



2023 INTERNET2
TECHNOLOGY
exchange

Deploy Shib IDP via Azure DevOps

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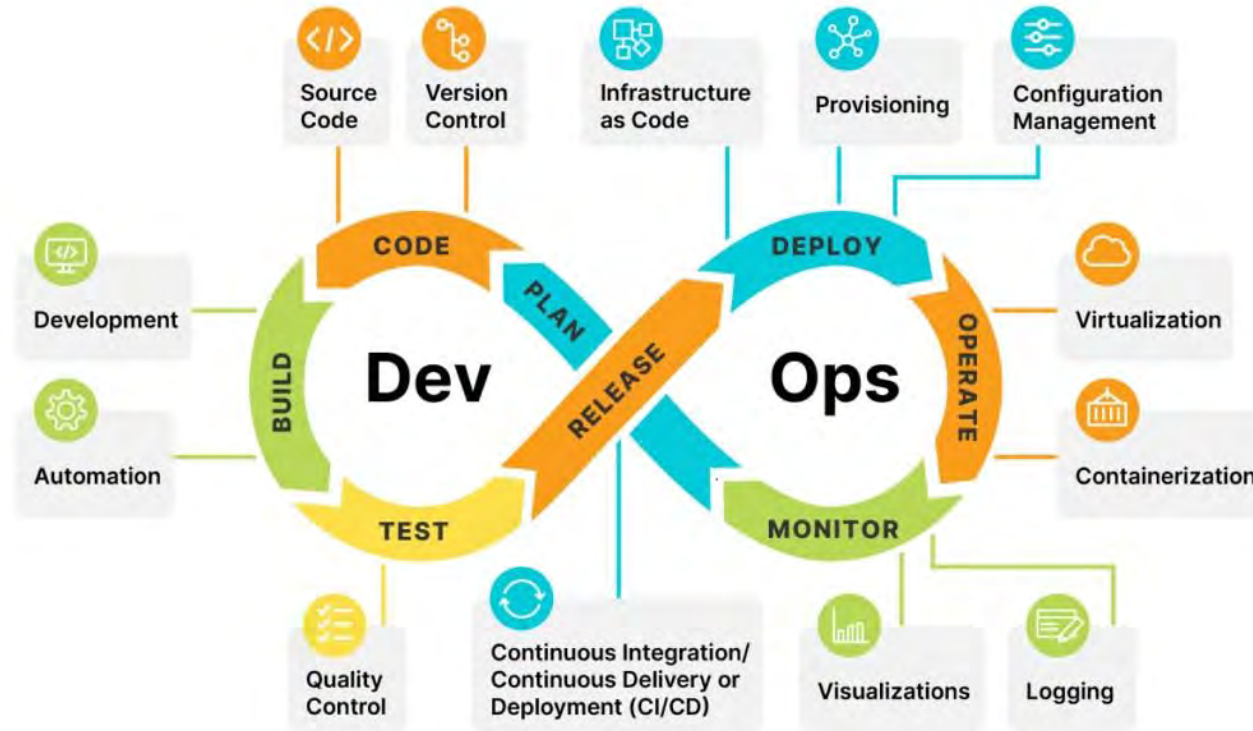
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- Configuration as Code (CAC)
- Infrastructure as Code (IaC)
- Questions

