

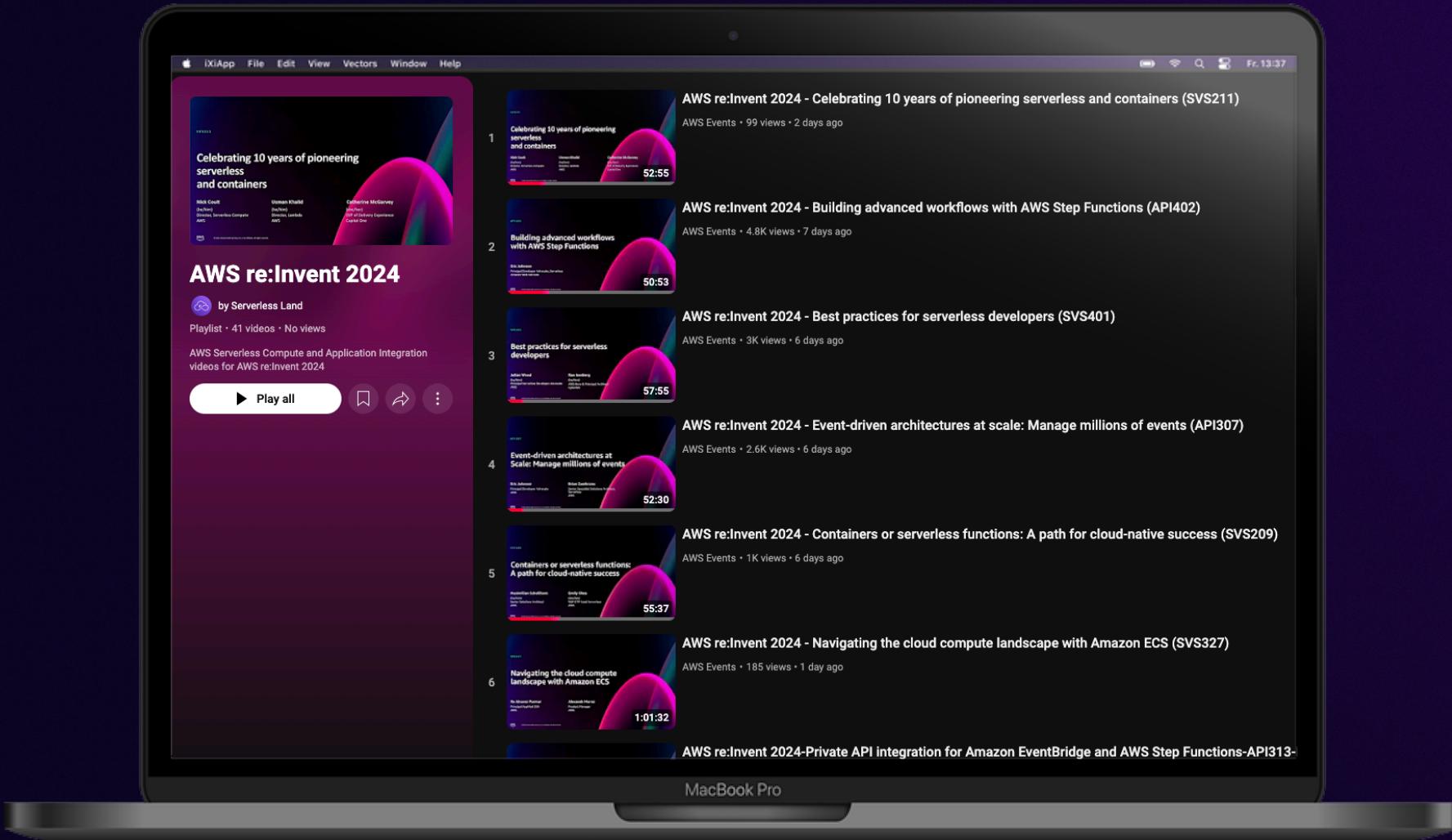
What's new in Serverless

2025



Anton Aleksandrov
Principal Solutions Architect
AWS Serverless and Event-Driven Architectures

AWS re:Invent 2024 – Serverless Compute Playlist



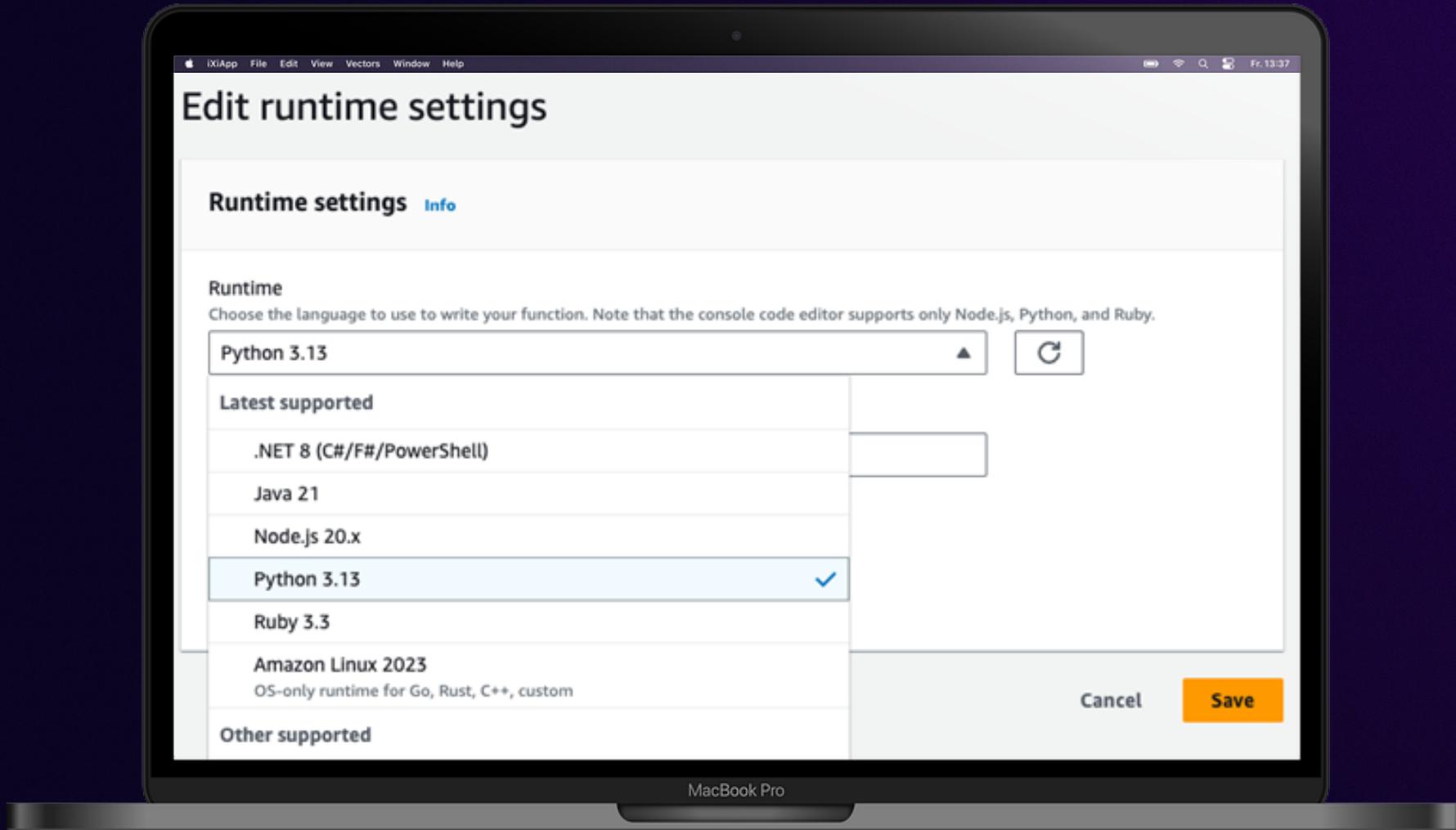
<https://www.youtube.com/playlist?list=PLJo-rJlep0ECCB8xQeqq2YRLNZOztV6Yf>



