
AWS
re:Invent
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STG335

How to use Amazon S3 Storage Lens to gain insights and optimize costs

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Session facilitators



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Agenda

- Introductions
- About Amazon S3 Storage Lens
- Workshop
- Wrap up and next steps

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S3 Insights portfolio

S3 Storage Lens



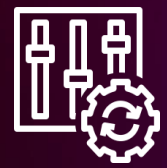
Free and paid versions available

S3 Inventory



Object-level metadata

S3 Storage Class Analysis



Access patterns by bucket

S3 Amazon CloudWatch Metrics



Monitoring and alarms

S3 Server Access Logs



Detailed request logging

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S3 Storage Lens overview



Launched November 2020

1. Interactive dashboard experience in the S3 console – auto-configured
2. Organization-wide visibility
3. Drill-down by Region, storage class, bucket, and prefix
4. Granular usage and activity metrics
5. Automated alarms and anomaly detection

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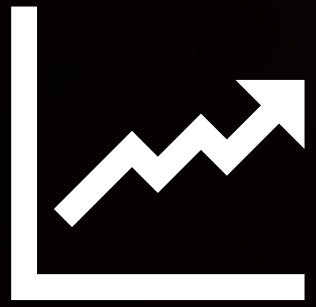
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Upgrade for extended visibility

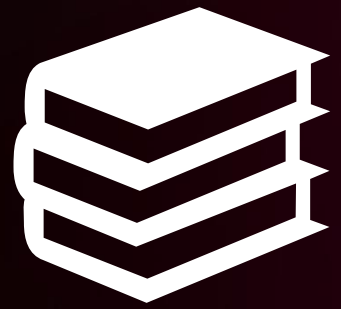
Benefits of enabling Storage Lens advanced



Additional metrics



15-months historical trending



Prefix-level insights



Automated alarms

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On average, customers using Amazon S3 Storage Lens advanced metrics and recommendations have obtained cost savings

6X greater

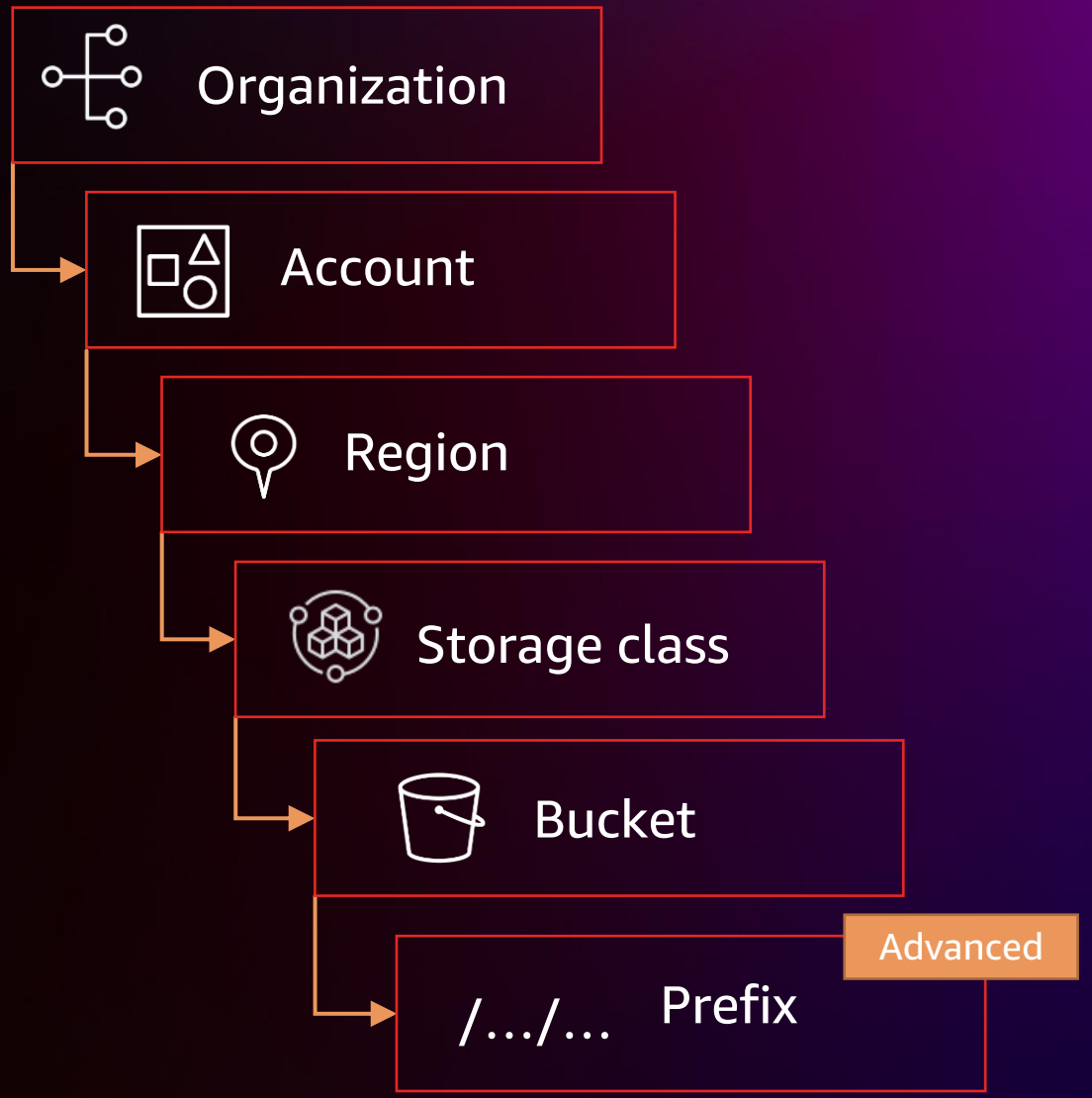
than the Storage Lens cost in the first 6 months of using it

