

Project Proposal¹ : AWS design with backups and scheduled resource check

Background

The project aims to develop a software application that uses AWS-CPM (Cloud Protection Manager) to provide backup, recovery, and disaster recovery solutions for AWS workloads. The software will leverage the native snapshot technology of AWS to automate and optimize the backup and restore processes of various AWS services, such as EC2, EBS, RDS, Redshift, Aurora, EFS, FSx, Dynamo DB and S3. The software will also enable cross-region and cross-account backup and disaster recovery, as well as resource scheduling and cost monitoring.

Scope

The scope of the project is to design, implement, test, and deploy the software application that integrates with AWS-CPM and provides a user-friendly interface for managing backup and recovery tasks.

The software will have the following capabilities:

Create, edit, delete, and clone backup policies and schedules for different AWS services and resources.

Perform on-demand or scheduled backups and restores of AWS services and resources.

Monitor backup and restore status and performance.

Configure and execute cross-region and cross-account backup and disaster recovery.

Manage backup retention and deletion policies.

Schedule resources to start and stop automatically to reduce costs.

Generate and view reports on backup and restore activities and costs.

The project will not cover the following aspects:

Installation and configuration of AWS-CPM

Backup and recovery of non-AWS services and resources

Integration with other backup and recovery solutions

Customization of AWS-CPM features and functionalities

Deliverables and schedule

The main deliverables of the project are:

¹ This document is by no means a “full project proposal”. It has been simplified and customized for the purposes of SWE20001 teaching. The full project proposal includes many other sections which have not been discussed during the first few weeks of SWE20001 teaching.

A software application that integrates with AWS-CPM and provides a user-friendly interface for managing backup and recovery tasks.

A user manual that documents the features and functionalities of the software application

A test plan and test cases that verify the quality and performance of the software application.

A deployment guide that describes the steps and requirements for deploying the software application on AWS

Initial Release Schedule of the Product backlog items

No.	Item	Dependencies	Business Value (1 least – 10 most)	Release Schedule (Sprint 1 2 3 ...)
F1	Add a new member		7	Sprint 1
F2	Add a sales record	F1	8	Sprint 2
F3	Edit a sales record	F2	8	Sprint 3
F4	Analyse a member's grocery needs	Existence of a member's record and that member's sales records	9	Sprint 3
F5	Create backup policies and schedules	F1	9	Sprint 1
F6	Perform on-demand backups and restores	F5	10	Sprint 2
F7	Monitor backup and restore status and performance	F6	9	Sprint 2
F8	Configure and execute cross-region and cross-account backup and disaster recovery	F6	8	Sprint 3
F9	Manage backup retention and deletion policies	F6	7	Sprint 4
F10	Schedule resources to start and stop automatically	F6 and F7	5	Sprint 4
F11	Generate and view reports on backup and restore activities and costs	F7	6	Sprint 4
F12	Document user manual	F7 and F11	8	Sprint 4
F13	Develop test plan and test cases	F7 and F11	7	Sprint 4
F14	Deploy software application on AWS		10	Sprint 4