
AWS
re:Invent
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GAM303

Global multiplayer infrastructure: Compute, containers & Amazon GameLift

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Agenda

What to expect from this chalk talk

AWS game server hosting options

Challenges

Q&A and whiteboarding

Closing

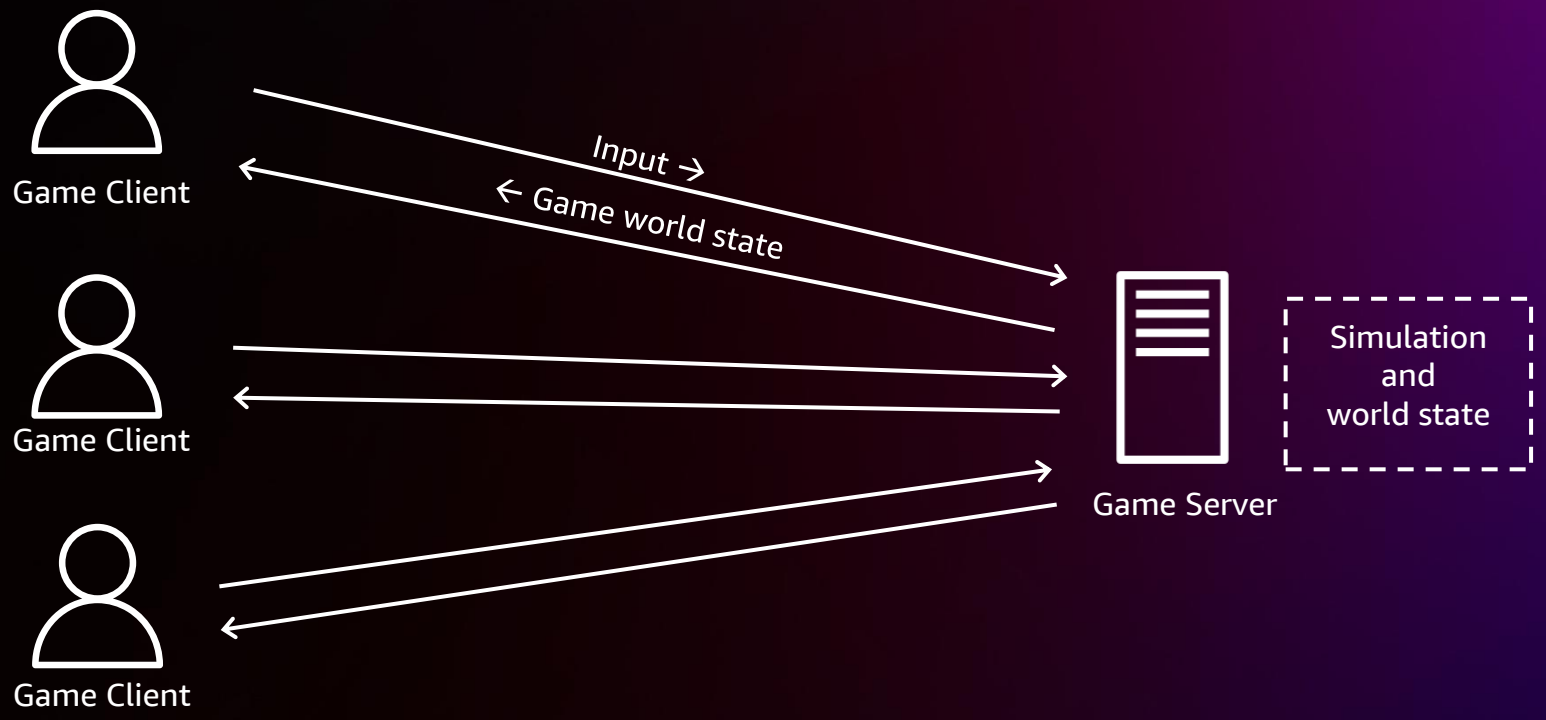
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How many of you are developing games?

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What is a game server?