Serverless compute



New Lambda runtimes



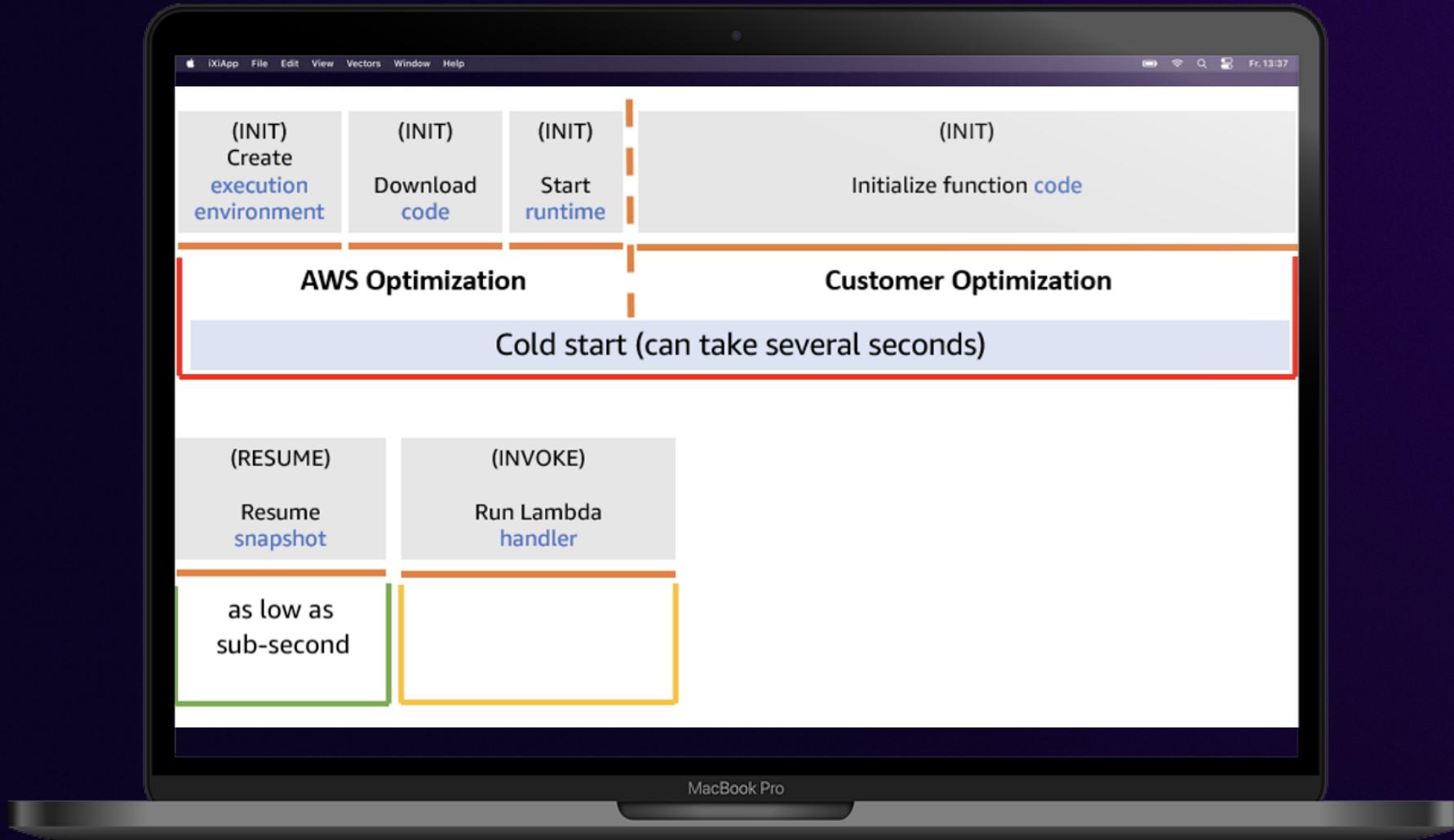
Python 3.13



Node.js 22

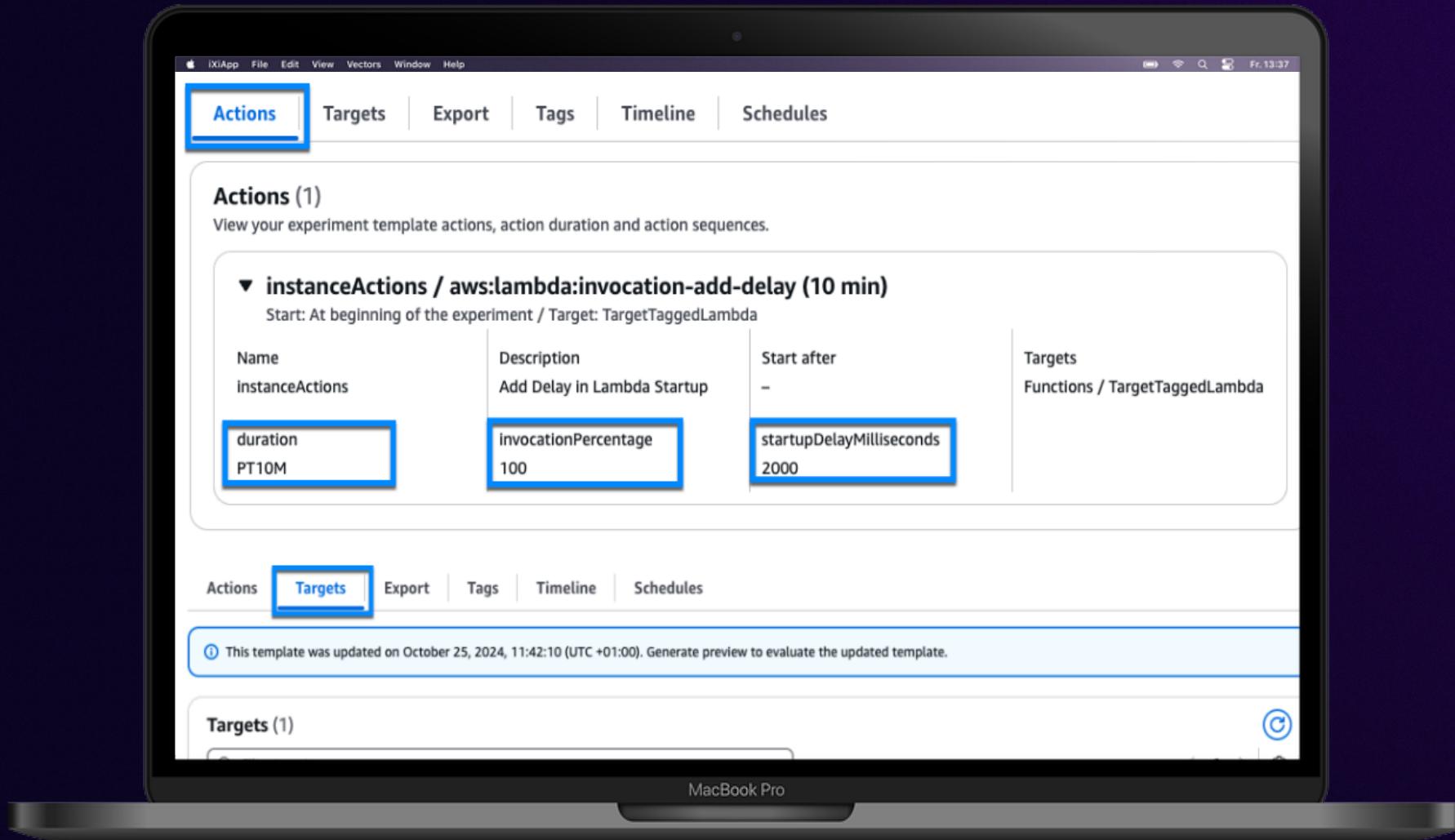
<https://aws.amazon.com/blogs/compute/python-3-13-runtime-now-available-in-aws-lambda/>
<https://aws.amazon.com/blogs/compute/node-js-22-runtime-now-available-in-aws-lambda/>

SnapStart for Python and .NET functions



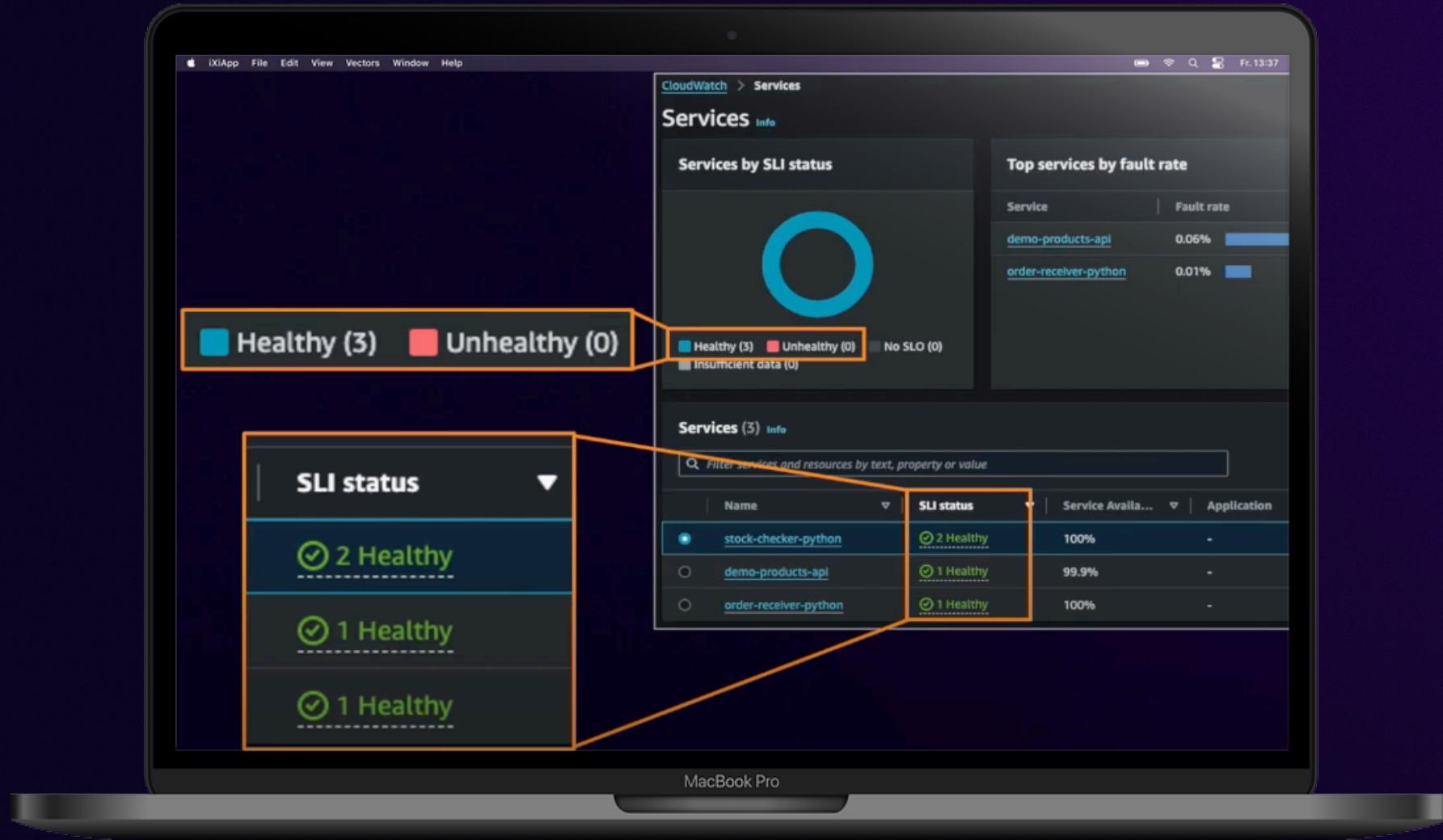
<https://aws.amazon.com/blogs/aws/aws-lambda-snapstart-for-python-and-net-functions-is-now-generally-available/>

Fault Injection Service support for Lambda functions



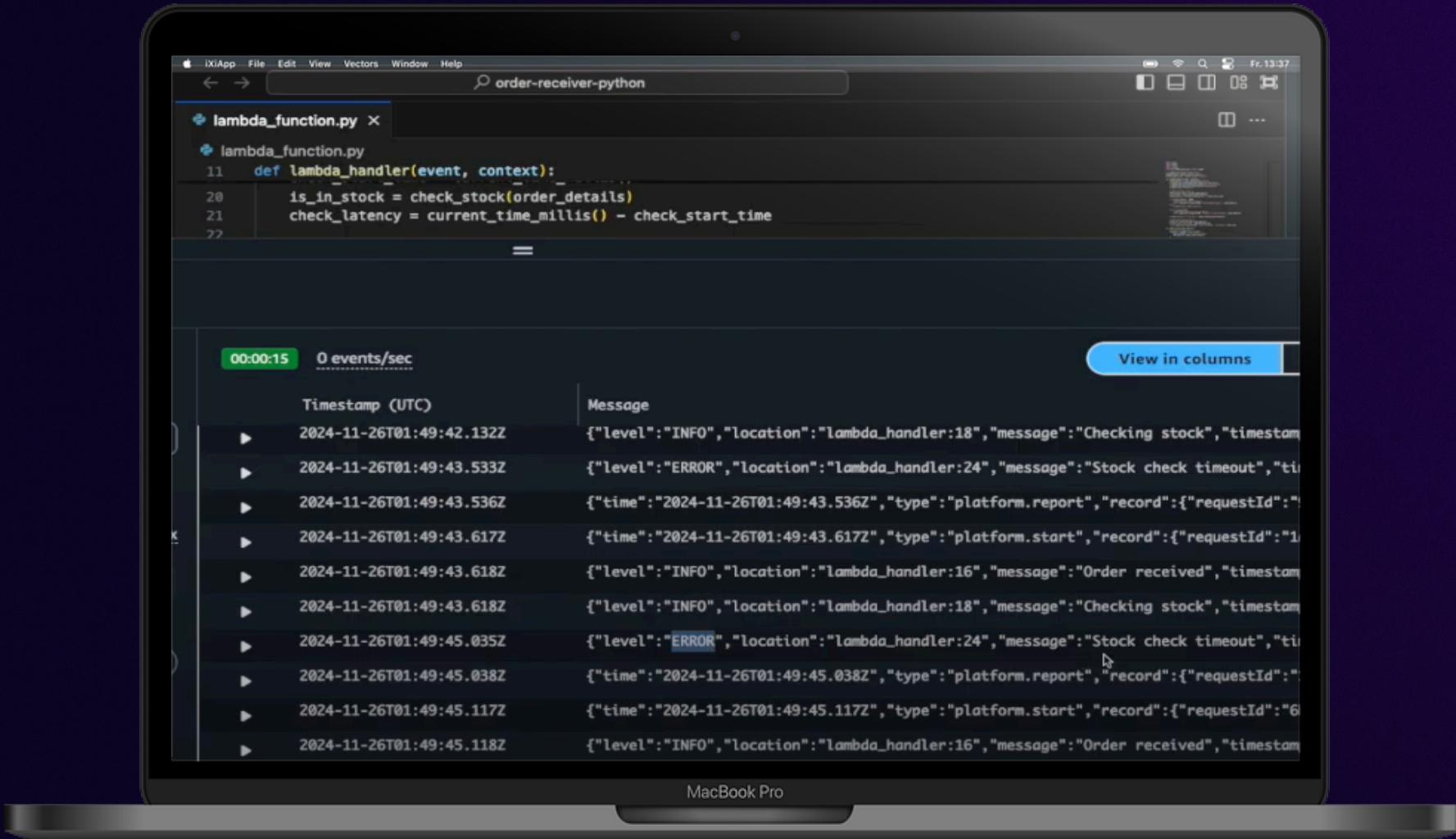
<https://aws.amazon.com/blogs/mt/introducing-aws-fault-injection-service-actions-to-inject-chaos-in-lambda-functions/>

