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| Cloud Computing CA |
| PT TEAM 4 Proposal |
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# **Background**

Active Learning Institute had launched an online registration and management system in 2016. It was hosted on Microsoft Azure VM (IaaS) with localhost SQL database.

It was noticed that some of the courses had very high demand and students had to spent at least 10 minutes to complete the registration or get notified the desired course was fully enrolled, due to the long loading time of the pages. Some students had also feedback that they had encountered page cannot display message in their internet browsers.

Considering the high demand of some courses last year, the management of the institute has decided to open multiple concurrent sessions for the most popular courses this year. The online registration will be open on 1 July.

The IT department head is now concerned about the performance.

# **Objective**

The IT department head of the institute is looking at optimizing the program of the system as well as a better hosting solution to achieve quick and flexible resource scaling, and yet at a reasonable cost.

# **Cloud Provider**

After a few internal meetings, the IT department head decided to migrate the system to Microsoft Azure Web App (PaaS).

# **Cloud Features**

In order to achieve the best performance, the team will explore and integrate the following services in the system

* Azure CDN
* Azure Logic App for batch processing

In order to achieve high availability, the team will explore and integrate the following services in the system

* Auto scaling of Web App
* Geographical redundancy of Web App
* Geographical redundancy of Database
* Geographical redundancy of blob storage for course media files

Additionally, some additional features will be explored and used for monitoring and reporting purpose

* Application Insights for Analytics
* Application Insights live stream and error monitoring
* Alert for high resource usage of Web App
* Alert for high resource usage of database