Linda Mohamed

From ClickOps to DevOps and Beyond – How IT Evolved
What you can expect today

Agenda

The history of IT Infrastructure

The benefits of IaC

The DevOps movement

The future of automation
Your speaker today

Linda Mohamed

Background in Software Development

Specialized in Cloud Technologies & AI/ML

Graduated in Informatics

Studied Business Informatics

Principal Consultant / Head of AWS @EBCONT
AWS Community Hero

Other than that, I am...

→ … in love with juggling
→ … very impatient
→ … a process nerd
What do you think about when you hear the term "DevOps"?

Wordcloud Poll  📋 47 responses  🧑‍💻 30 participants

- Administrative work
- Build pipelines
- Dead
- developer experience (DX)
- administrator
- sya admin
- cloud
- Scarce
- Travis
- fix my problems
- yaml
- Pipelines
- Jenkins
- Ci/cd
- Server
- trial and error
- mental load
- keeping programmers happy
- K8
- Azure
- Platform setup
- gitlab
- CI CD
- acceleration
- Release
The history of IT Infrastructure
What happened since the 90s?

~30 years of IT Infrastructure

1990
World’s first web server created

1998
Google started its first server

1999
VMWare launched virtualization

2005
Automation with Puppet started

2006
AWS launched first cloud services

~2008
The DevOps movement started
The DevOps Movement
What were the key triggers for the DevOps movement?

The DevOps movement

- DevOps promotes **collaboration** for **faster deployment**
- **IaC** reduces errors and enables version control
- **CI/CD** enables faster **feedback loops**
- **Logging** and monitoring helps to identify issues easier
- **Automation** and efficient resource usage lead to **cost savings** and **scalability**

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- AWS CodeBuild
- AWS CodeCommit
- AWS CodeDeploy
- AWS CloudFormation
- Amazon CloudWatch
- AWS CloudTrail
- AWS Config
- AWS X-Ray
Infrastructure as Code
The benefits of IaC

- Consistency and repeatability
- Speed and agility
- Version control
- Collaboration and sharing
- Cost savings
- Scalability

AWS CloudFormation
ANSIBLE
Terraform
puppet
CHEF
IaC to improve efficiency

- Reduced human error
- Faster disaster recovery
- Improved scalability
- Increased agility
- Improved testing and validation
- Better compliance
## The maturity phases of automation with IaC in the cloud

### Stages of automation

<table>
<thead>
<tr>
<th>Stage One “Click-Ops”</th>
<th>Stage Two “Script”</th>
<th>Stage Three “Commit”</th>
</tr>
</thead>
<tbody>
<tr>
<td>→ Everything is done directly in the console</td>
<td>→ Usage of IaC to create resources</td>
<td>→ Deployment of resources can only be done with the pipeline</td>
</tr>
<tr>
<td>● Manual Best Practices</td>
<td>● Automated Controls</td>
<td>● Continuous Deployment</td>
</tr>
<tr>
<td>● Static Workloads</td>
<td>● Evolving Workloads</td>
<td>● Dynamic Workloads</td>
</tr>
<tr>
<td>● Release 1x per month</td>
<td>● Release &gt;10x per month</td>
<td>● Release &gt;100x per month</td>
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</tbody>
</table>
What do you think will be the next big thing after DevOps?

Wordcloud Poll  🗳️  8 responses  🗳️  8 participants

Platform Engineering  🌟

AI Admins

OpsDev  MLOps

MLDevSecOps
How could the future of automation look like?

The future of automation

- **Budget Actions** to shutdown not needed non-production infrastructure
- **Serverless Computing** to completely cut costs of idle servers
- **Artificial Intelligence** to automate resource allocation and capacity planning
- **Cloud Management Platforms** to manage infrastructure across multiple clouds
- **Resilience Hub** to define, validate and track the resilience of your applications on AWS
- **Democratization** of deployments

Platform Engineering?!
Your speaker today

Linda Mohamed

Principal Consultant / Head of AWS @EBCONT
AWS Community Hero

Questions?

Contact me on LinkedIn!

or email me:

linda.mohamed@ebcont.com