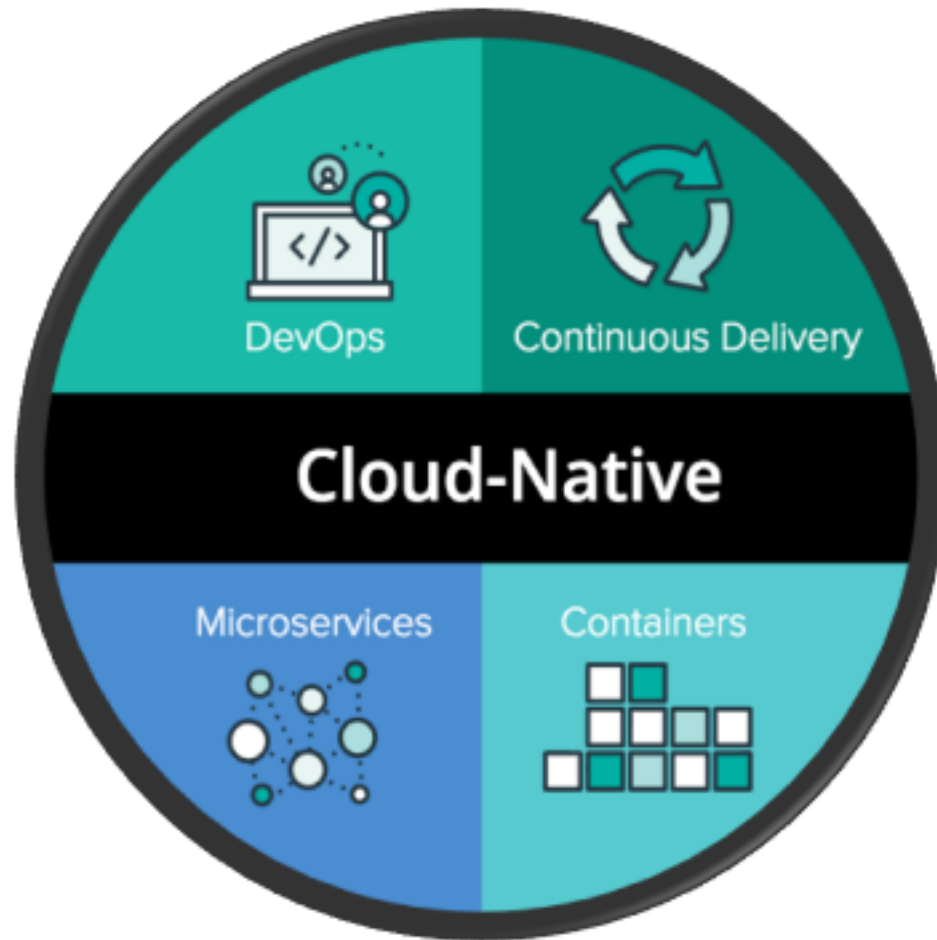
✓ Compatibility checks succeeded.

