

Introduction to Azure DevOps

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What is DevOps?

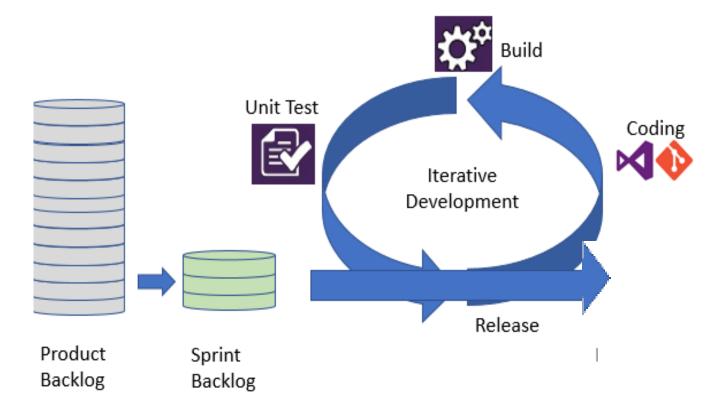
• To understand DevOps we have to start with Agile

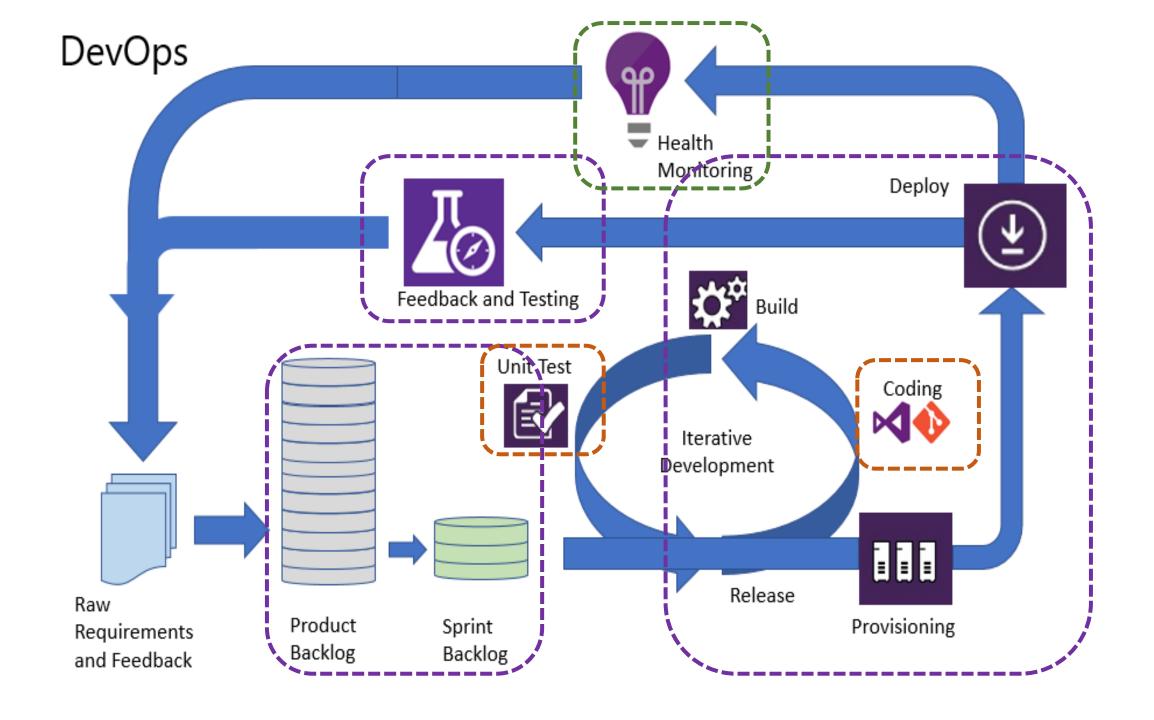
Agile Practices

- Iterative Development
- Plan for the immediate only
- Effective Version Control
- Continuous Integration

