CPU/IO Usage Summary Project Charter

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Capstone 1

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Background/Executive Summary

The CPU/IO Usage Summary Project is a simple yet complicated project. To explain, our team at Acxiom has a client that sends us data in which we fix/complete and overall make better for their business purposes. The "solution" that does this runs 24/7 and is constantly updating tables and sending out files for the client to utilize. The client has teams/groups across the world that run campaigns and reports to gather information from the database to see the success of marketing campaigns, individual store locations, and future business decisions. The whole goal for the project is to provide our Production Support team with the proper tool to look and compare CPU and IO usage between the different groups that query from our server, which houses our database. This will include a months' worth of data to look at. The importance of this capture time is if we miss our SLA (must finish certain processing by certain time), then we can go back and see if a certain group had over average server usage (that caused our processing to be delayed and non-efficient).

Project Purpose/Justification

The goal of the project is to provide a tool showing CPU and IO Usage on our server for the production support team so that we can better help our client and determine what users have high activity. I aim to accomplish this project with my co-worker Cade Toennis (Delivery Analyst) and help from the rest of the team by the end of March, allowing time for future improvements to get started before the start of May.

The need for this project stems from the current problem with how we capture this data. It is manually done through a SQL query that takes 1 to 2 minutes to process, which is then needed to be moved to excel and made into a usable graph. This only allows for one person to view it and does not provide historical data. The goal for this project is to automate the process, store historical data in a table, and create a webpage for all team members to access and utilize in daily decisions.

Business Need/Case

Within our team, there have been many advances made to making tools that help with analysis, decision making, monitoring, etc. On our current inhouse website, there are a multitude of these tools such as a database dashboard, file input/output status's, etc. The addition of the CPU and IO Usage Summary tool will improve the time efficiency and ease of gathering the data and viewing it, and it will diminish the risk of human error and risk of obtaining bad data.

Business Objectives

For the goal of this project, the intent is to provide a simple tool that allows team members to view selected data with ease and make business or technical decisions off it. For example, if a client group has been using the server too much or exceeding the limit set by contract, we will be able to know in a second and possibly bill them for extra usage. Also, if server load is just high in general and a group is using too much CPU power for instance to the point where the whole server isn't working, then we can see that and lock the user from creating more queries.

Project Description

Project Objectives and Success Criteria

The following objectives are centered around making the CPU/IO Usage Summary tool/webpage easy to access, use, view, and overall be useful to decisions around server usage for Acxiom and its client.

- Understanding of all previous code that has been modified towards our tool
- Full documentation of code, hours worked, and feedback provided
- Cleaned up 1.0 version of tool

Requirements

The project must meet the following list of requirements to be considered successful:

- Working webpage with both CPU and IO Usage graphs
- Working data date selection (drop down or list)
- List of future improvements/upgrades
- Finish before May if possible

Constraints

The CPU/IO Usage Summary Project must follow the listed constraints:
- All security standards and software practices must be compatible and to the standards of the current tools (webpages)
- The project must be completed by Alexander Sohn with help from Cade Toennis
- 3 IT specialists will be provided as resources for mentoring, teaching, and helping if need be
- When the base project is complete, improvements and out of scope goals will start to be worked on

Assumptions

The following are a list of assumptions for the CPU/IO Usage Summary Project

- The purpose of this project will be communicated to the entire team (not just production support) prior to deployment
- The project has the full support of everyone on production support
- Upon completion, the webpage will be a base model of functionality.
- After completion, upgrades that will make the tool more useful will begin.

Risks

There are possible risks with the CPU/IO Usage Summary Project. There are reasonable precautions that are in place to minimize the impact these risks could have on the project's deployment:
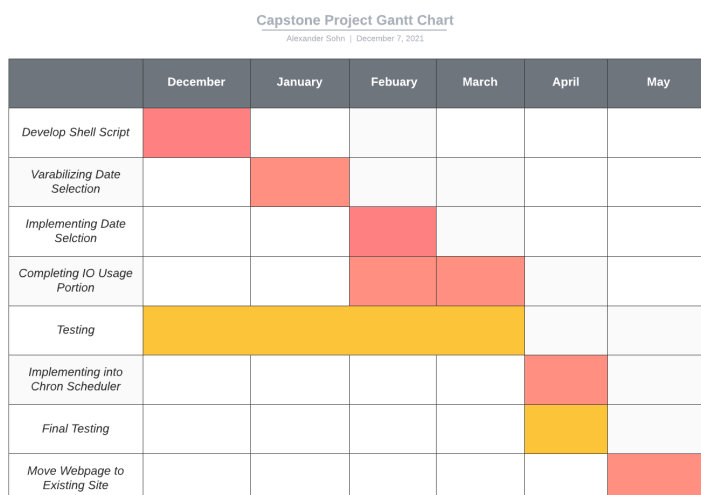- Possible outage of database that will disable updates of data to source table.
- Potential disruption to website operations during deployment
- External threats breaching new webpage

Project Deliverables

The following deliverables must be met upon the successful completion of the CPU/IO Usage Summary Project:

- Functioning CPU and IO Usage Summary Graph access on main website
- List of improvements that are wanted to be made
- Documentation for the completed project

Gantt Chart (Project Timeline)

Capstone Project Gantt Chart
Alexander Sohn | December 7, 2021

	December	January	Febuary	March	April	May
Develop Shell Script	■					
Varabilizing Date Selection		■				
Implementing Date Selction			■			
Completing IO Usage Portion			■	■		
Testing	■	■	■	■		
Implementing into Chron Scheduler					■	
Final Testing					■	
Move Webpage to Existing Site						■

Project Approval Requirements

For this project to be viewed as successful, there will be a functioning and user-friendly website that will be deployed within the time schedule set in this charter. Additionally, if time permits, future improvement plans will be set and scheduled. Success will be determined by Project Sponsor, Shane Griffith, who will also help authorize completion of the project.

Project Manager

Alexander Sohn is named Project Manager for the duration of this project. Mr. Sohn's responsibility is to manage all project tasks, scheduling, and communication regarding the project. Cade Toennis will work side by side as a mentor and guide to completing the project. With the help of Shane Griffith and other leaders among the team, advice, suggestions, and teaching will be given.