Application Signals support for Lambda functions



<https://aws.amazon.com/blogs/aws/track-performance-of-serverless-applications-built-using-aws-lambda-with-application-signals/>

Lambda CloudWatch Logs Live Tail and Metrics Insights



<https://aws.amazon.com/blogs/compute/simplifying-lambda-function-development-using-cloudwatch-logs-live-tail-and-metrics-insights/>

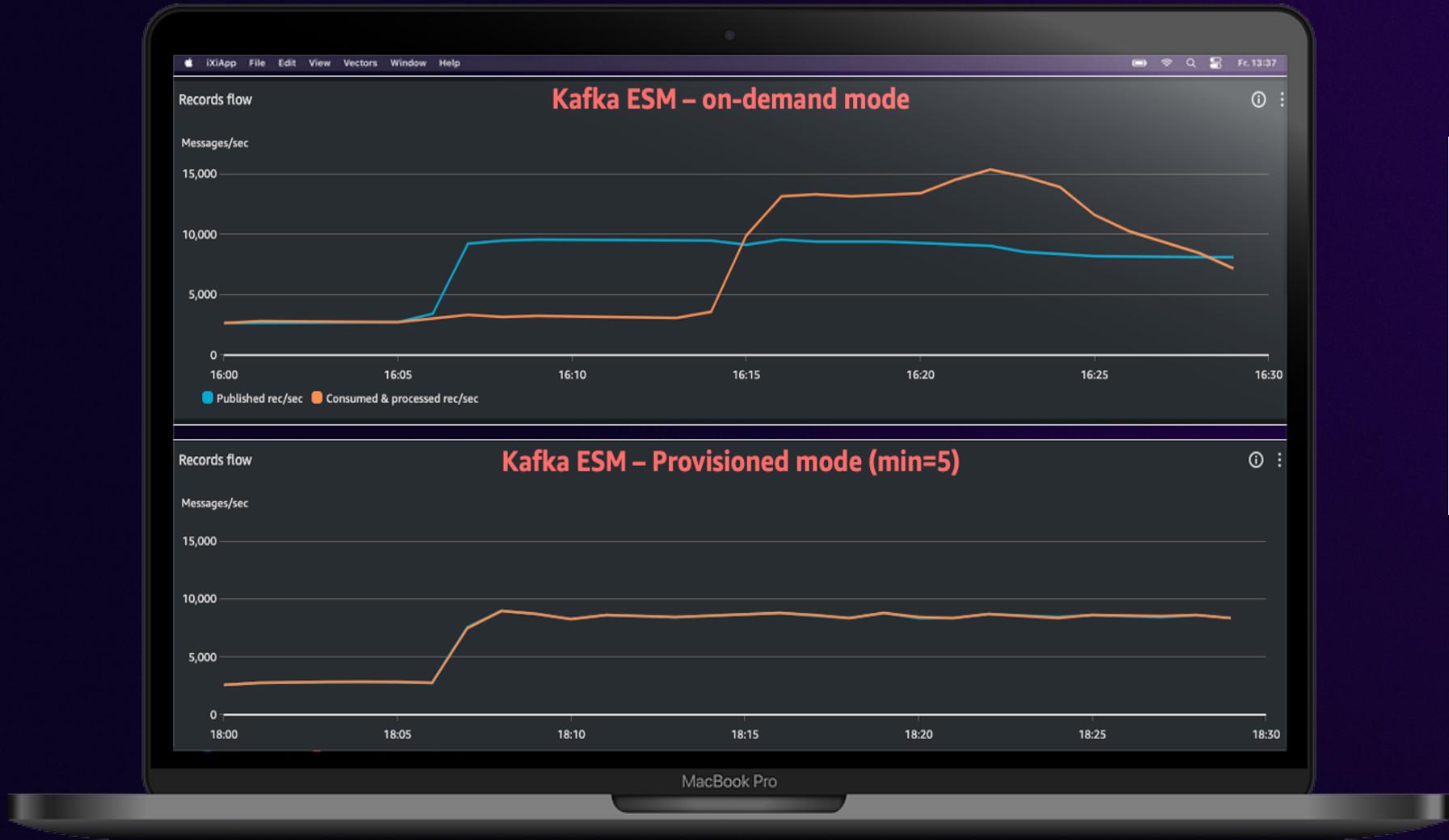


Event Source Mapping metrics for AWS Lambda



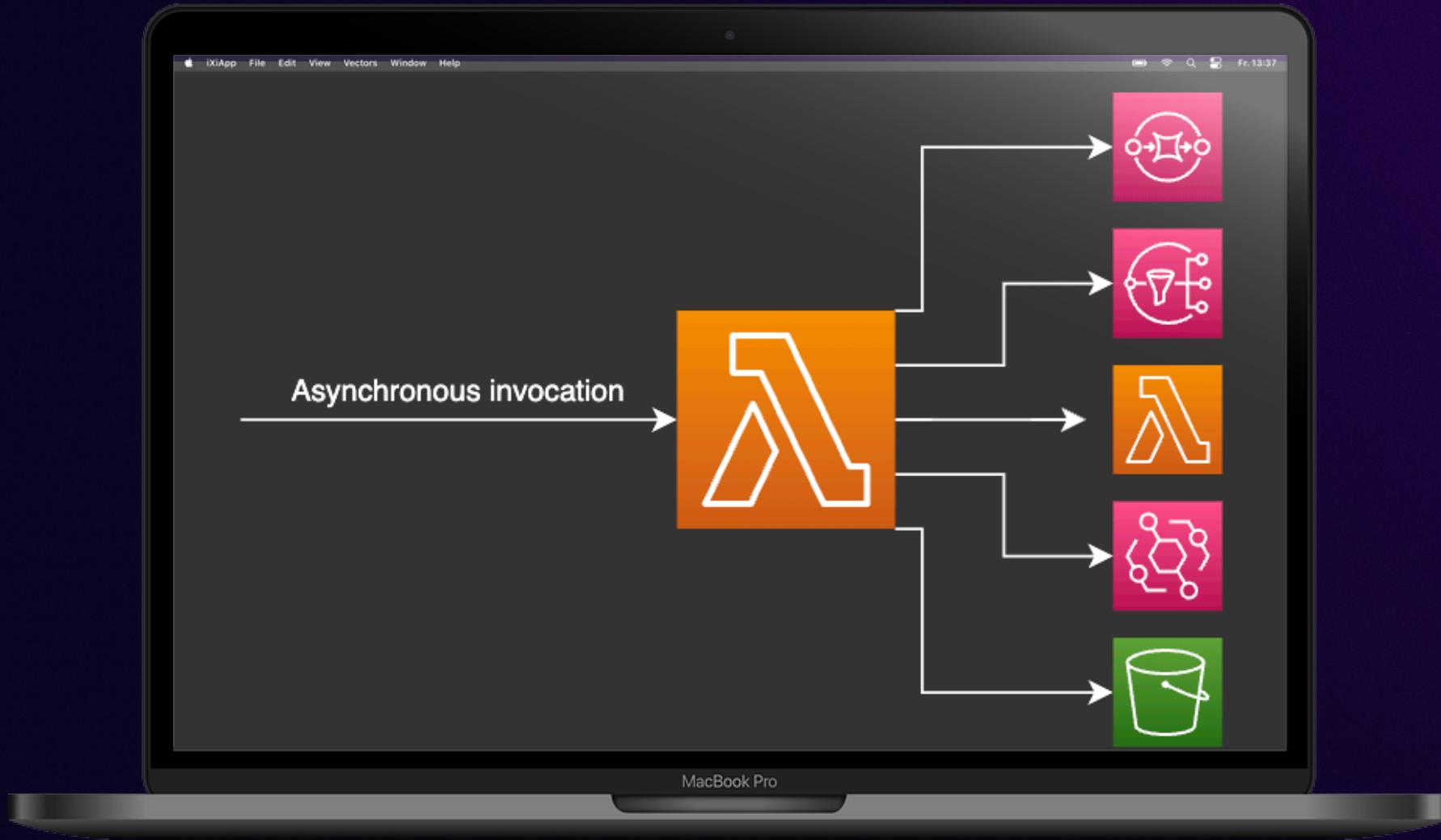
<https://aws.amazon.com/blogs/compute/introducing-new-event-source-mapping-esm-metrics-for-aws-lambda/>

Provisioned Mode for Kafka Event Source Mapping



<https://aws.amazon.com/blogs/compute/introducing-provisioned-mode-for-kafka-event-source-mappings-with-aws-lambda/>

S3 support as a failed event destination



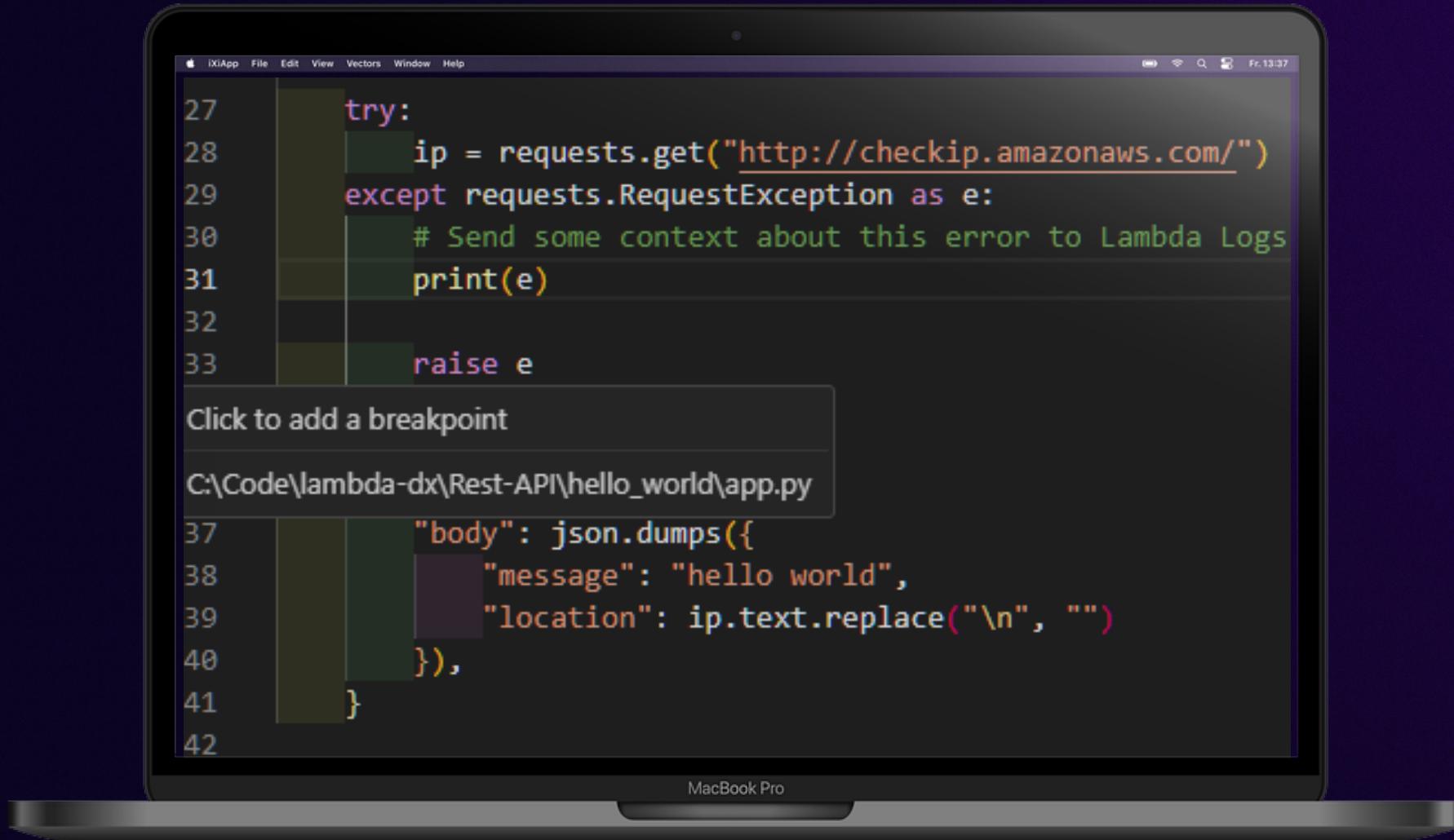
<https://aws.amazon.com/about-aws/whats-new/2024/11/aws-lambda-s3-failed-event-destination-stream-event-sources/>