DEVOPS OVERVIEW



DevOps Overview



CONFIGURATION AS CODE

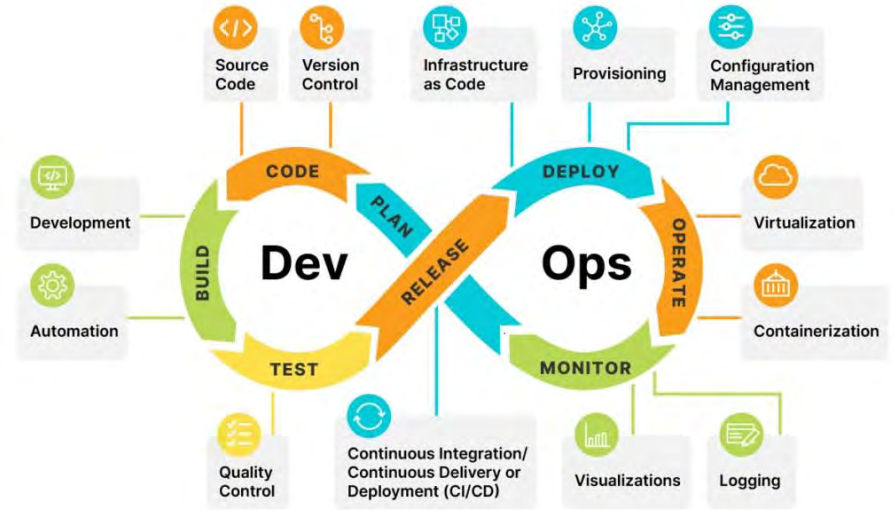


Why CaC?

- Version control
- Reproducibility
- Automation
- Consistency
- Quick recovery

CaC Shibboleth Example

- [Demo](#) (~2 minutes)
 - Simple update to 4 IDPs



INFRASTRUCTURE AS CODE



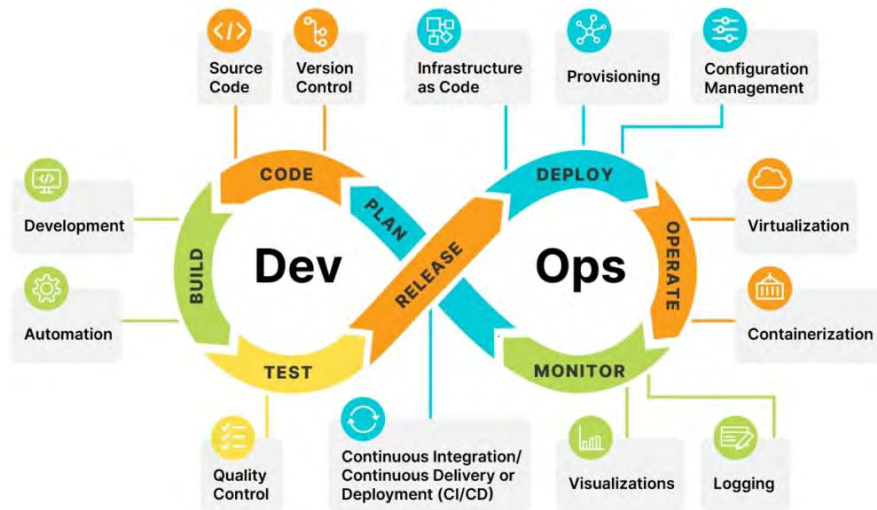
Why IaC?

- Version Control
- Reproducibility
- Automation
- Consistency
- Quick Recovery

- Security
- Cost Management
- Portability (nope)