- Dedicated process running on a host – runs game world simulation or a rule engine
- Exposed on public internet so that game clients can reach it



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AWS game server hosting options

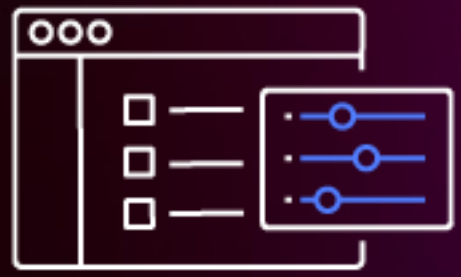
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Game server hosting: The choice is yours



Build your own

Virtual machine or container hosting



Managed services

Managed solution for deployment, virtual machine management, and session placement

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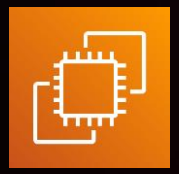
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Are you currently running or developing game servers?

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Game server hosting: Build your own

Virtual machine hosting



Amazon Elastic Compute Cloud (Amazon EC2)



Amazon EC2 Auto Scaling

Container hosting



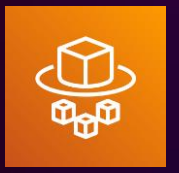
Amazon Elastic Kubernetes Service (Amazon EKS)

OR



Amazon Elastic Container Service (Amazon ECS)

OR



AWS Fargate

Both EKS and ECS have hybrid models with EKS Anywhere and ECS Anywhere

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Game server hosting: Managed services



Amazon GameLift
Fully managed

- Deploys and operates game servers for you
- Upload your build once and run globally with multi-region fleets
- Latency and player attribute-based matchmaking and session placement
- Session-aware auto scaling and optimized session packing on instances



Amazon GameLift FleetIQ

- Simple API layer for game session management
- More control and responsibility on game server processes
- Allows you to use your own management and deployment tools
- Session-aware EC2 Auto Scaling Group scaling

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Challenges

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Player expectations



- Successful game launch
- Great in-game experience
- Uninterrupted play – no server lag
- Have fun with friends

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Technical challenges



- Latency – group players in a location close to them
- Scaling – right amount of game servers available
- Operational – ease of management and observability
- Technical complexity – implementing global game server orchestration

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Business requirements



- Cost of the first player
- Launch plans
- Ability to reach players in different geographical regions
- Understand your players and their business impact

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Q&A and whiteboarding

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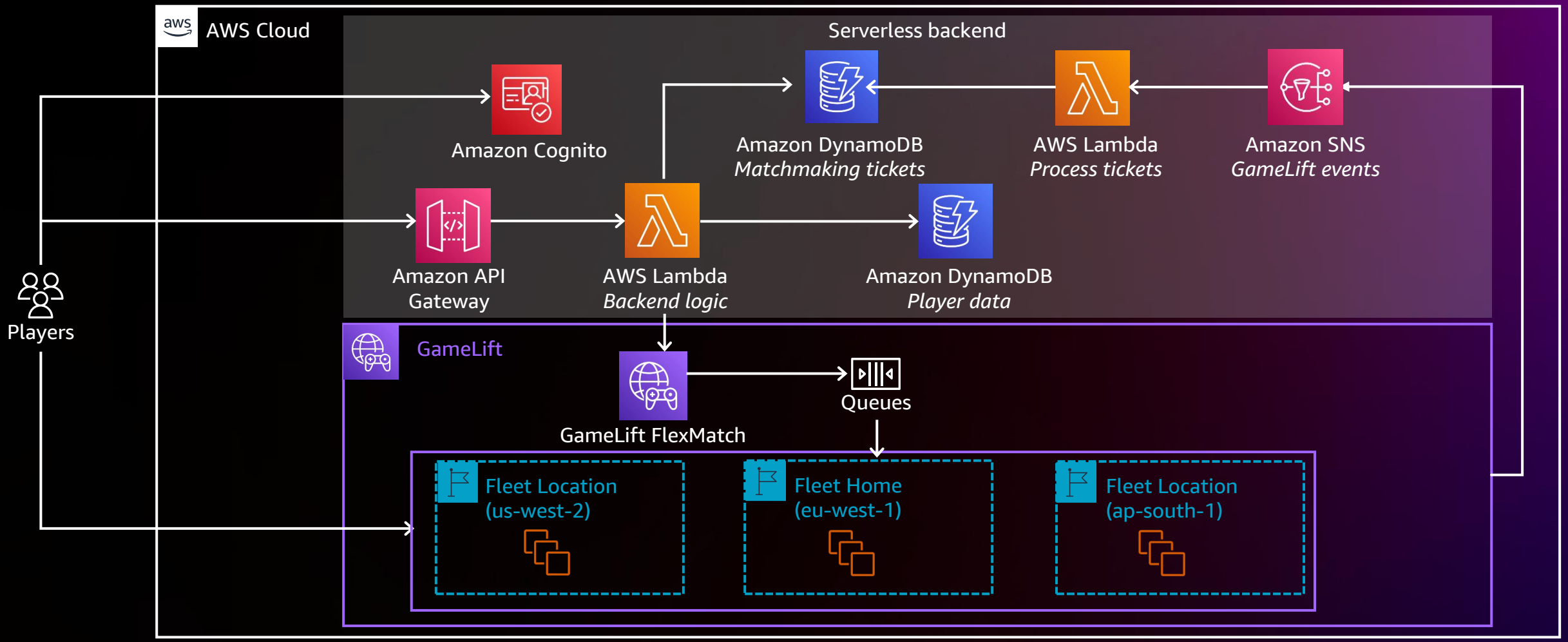
Share your challenges and requirements

