



AWS
re:Invent

D A T 4 0 6 - R 1

Hands-on with Amazon ElastiCache for Redis

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Agenda

Training and related sessions (2m)

Amazon ElastiCache for Redis overview (5m)

Redis data structures (5m)

Workshop architecture & instructions (10m)

Workshop lab (1h 50m)

Related breakouts

DAT208 Supercharge your real-time apps with Amazon ElastiCache (Wed only)

DAT323 What's new with Amazon ElastiCache (Wed, Thu)

DAT354 Best Practices with ElastiCache (Wed only)

DAT358 Best Practices for Migrating Redis Clusters from Amazon EC2 to ElastiCache (Wed only)

DAT407 Get started with Amazon ElastiCache in 60 minutes (Mon - Fri)

What is Amazon ElastiCache?

Managed, Redis- or Memcached-compatible in-memory data store



Amazon
ElastiCache



ElastiCache
for Redis



ElastiCache for
Memcached

In-memory key-value store supporting

- Redis 5.0.5
- Memcached 1.5.16

Engine types

	Redis	Memcached
Open-source compatible	Yes	Yes
Data types	8+	1
Data modeling	Flexible	Simple

Engine types

	Redis	Memcached
Persistence	Yes	No
Encryption	At rest and in transit	No
Failover	Yes	No

Engine types

	Redis	Memcached
Online scaling	Up, down, in, out	In, out
Replication	Yes	No

Engines types – Summary

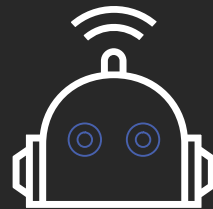
	Redis	Memcached
If you need	Flexible data modeling	Simple data modeling
	Snapshots	Large nodes w/multiple threads
	Scaling flexibility	
	Replication and failover	
	Encryption	

