apriorit

Case Study: **System Rollback Solution with Fractalia (Spain)**

Fractalia: Client Profile

Fractalia is an IT research and development company, a leader in robust and effective solutions for managing and controlling large networks of computers. Fractalia Software offers large service providers, telcos and companies PC management platforms to provide differentiated and competitive services to end users.

Fractalia Software forms part of the Spanish corporate group Fractalia Remote Systems. Being headquartered in Spain, it has offices in Portugal and UK.

The Situation:

Client was a partner of the big international telco in the project of deployment and maintenance of kiosks at the public places, like airports, shopping centers, libraries, etc. Kiosk is an Internet access point that can be universal or serve for some specific purposes.

One of the most important project aspects was to ensure uninterrupted functioning (minimize downtime caused by the software failure) of the kiosks, situated in various cities and countries.

The Problem:

Providing the uninterrupted kiosk functioning was not an easy task. In case of system failure, it would take a qualified specialist a lot of time to get to the kiosk, research the situation, and perform corresponding actions to fix the system.

To resolve this task, a stand-alone application project was proposed. This application was to have its own GUI and work with hard drive on low level providing the option to rollback all recent changes, which had caused system hang-up or crash, and return system to the stable state after next restart. It was equivalent to create the complete image of the hard drive in stable system state and then rollback to it if required.

At that time, Fractalia development team did not have enough knowledge and expertise in the specific tech areas required to implement the project: low level work with disk, low level driver development, boot loaders. The company decided to outsource the project to a highly qualified professional team in this competence scope.

Apriorit had all required skills and provided the portfolio that completely matched the project tasks.

The Solution:

After the project vision was approved and basic estimation provided, Apriorit formed a team of developers and researchers that was cooperating closely with the business requirement team and project managers of Fractalia.

To control all disk operations and guarantee system restore, the architecture of three components was chosen:

◆ Boot Loader

◆ Disk Driver

◆ User Interface Part

During project development, some aspects were discovered, which made the project even more challenging:

◆ As the solution worked on the level that was maximally close to the hardware, it was impossible to test and debug it using traditional tools. Team had to apply debug via external device.

◆ The necessity to place custom bootloader in the specific memory area made the solution very dependent on the given BIOS version. It obligated the team to test the solution almost for all popular and a set of exotic BIOS versions. Things, which made life easier here, were the shared bug tracking system of Apriorit and Fractalia teams and the process of fast response on the customer bugs.

◆ The first deep research of the task discovered a number of difficulties and pitfalls that meant that the development would take much longer than it had been initially estimated. The team had to work in the very limited time frame to let the client report on the next general project stage on time.

After the half-year long project, the client was provided with the working prototype that successfully passed acceptance testing and became a part of the Fractalia general project.

The Impact:

The developed prototype successfully solved the task – shortened the station downtime and made the developed international kiosk network more fail-safe as for software troubles.

Created in the admissible terms, this prototype allowed Fractalia to report on the corresponding stage of the project with the international telco and get financing for the next stages.

With this project, Fractalia and Apriorit started a long-term partnership.

What's next?

Get the **free estimation** of time and effort for your project! After initial research, we'll provide you with the basic task dropdown and estimates indicating approaches and tools we can use to save your budget.

All we need is a brief project description sent to the info@apriorit.com with "RFP" mentioned in the subject.

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