Lambda recursive loop detection for S3



<https://aws.amazon.com/about-aws/whats-new/2024/10/aws-lambda-detects-stops-recursive-loops-lambda-s3/>

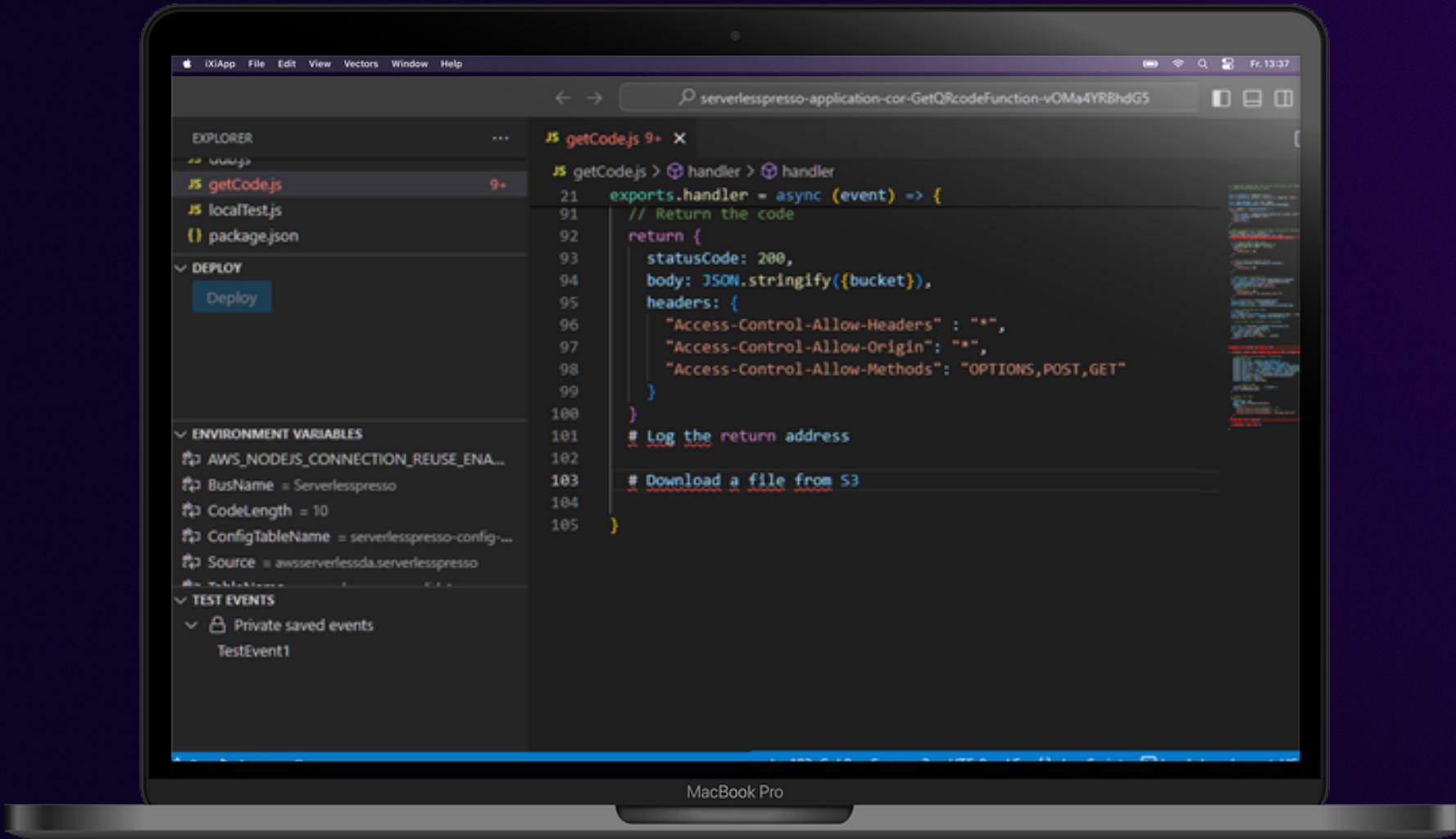
Enhanced local IDE experience



<https://aws.amazon.com/blogs/compute/introducing-an-enhanced-local-ide-experience-for-aws-lambda-developers/>



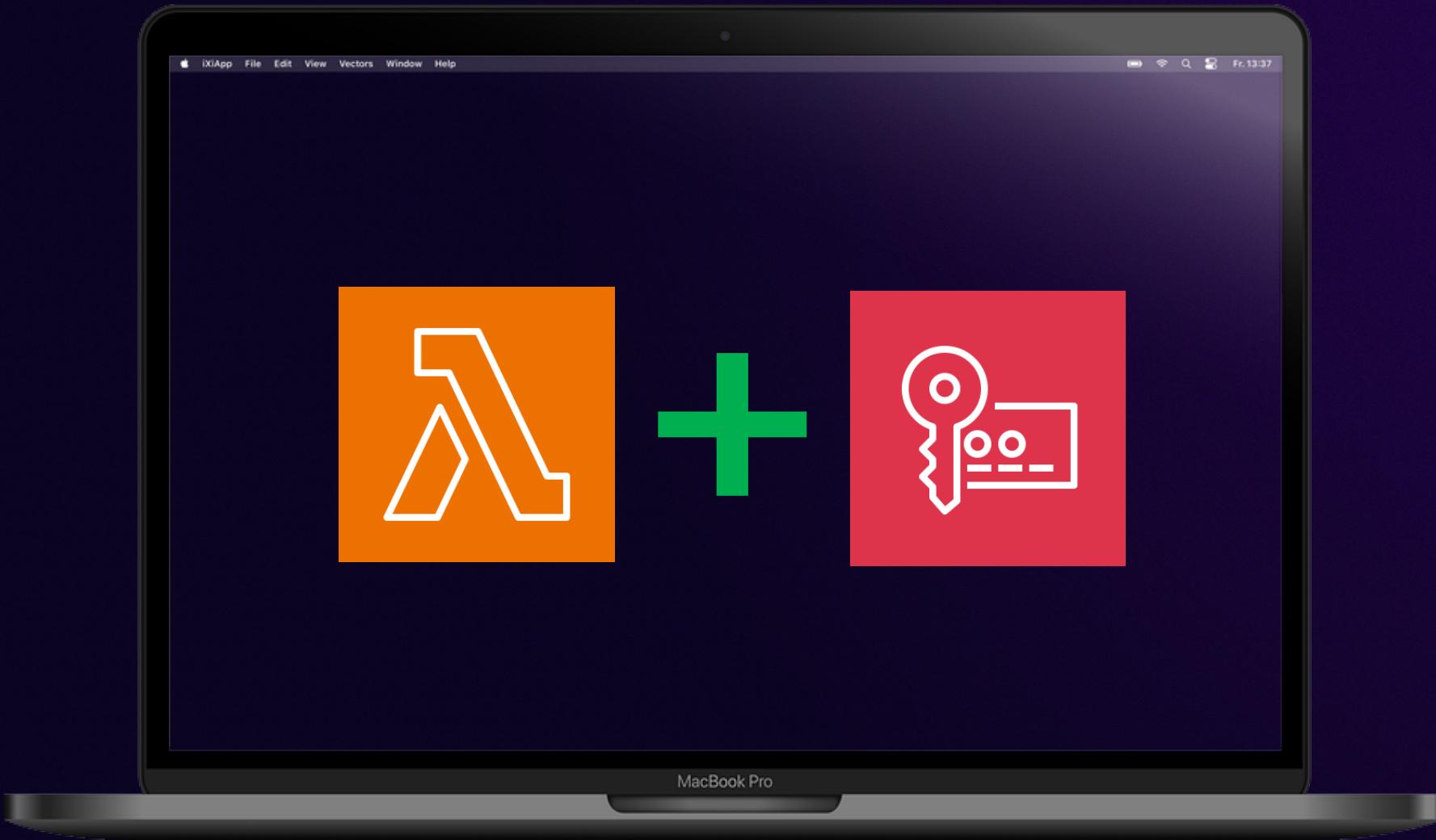
Enhanced Lambda Console coding experience



<https://aws.amazon.com/blogs/compute/introducing-an-enhanced-in-console-editing-experience-for-aws-lambda/>

