



DEVOPS ON AZURE

Software development has always been a difficult task. With a single developer, the development process could take decades. To combat this, development teams are used to distributing development work. The problem with this distribution is keeping everyone on the same page. One developer will write code, only for it to be incompatible with another developer's contributions. This results in massive inefficiencies for the software development lifecycle (SDLC), causing delays and increasing the cost of software development.

As a solution, development teams have started using the DevOps methodology. DevOps aims to automate certain parts of the SDLC, to increase the velocity of agile software development. Instead of manually reviewing code commits, or provisioning server instances for testing purposes, developers can focus on writing code while AI and ML technologies automate these low-level tasks. This all serves to increase the quality and pace of software development—helping your business to deliver new experiences to customers faster than ever.

The Benefits of DevOps on Azure

The Microsoft Azure cloud platform offers numerous services that cater to DevOps. These services range from CI/CD pipeline automation to self-healing of live applications through RASP.

By moving your enterprise to DevOps on Azure, you will experience benefits like:

- **Leverage CI/CD** – One of the most useful aspects of DevOps is the introduction of CI/CD pipelines. Due to lower operating costs and access to burst processing on Azure, continuous integration and deployment (CI/CD) is now economical enough for widespread use.
Continuous integration is where changes to code are frequently integrated into the master branch. This is supplemented by automated testing, helping developers to identify bugs before they reach the final product. Continuous delivery is where fully tested and approved software versions are delivered over the air (OTA) to customers, delivering continuous updates for your services. CI/CD pipelines are available through the Azure DevOps platform at Azure Pipelines, with full support for Git, Jenkins, and Apache.
- **Improved MTTA and MTTR** – With software development, the earlier you discover a problem, the better. The longer a bug remains in your software, the more likely other aspects of your application will break when attempting to remediate the bug. For that reason, SDLC monitoring tools can help you improve both your mean time to acknowledge (MTTA) and mean time to remediate (MTTR) problems. These monitoring tools sit leftwards in the SDLC and can even monitor code as its written in real time to avoid bugs reaching the final product. The Azure cloud offers numerous DevOps monitoring services, including CI/CD release pipeline monitoring through Application Insights to improve your MTTA and MTTR.

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DevOps on Azure with Trianz

Trianz is an industry-leading DevOps consulting firm that has a [close working partnership with the Microsoft Azure platform](#). Our Gold partnership status coupled with Azure Expert Managed Service Provider (MSP) status illustrates our competencies on the Azure platform.

We offer a range of services to help our clients leverage DevOps on Azure, including:

- **Designing and Implementing CI/CD Pipelines** – It can be difficult to take the first steps with CI/CD pipelines. You need to know what monitoring tools you are using, and where in the SDLC they should be monitoring. Then, you need to create feedback loops that guarantee code commits are being tested and approved against the master branch. For unapproved code, a job task needs to be sent to the original developer requesting a code rewrite, requiring integration with your integrated development environment (IDE). As you can imagine, these CI/CD hooks can become incredibly complex, and mismanagement may result in SDLC slowdowns or bugs reaching the final product. Our dedicated DevOps consulting team has the knowledge and experience required to design and implement CI/CD pipelines for your business. We can curate a selection of monitoring tools for your CI/CD pipeline, ensuring that bad or incompatible code is always rewritten. Azure Pipelines also supports new technologies like Docker and Kubernetes, allowing you to scale your delivery efforts more easily. Our experts can work in languages like C, C++, .NET, Python, Java, and Ruby, all of which are supported on Azure Pipelines.
- **Live Application Healing through RASP** – While most of DevOps aims to expedite the SDLC, live applications can also benefit from DevOps monitoring solutions. These live applications are less likely to have bugs; however, considering they are live, any bugs will be more detrimental to your service quality. Trianz experts can implement a runtime application self-protection (RASP) tool to bolster the security of your live services. These RASP monitoring tools act as a proxy for user inputs, monitoring for whether an input will result in a non-compliant output. This all happens in real time, and any malicious inputs will be automatically rejected—protecting your live applications and services from zero-day threats. Our experts can leverage platform-native RASP monitoring through the Azure Security Center, or curate a solution from one of our ISV partners to meet your business needs.
- **E2E Manual and Exploratory Software Testing** – DevOps aims to expedite the software development process through automation, and testing automation is one of the most time-consuming aspects of software development. There are two common types of tests: manual tests and exploratory tests. Trianz experts can design a framework for SDLC testing using the Azure Test Plans service. We can design manual tests for typical workflow—like browser, OS, and runtime compatibility—before continuously repeating these tests through automation scripting during the development process. To simulate a live environment, exploratory testing can be used to test the scalability and reliability of your new services across different Azure instance types and geolocations. With help from our experts, you can gain full end-to-end visibility of your SDLC testing and auditing, helping you to build secure and compliant applications more quickly and easily.

Simplify Software Development with DevOps and Trianz

Software development is no small task, often requiring large teams and close collaboration to achieve results. With DevOps on Azure, you can start automating the low-level tasks that slow down the SDLC, as well as expedite the testing process with automated manual and exploratory

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test plans. Your live services are not immune to attacks, and RASP monitoring can help you to avoid zero-day attacks as part of your DevOps strategy.
Stop doing things manually. Start leveraging CI/CD pipeline automation through DevOps to expedite every one of your software development endeavors!

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