Hosting Serverless Game in AWS

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ABSTRACT

Server less gaming is a service which is incorporated with Aws services which helps in hosting the web serverless game which can be access by anyone in the world who has internet, this server less games are hosted in the cloud and can run on any platform which has web browser ,we have hosted served game in ec2 instance and serverless game in aws S3 bucket where the website is hosted the normal pc game is merged into a web game which do not require any server to run the game backend ,serverless game acts as a remote resource in order to play game locally and remotely generally the request from the client which is transmitted with the help of thin client and transmitted via video stream which help the user to play the game efficiently here we used WebGL as a graphical rendering library which help to build the serverless game.

1. INTRODUCTION

Serverless Cloud gaming defines the work and the process of how the game completely work in the back end vs front end , In the server gaming system the game in build using the unity platform and hosted in the aws services which is ec2 we create ec2 instance and host our server in the ec2 instance and port forward our server using ngrok, ngrok is the port forwarding tool which host our port online so the services can be found on web so once the user click the game in the web site the request will be sent to the server and in the server the game code runs and request will be stored and video is encode in the game is automatically loaded in the web browser by decoding the graphical video of the client and the client can be played the game efficiently and for every process in the game the server receives the request and send back the output .and can be played efficiently Were as in serverless gaming the game is built in the unity platform and converted into the WebGL gaming platform were the game can be deployed in the website directly so there is no necessary of hosting the game in the cloud or in the web and ca be directly hosted in he website by the help of WebGL.in this serverless gaming the process is done when the user click he game in the website the request is sent to the browser directly ans sends back the video encoded graphical UI and the gaming experience easily and efficiently Server less gaming is a service which is incorporated with Aws services which helps in hosting the web serverless game which can be access by anyone in the world who has internet, this server less games are hosted in the cloud and can run on any platform which has web browser ,we have hosted served game in ec2 instance and serverless game in aws S3 bucket where the website is hosted the normal pc game is merged into a web game which do not require any server to run the game backend ,serverless game acts as a remote resource in order to play game locally and remotely generally the request from the client which is transmitted with the help of thin client and transmitted via video stream which help the user to play the game efficiently here we used WebGL as a graphical rendering library which help to build the serverless game

2. PROPOSED WORK

Server Less cloud gaming is a process of delivering the new way for gaming experience to the user by playing the moderate game in the browser which help the user to load and render the game very efficiently and process the game easily we the game is developed in the unity gam engine were the game all the 3d modules and the game logical units are put together and built a web game which is known as serverless game where there is no server hosted .here we use WebGL as the module to render the image or the video of the graphical content of the game which is present to source and help the user to play the game efficiently. Game is built on the python and node js platform which help to game load and process fast.

3. SOFTWARE REQUIREMENTS

3.1 Python

Python is a object oriented language, and web programing language we used python libraries and python modules for creating and running game.

3.2 Node Js

Node js is also used to build the web game and we used node modules to run and process the game.

3.3 NumPy

NumPy is a library which is used numerical operations performed in the backend of the game rendering process.

3.4 Amazon Web Services (AWS)

Amazon web service is used fo hosting and deploying the game to online were the game can be accessed by everyone .

3.5 Amazon Elastic Compute Cloud (EC2)

We used amazon Ec2 for hosting the server in the cloud so that the user can access the games 24/7.

3.6 PyGame

PyGames is the python game modules for graphical interface for the game which helps the game to run the graphics elements.

3.7 Unity

Unity is cross gaming platform for developing the games ,like 3d game 2d games and web game and serverless games and android games.

4. PROBLEM STATEMENT

As the gaming industry is growing rapidly, we need to increase the availability of the serverless gaming ,high level gaming can be implemented but takes lot of time to render the game in the web ,so the future enhancement is increasing the availability of high level gaming in the serverless cloud gaming platform were the high level 3d games can be played easily with help of low end devices The problem is every devices need internet access to load or play the game in the devices

5. ARCHITECTURE
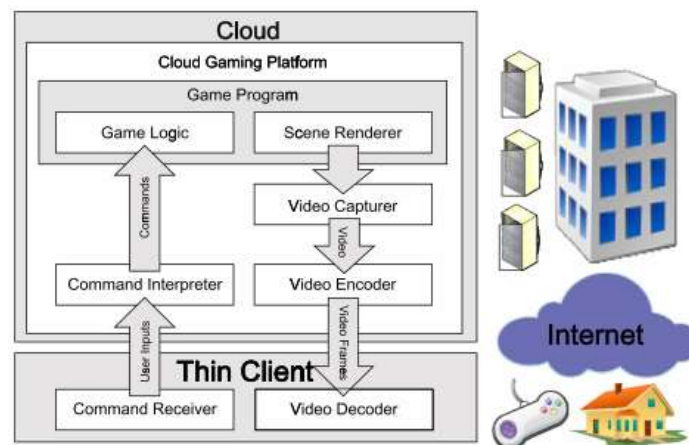
Serverless Cloud gaming Architecture defines the work and the process of how the game completely work in the back end vs front end , In the server gaming system the game in build using the unity platform and hosted in the aws services which is ec2 we create ec2 instance and host our server in the ec2 instance and port forward our server using ngrok,ngrok is the port forwarding tool which host our port online so the services can be found on web so once the user click the game in the web site the request will be sent to the server and in the server the gamecode runs and request will be stored and video is encode in the game is automatically loaded in the web browser by decoding the graphical video of the client and the client can be played the game effeciently and for every process in the game the server receives the request and send back the out put .and can be played effeciently Were as in serverless gaming the game is build in the unity platform and converted into the WebGL gaming platform were the game can be deployed in the website directly so there is no necessary of hosting the game in the cloud or in the web and ca be directly hosted in he website by the help of WebGL.in this serverless gaming the process is done when the user click he game in the website the request is sent to the browser directly ans sends back the video encoded graphical UI and the gaming experience easily and efficiently

6. FEATURES

No Server management is necessary, Aws Hosted web page to (choose game). Provide good latency and user reliable performance

6.1 Procedure
- Run the Server.js game in the
- Port forward the local hot to internet using Ngrok
- Open the serverless game webpage.
- Select the specified game need to be played

7. RESULT ANALYSIS

Login page appears when you need to sign in and then start the application

8. CONCLUSION AND FUTURE ENCHANTMENT.

Future enhancement is increasing the availability of high-level gaming in the serverless cloud gaming platform were the high level 3d games can be played easily with help of low-end devices. The problem is every device need internet access to load or play the game in the devices

9. REFERENCE

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