Unit Testing

Agile Promise Early and
Frequent Delivery





Mindset

Early and Frequent Delivery

Automation

Minimum
Manual
Intervention

Tools

To Support Automation

Azure DevOps in Collaboration with Azure

Azure Boards

- Collaboration from Anywhere in the Internet
- Agile Planning and Monitoring



Version Control

- Accessible From Anywhere
- Distributed Repository



Automation of Build

- Infrastructure to run the build - in Azure
- Continuous Integration



Automation of Provisioning

- Idempotency using ARM Templates
- Azure Monitor + Azure Automation

Automation of Deployment

- Continuous Deployment
- Approvals Workflow



Automation of Testing

- Continuous Testing
- Browser Based Test
 Management and Execution

Integrated Communication

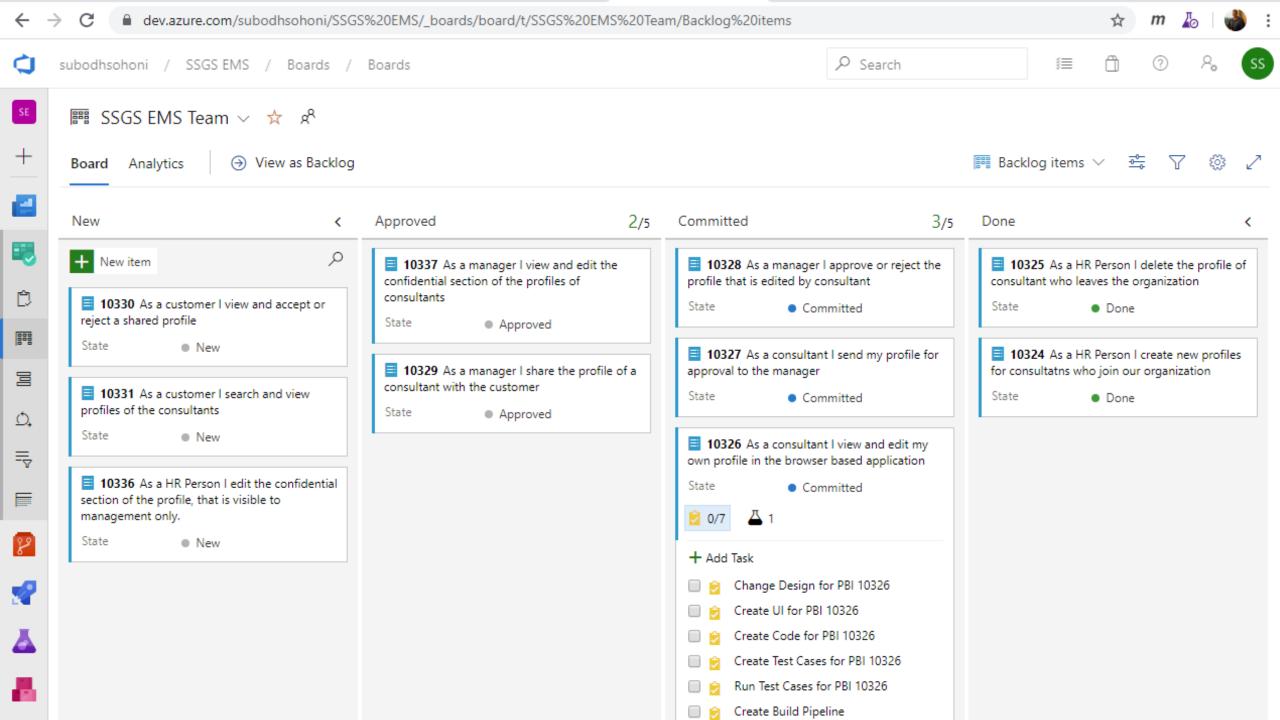
Microsoft Teams

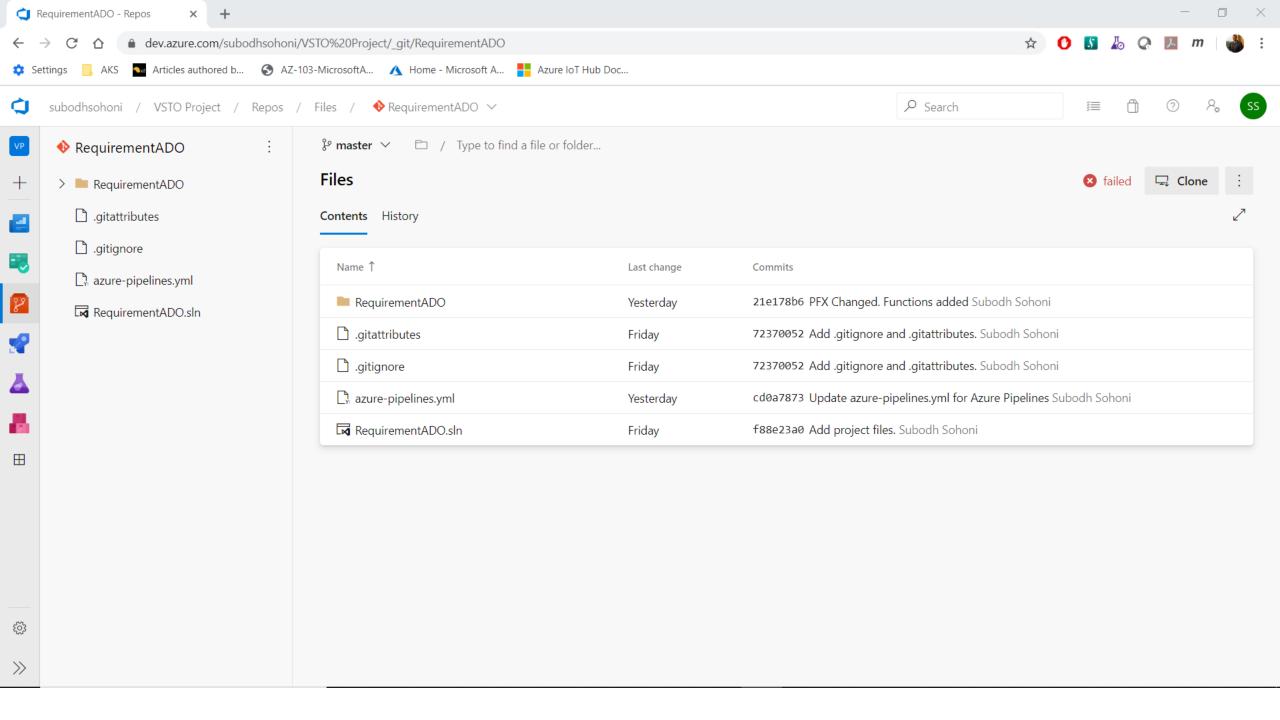
Automation of Health Monitoring

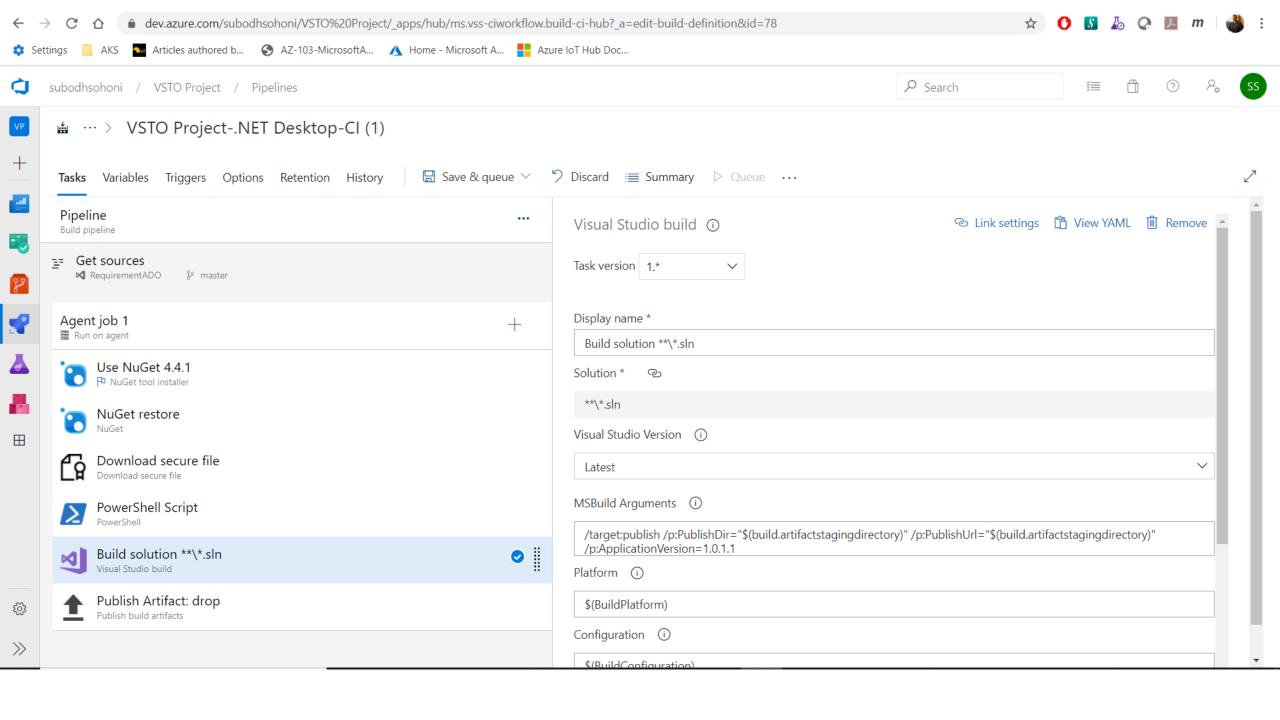
- Azure Monitor Alerts and Log Analytics
- Application Insights