CANCEL

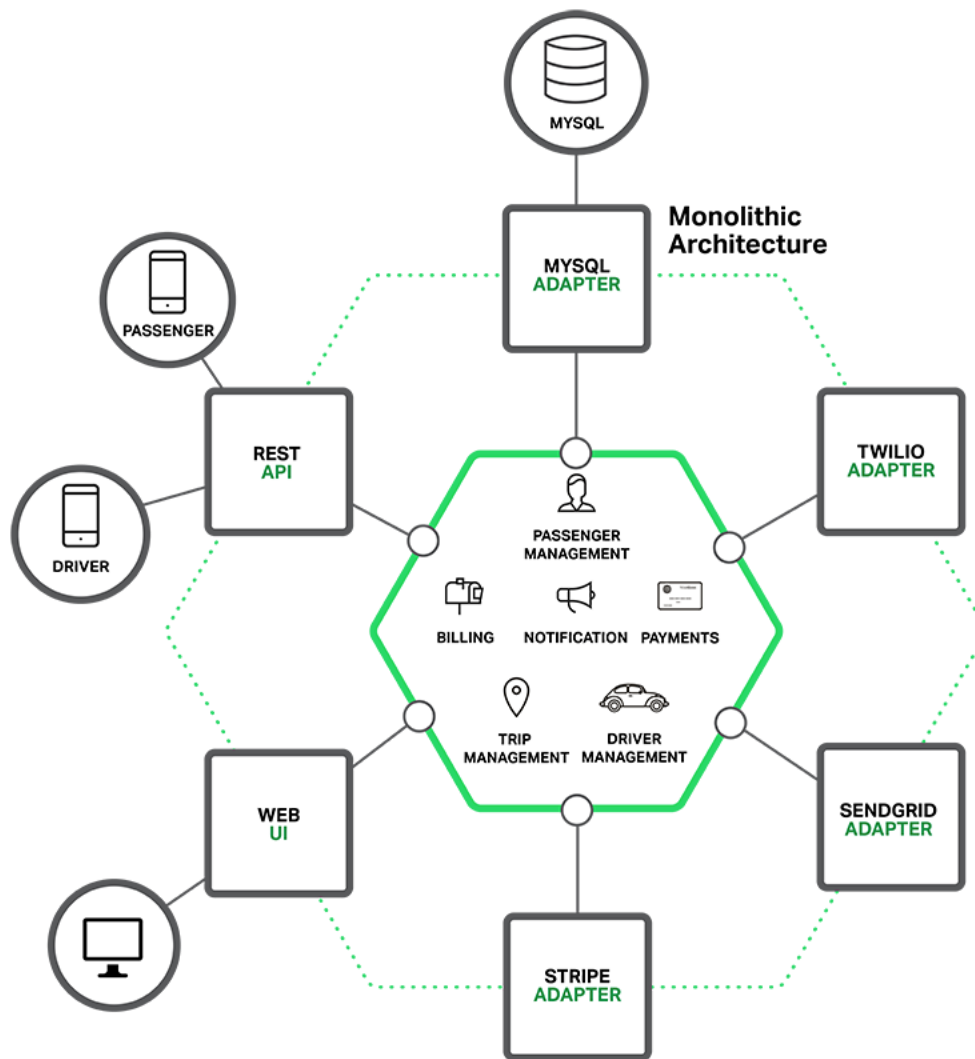
BACK

NEXT

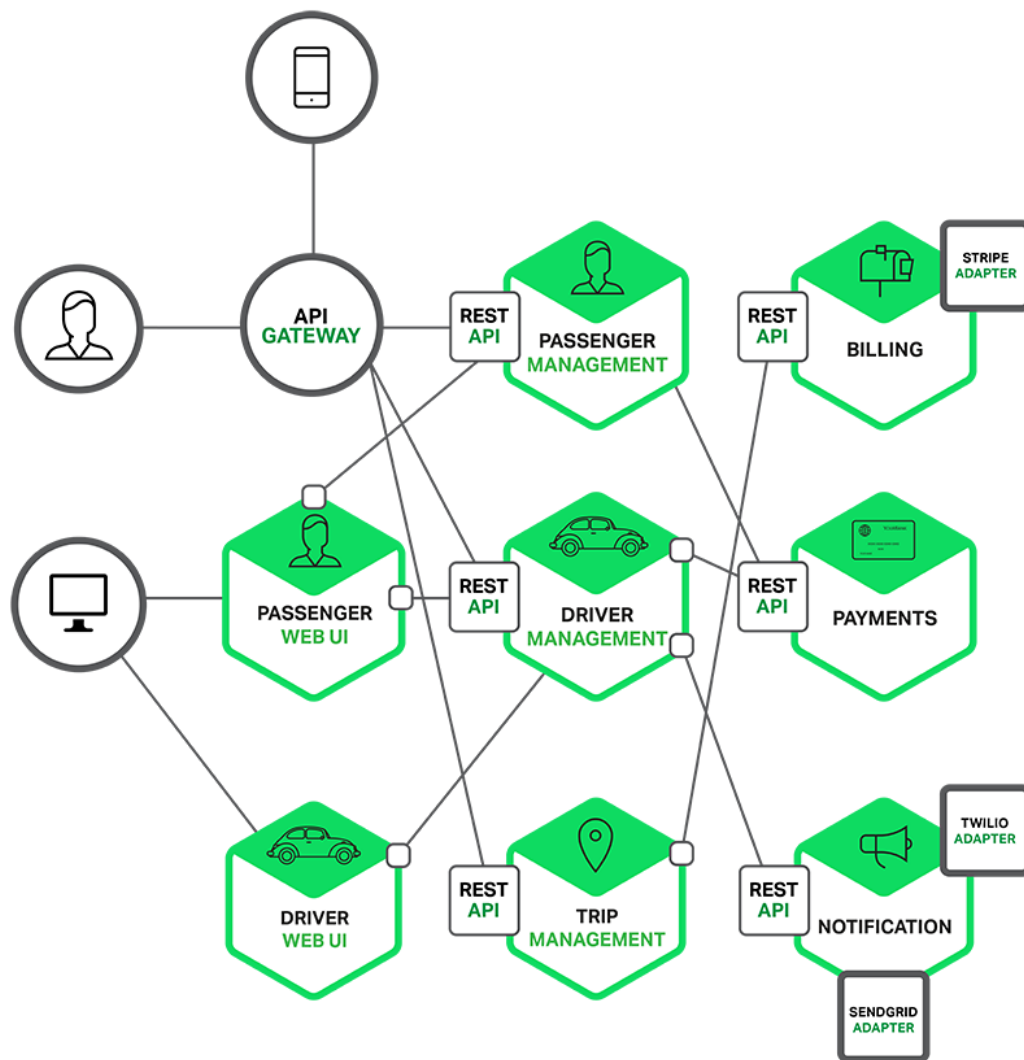
云原生应用 Cloud Native



传统（一体化）方式

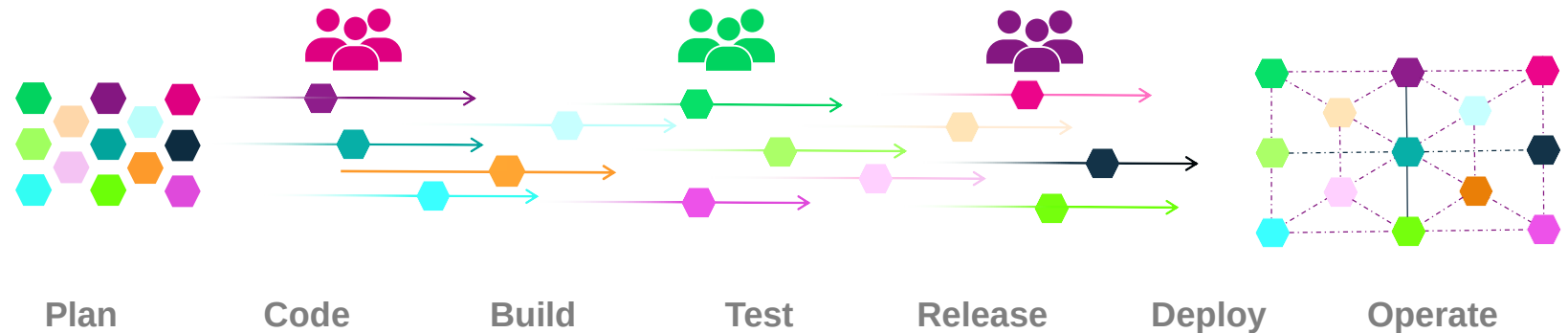


更好的方法... 微服务架构



Build and Deliver Cloud Native Applications

Increase agility with Microservices



Smaller Codebase + Specialized Teams + Deconstructed Services = *Agile IT*
= Opportunity!

