Digital justice

T-Systems provides an agile test environment for pioneering GeFa procedure

Reference project:

GeFa

Digitalization is not only relevant for businesses. Public sector institutions also need digital solutions to optimize their administrative procedures and make them more citizen-friendly. In 2017, representatives from the judiciary of the federal states decided to standardize their existing mix of specialized procedures that support their processes – in other words, their IT applications. In a program titled "GeFa, all federal states are implementing a new, standardized specialized procedure for the institutions of the ordinary jurisdiction, public prosecutors, and specialist jurisdiction. The new specialized procedure will enable more than 100,000 employees to work in a modern, efficient, goal-oriented manner. To do so, a forward-looking technological solution is needed. User friendliness is a key success factor here, which is why an enhanced user experience, ergonomics, and accessibility are essential requirements for the implementation.

The project owners decided to involve several external service providers in the development and testing of the specialized application. They awarded three lots: one partner supports phase 1 – requirements engineering and design, while another supports phase 2 – software development and integration. The Ventus alliance, under the leadership of T-Systems, won the third lot, for test support and acceptance. In addition to a variety of Deutsche Telekom units, the Ventus alliance also includes Materna, Lunzer & Partner, and Westernacher Solutions. The customer is the "GeFa" development alliance, which consists of the Federal Republic of Germany's 16 federal states. They are represented by the Free State of Bavaria, which in turn is represented by the Bavarian State Ministry of Justice, the body taking the lead in coordinating the GeFa program.

At a glance

- GeFa program to develop a specialized procedure for the staff of the ordinary jurisdiction, including public prosecutors, as well as specialist jurisdiction.
- The goal: modern, efficient, targeted work for over 100,000 judiciary employees
- Transition to agile development methods: Scrum/Scaled Agile Framework (SAFe)
- Faster development, faster visible progress
- Setup and operation of an innovative test environment, consisting of a set of test tools and a complete CI/CD platform
- Supply of testing expertise in the agile development framework
- Specific testing competencies for ergonomics and accessibility
- Hosted in a DIN ISO 27001-certified data center
- Dynamic provisioning (scaling) from the Open Telekom Cloud
- Agile, fixed-price project ensures budget compliance

·T· ·Systems·

Let's power
higher performance

Reference in detail

The challenge

The goal of implementing a modern specialized procedure is connected to the decision for a more agile, more interactive software development process. The development process, including testing and acceptance, is to be sped up. In turn, this will make project progress more transparent for the customer. Scrum and the Scaled Agile Framework (SAFe) have been defined as the foundation. A shared CI/CD pipeline for up to 10 developer teams working in parallel will organize the project work. As such, this CI/CD pipeline must be provisioned in a scalable manner. It also serves as the foundation for the various software tests. To achieve this, the German judiciary needed a partner with proven expertise for testing in agile development methods, one capable of guaranteeing the required software quality. In turn, this required both qualified test personnel and a scalable testing platform, consisting of hardware and software. Due to the special compliance requirements – it must be possible to test the specialized procedure with real data – the platform could only be run in a European data center with a security certification. The alliance under the lead of T-Systems fulfilled all of these requirements.

The solution

T-Systems supplies the testing environment from its twin-core data center in Magdeburg/Biere. The infrastructure is comprised of scalable resources from the DIN ISO 27001-certified Open Telekom Cloud. The Open Telekom Cloud also fulfills the C5 Criteria Catalogue issued by the BSI, the German Federal Office for Information Security. The CI/CD (continuous integration, continuous delivery) pipeline was built on the foundation of the standard T-Systems product "DevOps as a Service". The necessary test tools were also built on the basis of the Open Telekom Cloud, with the result that a powerful, scalable, fully functional test environment is now available. The test platform in the T-Systems domain includes two logically separated parts: the integration and testing platform, where the Scrum teams import their code, and the platform for system tests, where the new and tested increments are tested in combination with one another. T-Systems is supporting the customer with setting up its internal acceptance test environment, training its staff, and providing quality assurance for the testing process.

Customer benefits

Dynamic resources are ideal for use in tests, which are usually carried out as needed – whenever the developer teams provide new code. The dynamic testing platform complements the agile development in an optimal way and adapts to the testing needs of the GeFa program as it progresses. The customer has full cost control: an agile fixed-price project ensures that the costs remain within the agreed framework, despite dynamic service delivery. At the same time, the customer gets access to specific and extensive testing expertise (also due to the option of using a pool of European near-shore resources). As a result, they can also map the various requirements for accessibility and ergonomics in the agile environment. Different certifications (BSI C5, DIN 27001) ensure that the resources meet the customer's compliance requirements in full.