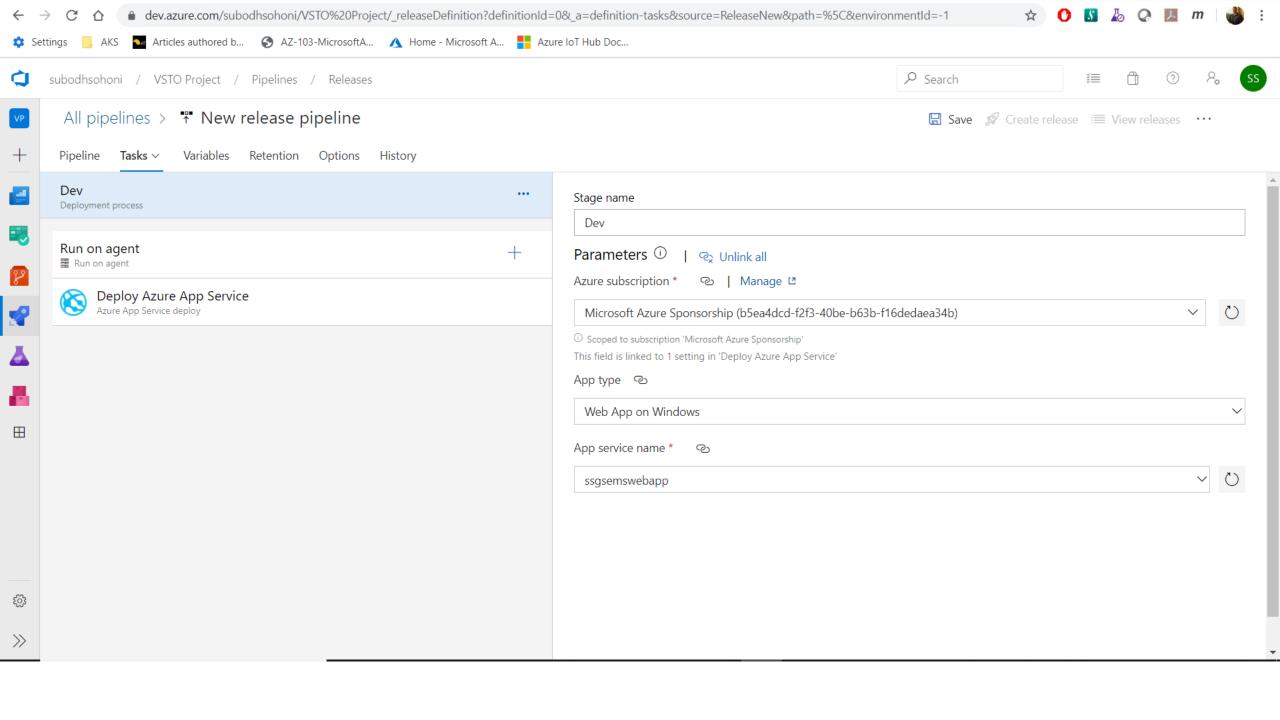


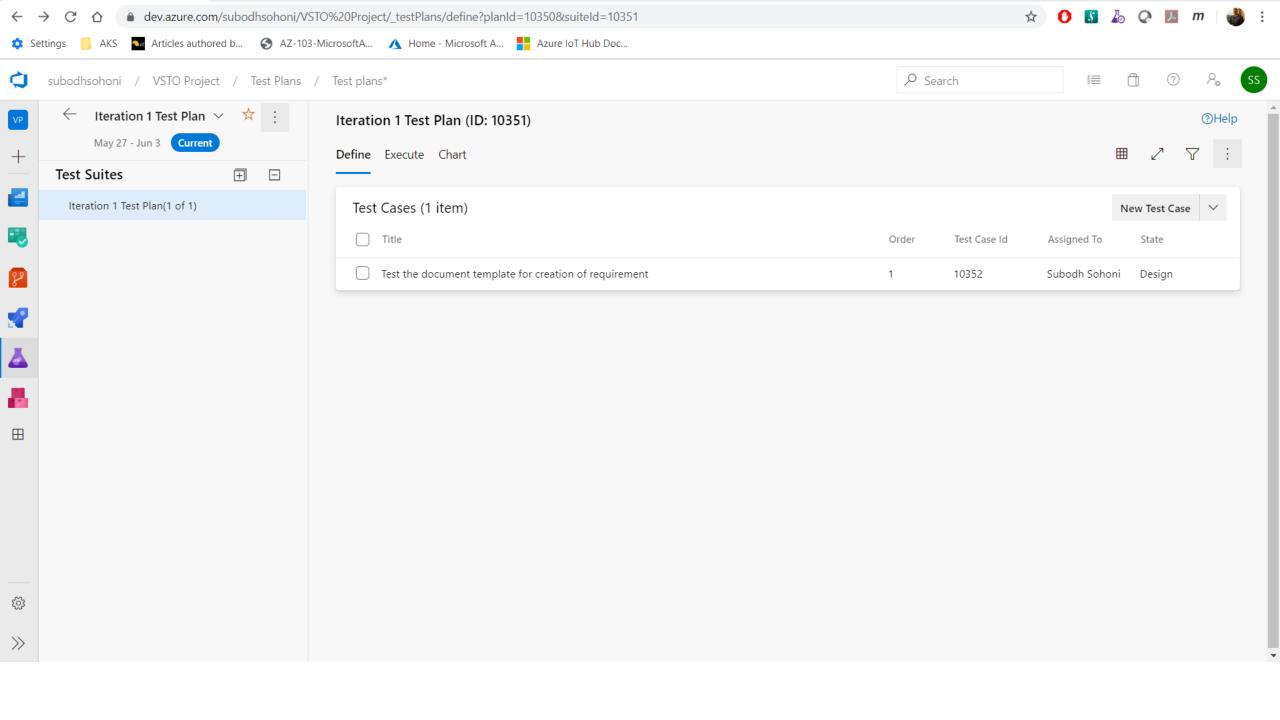


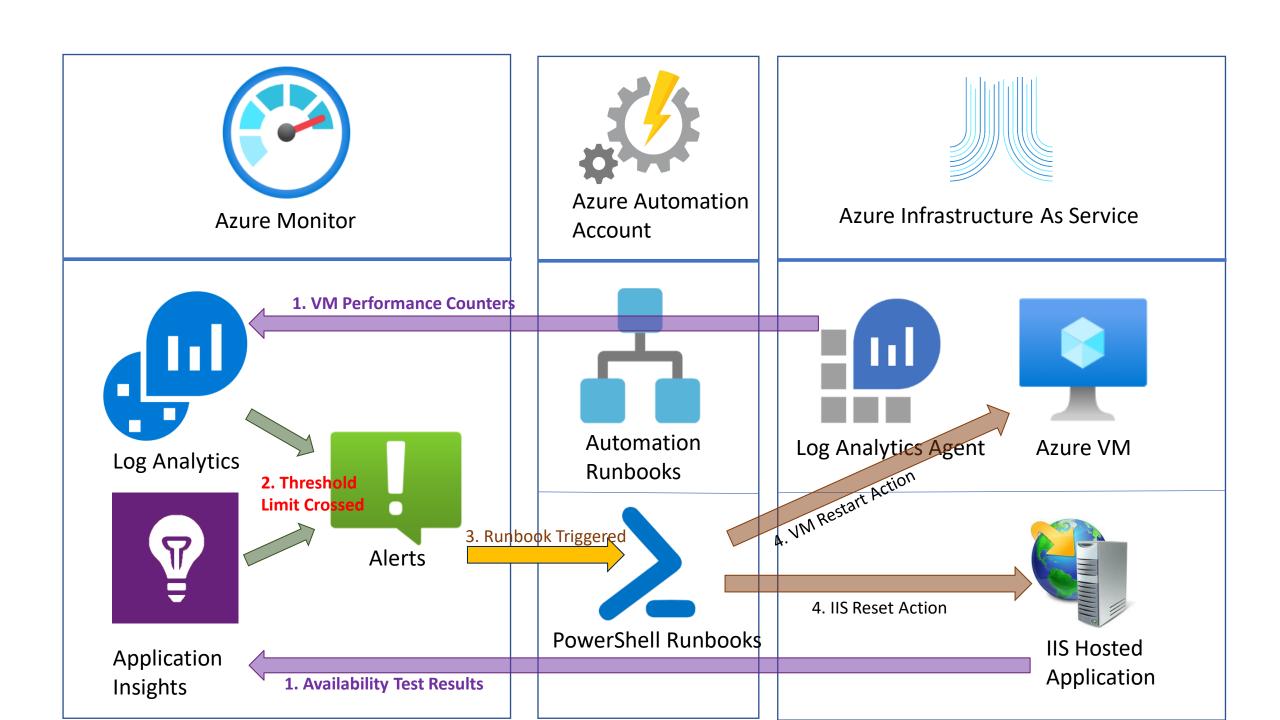




