Comic Relief – Migration

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cloudThing consolidated three providers into one automation tool through Microsoft Azure and Dynamics 365, where we also created pre-processing checks before Gift Aid donations were validated and submitted.

The Scenario:

At this organisation, they regularly submit Gift Aid donations to HMRC. This is done after a number of processes, including submission and validation of the donations. Within these submissions, the required information must be input in the correct format. For example, if you are inputting a post code, some rules that you may have implemented are to have a space in between it- B11 1BB. If this is a business rule within your system, then all your submissions must be in this format, otherwise this can create errors within the validation process. When submitting to HMRC, there is no exact rule that you must have in place- the only requirement is that all your data that is submitted must be in the same, consistent format.

This organisation used three different providers in order to successfully submit their Gift Aid donation to HMRC. The providers used, were Jenkins, a build and deployment automation tool, an internal GITlab (a self-hosted Source Code Repository tool), and Pivotal (an Agile Project Management tool) for tracking bugs and user stories. Although these weren't causing any major issues, it was confusing new developers who were joining the team as these tools were all separate and therefore, they needed more guidance as to how things work. So, they wanted a solution that would consolidate all this work into one tool that did everything and would be simple and easy to use and reduce the amount of time spent on directing people with how to use it.

The Problem:

The main problem within this was that the tools were distributed across several different providers and updates/information was input manually. This, of course, meant that time was not being used efficiently as this work could be automated and the risk of errors would be reduced. When submitting Gift Aid donations to HMRC, if you get an error rate of 4% or over, you can be fined a substantial quantity and may be issued with a Yellow Card to assist with the payment process/plan. This is unnecessary stress and we had a solution that could minimise this greatly and be bespoke to their requirements in submission and validation.

Also, by having three different providers validate and submit Gift Aid donations, it can mean that:

1. There is more room for errors

2. Time is used up when manually inputting information

3. If one application stops working, it may affect the submission process

4. It's difficult to check three separate applications and make sure that there are no errors

The Solution:

The first improvement we made was that we took the three applications currently used and consolidated it into one tool, thanks to an automation tool created by our developers at cloudThing. We then took all the data and put it into Microsoft Azure and Dynamics 365 where we could create the fields required for the organisation and their donations and we helped to automate the submission and validation process. This sounds complex but it was actually a fairly easy migration for our DevOps team as there was no development in current progress.

We had to move the open bugs from Pivotal tracker to ADO work items (there are tools on the market place that can automate this) but as we had no bugs or work items on the project, this step was skipped. Normally, it's much harder to move a project when there is active development still going on. What if your organisation does have development occurring during the process of migrating data? No problem for us- we can adapt and help by making sure that all the stories are up to date and we know exactly what is happening. If the stories aren't up to date, of course this will add more time and will therefore cost as a result, but it is not impossible to do. We like to be transparent during

the whole process and so if this does arise, we will ask you what you as the client would like to do- it is normally found in the discovery stage of the process (so as early as we can identify it).

As mentioned in the opening paragraph of this case study, there are certain business rules set by each organisation within their submission process and this must be consistent throughout all their donations. We created a tool that included checks before the data was sent to HMRC to make sure that it was in the correct format. If there was a field entered incorrectly, these pre-processing logic checks would show where the error was and would allow you to fix it before sending it to HMRC to be validated and submitted. This feature reduced the risk of them gaining an 'Error Rate' from HMRC, and therefore minimised the chances of receiving fines. We started by automating single submissions and once we were happy with this, we were able to improve the process by submitting donations in bulk- we did up to 100,000 records at once, all with pre-processing check included.

With the improvements made with the consolidated tool, visibility for fixing bugs and team collaboration was much better. For example, if a new developer was assigned to the project and they've used Azure DevOps before, then it's really simple to implement team collaboration. If they haven't used this before then team collaboration is still able to work because it is easier to show someone when all the tools have the same interface and is in one location.

There are many advantages of using Azure and Dynamics 365. Of course, we would have to have a meeting to understand your situation and what you would like to achieve in order to see if we are the best fit for you. We would need to see what process and applications you currently use so that we can understand how the migration would work and what features you require for it to be the most efficient and effective for your organisation.