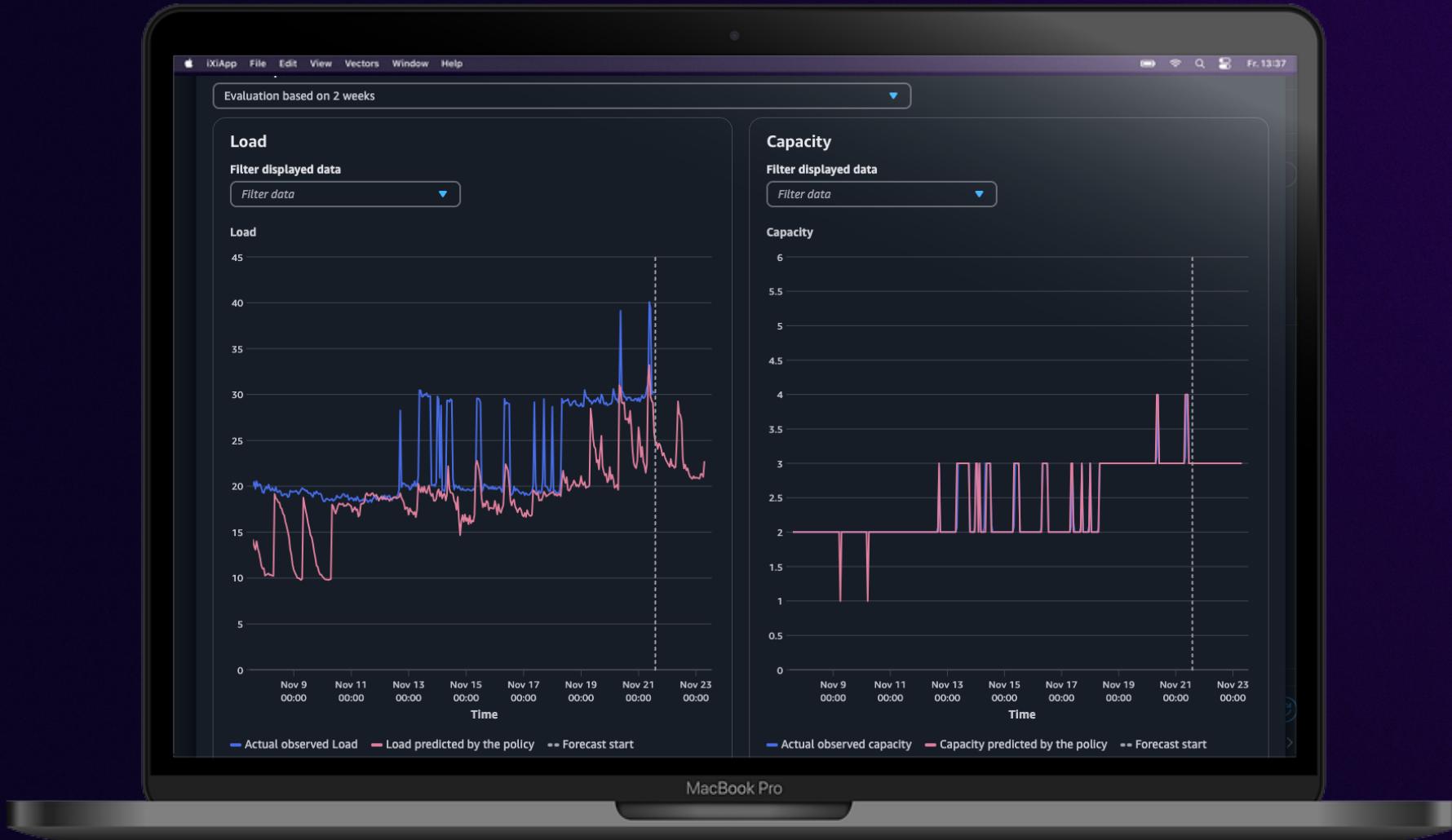


Encryption of Lambda Zip code artifacts with Customer Managed Keys



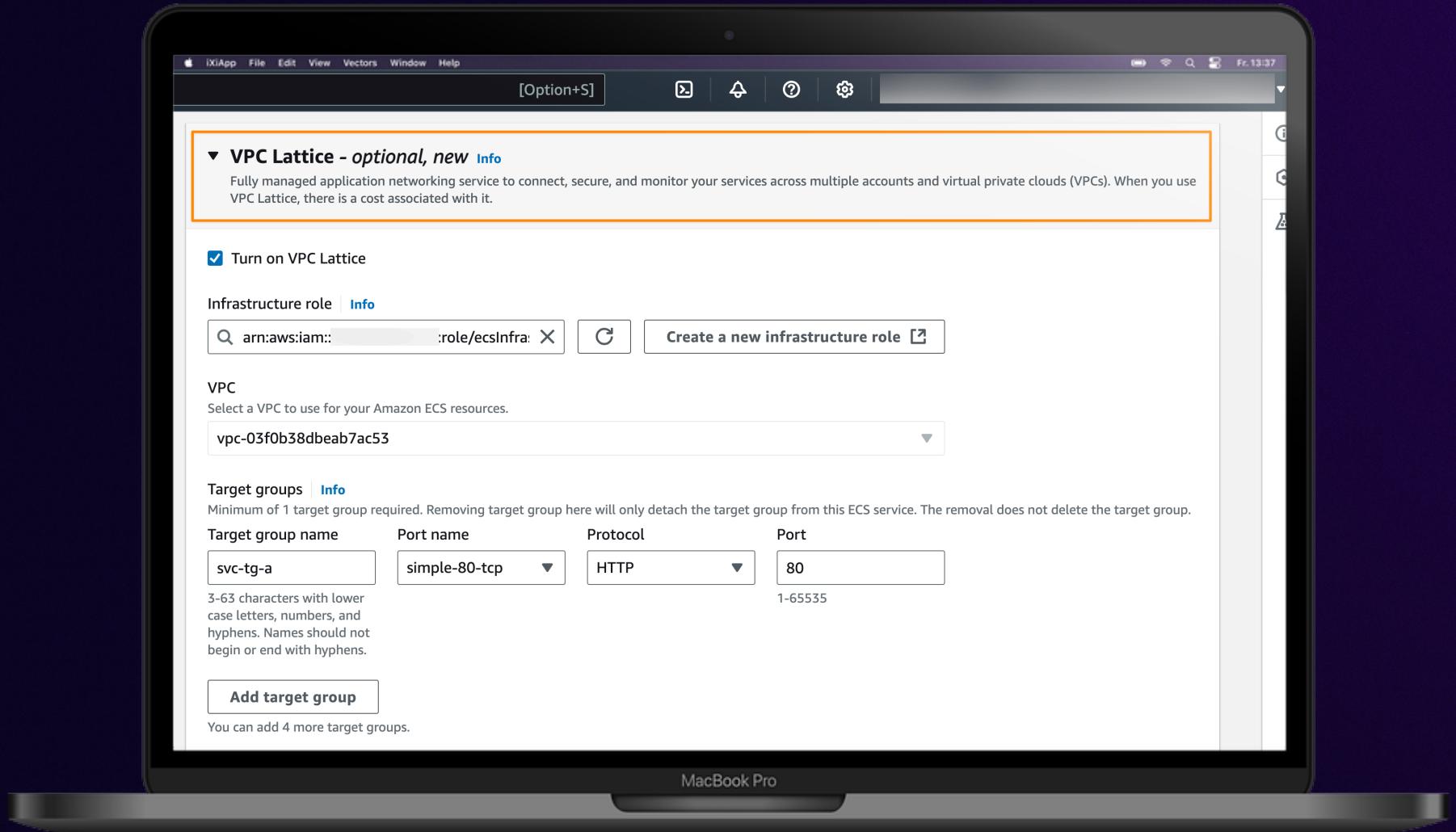
<https://aws.amazon.com/about-aws/whats-new/2024/11/aws-lambda-cmk-encryption-zip-function-code-artifacts/>

ECS Predictive Auto Scaling



<https://aws.amazon.com/blogs/containers/optimize-compute-resources-on-amazon-ecs-with-predictive-scaling/>

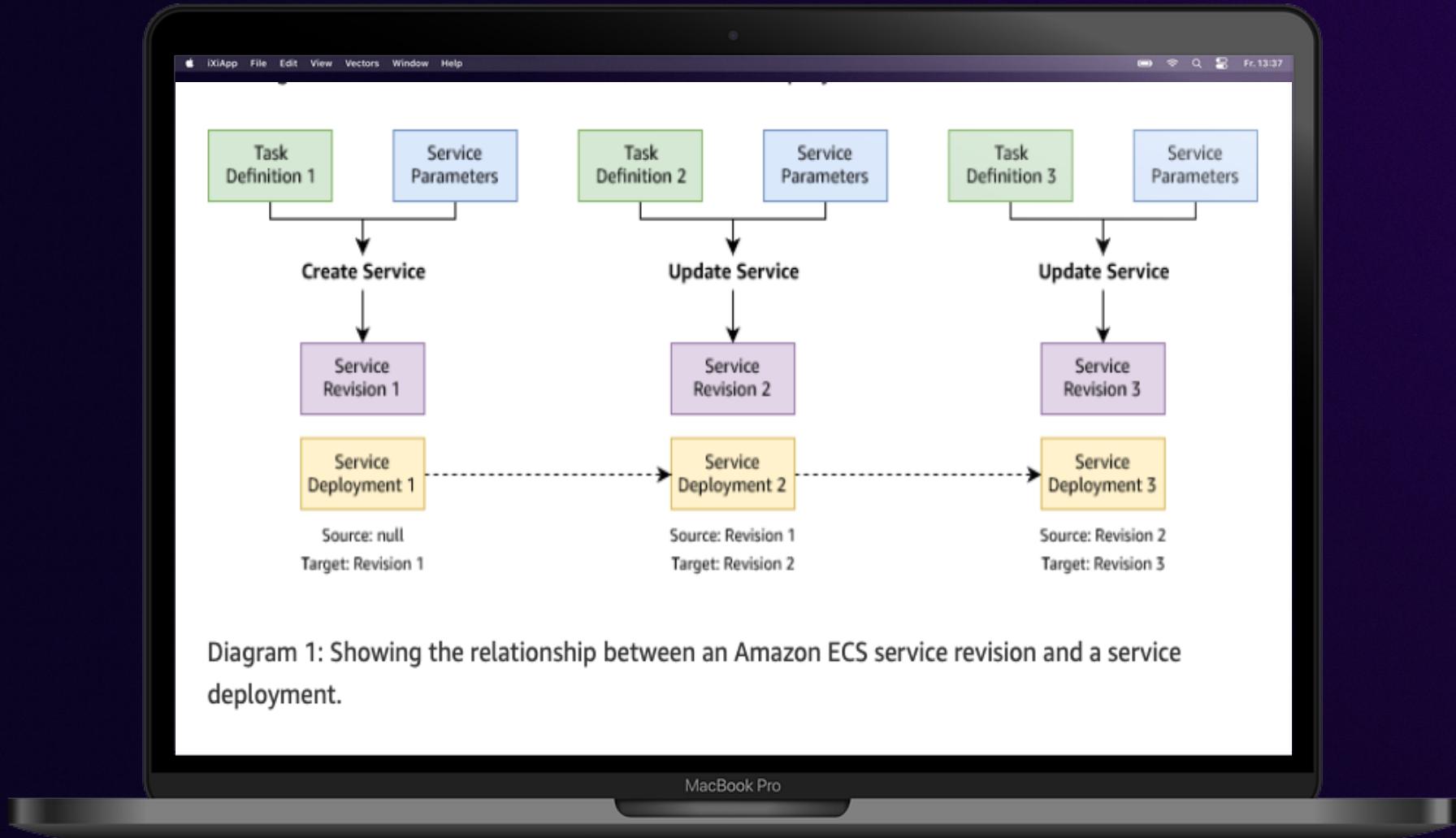
VPC Lattice Support for ECS



<https://aws.amazon.com/blogs/aws/streamline-container-application-networking-with-native-amazon-ecs-support-in-amazon-vpc-lattice/>