SUSE CaaS 平台

微服务部署示范



Cluster

Namespaces

Nodes

Persistent Volumes

Roles

Storage Classes

Namespace

hongkong ▼

Overview

Workloads

Daemon Sets

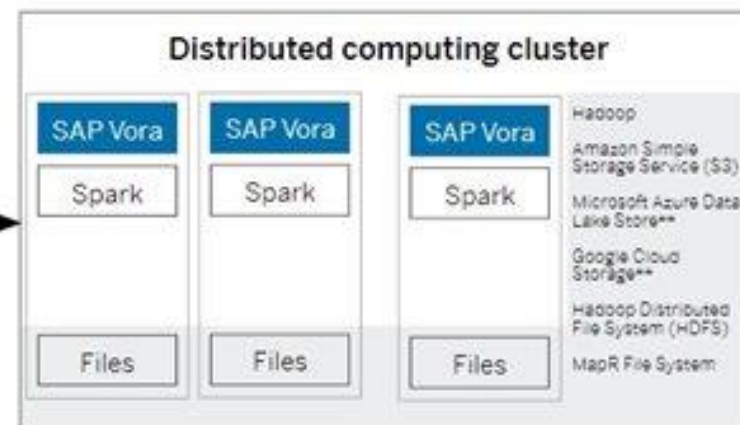
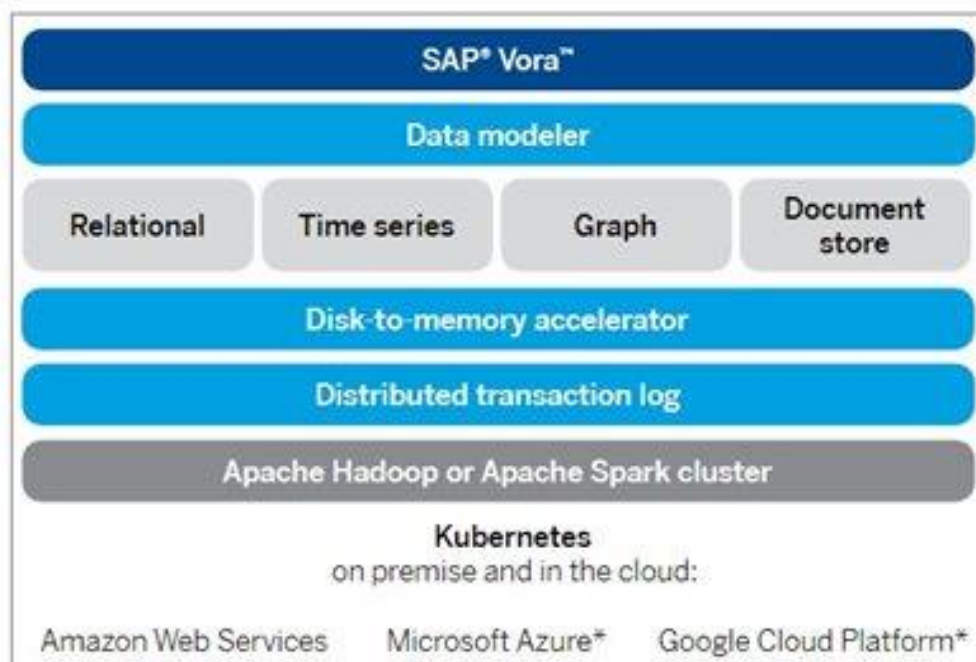
Deployments

Jobs

Pods

SUSE CaaS 平台 和 SAP 大数据分析 解决方案

SAP 处理大数据的架构



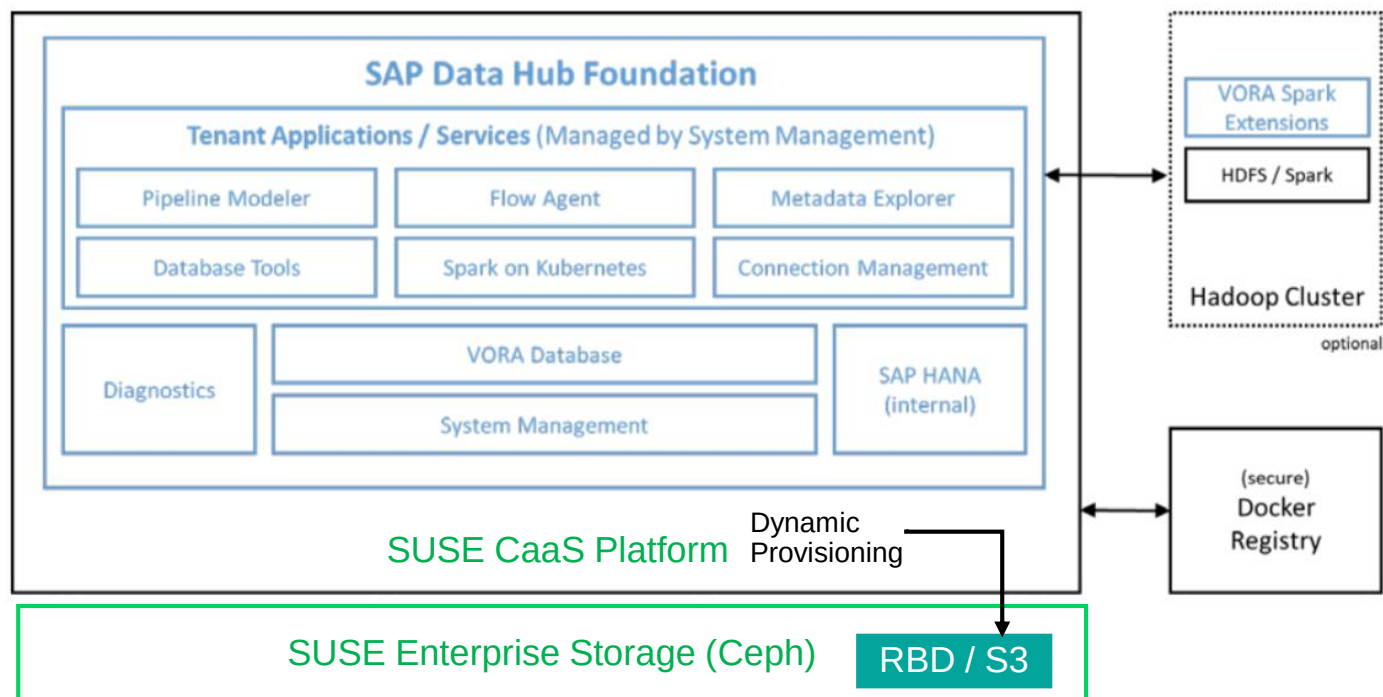
*Support for Microsoft and Google planned for the 2.1 release, not the current 2.0 release