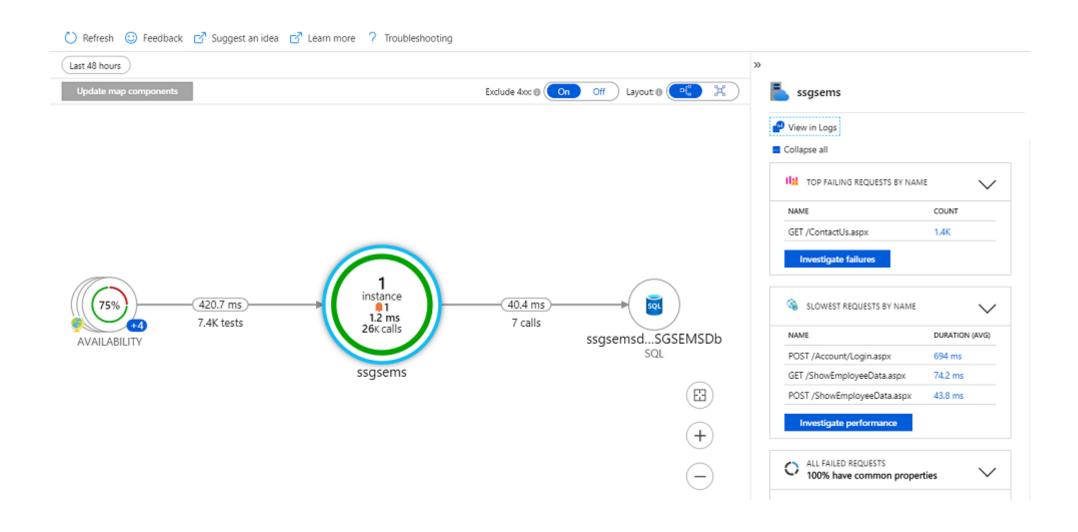








Application Insights: Health Check of Application that is deployed



Azure DevOps Implementations

Cloud

Created and Maintained by Microsoft

On Premises (Azure DevOps Server)