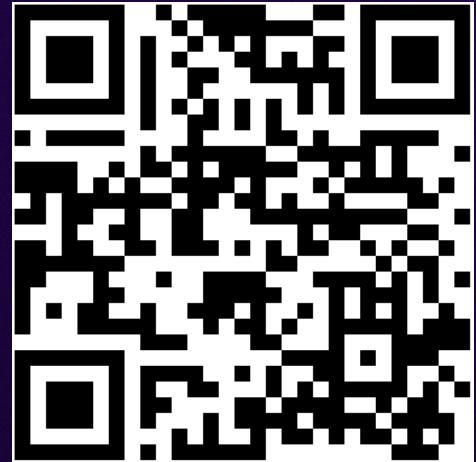
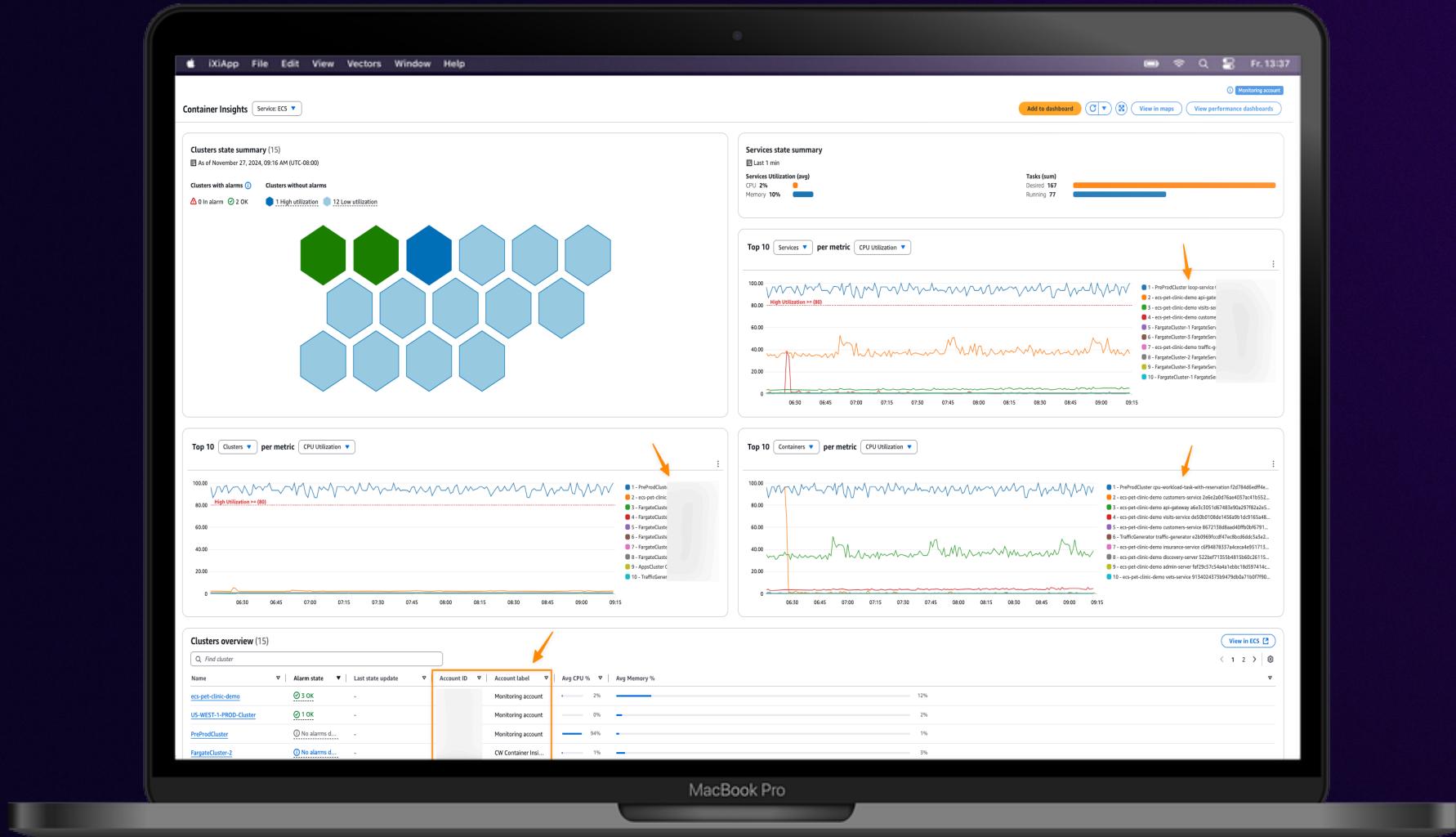


ECS Service Versioning and Deployment History



<https://aws.amazon.com/blogs/containers/improving-deployment-visibility-for-amazon-ecs-services/>

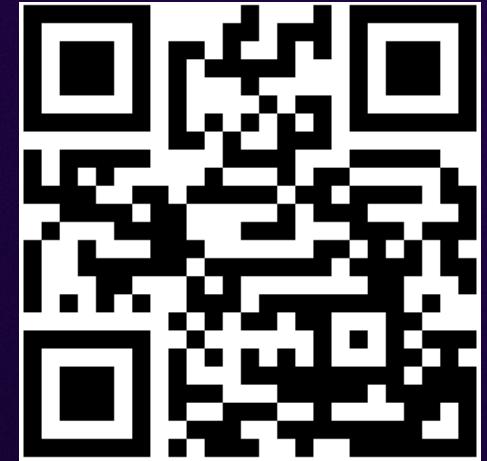
Container Insights Enhanced Observability for ECS Fargate



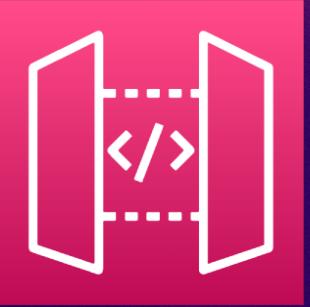
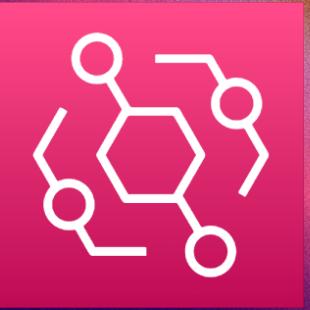
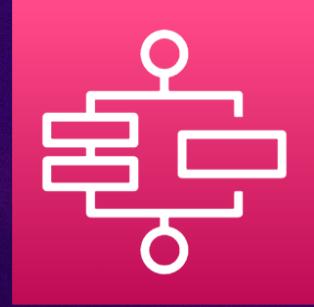
<https://aws.amazon.com/blogs/aws/container-insights-with-enhanced-observability-now-available-in-amazon-ecs/>



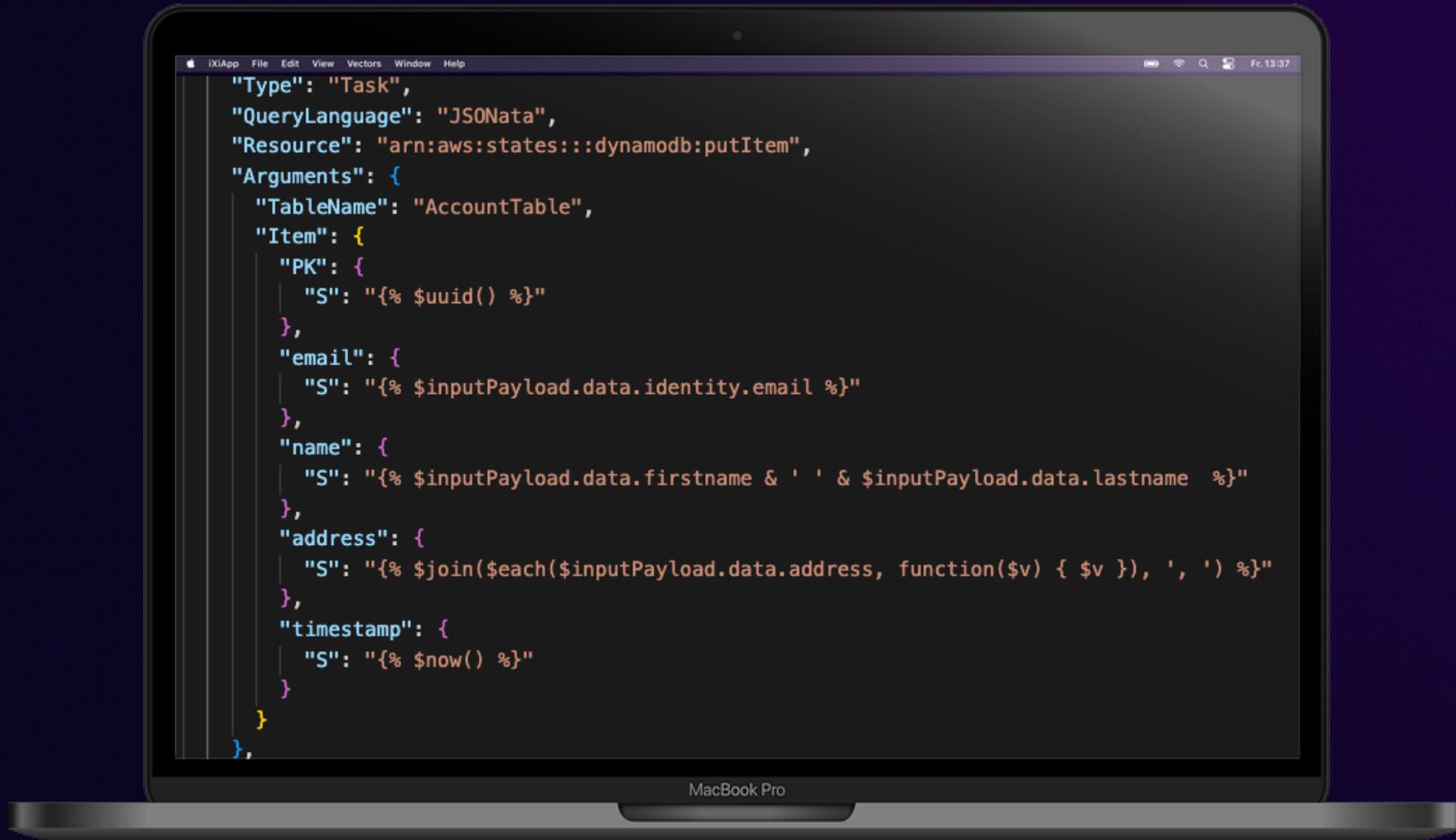
Fault Injection Service(FIS) Supports Network Experiments in ECS Fargate