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Reference architectures

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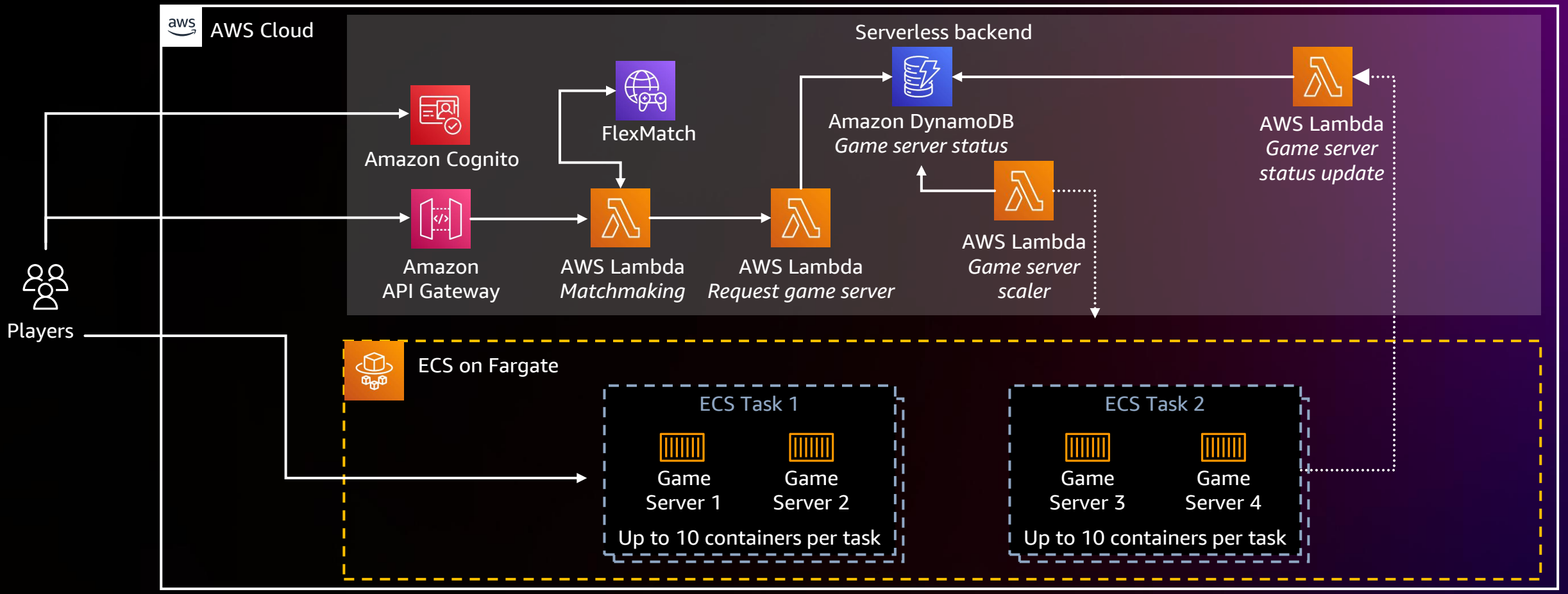
Game servers on fully managed GameLift