Installed and Maintained by Owner

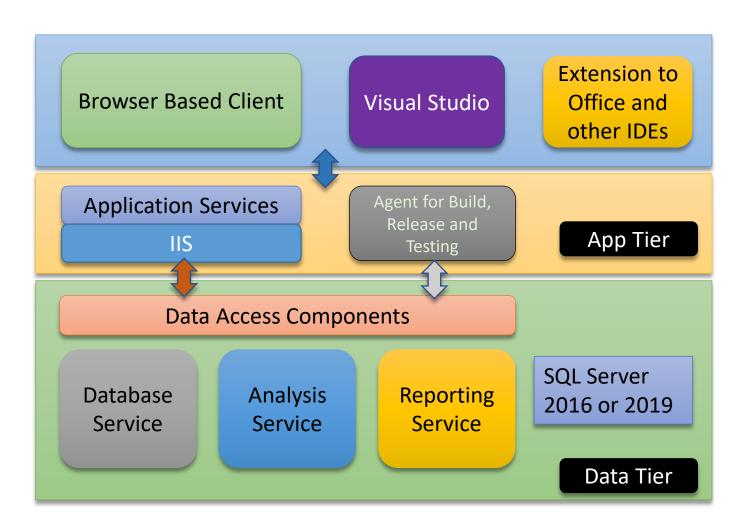
Infra for Build and Deployment Pipelines

Owner has to provision infra for everything

REST APIs Available but No Deep Customization

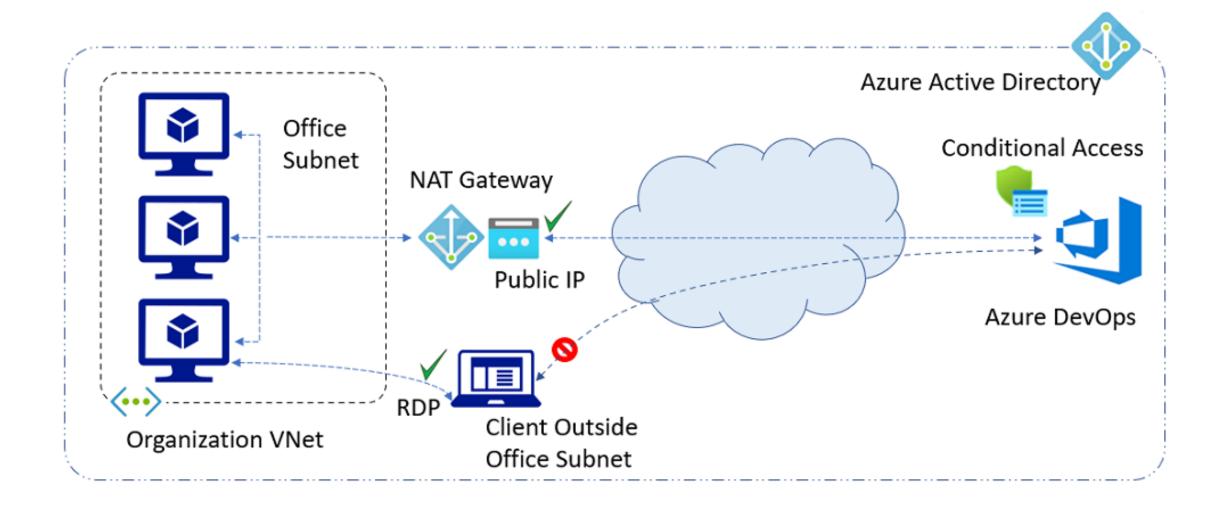
Deep level customization possible

Azure DevOps Server Architecture



Operating System – Windows Server 2016 or 2019 Windows 10 64 Bit

Code Access Control for IP Protection



Conclusion

DevOps Benefits Integration of All Roles in a Team

- Fulfilment of promise made by agile "Early and Frequent Delivery"
- Improved Profitability = Improved Productivity of the Team + Improved Quality of Product

Azure DevOps

SaaS Offer by Microsoft for All Things DevOps

- Automation of CI + CD + CT + CM
- Works from cloud Accessible from anywhere
- Secure Role Based Access Control + Encrypted Communication + Encrypted Data Storage
- Integrates Excellently with Azure Monitor, Azure Resource Manager, Azure Automation etc. for Remote Working
- Technology Agnostic Technology of Development is YOUR Decision