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Source: internal AWS causal impact study, covering 2K+ customers between Dec. 2020 and Aug. 2022

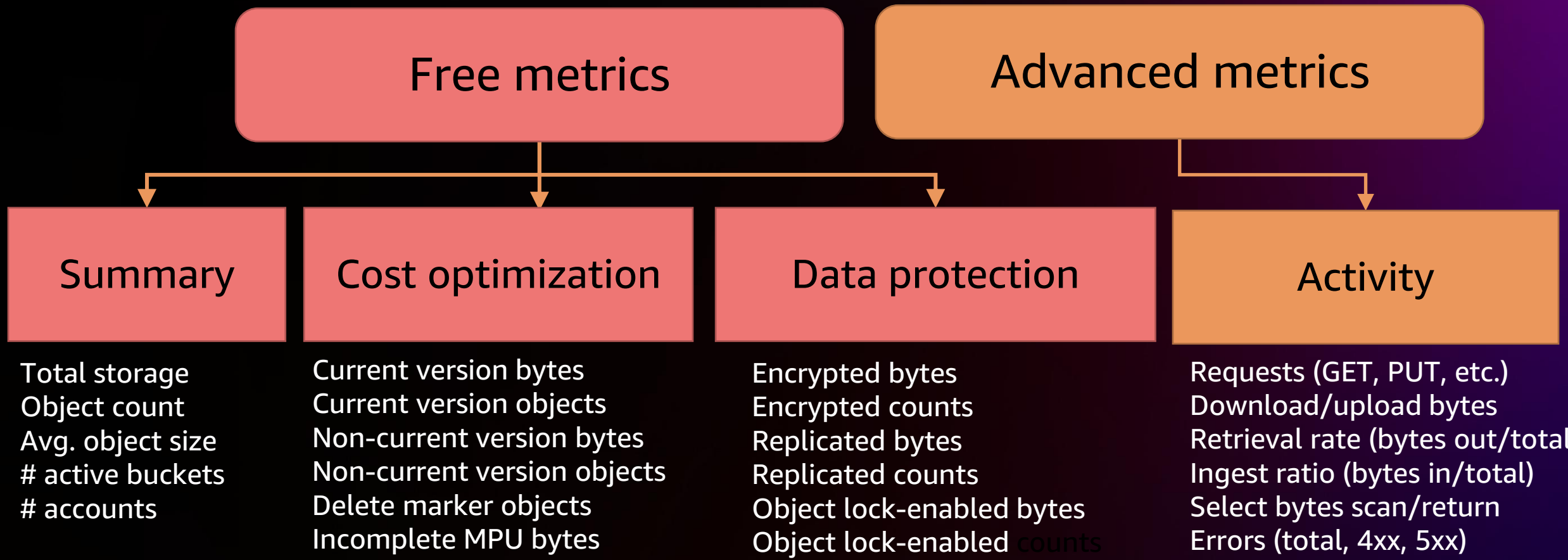
Drill-down dimensions

- Drill down from org or account level to more granular details
- Use prefix-level details to run storage allocations in data lakes



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Metrics available at launch



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Introducing new S3 Storage Lens metrics

New

29 → 63

More than doubling the existing metrics count, with 34 additional metrics (13 free, 21 advanced)

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34 recently added new metrics

Free (13)

Cost optimization
- Delete marker storage bytes
- Incomplete MPU bytes and object count >7 days old

Data protection
- Replicated bytes and object count source
- Versioning-enabled buckets
- MFA-enabled buckets