Guidance for Multiplayer Session-based Game Hosting on AWS
https://aws.amazon.com/solutions/guidance/guidance-for-multiplayer-session-based-game-hosting-on-aws/?did=sl_card&trk=sl_card

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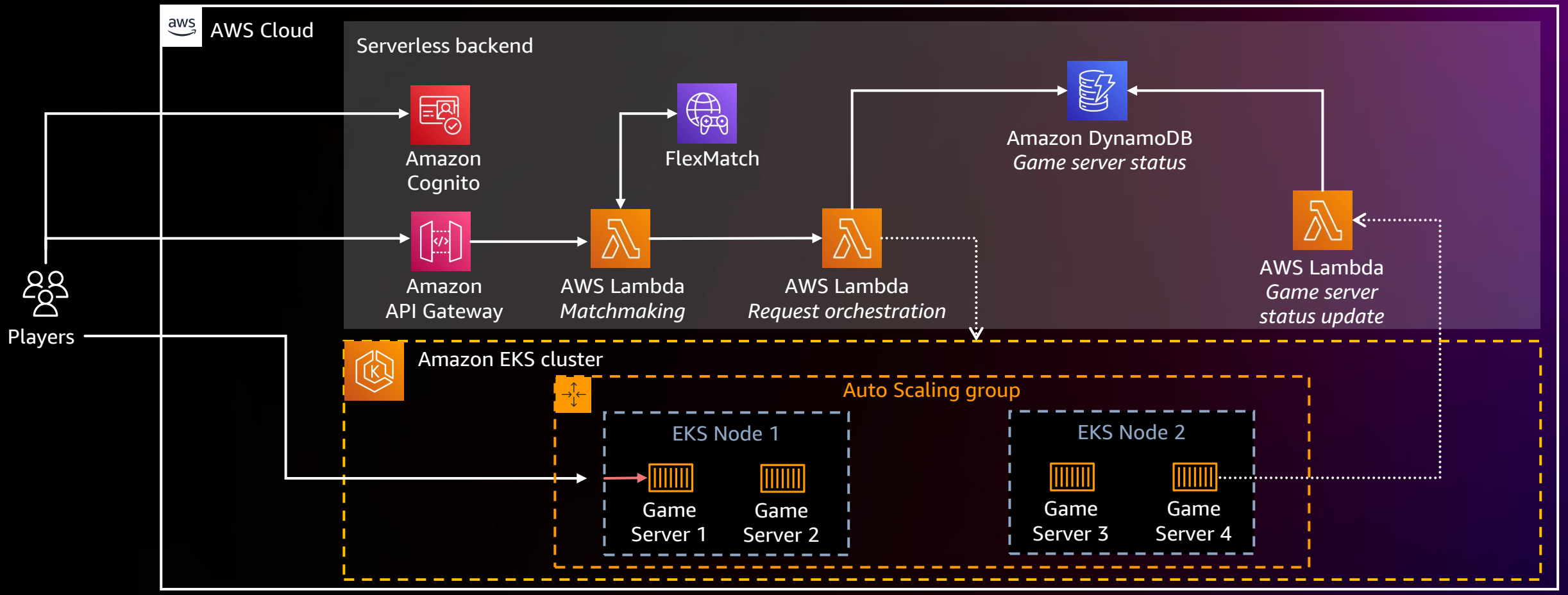
Game servers on ECS on Fargate



Game server hosting on AWS Fargate: https://github.com/aws-samples/fargate-game-servers

