HW 13-Team: Metrics

Team number and name: Team 8 "AppBundle"

Names of students who actively worked on this assignment:

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A. Write the three core user actions for your product:

1. To store different categories of applications, App Data, and Files on a cloud server.
2. Share data securely for professional and personal use.
3. Have a cost-effective storage and manage subscription based on the necessities

B. Each team member writes the three metrics that would be important to measure for your product. List them below.

1. **Security**: Security is one of the most important metrics of our product as AppBundle stores Application data, files, sensitive information of customers on cloud servers and works in real time. It also includes a business continuity and data backup plan in case of cloud security breach.
2. **Capacity**: Capacity is the size of the workload compared to the available infrastructure. It is important in order to balance supply and demand. A good capacity should be ensured in order to actually deliver the required service.
3. **Service Cost**: This estimates the amount it expenses to convey the cloud for every customer. The repetitive expense of all engineering, support, account management, customer service, and billing activities in addition to all physical infrastructure and systems required to keep up a present customer, including completely stacked work costs. We have to keep the cost as low as possible in order to attract the customers.
4. **Elasticity**: For many people, a cloud service should not be called a cloud unless you can automatically add and remove resources. It's a question of how long it will take and whether there will be enough files to add or move, which means that being flexible and flexible is very important for our cloud-based product
5. **Scalability**: Degree to which the service or system can support a defined growth scenario. Scalability refers to the ability to service a theoretical number of users. Web-based applications are often mentioned as scalable up to tens of thousands, hundreds of thousands, millions, or even more, simultaneous users. That means that at full capacity

(usually marked as 80%), the system can handle that many users without failure to any user or without crashing as a whole because of resource exhaustion. The better an application's scalability, the more users it can handle simultaneously.

6. **Community Popularizion**: A service can offer users great user experience to promote them to write good comments and recommend it to people around them, and at the same time, recommending this App to friends to register new users can also benefit both parties. It is an important products indicator that AppBundle should increase product attractiveness and market occupancy, use event marketing and community promotion.

7. **Variability**: It is important to track the temporal nature of performance. Multiple applications of varied backgrounds runs simultaneously on the computer and it becomes a little difficult to track the overall performance of the cloud application. It is important to calculate the recovery time of the application and the mean time between the failures.

8. **Network latency**: We wish to give the customers a feel that they are running the application from their local device itself. This can be achieved if there is no lag when handling the application and the operations done with it. Hence no latency and quick access is an important feature. This is mainly important for gamers who need real time experience with the application

9. **Robust and Concurrent**: Today even the confidential data is handled through mobile applications. It is not feasible if the application breaks in the middle or is not able to handle the unexpected situation. The application needs to be robust and should be able to store the real time data. For business applications like robinhood, it is of grave importance that the concurrency is maintained at highest priority. Multiple transactions can take place simultaneously and the application should be able to handle it without any errors.

10. **System Availability**: It means service or App's system's availability rate. In other words, it means how long the bug fixing or service is unavailable of product or service. The company has to count the malfunctioning time into expenditure. It is the actual cost and time cost.

11. **Reliability**: It is an extreme factor in a service or a product. It means the average fault time and the average repair time. In this factor, people will understand how often the fault happened and how often the product or the service returns to normal. It is critical for competitiveness because it might decrease expenditure and help the company save budget.

12. **Service and helpdesk:** Its a standard of logistics. It displays the capability of management and the ability to deal with the logistics and processing methods. This metric will help the company analyze and improve the service or product based on the feedback from the customer or users.

13. **Downloads**: The total number of applications downloaded. The time the user used the app after downloading it. Cases of zero application utilization are not included in the true download count.

14. **New vs Returning**: The probability of a user choosing our cloud service after comparing multiple similar cloud storage applications. Our application's competitiveness in attracting new users and retaining old users.
15. **Throughput**: It refers to the performance of tasks by a computing service over a specific period. Adequate throughput is important to ensure all the applications on cloud servers run with optimal efficiency.

C.   As a team, discuss all suggested metrics and select <u>Top Three</u>:

1. Security
2. Network Latency
3. Service Cost

D.   Which one is the <u>most important metric</u> and why?

Security is the most important metric of an AppBundle as the application runs on cloud servers. Cloud services can be accessed from anywhere and brought a new way of storing data. While this can be good for the user's business, but also pose a significant security challenge. Any unauthorized person from anywhere may attempt to access and abuse the user's data. For example, someone might hack into a cloud server and take away customers' information, files and cause disruption of the application. This leads to a bad reputation to our company, loss of customers and business. Users have no direct control over the security of their data. When a user stores data and his applications on the cloud server, it's our duty to provide and monitor the it's security. There is a strict monitoring on the activities of the third-party application as they have some access to the information on the cloud server in order to provide a complete service to the user.