Deploy SHIB IDP via Azure DevOps

- The project/ goals
- Demos
- Lessons learned
- Next steps



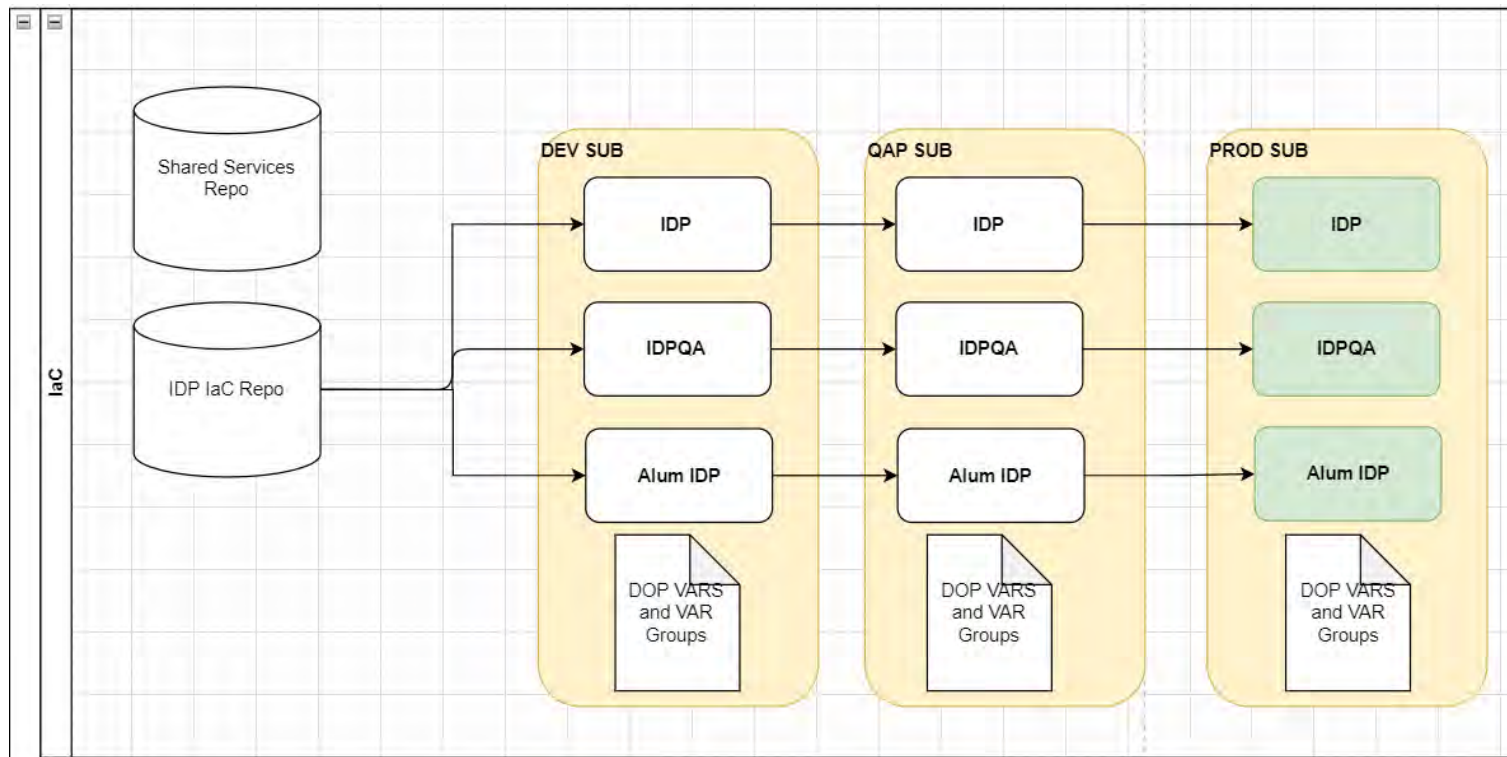
The Project

Migrate the authentication stack to Azure containers, while maintaining seamless configuration updates through CI/CD. Enhance the management of CAS and Shibboleth service registry by transitioning to cloud storage and employ CI/CD for streamlined software version updates.