Amazon ElastiCache for Redis



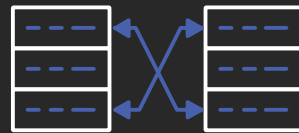
Detailed monitoring

Native Amazon CloudWatch integration



Fully managed

Hardware, software, configuration, patching, snapshots



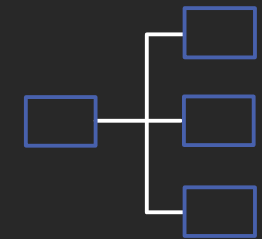
Resilient

Automatic Multi-AZ failover with replication



Hardened

Encryption at rest, encryption in transit



Online scaling

Up, down, in, out

Enhanced I/O

Offloads networking

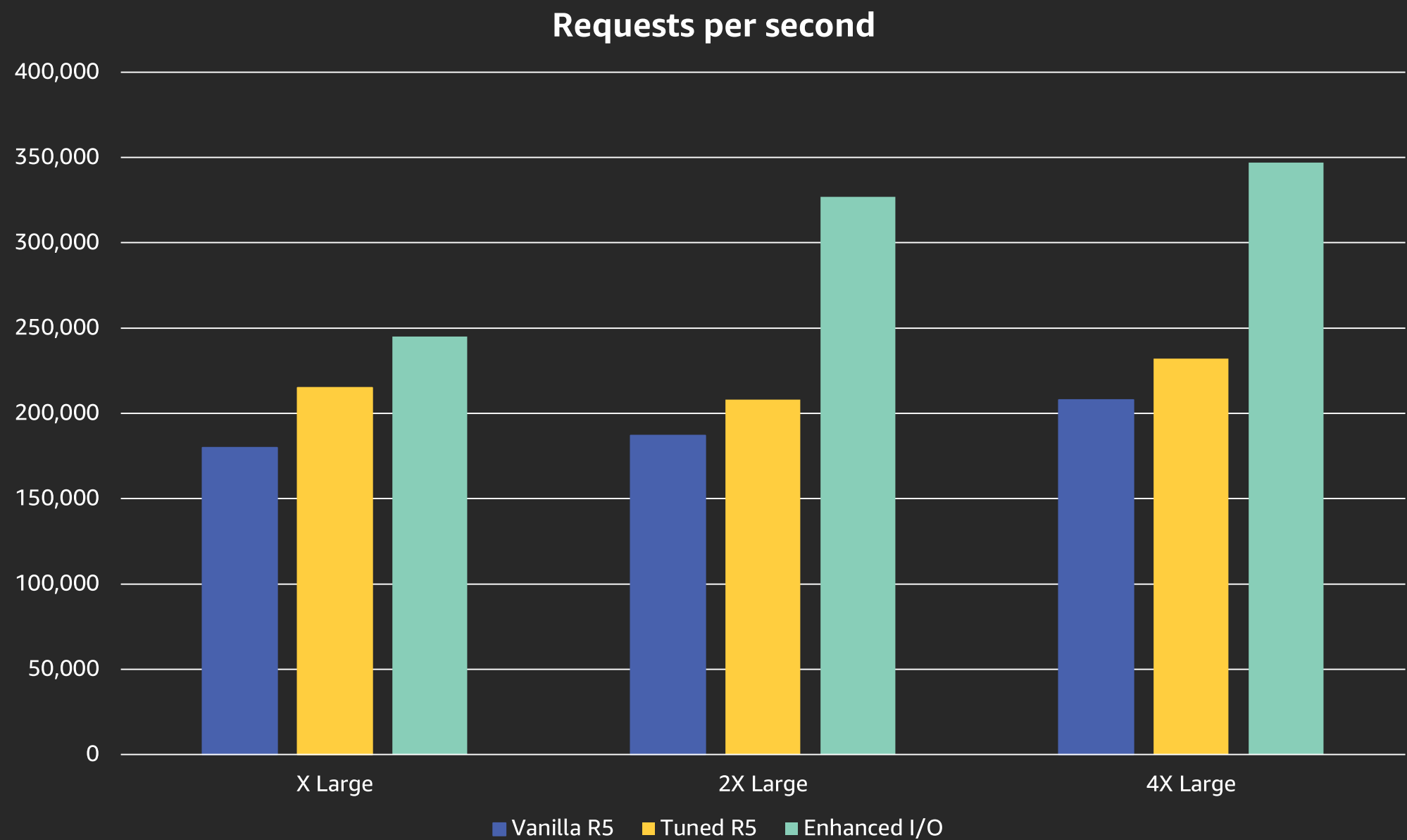
Leverages multiple cores

Improves efficiency

Increases throughput

Reduces latency

No code changes



Lab data types

Data type	Description	Use case(s)	Associated commands
Hash	Map of key / value pairs	Varied	HGET, HGETALL, HMSET ...
List	A list of Strings	Varied	LSET, LLEN, LPUSH, LPOP ...
Sorted Set	Non-repeating, ordered collection of strings	Leaderboards	ZADD, ZRANK, ZRANGE ...
Streams	Log data structure	Fast-moving data	XADD, XREAD, XRANGE ...

