AWS re:Invent

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Choose your own adventure: AWS Java developer tooling

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Topics

1. Amazon DynamoDB tooling
2. AWS SDK for Java 1.x to 2.x migration
3. Accelerated development in the IDE
4. High throughput with Amazon S3
5. Improving SDK for Java performance
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Amazon DynamoDB tooling

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Amazon DynamoDB tooling

DynamoDB enhanced client

- Replaces DynamoDB client
- Annotation-based object mapper

IDE table viewer

- View/query indexes in IntelliJ

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AWS SDK for Java 1.x to 2.x migration

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AWS SDK for Java 1.x to 2.x migration

- Immutable objects
- First class non-blocking I/O support
- Pluggable interfaces
- High-level libraries
- 1.x and 2.x don’t collide – supports gradual migration

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Accelerated development in the IDE

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Accelerated development in the IDE

IntelliJ

- Works in any JetBrains IDE (e.g., PyCharm, WebStorm)
- Marketplace: https://plugins.jetbrains.com/plugin/11349-aws-toolkit
- Source: https://github.com/aws/aws-toolkit-jetbrains
- Docs: https://aws.amazon.com/intellij/

AWS Cloud9/Visual Studio Code

- Comes preloaded in AWS Cloud9
- Marketplace: https://marketplace.visualstudio.com/items?itemName=AmazonWebServices.aws-toolkit-vscode
- Source: https://github.com/aws/aws-toolkit-vscode
- Docs: https://aws.amazon.com/vscode/

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High throughput with Amazon S3

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Maximize throughput with Amazon S3

TransferManager simplifies high-throughput transfers to Amazon S3

- Simple and easy-to-use interfaces
  - Methods and workflow familiar to users of v1 TransferManager
  - Refined async interfaces make asynchronous workflows easier in v2
  - Improved progress listeners
- Leverages AWS Common Runtime (CRT) to maximize performance

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Improving SDK for Java performance

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Improving SDK for Java performance

Peering under the hood

- Understanding the request lifecycle
- Metrics and identifying optimization opportunities

Going plaid with native bindings

- Native images with GraalVM
- AWS Common Runtime (CRT) HTTP client

Improving startup times in AWS Lambda

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Java at AWS at large

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Java at AWS at large

- Amazon Corretto (free OpenJDK)
- AWS SDK for Kotlin (Developer Preview)
- AWS Cloud Development Kit (AWS CDK)
- Amazon CodeGuru

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Thank you!

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