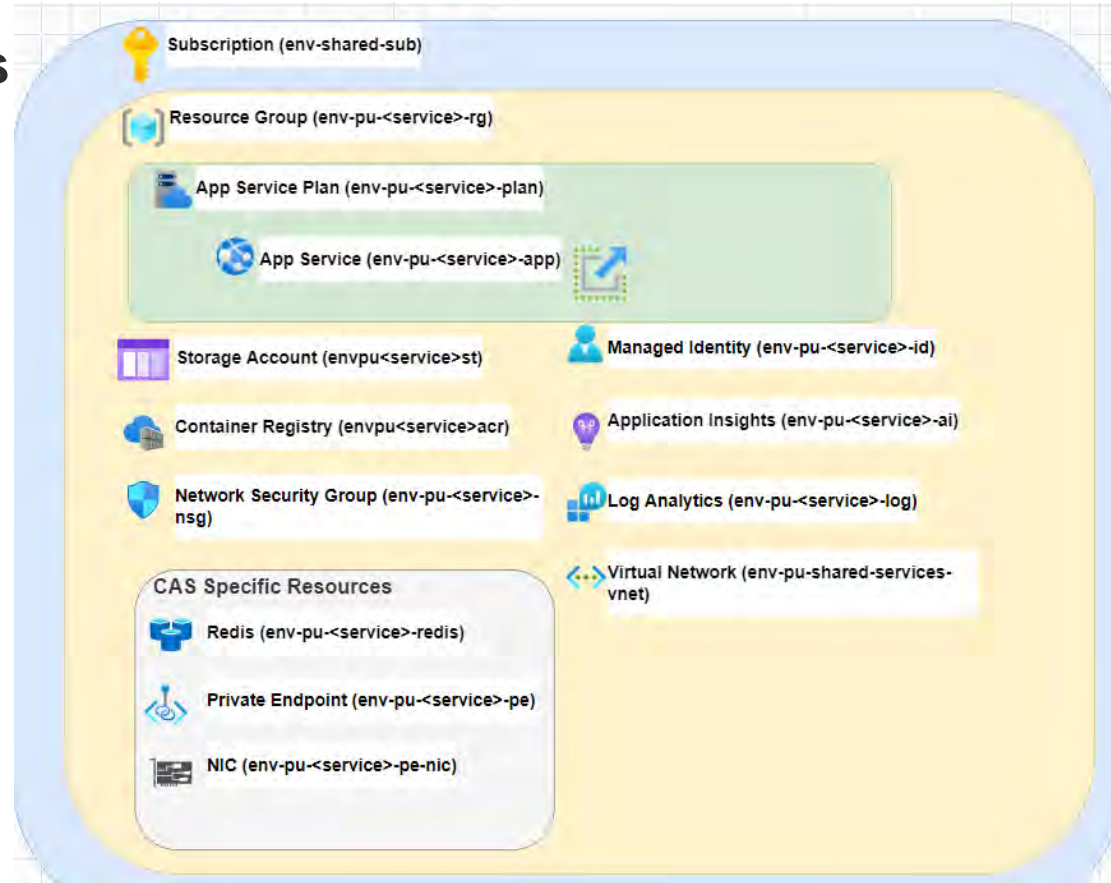
Goals

1. IaC everything
2. Update regularly
3. Automate service updates
4. Scalability
5. Reduce complexity

DevOps IaC

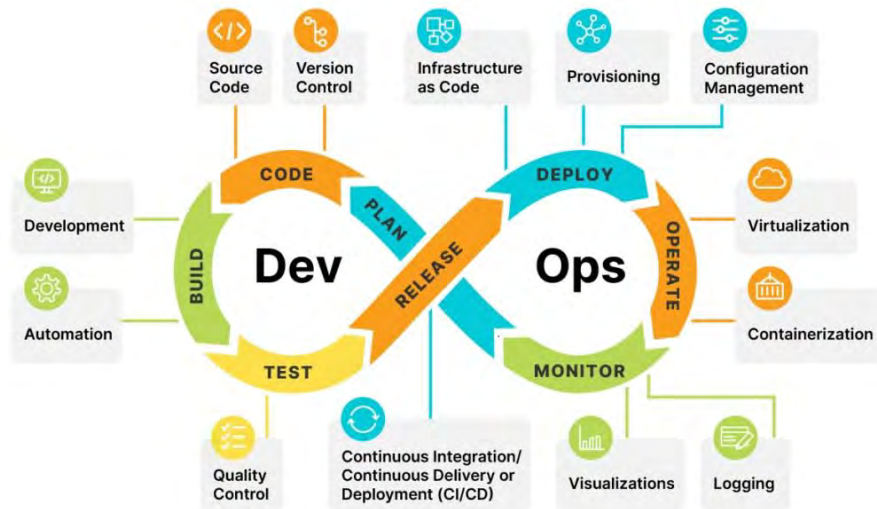