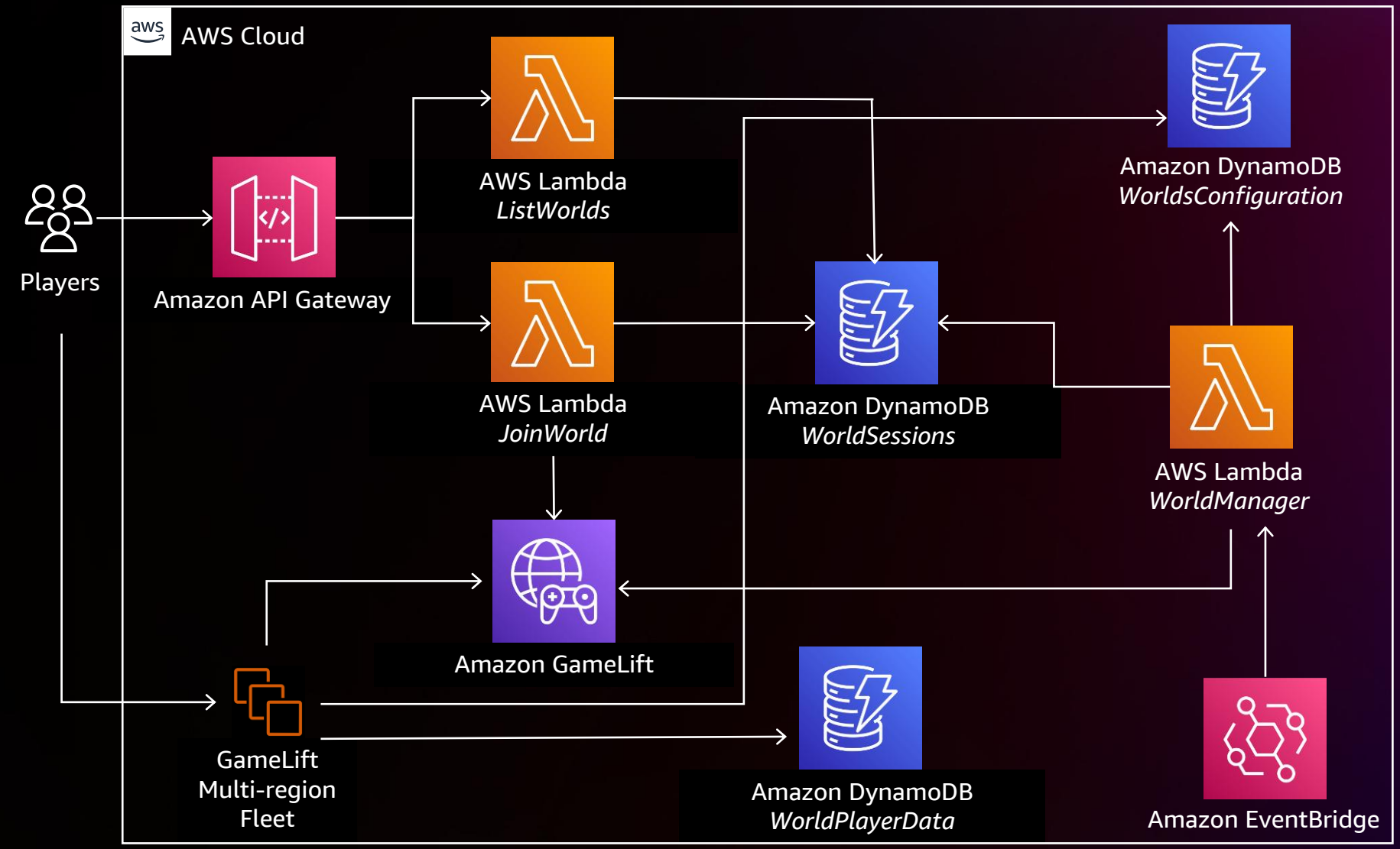
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Game servers on EKS