Serverless Integration Services



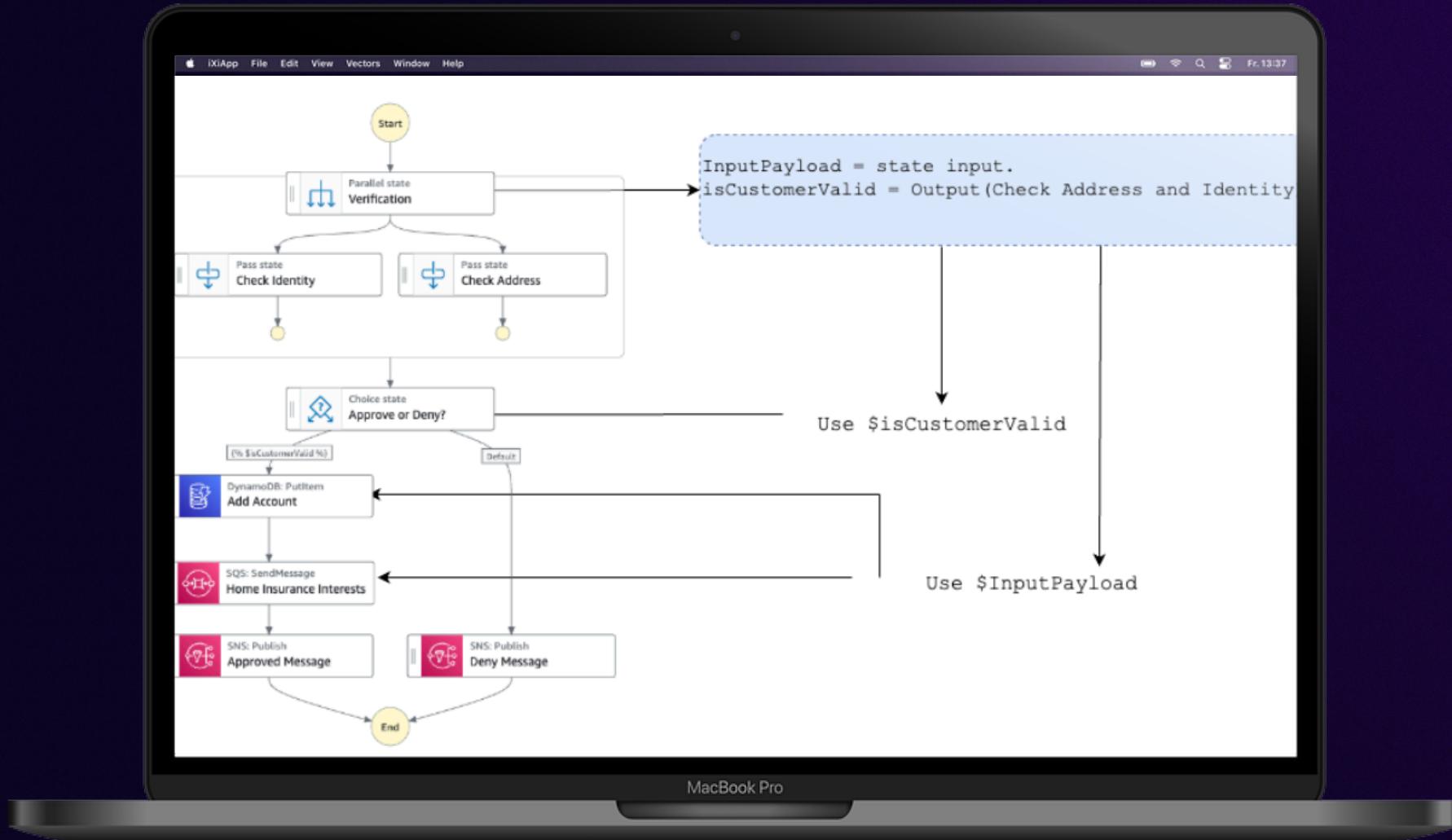
Step Functions - JSONata support



<https://aws.amazon.com/blogs/compute/simplifying-developer-experience-with-variables-and-jsonata-in-aws-step-functions/>

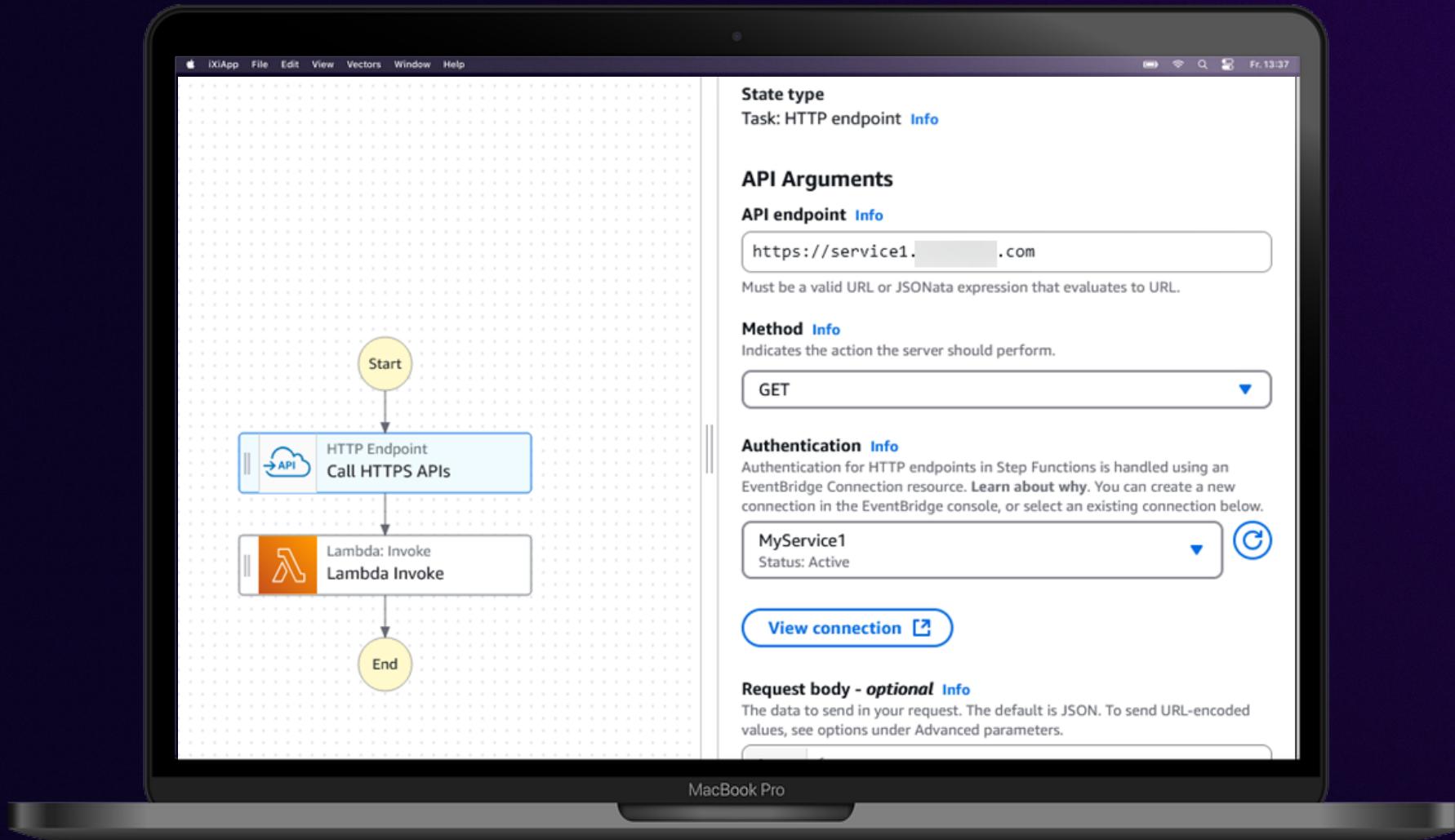


Step Functions - Variables support



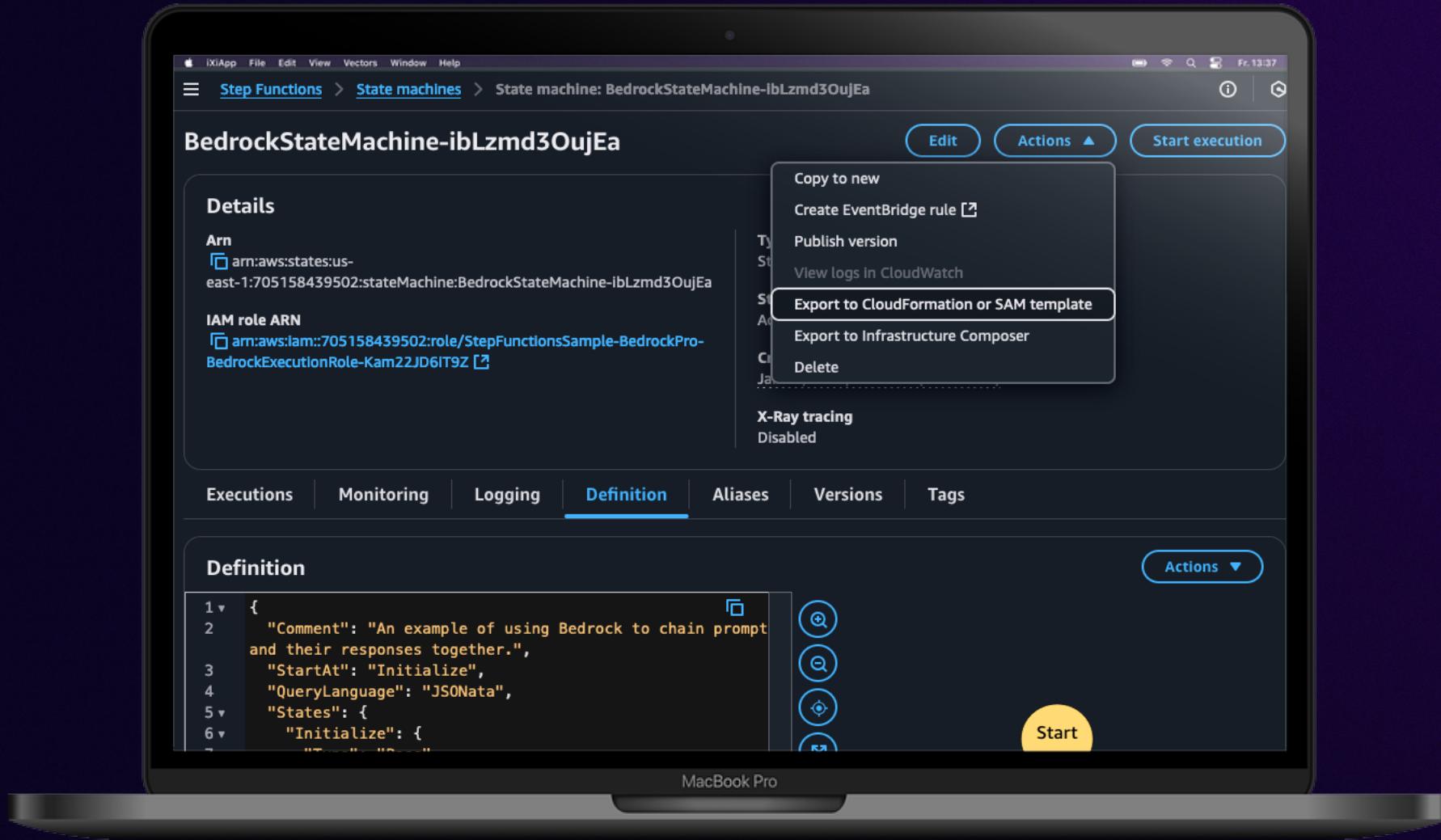
<https://aws.amazon.com/blogs/compute/simplifying-developer-experience-with-variables-and-jsonata-in-aws-step-functions/>

Step Functions & EventBridge – Private API integration



<https://aws.amazon.com/blogs/aws/securingly-share-aws-resources-across-vpc-and-account-boundaries-with-privatelink-vpc-lattice-eventbridge-and-step-functions/>

