



Day 8

DIY

Q1. Technical Case Study on Migration of a Charity Trust Operations to Cloud Infrastructure.

Objective: To be able to understand why Cloud Computing is preferred over traditional non-IT solutions.

Background:

A well-known Charity Trust XPO has been running since 2001 which helps people to raise money for charity. Since its foundation, around 22 million users have raised £3 billion for various causes. Now fundraising has evolved and goes beyond people contributing to various causes by taking part in different activities like running Marathons etc.

The trust wants to find a way of connecting people with not only more worthy causes but also ones that they actually care for. Like people might have an inclination towards orphanages age. Others might have more liking for Old age homes.

They have been following traditional methods of considering previous transaction history and trying to find out areas that could attract more people for fundraising.

Problem Description: On deploying a website as a solution, the firm traces the various challenges/objectives:

1. The objective is that giving has to become far more engaging. Firstly, it has to become social. The second one is that it has to be relevant. So this is where comes in the first challenge.

2. As the traffic i.e. the no. of hits on the website will increase manifold, the foundation needs to ensure that the website is equipped to handle the increased load, especially during events of special cause donations.

3. As an enterprise the trust has to be able to take up donations anytime someone has the urge to give to a cause.

4. The next challenge is how do to find out using the data that the trust has got, what people actually are looking for?

Simply using traditional methods wouldn't work. Therefore a graph has to be built up.

As a proof of concept of the foundation's historical graph, the organization had around 14 years' worth of data with 70 million nodes and 280 million relationships.

5. The foundation uses a range of languages for the graph, such as Linux and Python in some areas and Java in others. So the foundation is looking for an enterprise-ready solution.

XPO is now seeking a solution from somebody as it do not have IT skills.

Solution:

The trust has been depending upon traditional methods till now but all these challenges would require support from the cloud.

It's quite clear that the charity trust needs to follow the IaaS and PaaS service model.

The above challenges can be met by:

1. Increasing the no. of Web Front-End servers so that company's web-portal is available to users at all the time.
2. Adding more App servers so as to accommodate more automated business applications managing the operations of the company.
3. Increasing the no. of DB servers to store multi-fold data coming from customers.
4. Flexibility to choose the right technology for the problem without it being a platform-dependent one.

Products which could be considered: Microsoft Azure, AWS

Estimated time: 30 minutes

Summary of this assignment: You have learned to identify the deployment model as well as the service to go for in a particular case.

Benefits of the above solution could be seen in the below areas:

- Flexibility in particular was something major that made them to choose Microsoft for it. As the team could code using whatever language they need, it allowed them to pick the right technology for the problem and it didn't have to be a Windows solution specifically.
- This resulted in increased focus of the developers on application development logic.

Q 2: Case Study on a PQR Housing Association migrating to Cloud.

Objective: To be able to understand how a PQR Housing Association cuts down its, IT costs by migrating to Cloud.

Background: PQR Housing Association is responsible for managing 1,500 homes but the staff number is only 25.

The housing group has also introduced Citrix Desktops for housing officers, allowing them to access their workstations remotely on iPads when they are

out on making visits. The association has been outsourcing certain services for the past few years. But it has been experiencing uneven business continuously.

Problem Description:

1. The Company doesn't want to add to its costs by hiring more to support an on-premise IT deployment as there is a chance that the requirement would go down in due course.
2. Another factor is that Railway Housing operates at 14 separate sites, and buying separate IT systems for them all would prove horribly expensive.
3. The association also needs to upgrade its Microsoft Office software to the latest version, while also migrating away from Windows Server 2003 servers to Windows Server 2012.

Solution:

All these problems demanded support from Cloud. As they are in need of managing their infrastructure (including network, resources etc.) as well as software maintenance, it is understood that they need to go with the IaaS + PaaS + SaaS service model.

They need to take the following steps:

- The Company can let its outsourcer to host its complete infrastructure inside a managed cloud based on business requirement which if goes down, the infra can be released.
- The outsourcer will provide single sites with single workstations which would mean wherever they're going, they have an IT presence i.e. resources and network will be available irrespective of their geographic location.
- The outsourcer should also supply all the required software to the company with its licenses as and when required.
- The outsourcer should also maintain the software solutions along with providing regular upgrades and enhancements.

Products considered: Civica Cloud

Estimated time: 30 minutes

Summary of this assignment: You have learnt to identify the deployment model as well as the service to go for in a particular case study.

Benefits:

The Company has picked Civica Housing CX, a management and dashboard reporting tool, as the association's housing management system. This will allow housing officers out in the field to get access to that from devices, as it's a cloud-based application.

It's a web-based housing management system, so that will allow better connectivity to the housing management system, which is basically what they want.

Q 3: Case Study on Migration of a Short Story Company to Cloud Services

Objective: To be able to understand how a short story company translated to huge profits by migrating to the cloud.

Background:

This is a London-based community website where people share short stories and poems they have written. Readers of the stories offer feedback and can interact with the authors through the company's site. The company has no hardware intentionally. They wanted to save time and The investment that would have been required to build out their own infrastructure. They wanted to focus development time on improving/extending the applications and not on maintaining IT infrastructure.

- Set up almost four years ago, this platform was originally hosted by a local Infrastructure as a Service (IaaS) provider in Copenhagen.
- The development team had been responsible for building the systems and ongoing maintenance of the infrastructure. The systems are based on Linux and Unix.
- Over the last 3-4 years, the company has grown – today it has about 1.5 million web and app users and over 70,000 stories accessible on the site.

Problem Description:

1. Originally hosting the platform with an IaaS hoster saved it from having to invest time, money, and resources in building out its own IT infrastructure. However, with IaaS, the company still had many maintenance activities – loading up software, middleware, etc. They realized that they were spending too much time on IT maintenance activities.
2. The Company's applications are written in Java. So they need a platform that would best fit to provide support for JVM-based languages.
3. Moreover the platform had to be cost-effective.

Solution:

As it is understood from the background scenario that the company already had the infrastructure. They just wanted to be relieved from the extra load of maintaining the infrastructure so that they can utilize the time for improving their efficiency.

- To cater to the needs of the company only a PaaS service could help.

PaaS will provide:

- The ability to quickly and cost-effectively build and deploy new applications.
- Provision for a computing platform and deployment of the associated set of software applications while negating the need to buy or maintain hardware or software.
- A flexible, easy to use and easy to configure service.
- All the required software along with their licenses to the company as and when required.

Products considered: AWS, Salesforce

Estimated time: 30 minutes

Summary of this assignment: You have learned to identify the deployment model as well as the service to go for in a particular case.

Benefits:

- Amazon Web Services (AWS) are reliable and easily accessible. Easy to setup, configure and provision. Once you have data and services running in the cloud, it's easy to run apps close to that data and services.
- Salesforce provided the right functionality for the company's requirements. Their applications are written in Java, and with Salesforce focused on support for JVM-based languages, the Salesforce Platform was a natural fit.
- No application changes were required to be made in order to run Existing applications on Salesforce. Additionally, the team found deployment with Salesforce to be a fast, simple process.
- Salesforce removed a lot of the barriers to developers so they could focus on development. Therefore, unleashing a lot of creativity in them.
- The company also found the service to be very cost-efficient. The low cost of the Salesforce Platform, coupled with a huge developer productivity boost, translated to big savings for them.