**Support planned starting from the SAP Vora 2.1 release

大数据分析解决方案

SAP DataHub 运行在SUSE CaaS Platform

SAP DataHub 提供了一种简单、可扩展的方法来管理数据,并集成、处理和管理数据。



✓部署时间减少 75%

SUSE CaaS 平台合作伙伴

安全/监控



区块链



大数据



编排



存储/网络

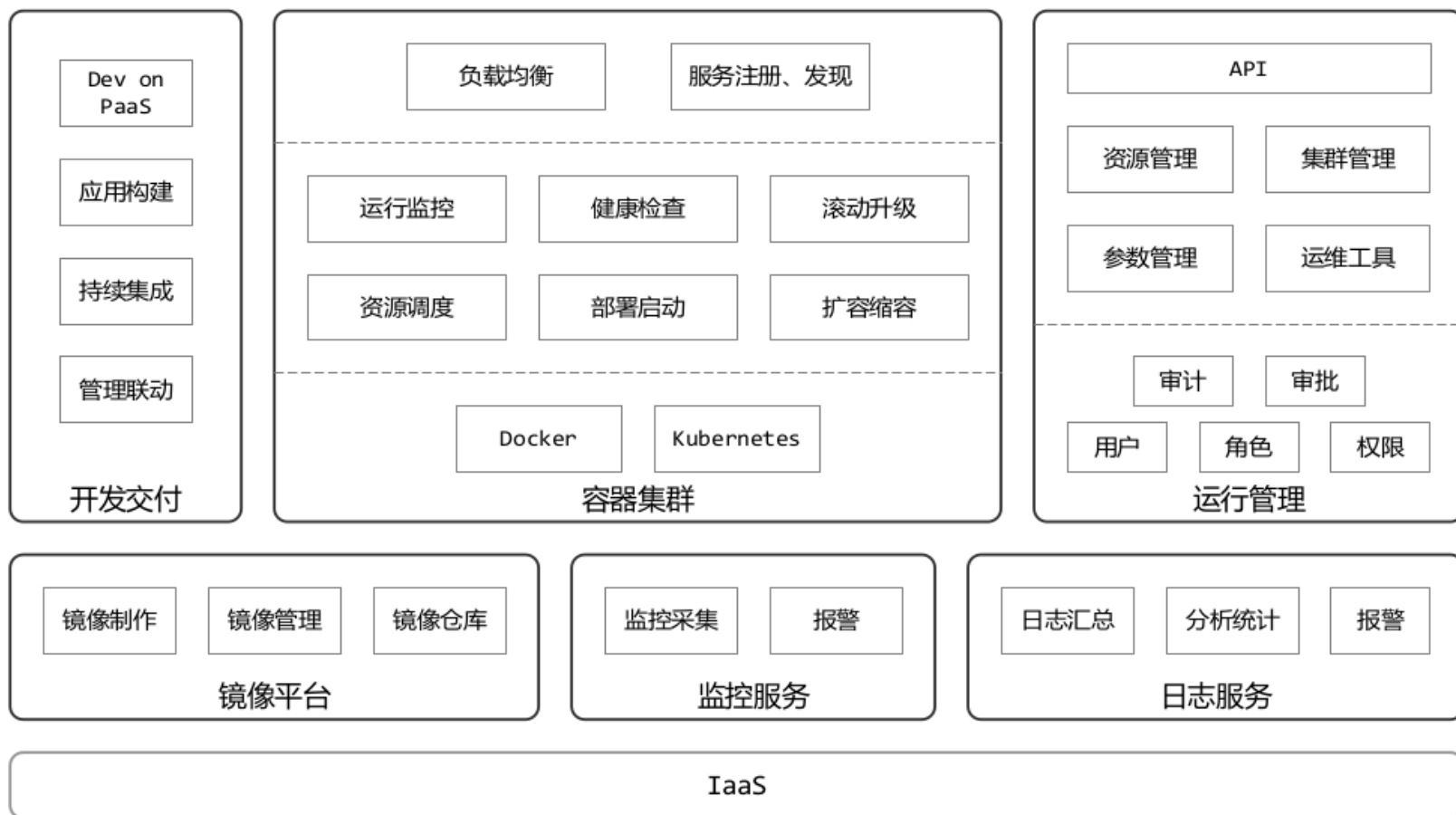


CI/CD



容器平台 = PaaS 平台?

某大型金融企业PaaS平台



Kubernetes 面向IT 操作员, 而不是开发人员



Kubernetes
= IT 灵活性



Cloud Foundry =
开发人员工作效率

SUSE致力于Cloud Foundry

作为Cloud Foundry的长期支持者，SUSE以多种方式对项目及其基金会做出贡献：

- Cloud Foundry基金会的白金会员
- SUSE云应用平台是经认证的版本
- CF容器化的发起者和项目领导者
- Stratos的发起者和项目领导者
- Eirini项目的早期采用者和影响者