Other data types in Redis

Geospatial

Sets

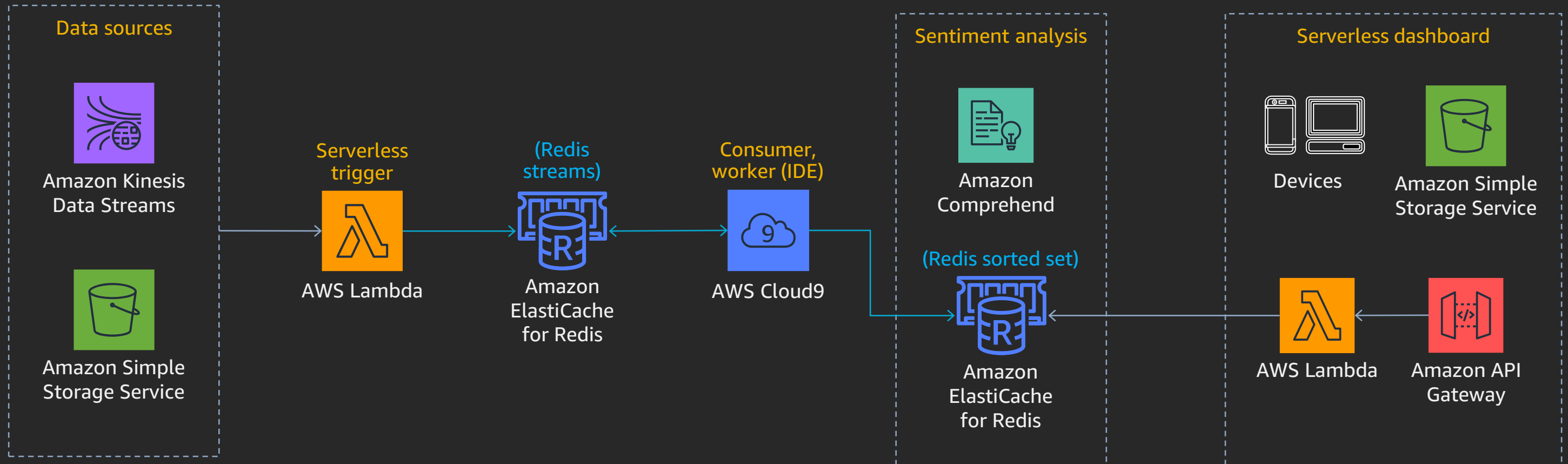
String

Bitmaps

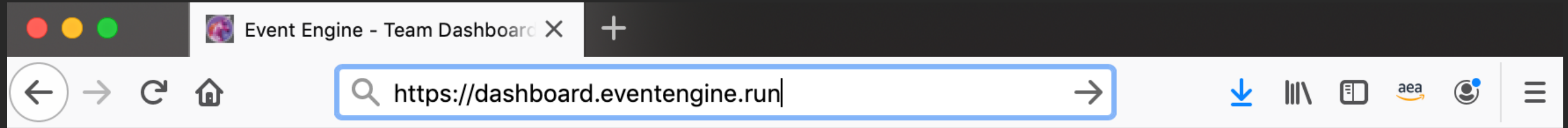
HyperLogLogs

Workshop introduction

Lab architecture



Workshop login

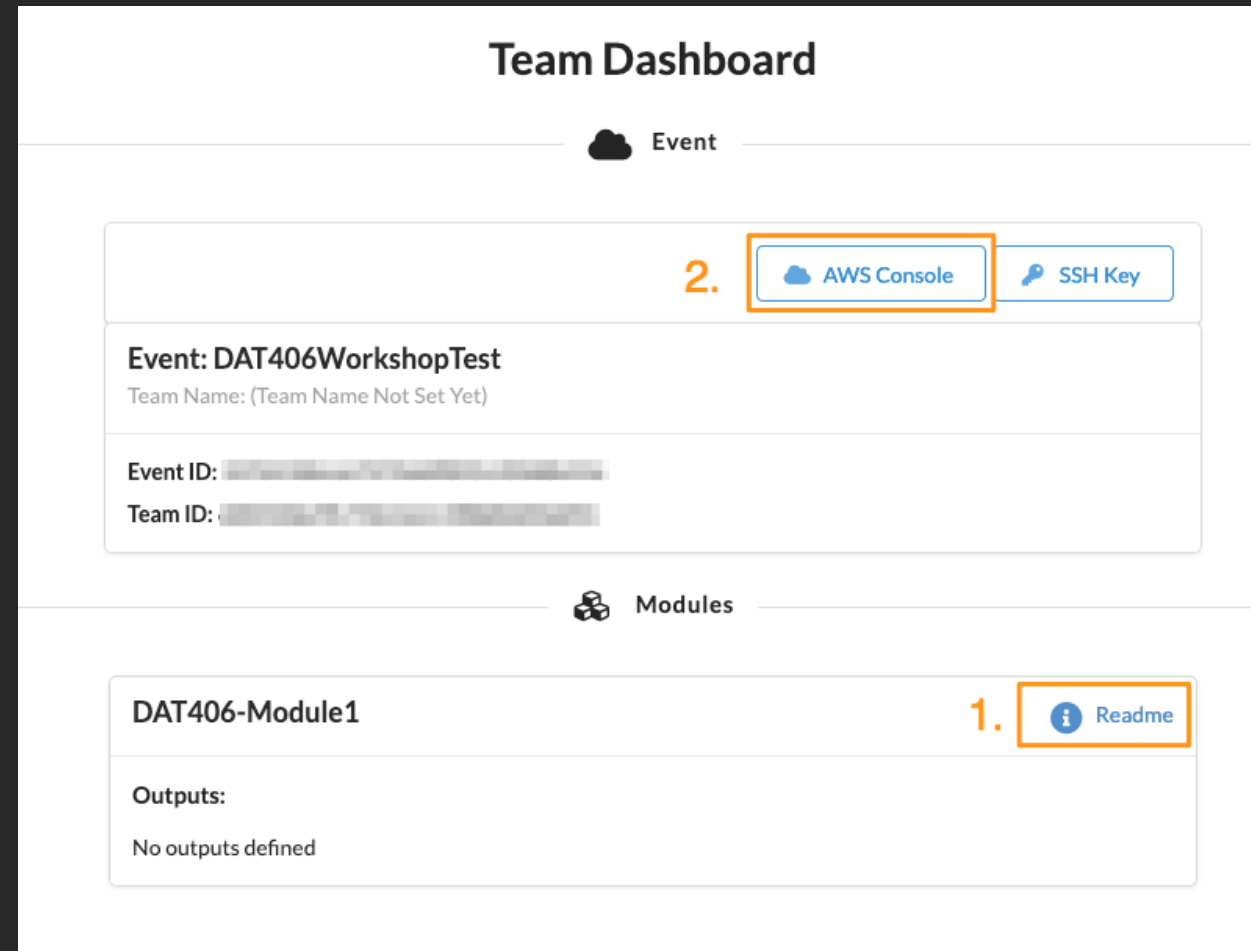


Who are you?

Team Hash (e.g. abcdef123456)

This is the 12 digit hash that was given to you or your team.

Workshop login




In this order: 1. Click Readme to download the lab guide
2. Click the AWS Console button


Workshop login

AWS Console Login

Remember to only use "eu-west-1" as your region, unless otherwise directed by the event operator.

