

Case Study

The State Of Tennessee Department Of Health

The Business Problem

To promote public health advancements in Tennessee, it is imperative that the state modernizes its data systems and incorporates cutting-edge technologies to fortify public health protection. The Tennessee Department of Health employs Microsoft DevOps for development and process tracking for Agile methodologies.

About Devops

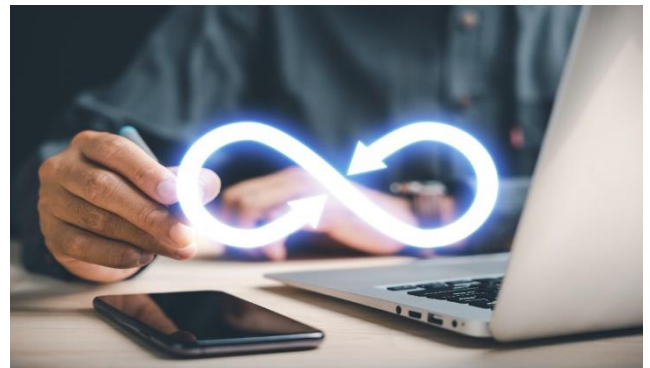
Azure DevOps is a consolidated set of modern software services that facilitates smart planning, better collaboration, and faster deployment of IT resources.

It provides a comprehensive suite of tools for end-to-end DevOps practices, enabling teams to streamline their workflows, automate processes, and deliver high-quality software with greater efficiency.



About Cogent Infotech

Founded in 2003, Cogent Infotech is a trusted, award-winning firm with **21+ years** of experience, **150+** government contracts, **10,000+** projects, and a 96% employee retention rate. Recognized as an SBA Small Business and MBE-certified, we deliver excellence through diverse talent, AI-driven recruitment, and cooperative contracts like NASPO Value Point and TIPS-USA.



Migration Tools & Technologies

Azure Migrate: Azure Migrate is a service offered by Microsoft as part of Azure that helps customers discover, assess, and migrate their on-premises workloads to Azure.

Azure Database Migration Service: Azure Database Migration Service (DMS) is a fully managed service offered by Microsoft as part of Azure that simplifies and accelerates the process of migrating on-premises databases to Azure.

One-time migration: Move a database to Azure once and leave it running in Azure

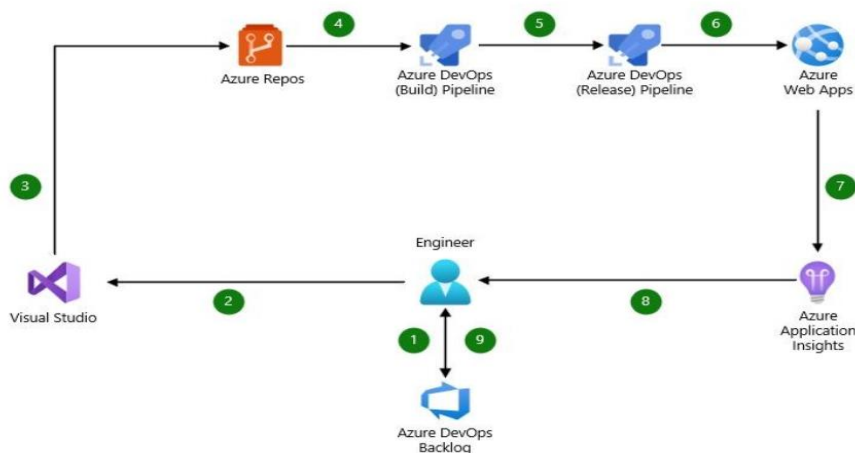
Lift and shift: Migrate an on-premises database to Azure and keep the same database engine running in Azure.

Change the engine: Migrate an on-premises database to Azure, but change the database engine running in Azure to a different one.

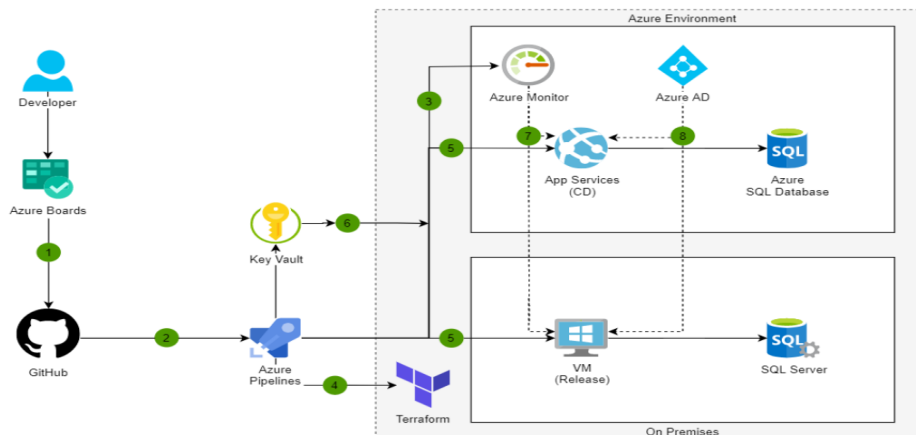
Azure Data Box: Azure Data Box is a service offered by Microsoft as part of Azure that allows customers to transfer large amounts of data to Azure for storage and processing.



CI/CD Flow Design



Solution Design



Best Practices

- ✓ **Assessment and Planning:** Start by assessing your current development processes, tools, and infrastructure.
- ✓ **Training and Communication:** Ensure that your team is adequately trained on Azure DevOps tools and practices.
- ✓ **Version Control Migration:** If you're migrating from another version control system (e.g., GitLab, SVN), plan and execute the migration carefully.
- ✓ **CI/CD Pipeline Migration:** Replicate your existing Continuous Integration (CI) and Continuous Deployment (CD) pipelines in Azure DevOps.
- ✓ **Infrastructure as Code:** Embrace Infrastructure as Code (IaC) practices for managing your Azure infrastructure. Use tools like Azure Resource Manager (ARM) templates or Terraform to define and deploy infrastructure resources programmatically.
- ✓ **Security and Compliance:** Implement security best practices and compliance standards in Azure DevOps.

Technologies

- **Azure DevOps Services:** Azure DevOps Services itself provides a suite of tools for planning, development, testing, and deployment. This includes Azure Repos (for version control), Azure Pipelines (for CI/CD), Azure Boards (for project management), Azure Artifacts (for package management), and Azure Test Plans (for testing).
- **Version Control Systems (VCS):** Git, TFVC
- **Migration Tools and Utilities**
- **Azure DevOps Migration Tools**
- **Third-Party Migration Tools**
- **Continuous Integration/Continuous Deployment (CI/CD)**
- **Infrastructure as Code (IaC):** ARM
- **Containerization and Orchestration:** Docker, AKS.
- **Monitoring and Logging:** Azure Monitor
- **Security and Compliance**
- **Azure Policy**