Step Functions – Export Cloudformation from the Console



EventBridge Latency Improvements and New Metrics

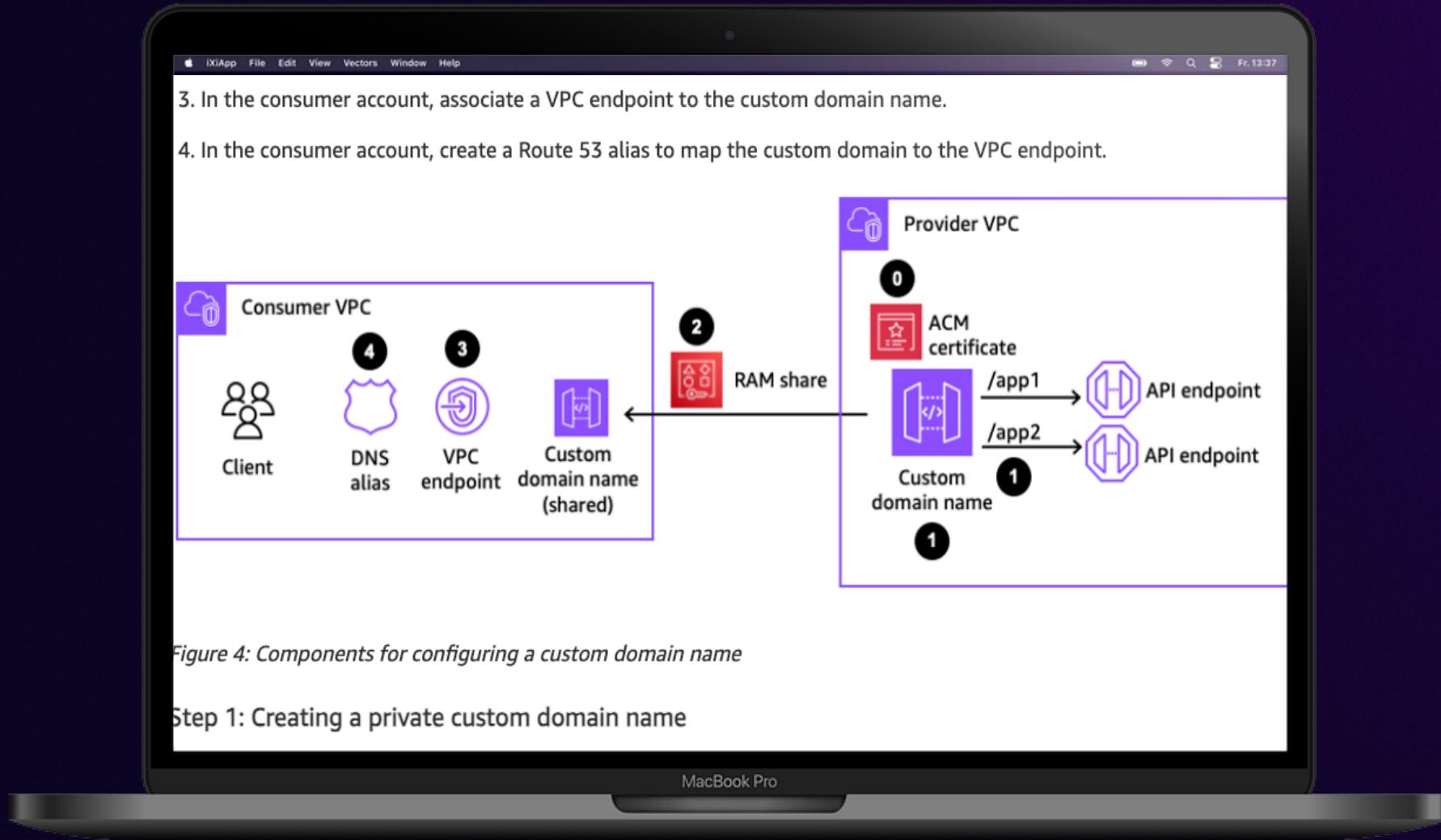
- EventBridge latency has been improved across the board, P99 latencies have been reduced from 2235ms to 129ms
- EventBridge also introduced a new metric `IngestionToInvocationSuccessLatency` that allows you to now detect and respond to event processing delays caused by under-performing, under-scaled, or unresponsive targets



<https://aws.amazon.com/about-aws/whats-new/2024/11/amazon-eventbridge-improvement-latency-event-buses/>

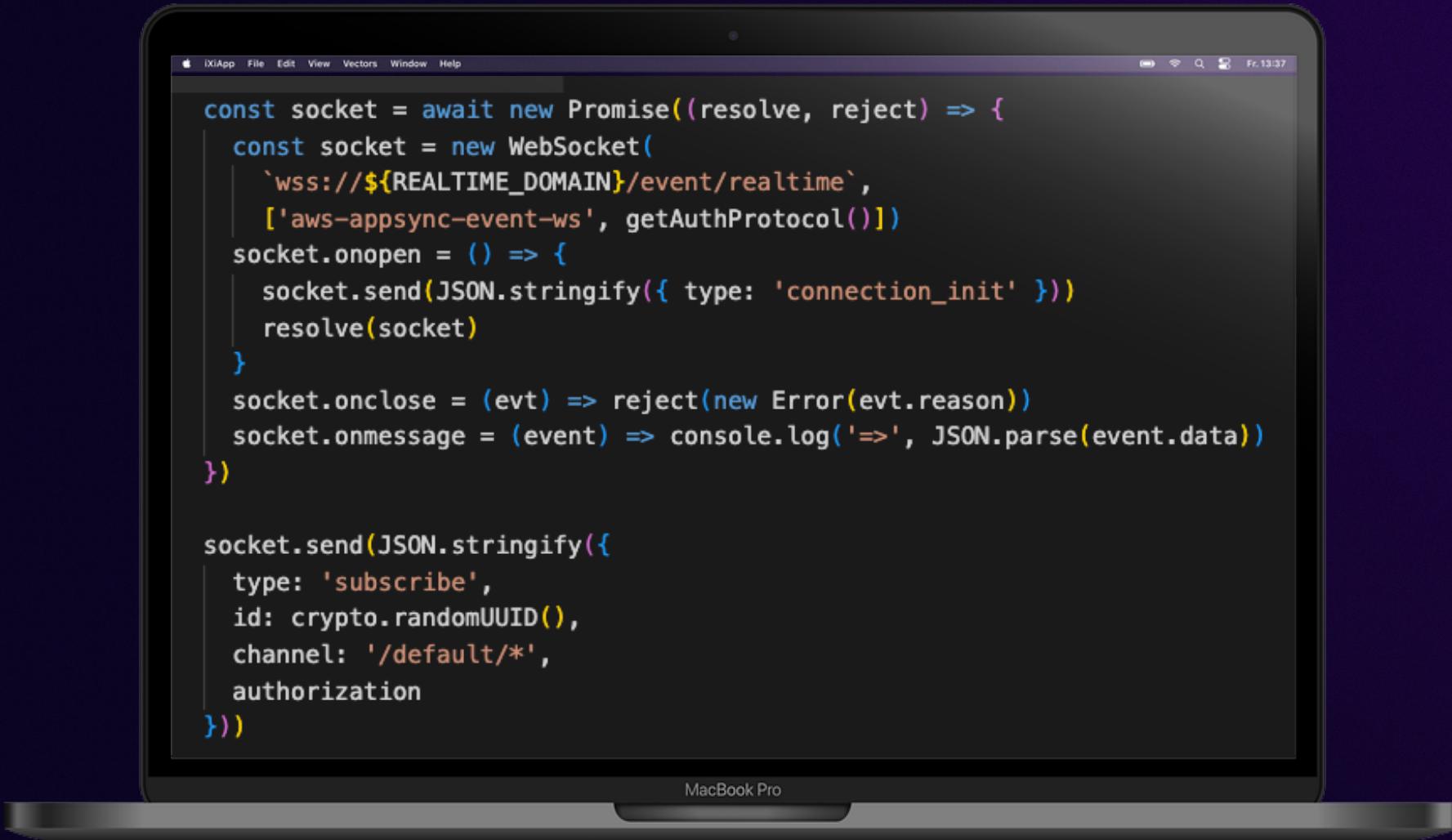
<https://aws.amazon.com/about-aws/whats-new/2024/09/amazon-eventbridge-event-delivery-latency-metric-event-buses/>

API Gateway custom domain names for private APIs



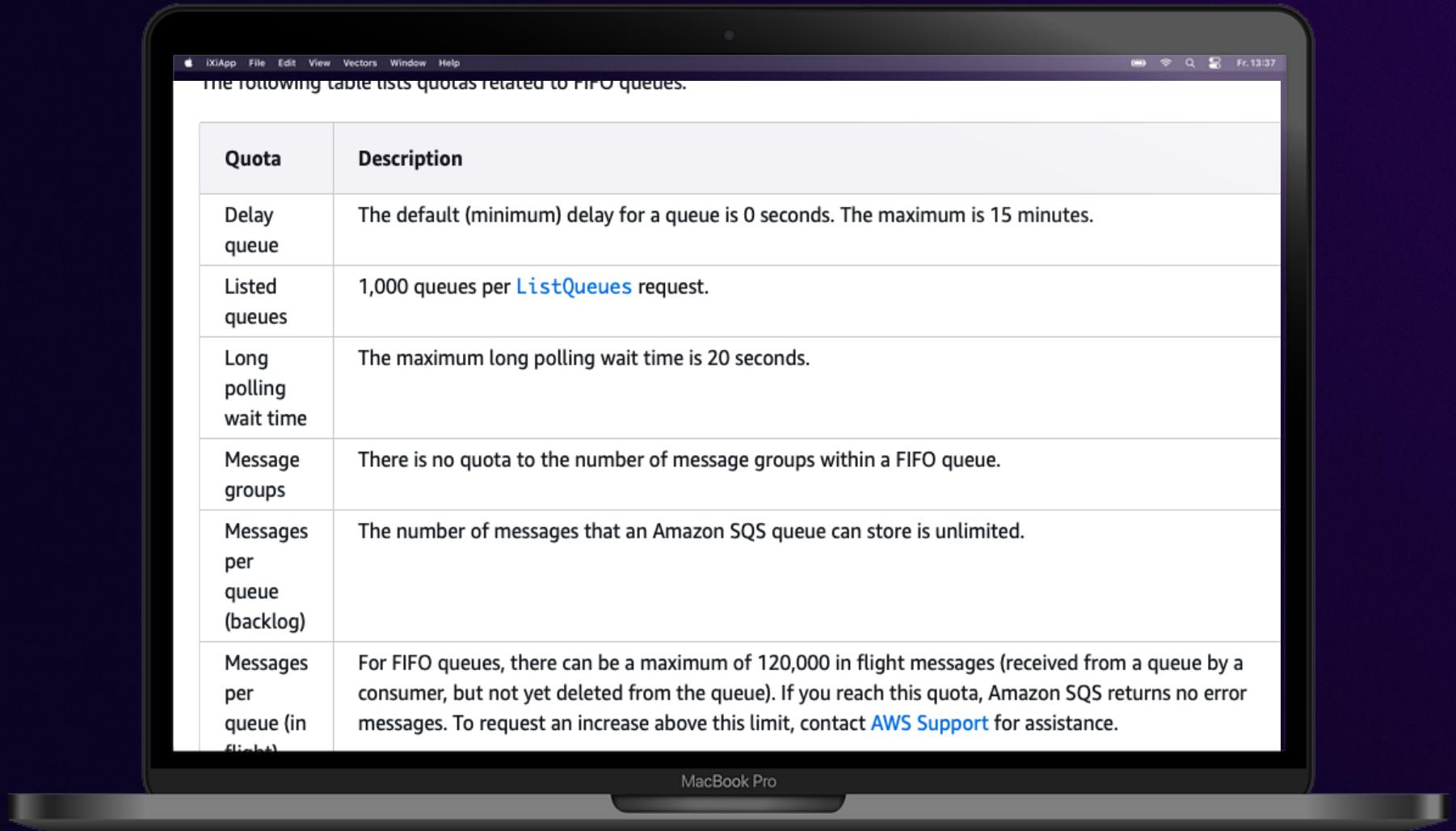
<https://aws.amazon.com/blogs/compute/implementing-custom-domain-names-for-private-endpoints-with-amazon-api-gateway/>

AppSync Events – Serverless WebSockets API



<https://aws.amazon.com/blogs/mobile/announcing-aws-appsync-events-serverless-websocket-apis/>

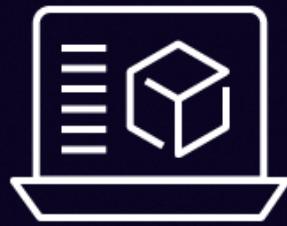
SQS FIFO – Increased In Flight Message Limit to 120K



<https://aws.amazon.com/about-aws/whats-new/2024/11/amazon-sqs-increases-in-flight-limit-fifo-queues/>

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AWS re:Invent 2024 – Serverless Playlist



https://www.youtube.com/playlist?list=PL2yQDdvIhXf_Ezjnq7A7LfHBgCYSqzrZS



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Thank you!



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AWS Serverless and Event-Driven Architectures