Azure Resources

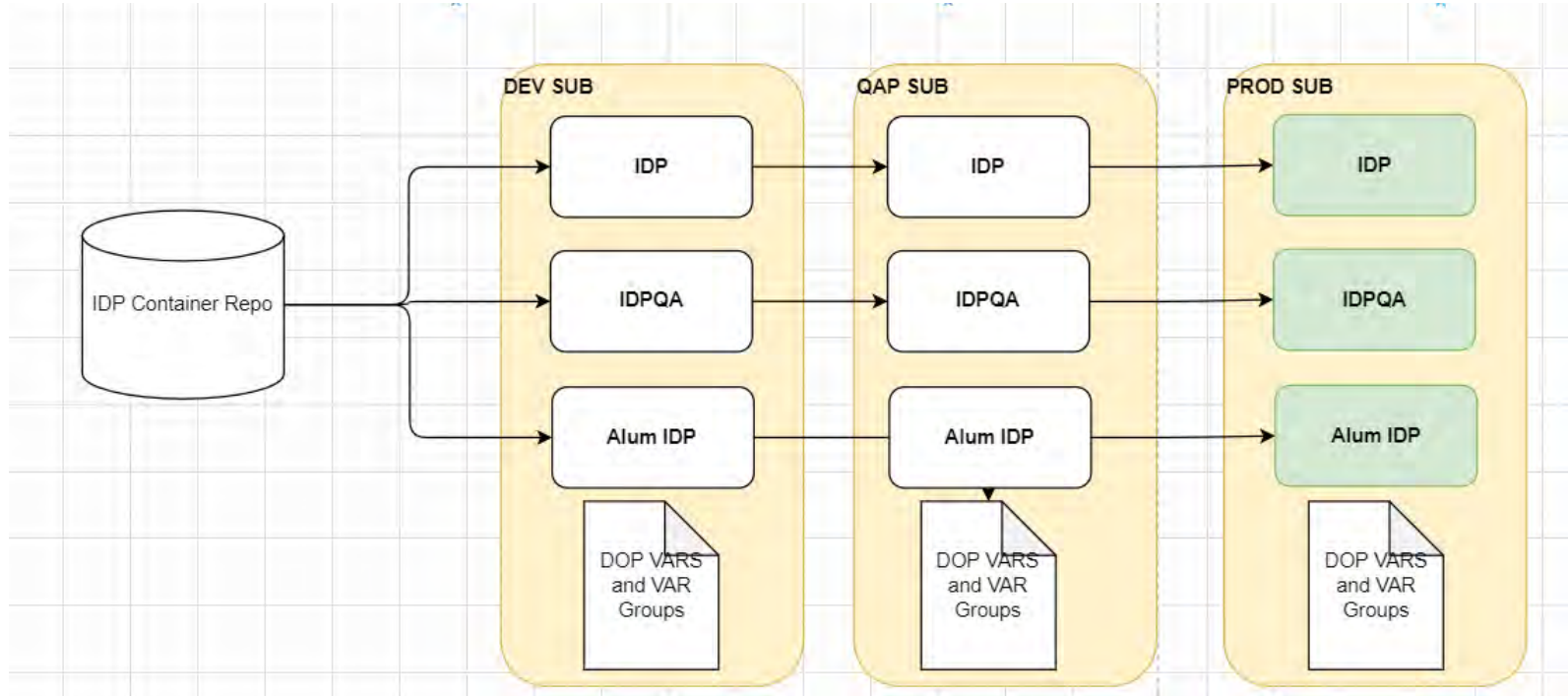


Devops Release for IaC

- [Demo](#) (~8 minutes)
 - Deployment methodology
 - Variables
 - Variable Groups
 - Tasks
 - Task Groups

