Kubernetes
Crossing the Chasm

01.10.2018

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Diffusion of Innovation

Early Market

- Innovators: 2.5%
- Early Adopters: 13.5%
- Early Majority: 34%

Mainstream Market

- Late Majority: 34%
- Laggards: 16%
Diffusion of Innovation

Early Market

THE CHASM

Whole Product Solution

Mainstream Market

Minimum Feature Set

Innovators 2.5%

Early Adopters 13.5%

Early Majority 34%

Late Majority 34%

Laggards 16%
...25 percent of surveyed companies were using containers at some stage of deployment


50% of all companies using containers have some form of orchestration

[source: https://www.datadoghq.com/docker-adoption/]
Will Kubernetes Cross the Chasm?
Requirements to Cross the Chasm

■ Success Amongst Early Adopters
■ Existing Market
■ Competition
■ A “Whole Product”
Kubernetes: Crossing the Chasm

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Kubernetes - The Missing Pieces

- Real world examples
- Present new challenges
- How we solved them
- What can we learn?
Where and How to run Kubernetes?
Certified Kubernetes - Hosted

- Alibaba Cloud
- Amazon EKS
- Azure Container Service
- Azure
- Baidu Cloud
- 博云
- BoCloud
- 博云科技
- CIO
- Cisco
- EasyStack
- eBaoCloud
- eKing Technology
- Google Kubernetes Engine
- Harmony Cloud
- Hasura
- Huawei
- IAP Cloud
- k8s.io
- Nirmata
- Oracle
- Oracle OpenCloud
- Oracle Managed Cloud Services
- Samsung SDS
- SAP
- SysEleven
- Tencent Cloud
- VMware
- ZTE

source: https://landscape.cncf.io
Certified Kubernetes - Installer

source: https://landscape.cncf.io
The Great Firewall of China

Ryan McLaughlin https://www.flickr.com/photos/thehumanaught/
The Great Firewall of China

- No access to Google domains
- AWS... ish (missing features such as Route53)
- Lack of documentation
Connecting the Clusters
Looking Back

- Not the ideal setup
- Issues with Kubernetes Federation
- Other Options?
Kubernetes: Crossing the Chasm

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Diagram:
- Installation
- Configuration
- Customization
- Integration
- Training
- Maintenance and Support
- Distribution and Delivery
- 3rd-party Add-ons

Kubernetes
From Traditional Enterprise to Cloud Native.
‘Standard’ Cloud Native Migration

- Monolith to Microservices
- Containerize everything
- Dynamic orchestration
- How to deliver software?
The package manager for Kubernetes

Helm is the best way to find, share, and use software built for Kubernetes.
Benefits

- Vastly improve the upgrade process
- A ‘new’ model for enterprise software
- Kubernetes as O/S
KUBERNETES

Distribution and Delivery
3rd-party Add-ons
Installation
Customization
Integration
Training
Maintenance and Support
Configuration
Challenges

- High Security
- Self hosted
- Private internal network
- No buy in from wider organisation
This is fine.
Steps to a Successful Cloud Migration

1. Move to the Cloud
2. Automation
3. Culture
4. Microservices
5. Containerization
6. Orchestration

Source: https://container-solutions.com/when-is-the-wrong-time-to-use-kubernetes/
Looking Back

- Look at the why
- Enforce the pre-requirements
- Build in security
- On premise is a real use case
Looking Back

- Look at the why
- Build in security
- On premise is a real use case
- PaaS often a good option
More Challenges?

- Support for Windows
- Integration with Legacy/Vendor Software
- Hybrid Cloud
- Security - Access Control
- ???
TOOLING

ADOPTION

USE CASES
Will Kubernetes Cross the Chasm?
When Will Kubernetes Cross the Chasm?
Thanks.
Other resources

Webinar
https://info.container-solutions.com/recording-webinar-crossing-the-chasm

Whitepaper
https://info.container-solutions.com/whitepaper-kubernetes-crossing-the-chasm