CLOUD FOUNDRY

提高开发人员的工作效率 = 提高投资回报率

Cloud Foundry Users Save



10 WEEKS



\$100,000

on average per application development cycle

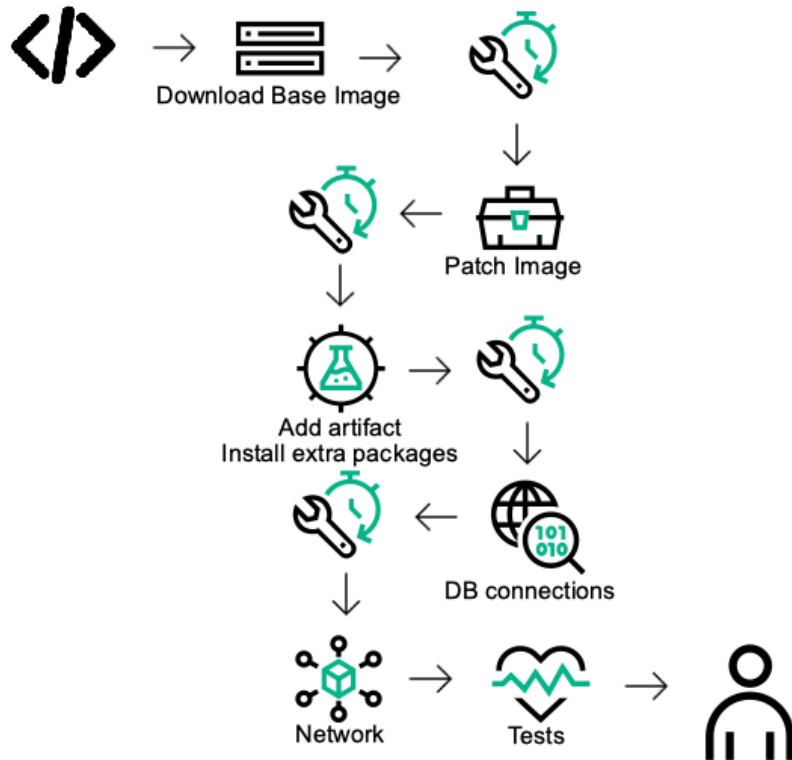
SUSE Cloud Application Platform

带来高级云原生开发人员
现代化的K8S 基础设施的经验



With cloud native, time-to-market is accelerated

Before

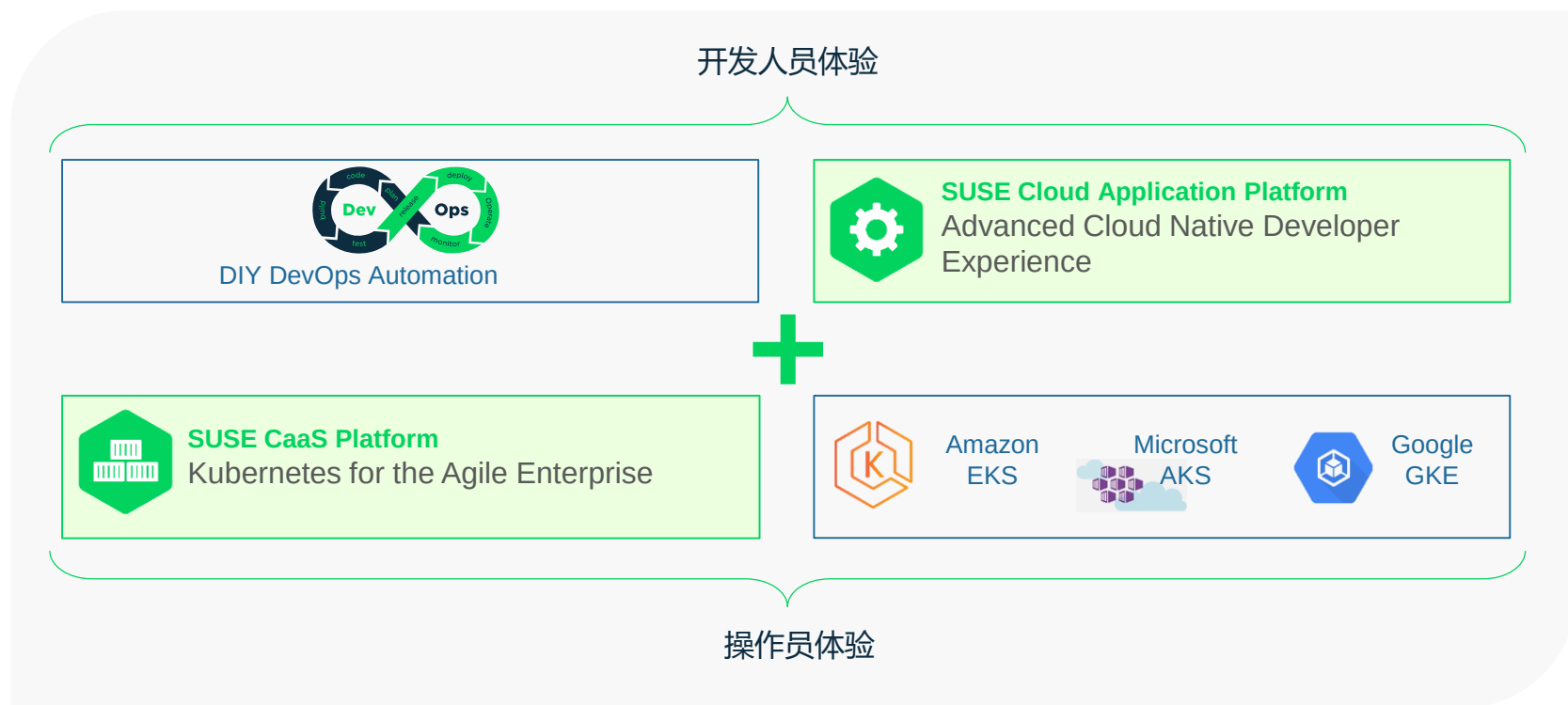


After

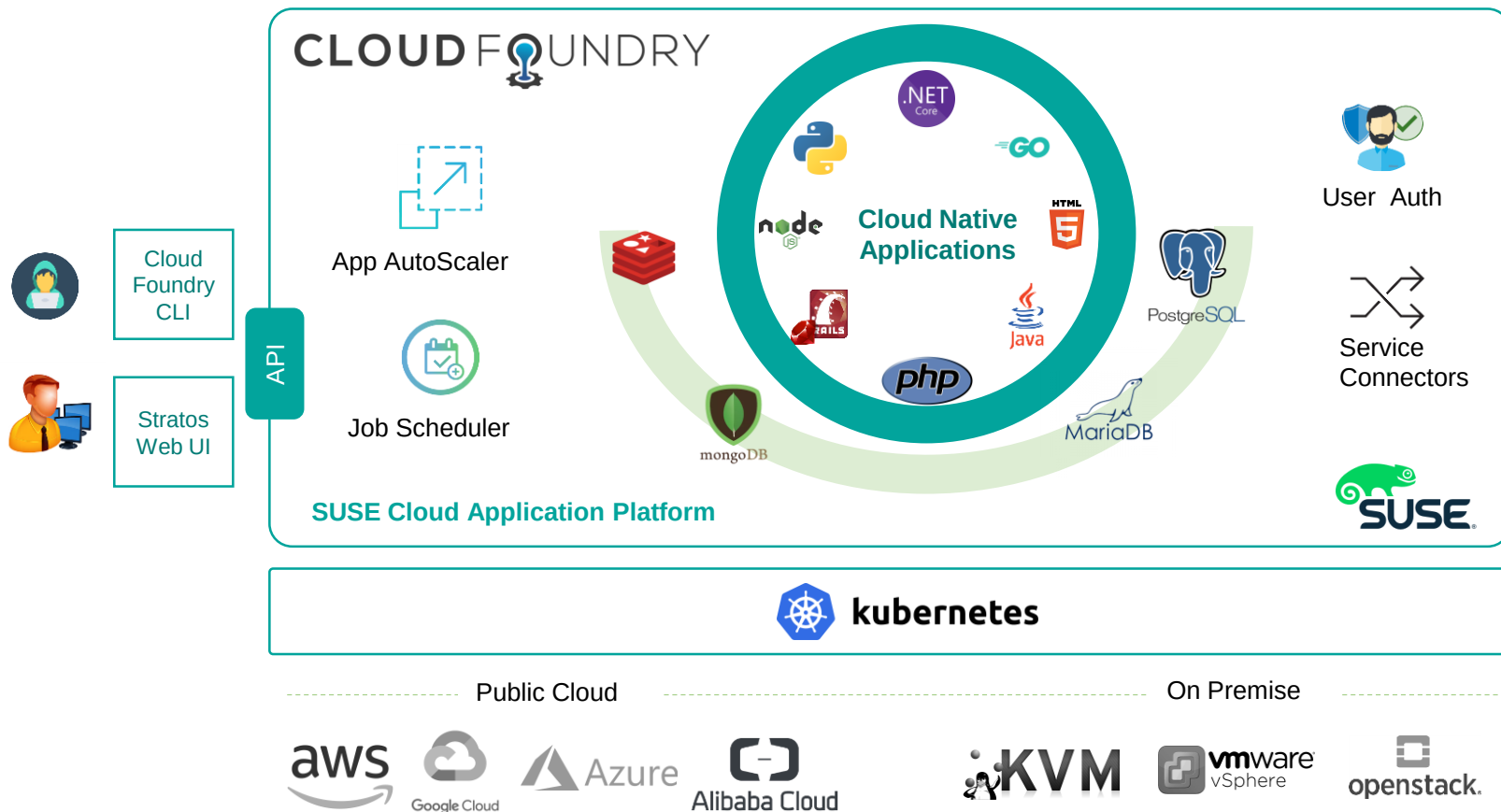
> cf push

模块化 K8S 解决方案架构

灵活的包装,满足您的需求

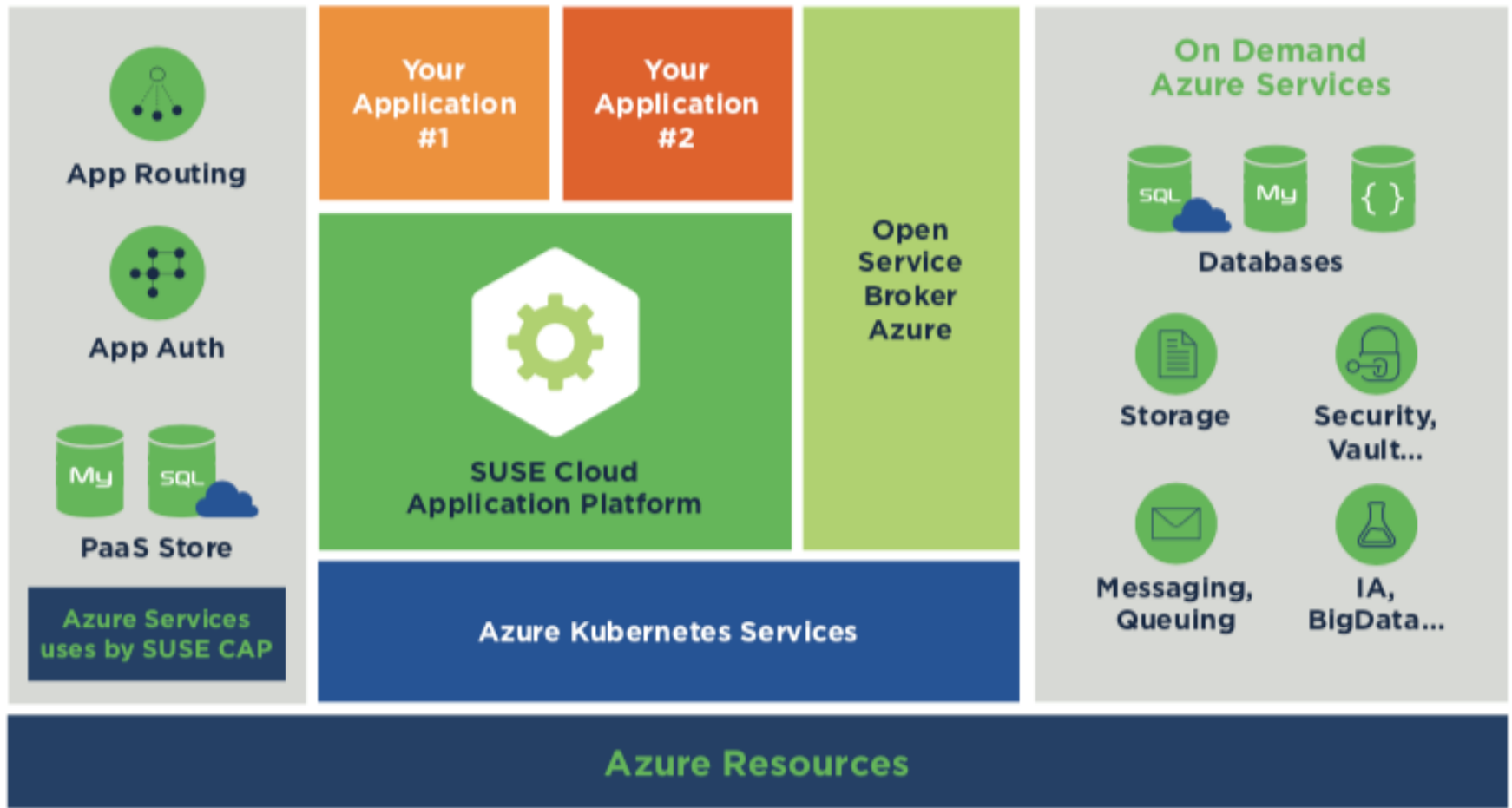


SUSE Cloud Application Platform 架构图



SUSE CAP – 公有云部署

Azure开放服务代理 / 云提供商集成



SUSE Cloud Application Platform



Platform-as-a-Service (PaaS)