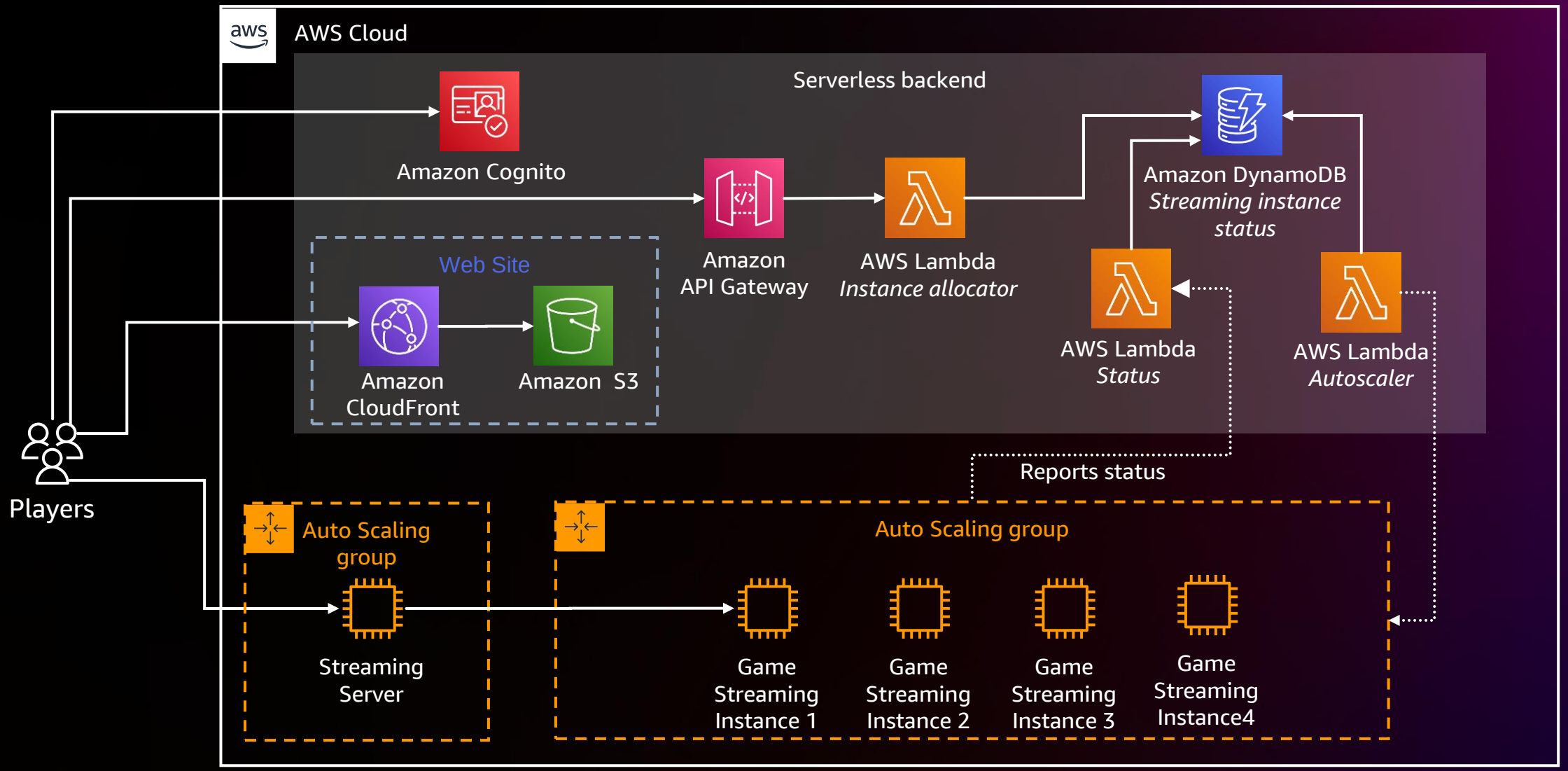
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Virtual worlds on Amazon GameLift



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Game streaming on AWS



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Useful resources

AWS for Games
https://aws.amazon.com/gametech/

Customer references
https://aws.amazon.com/gametech/customers/

Reference Architectures – Game Developer Resources
https://aws.amazon.com/gametech/resources/

re:Invent 2022 - AWS for Games
Check out other Game Tech Breakout sessions, Chalks Talks, and Workshops in your mobile app.

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Thank you!

Juho Jantunen
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