

Assignment 2: Cloud Service Implementation

For Internal Groups:

Demonstration Due Date: Practical Timeslot in Week 12

Presentation Due Date: Practical Timeslot in Week 13

Report Due Date: Sunday, 8th November, 11:55pm

For External Groups:

Demonstration Recording Due Date: Sunday, 1st November, 11:55pm

Presentation Recording Due Date: Sunday, 8th November, 11:55pm

Report Due Date: Sunday, 8th November, 11:55pm

Overview:

In this group assignment, you are acting as a member of the technical team developing a video service for the next major Adelaide horse racing event, the 2021 Adelaide Cup! Your task is to work with your team members to plan and implement the core components of the video service on the AWS cloud.

You should create your own AWS account and implement a small video service as the proof-of-concept (that handles up to 10 concurrent video streaming sessions). You are required to submit a report which contains your design and implementation details. You are required to give a demonstration in Week 12 and presentation in Week 13.

For students who wish to work on a different scenario, approval from the course coordinator is required **before the end of week 9**. You need to come up with extensions for each of the group members.

Implementation Details:

Each of the team member is responsible in leading one of the following topics. While the load of each topic may be different, students are encouraged to also contribute towards other topics. Each team member's contribution should be included in the report.

Account Management

Manage subscriptions, such as authentication, authorisation and accounting for subscribed users.

~~Video Streaming and Video-on-Demand~~

Provide video service on AWS. Please find the video provided for this assignment instead of hosting another video. Video no longer needs to be live streamed to be considered a pass. Video can be presented as on-demand instead. To achieve a high grade here additional features **must** be added. Creating a live video stream will be considered as an advanced additional feature.

Usage analysis

Collect and analyse the network traffic, e.g. hourly service usage pattern, etc.

Testing

(only if there is a 4th member in the team)

Testing of the system, such as whether the system is alive or not.

Planning and Estimated Budget:

Your task is to study and utilise tools made available on AWS to facilitate video streaming service for the given scenario. You should take a rough estimate of the traffic load and calculate the estimated budget. Justification of your estimate should be provided in the report.

Demonstration and Presentation:

Each team member is required to present the individual component under his/her responsibility. Each team is required to demonstrate the setup using team or individual AWS accounts. Individual demonstrations (for every team member) take place in week 12. A group presentation (with each member presenting their nominated section) regarding the implementation details will take place in week 13.

Deliverables:

1. Report
 - i. One Report per group, only one member is required to submit the report (ensure names are clear within, however).
 - ii. The report should include the following sections:
 - A Table Listing the individual components and contributions (in percentage) by each team member.
 - System Design (an overview of your system)
 - Implementation Details
 - Account Management
 - Video Streaming and Video-on-Demand
 - Usage Analysis
 - Testing (if applicable)
 - Other Sections (if applicable)
 - Estimated Budget
2. Presentation Slides
3. Demonstration in Week 12

4. Presentation in Week 13

Groups

This is a group assignment. You can self-nominate your group members **before the end of Week 8**, meeting the following requirements:

- All members are required to be able to demonstrate/present in the same practical timeslot (including external students working with internals).
- Minimum of 3 students, maximum of 4 students.

Nominations fail to meet the requirement will be discarded. The remaining students will be formed in groups at the beginning of mid-SP break. Note, depending on the number of remaining students, additional group members may be added to your group.

Assessment:

For a more detailed breakdown of each marking criteria, please see the “Assignment 2 – Marking Guidelines” file on the learn online...

- Demonstration 20%
- Presentation 30%
- Report 50%

Extension Policy:

All students seeking extensions are required to:

- Extensions can be made using the learn online utility or through emailing the course coordinator (email available on learn online).
 - Submit your most recent report as attachment
 - Submit supporting evidence as attachment (e.g. medical certificate, access plan, etc.)

Late Policy

There are NO late submissions, unless you have an approved extension. Please ensure that you have submitted a copy of your report early in case something comes up last minute.