Login Link


 Open AWS Console

 Copy Login Link

Credentials / CLI Snippets

Mac / Linux

Windows

Mac or Linux 

```
export AWS_DEFAULT_REGION=eu-west-1
export AWS_ACCESS_KEY_ID=
export AWS_SECRET_ACCESS_KEY=
export AWS_SESSION_TOKEN=
```

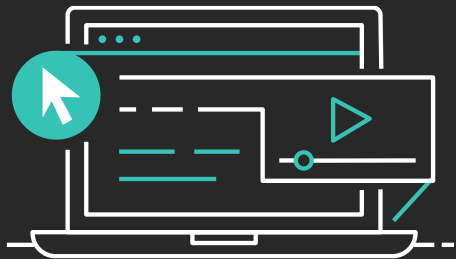
How do I use the AWS CLI?

Checkout the AWS CLI documentation here: <https://docs.aws.amazon.com/cli/latest/userguide/cli-chap-welcome.html>

OK

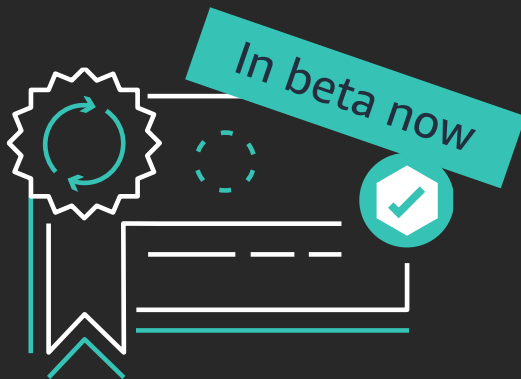
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Thank you!

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