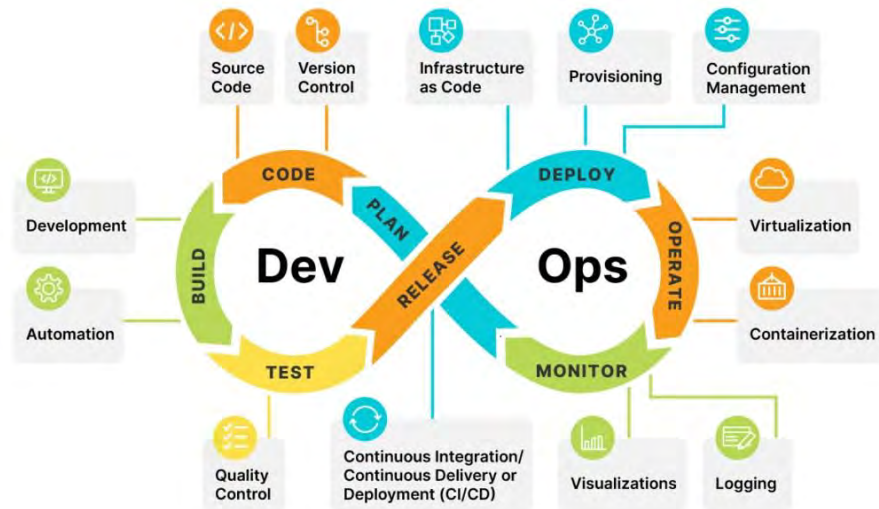


DevOps Container

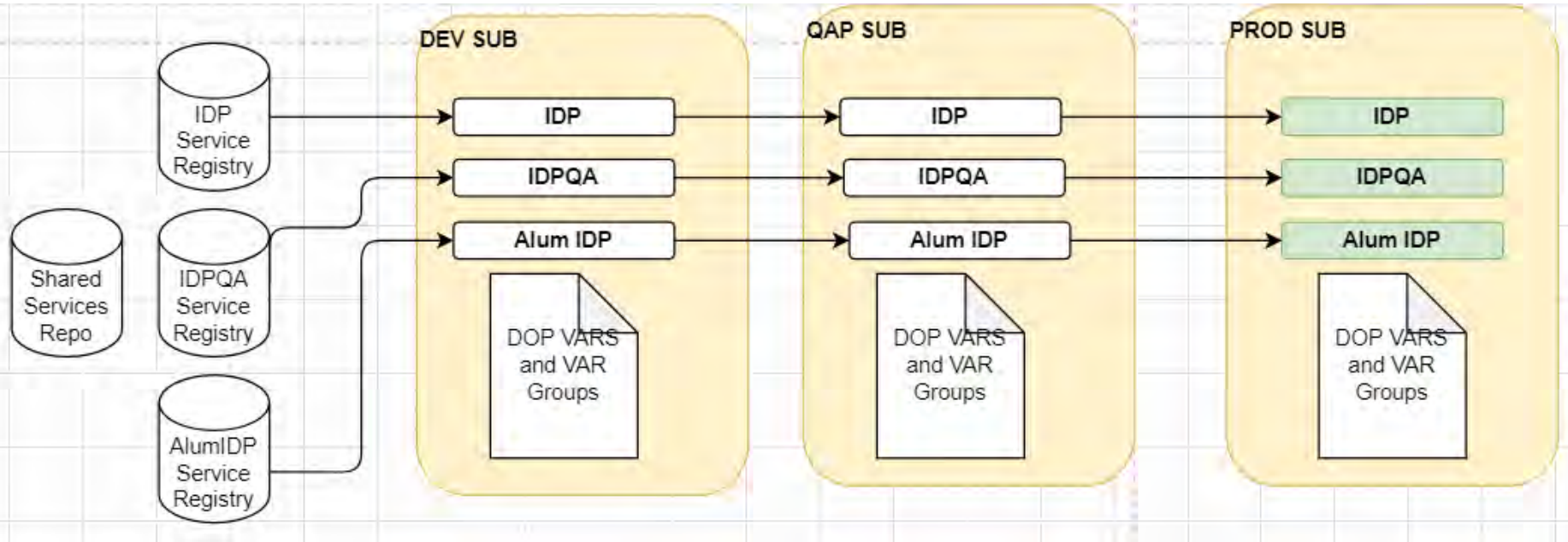


DevOps Container

