



Azure DevOps 101

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Getting started with DevOps

DevOps 101

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Cloud Lunch and Learn – 6th November 2020


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About Me

- Senior Technical Consultant
- Microsoft MVP – Azure
- DevOps Ambassador at DevOps Institute
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- Blog: <https://m12d.com/>
- Podcast: <https://anchor.fm/devops-squared>



A row of colorful pencils is shown against a light gray background. One purple pencil stands significantly taller than the others, which are arranged in a single row. The colors of the pencils include various shades of purple, pink, red, orange, yellow, green, blue, and black.

DevOps is the union of people, process, and products to enable continuous delivery of value to our end users

What is the goal of DevOps?



Deployment Frequency

We must change the way we encourage people and deliver value to our end users. When developers and operations start focusing on the same goals, they start working together.



Faster Time to Market

In order to work together, you need to adopt some processes for continuous collaboration, such as; plan, develop, release, monitor, and finally, repeat.



Lower Failure Rates

Culture is all about understanding between developers and operations, sharing responsibility for what they build. That means increasing transparency, communication, and collaboration across development, operations and the business.



Shorter Lead Times

In DevOps, technology plays a small but vital part in ensuring processes can be automated.



Improve Recovery Time

The ability to recover from failures faster is key in reducing the impact of failure, Mean Time to Resolution or MTTR is a key metric in DevOps.

What are the values of DevOps?



People

We have to change the way we encourage people and deliver value to our end users. When developers and operations start focusing on the same goals, they start working together.



Process

In order to work together, you need to adopt some processes for continuous collaboration, such as; plan, develop, release, monitor, and finally, repeat.



Culture

Culture is all about understanding between developers and operations, sharing responsibility for what they build. That means increasing transparency, communication, and collaboration across development, operations and the business.



Technology

In DevOps, technology plays a small but vital part in ensuring processes can be automated.

What are the challenges DevOps solves?

- Dev is often unaware of QA and Ops roadblocks
- QA and Ops are typically working across many features and have little wider context
- Each group has opposing goals that lead to inefficiency

The phases of DevOps maturity



Waterfall

Development teams write code for a period of time. Then those teams merge their code in order to release it. So many changes have been made that the actual integration could take months because the code now looks so different.



Continuous Integration

Continuous integration (CI) is the practice of quickly integrating newly developed code with the main body of code to be released. This saves time when the team is ready to release. The process is usually automated and produces a build artefact.



Continuous Delivery

Continuous delivery (CD) is an extension of CI and sits on top of it. When executing CD, you add additional automation and tests so that you don't just merge code, you get the code ready to deploy with almost no human intervention.



Continuous Deployment

Continuous deployment, is the most advanced state of evolution. It is the practice of deploying all the way into production without any human intervention.

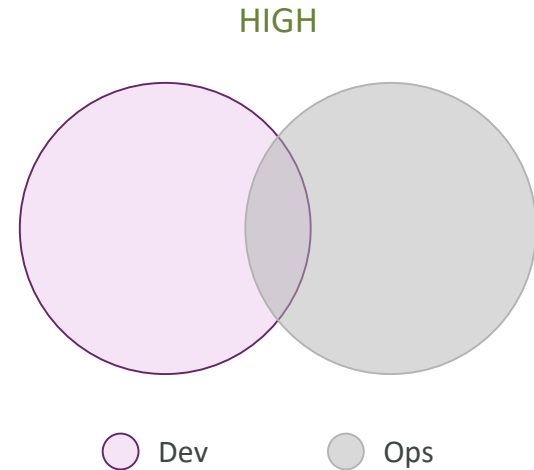
Team Topologies



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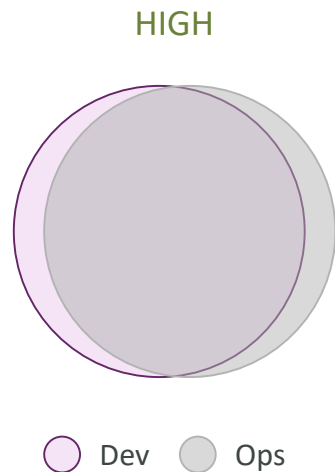
Dev and Ops Collaboration

- Often seen as the top of the ladder
- Smooth collaboration between teams
- Each teams specialize but share where needed
- Requires substantial organizational changes
- Competency higher up management
- Clearly expressed and demonstratable shared goal



