DevOps Take Home Test

Overview

These questions are a reflection of actual day-to-day problems that our Game Operations Engineers have to work through. In general, there aren't necessarily specific, correct answers here. We are looking to understand your thought processes, problem solving approaches, and ability to boil down loosely-framed problems into actionable takeaways.

Please make sure you share your thought processes and assumptions. For example, if you assume that the network time between location 1 and location 2 is 50ms, just jot that down so it is clear. If you find yourself asking things like "How many gameservers are running on that virtual machine", make an assumption and write down that assumption! Generally assume that you have a standard set of processes and tools to help you solve your problem.

GLHF from your friendly neighbourhood Wizards.

Test Questions

A. **Walk us through a live game issue you've encountered (As a player, not as an engineer!).**
   ○ How did the company handle it?
   ○ How did it affect players?
   ○ How do you think it affected the product and company overall?
   ○ What would you have done differently and why?

B. **Tell us how you would go about designing a metrics cluster capable of ingesting and displaying data from gameservers for a game with 1 Million CCU (Concurrent Users)**
   ○ What sort of data would the cluster hold?
   ○ How would you ensure it always stays performant?
   ○ What technologies would you use for ingestion, storage and visualisation?

○ How would you be certain it would handle the player counts needed?

○ Explain your reasons, thought processes, and assumptions you are relying on for making this recommendation.

C. **You are working with a Game Studio that has received player reports from their Japanese players stating that during the evening their latency is much higher than usual, affecting their match quality. How do you go about confirming the issue and working with the game server provider to resolve it?**

○ Extra info:
  i. You know that their gameservers are hosted by a third party which does not have good metrics and visibility
  ii. You know that the gameservers are in a mix of cloud and bare metal datacenters

○ What data and metrics do you need to see to be able to confirm the issue?

○ What tooling would you need to be in place to help you confirm the problem?

○ What debugging steps would you work through to help get a better understanding of the issue?

○ How would you go about working with the gameserver provider to resolve the issue?

D. **You are on-call and you have been paged for 25% drop in HTTP 200 player authentication requests to a games main backend API server. How do you go about diagnosing the issue?**

○ Feel free to assume existence of supporting tech/processes, but explicitly state them.

○ Basically - you are paged on-call for this issue and need to drive it to full completion.

E. Review the attached data and explain what you think the data is, along with answering the following points:

- ○ Extra info:
    - i. These fields are intentionally obfuscated
    - ii. There is no single 'correct' answer – there are several ways to interpret this data
    - iii. We are looking at how you draw conclusions and that the conclusion you have provided is supported by the data

- o Identify a conclusion of what the data supplied is indicating to you
- ○ Based on the conclusion you outlined, identify **two specific trends/changes** in the data.
- ○ Provide a short, clear summary of **meaningful takeaways and suggested action items** based on the trends you identified
- ○ Supply a **visualization** that clearly, efficiently, and impactfully supports your findings and backs up your suggested actions. Use whatever tool(s) you are comfortable with.