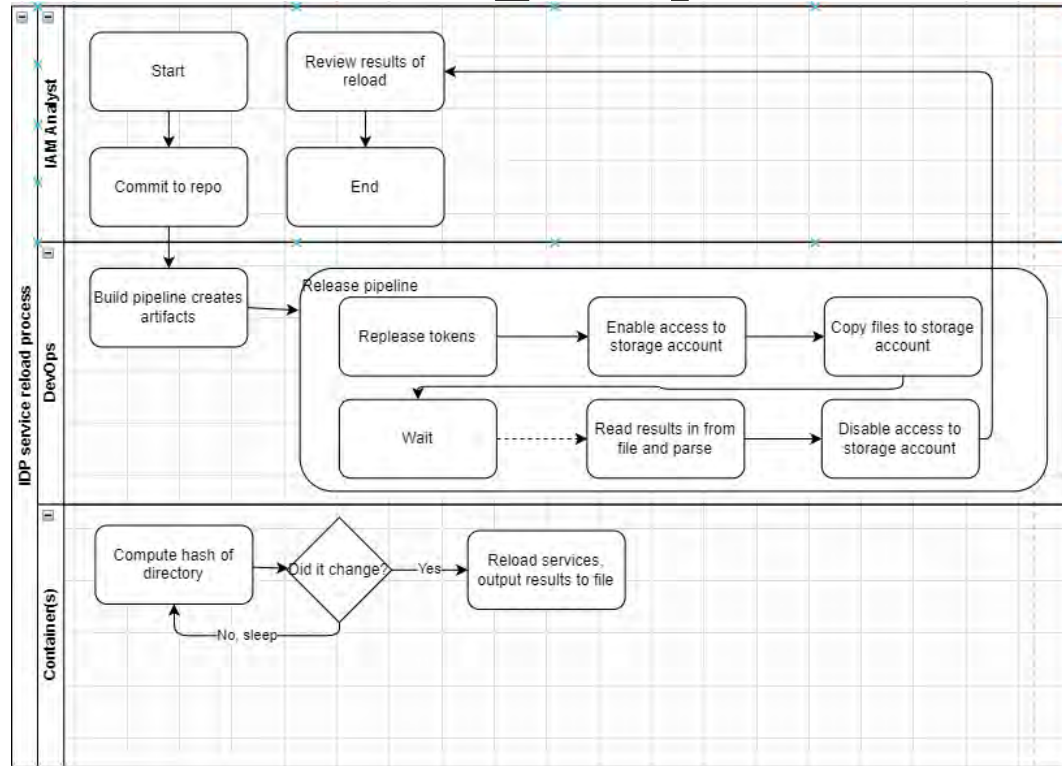
- [Demo](#) (~5 minutes)
 - Reuse of variable groups
 - Container security scan