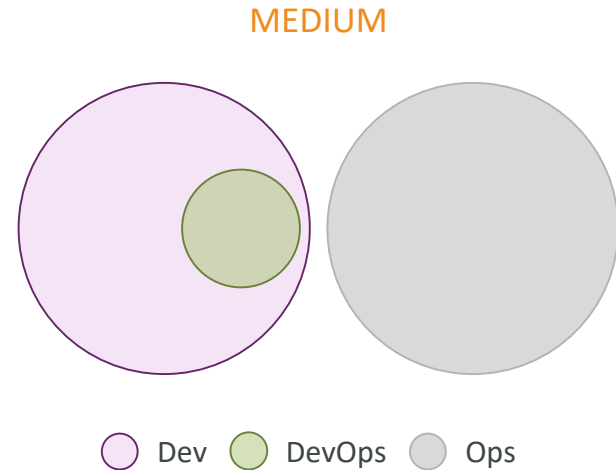
Fully Shared Responsibilities

- Ops teams integrated with product teams
- Little separation between teams
- Highly focused on a shared purpose
- A form of type 1 with special features
- Not applicable outside a narrow product focus
- Also known as NoOps



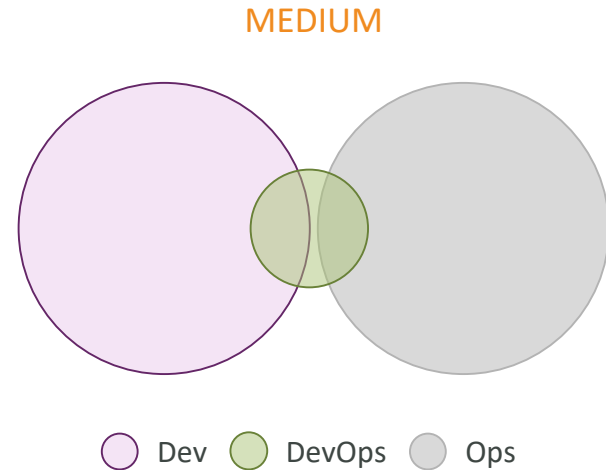
Ops as Platform

- IT Ops department which cannot or will not change
- Organisations who run in the cloud
- Ops simply provide the infrastructure
- Virtual team may act as source of expertise
- Trade effectiveness for easier implementation
- Deriving more value quicker than type 1



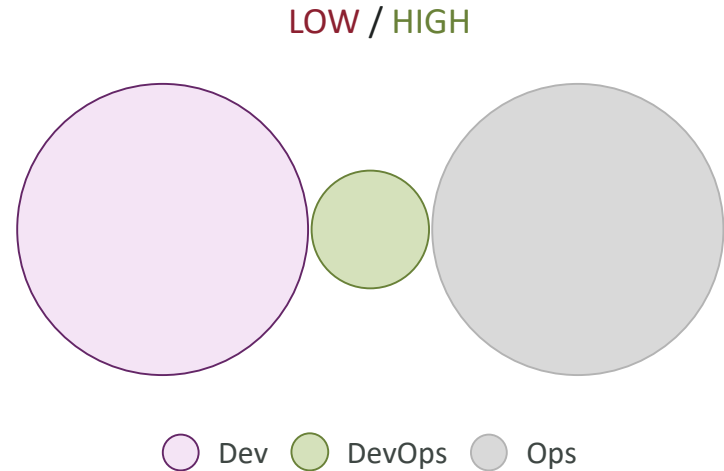
DevOps as an Service

- Useful for smaller organisations
- Without finances, experience or staff to lead
- Outsourcing to service providers
- Build environments and automate monitoring
- Useful to build to type 1 or 3



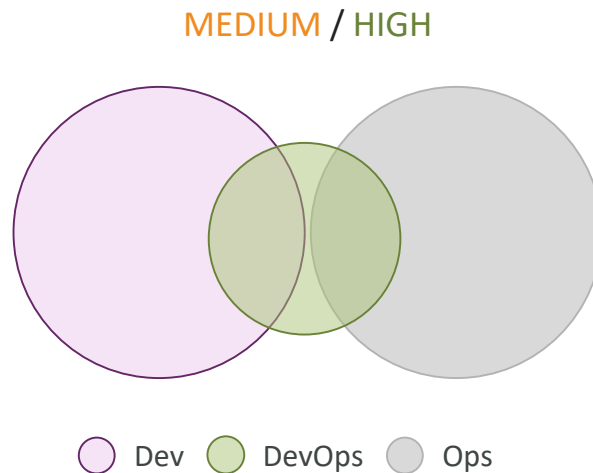
DevOps Team with an Expiry

- Temporary team with a mission
- Dev and Ops are working towards type ½
- Members shift between Dev and Ops speak
- Think about dirty details, helps bring together
- No responsibilities given to this team



DevOps Advocacy Team

- Facilitating team where a large gap exists
- Like the previous model but stays engaged
- Ongoing engagement to improve maturity
- Specific remit of collaboration and cooperation
- Help spread awareness
- General advocacy of the model



Takeaways

- DevOps is not so much about the technology
- One size of DevOps does not fit all
- You can change your model as you mature
- Principles of DevOps can apply outside of technology
- Buy in has to come from the top down
- Transformation can take months if not years

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