You will write a project proposal that addresses problems/limitations when a non-Cloud method is used within an IT business. You will propose a technical solution and identify how this solution can solve the existing problem or improve the performance of the business.

Step 1 : Project proposal

You are required to identify a problem (or create a scenario/use-case) in a business/company where traditional non-Cloud methods have been used for a long time. Your goal is to propose a modern solution based on the recent advances in Cloud Computing technologies. You are welcome to explore and use open-source Cloud software or commercially available Cloud platforms. You will then demonstrate the effectiveness of your solution and outline your plan for implementing the solution.

• Describes an existing problem in a business/company that uses non-Cloud methods
• Propose a Cloud-based solution and describes this solution solves the problem and meets the requirements of the business/company
• Present a solution strongly based on evidence from the literature and recent advances in Cloud computing

Step 2 : Project implementation and Demonstration

In Phase 2, you will implement your proposed idea as a proof-of-concept, supported by a strong literature review along with the identification of research gaps in the project scope you have proposed.

In Phase 2, you could use platforms of your choice to implement the solution, e.g., Amazon AWS, Microsoft Azure, Google Cloud, or your own small-scale Cloud-based prototype at home. In this phase, you will write a technical report presenting the literature review of the project scope and also documenting your project implementation.

You will extend the project proposal document in Phase 1 to include:
• The project design, method and intended outcomes/solutions
• Detailed review of evidence from the literature relevant to the issues, validity and reliability of current and proposed IT services and cloud computing solutions
• Practical work and synthesis of results
• Technical solutions and outcomes achieved

Report structure :

You should use the following structure when writing your project proposal (Phase 1) and technical report (Phase 2) document:

1) Project title (Phase 1 + 2)
2) Abstract (Phase 1 + 2)
3) Introduction (Phase 1 + 2)
4) Related Work / Literature Review (Phase 1 + 2)
5) Proposed Project (Phase 1 + 2)
6) Project details / Proposed Solution (Phase 1 + 2)
7) Implementation Details (Phase 2 only)
8) Demonstration (Phase 2 only)
9) Discussion and Future Work (Phase 1 + 2)
10) Conclusion (Phase 1 + 2)
11) References (Phase 1 + 2)

Formatting :

• Formatted using the IEEE Conference Style Template in two column mode

• External sources are appropriately cited and referenced with the IEEE Referencing Style

• Between 10 to 15 pages in length depending on the scope you cover

Things that must be included in report :

- Excellent implementation details of the proposed solution

• Excellent use of schematic diagrams to present the architecture/layout of the proposed solution

• Critical analysis of the implemented solution supported with diagrams and figures

• Critical reflection on how the proposed and implemented solution can be further extended as future work

• Discussion on how the proposed and implemented solution can be applied to the real-world in a broader context

Ideas :

• *Network Visibility in Cloud Environments*: While log files can be used as telemetry sources, they are not tamper proof in the event of a security breach. This project explores a Cloud-native way of obtaining network-wide visibility within Cloud environments.

• *A Cloud Approach to Storing and Sharing Dental Records in Australia:* This project leverages Cloud computing technologies to build a scalable and cost-effective web service for secure dental record sharing and storage in Australia.

• *Cloud Migration Proposal for Counseling Companies:* This projects use Cloud computing technologies to expand a small counseling business and overcome current inefficiencies in the existing system.

• *Implementing Cloud-based solutions for Small and Medium-sized Enterprises (SMEs) to increase their revenues*: This project proposes a model using SMEs to increase their business output and revenues.

• *Cloud computing implementation for a smart shopping cart*: This project develops a smart shopping cart system that will keep the track of purchased products and online transaction for billing using RFID and Cloud computing which enables customers to skip the billing queue.