DevOps Service Registry

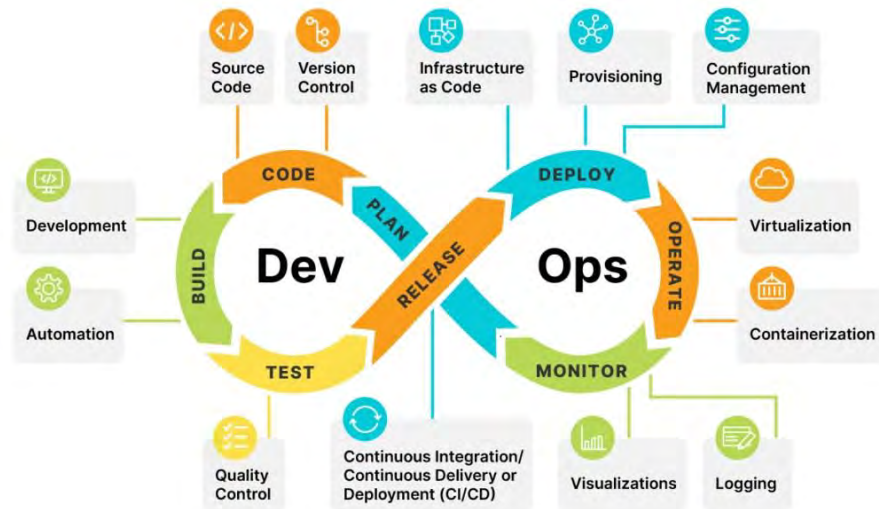


DevOps Service Registry Reload

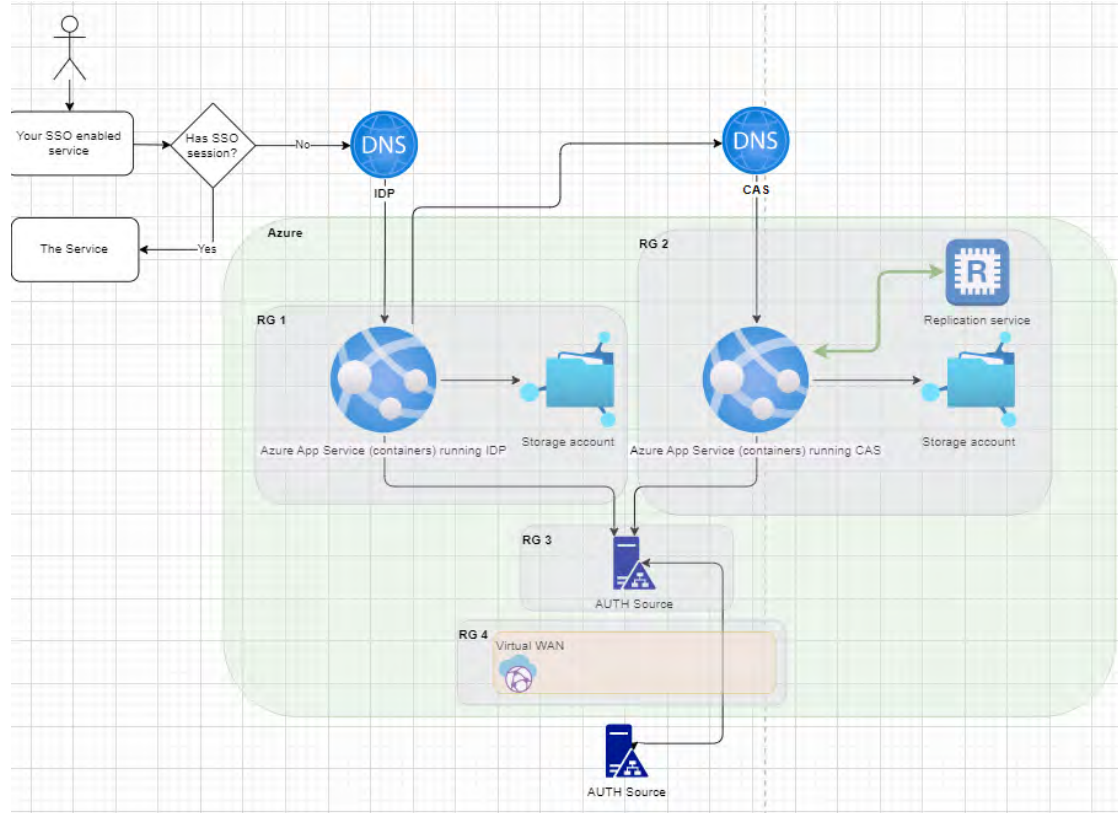


DevOps Service Registry Reload

- [Demo](#) (~4 minutes)
 - Reuse of shared repo
 - Settable attributes
 - Automate reload process
 - Azure Log Stream
 - SSH into container



The Results



Lessons Learned

Azure Resources

- Azure App Services and IP ACLs, no go
- Kudu what are you doing?
- Storage: balancing security and accessibility

DevOps

- Variables, variables, and more variables
- Repos, repos, and more repos
- Release pipeline, release pipeline, and more release pipelines
- Documentation, documentation, documentation

Next Steps

- Replace CAS with Azure AD Authentication
- SSL Certificate automation
- Automate system testing
- Automate load testing
- Buildout monitoring/ alerting
- Lots of testing!

QUESTIONS?



**THANK YOU
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