Turbo-charge application development

Based on the Cloud Foundry project



Cloud Foundry Projects SUSE is involved in



packages Cloud Foundry Application Runtime (CFAR) as containers instead of virtual machines, allowing CFAR to be deployed to Kubernetes



enables pluggable scheduling for CFAR (allows operators to choose whether CFAR should use Diego or Kubernetes to orchestrate application container instances)



a web-based UI for managing Cloud Foundry. It allows users and administrators to both manage applications running in the Cloud Foundry cluster and perform cluster management tasks

SUSE Cloud Application Platform

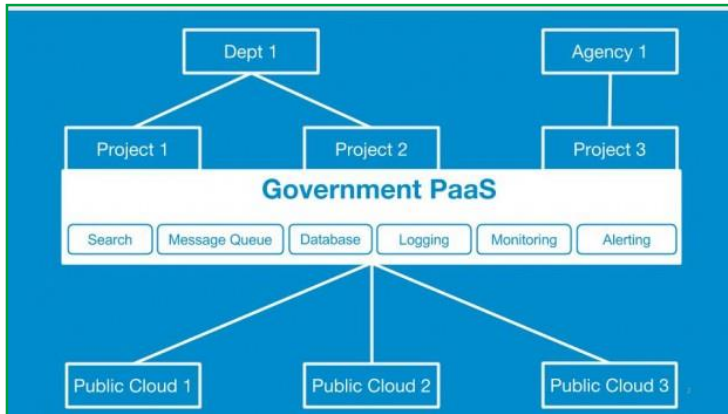
管理示范





案例研究

Bundesamt für Informatik und Telekommunikation (BIT)



瑞士联邦IT服务提供商

数千名开发人员为政府部门提供 30 多个应用

<https://www.bit.admin.ch>

问题

应用推出时间缓慢 - 推出需要数月或数年

非标准部署 - 操作复杂且维护成本高昂

影子 IT - 在不符合要求的云中运行应用,这会带来安全和泄露私隐问题。

解决方案

SUSE Cloud Application Platform 作为政府云原生 PaaS 平台

结果

提高开发人员的工作效率

更快的应用推出时间 - 应用程序推出/更新周期只需数天时间

节省成本并简化操作

今天还有谁在使用Cloud Foundry?

汽车制造



物联网



政府部门



金融



医疗



保险



电信



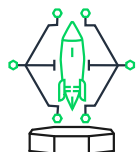
零售



SUSE Cloud Application Platform



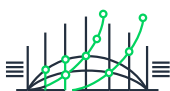
现代应用程序交付平台,为 Kubernetes 带来高级云原生开发人员体验。
SUSE 云应用平台通过帮助企业实现:



提高开发人员的工作效率: 使用最适合任务的语言和框架
轻松部署云本机应用程序



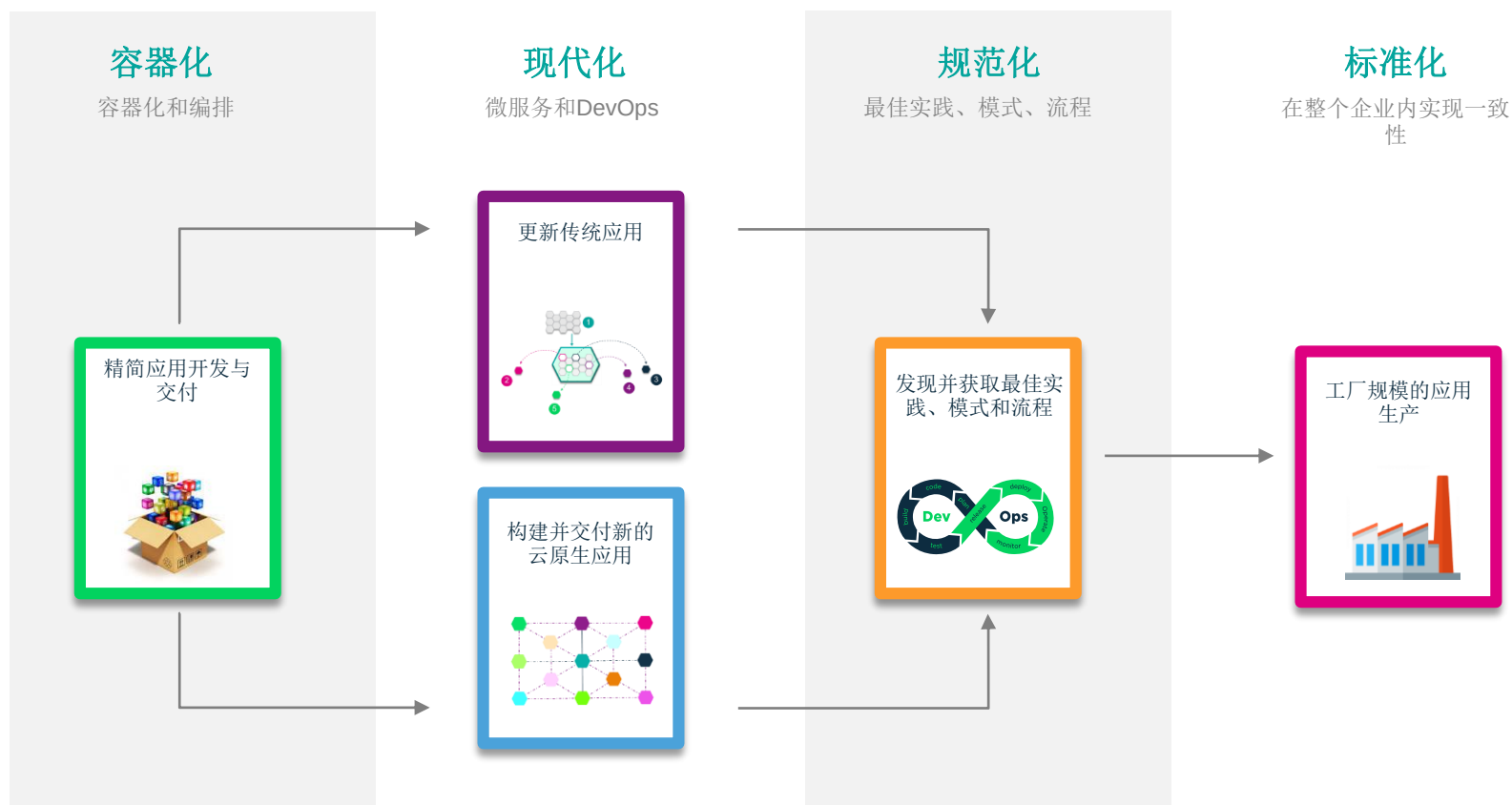
降低复杂性,提高 IT 效率: 借助精益平台实现大规模快速应用程序交付



最大化投资回报率: 利用业界领先的开源技术,利用您现有的投资

总结

应用交付转型之路



SUSE应用交付解决方案

加快容器化应用的开发和部署，以加速应用交付并提高业务敏捷性



SUSE CaaS平台
容器管理



SUSE云应用平台
平台即服务



利用**Kubernetes**打造敏捷性企业

最好的Kubernetes操作员体验



先进的云原生开发人员经验

增强Kubernetes生产力的能力经过验证

SUSE: 支撑数字化转型



关键业务应用



机器学习



物联网



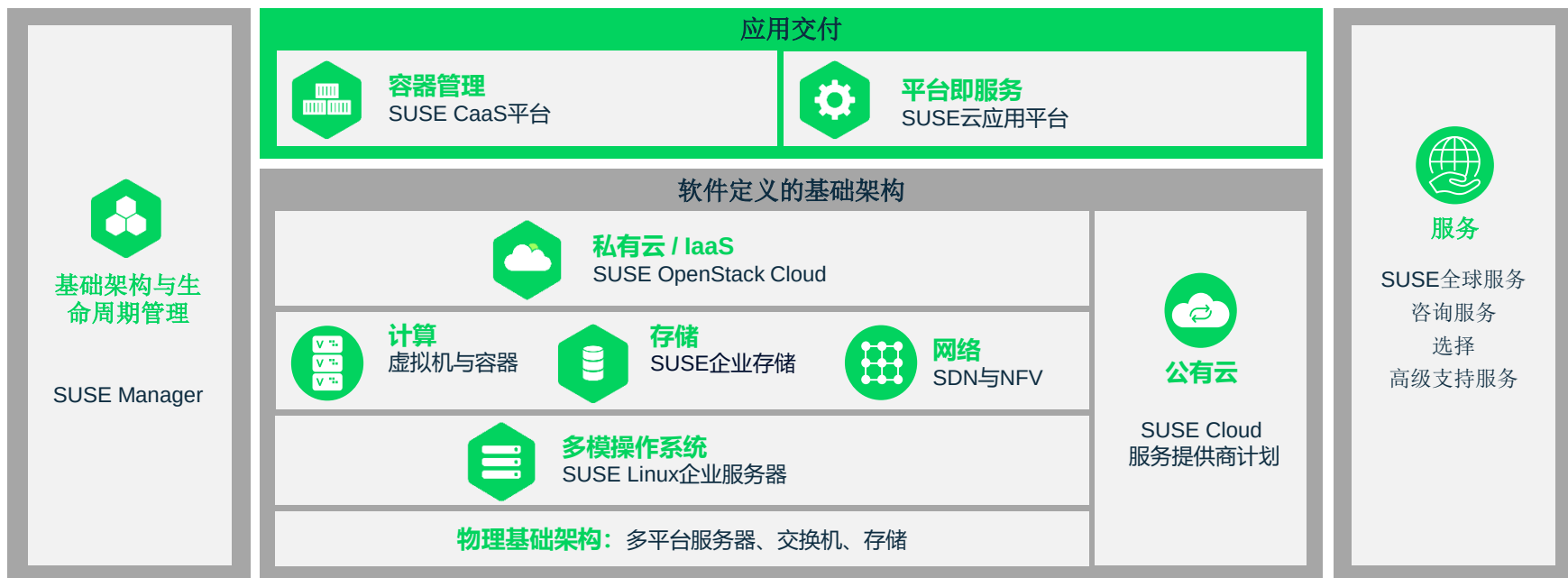
业务分析



高性能计算



传统IT与应用



开放、安全、经过验证



THANKS

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