Situation:

cDevWorkflow is a fast-growing technology company offering latest and advanced Business Process Management solutions. Its BPM and BI tools are easy to use, integrate into any application and have highest ROI. Engineers at cDevWorkflow are experts in BPM workflow solutions, automating business processes. Clients from start-ups to blue chip industries engage them to automate their processes. The goal of the cDevWorkFlow is to help software companies, developers, integrators and operating companies. Microsoft Visual Studio and TFS were in effective use for many years helping the teams to develop, collaborate and communicate to remain up-to-date.

cDevWorkFlow' s Next Generation Workflow Technology is built using Microsoft Visual Studio products in all stages of development. Having teams geographically diversified in three countries and working in three time zones there were difficulties like lag in accessing data, recurring expenditure on hardware and software updates, power failure and back up.

Product upgradations by Microsoft take time to reach on premises TFS users. Migration from old version to new version takes some more additional time to adopt the latest features. All these activities involve server downtime, dependency on skilled engineers and sometimes investment on new hardware infrastructure too. The other main requirement was to leverage the Microsoft cloud for infrastructure for Dev Test needs. Maintaining the existing infrastructure and effective utilization was becoming challenge.

Solution:

To ease the work of all those involved in development of cDevWorkFlow decided to embrace new Microsoft technologies available in Cloud i.e. Microsoft Azure. Being one of our early TFS customer, cDevWorkFlow had already understood how valuable it is to bring their development team together in one place with traceability from each aspect of the development lifecycle. Client approached **Canarys** for elaborated solution around Microsoft Cloud. After thorough study of the current environment we suggested for to migrate from TFS to VSTS backed by Azure Active Directory. The reasons were the early feature updates on the VSTS, zero maintenance and Infra cost, easy enablement of DevOps practices and exhaustive integrations with third party services. Apart from this, the client would be able to benefit from an on-demand and scalable Dev-Test environment, Cloud Load Testing Service, Application Insights, and many other capabilities.

Canarys Automations, being one of the leading Microsoft Partners with the DevOps & Azure Competency planned the entire activity in 4 phases:

1. Setup Azure Subscription (Pay-As-Go)
2. Sync on-premise AD with Azure AD for providing Single Sign-On for VSTS
3. Migrate from TFS to VSTS (SaaS)

    a. Migrate TFS from 2012 to 2017
    b. Migrate TFS 2017 to VSTS
4. Implement CI/CD using VSTS Build and Release features

Our Azure experts assisted cDevWorkFlow in synchronization of Azure AD with on-premise AD, setup VM's wherever necessary and suggested PAAS model for SQL, IIS and other on premise components. Leading from the front Canarys VSTS experts helped cDevWorkFlow in smooth and error free migration from On Premises TFS and Visual Studio Team Services using TFS Database Import Service. Downtime of servers never affected the regular developmental works. The whole process didn't last for more than a couple of days.

All these activities performed during the regular working hours and never impacted any of the users and whole process completed as planned and scheduled.

The project Head of cDevWorkflow says:

"We observed smooth and error free migration from On Premises TFS and Visual Studio Team Services using expertise from Canarys VSTS team.
Canarys ALM Specialists brought together people, processes and technology with our custom ALM methodologies to ensure a complete end to end solution and strategy for our product. This is definitely going to help us deliver fast and quality solutions."
Srinivas | Project Head, cDevWorkflow

THE BENEFITS

- **Accessibility:** Increased availability of Infrastructure resources for Dev-Test, which in turn increased the productivity, reduced maintenance and Integration of SSO made easy to manage entire organization with a common identity to access both cloud (PaaS & SaaS) and on-premises resources.
- **Replacing Jenkins and enhance Release Cycle:** After migrating the deployment process from Jenkins to VSTS Continuous Integration and Continuous Deployment (using vNext Build and Release) for customer projects. With this when the developer checks in the code, build is triggered with unit test and validations points and upon successful build release pipeline is triggered and deployment of App and DB happens on Azure Infra so the complete Devops is automated and the overall **release time has been reduced by 25%** and the traceability from Requirements to deliverables has brought more transparency into the team
- **Team Collaboration:** Developers from different time zone use team rooms and dashboards to collaborate, plan, and manage the Iteration/Release cycle.
- **Availability: Guaranteed at least 99.9% availability of Visual Studio Team Services**.
- **Focus**: Infra team can now spend focus on higher value tasks for the client business instead mundane activities. This reduced infrastructure maintenance & support resource cost by 40% compared to earlier way of working.

- **Reduced costs:** Canarys team built PowerShell scripts via Azure automation accounts to schedule the jobs to consume the services or resources only at required time by paying for what customer consumed. Now the **client is saving 15% investment cost on Infra** & other services by using this technique.
- **Transparency:** Now cDevWorkFlow developers have seamless access to cloud Infrastructure (IaaS, PaaS & SaaS) models and the working relationship is transparent.

The overall solution helped in achieving not only customer challenges but also reduced infrastructure investments and maintenance and **resource costs on an average of 40%,** reduced Release cycle time, enhanced collaboration with team from different time zones. Not only productivity of developers increased the customer says we see our developer's happy faces as they are spending more time on quality work then regular mundane activities.

THE SOFTWARES

Canarys utilized Microsoft Windows Server 2012/2016, Team Foundation Server (TFS) 2012, TFS 2017, Visual Studio 2017 Enterprise, SQL Server 2008 R2 and SQL Server 2012, Azure AD Connect, Azure Resource Groups, Azure Storage, Azure Active Directory, SQL Azure, TFS to VSTS migration tool, customized process templates and work items. These products helped in migration of On-Premises Infra to Cloud and TFS to VSTS.