- AWS KMS–enabled buckets

Access management
- Object owner enforced, preferred, and writer buckets

Performance
- Transfer acceleration–enabled buckets

Events
- Notification-enabled buckets

Advanced (21)

Cost optimization
- Transition and expiration lifecycle rule count
- Noncurrent transition and expiration lifecycle rule count
- Abort incomplete multipart upload lifecycle rule count
- Expired object delete marker lifecycle rule count

Data protection
- Same and cross-Region replication rule count
- Same and cross-account replication rule count
- Invalid replication rule count

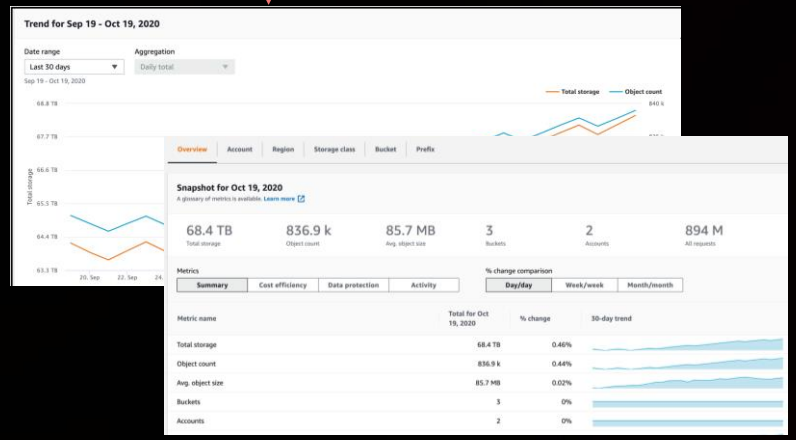
Status code metrics
- 200, 206 Status counts
- 400, 403, 406 Errors
- 500, 503 Errors

Activity metrics
- Unsupported sig requests
- Supported TLS requests
- AWS KMS requests

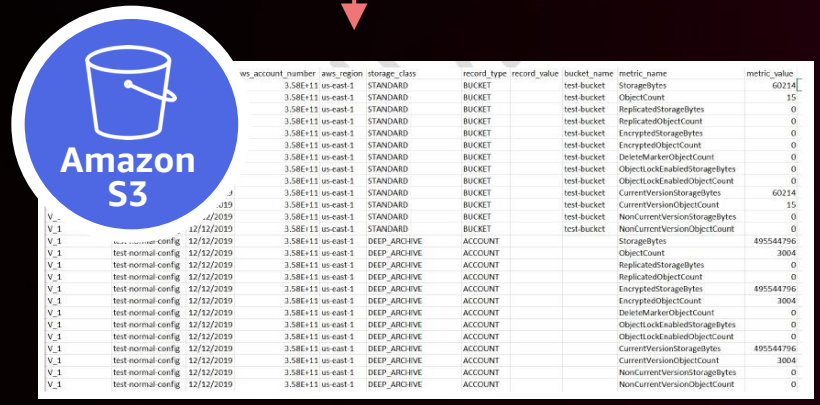
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Accessing Storage Lens metrics

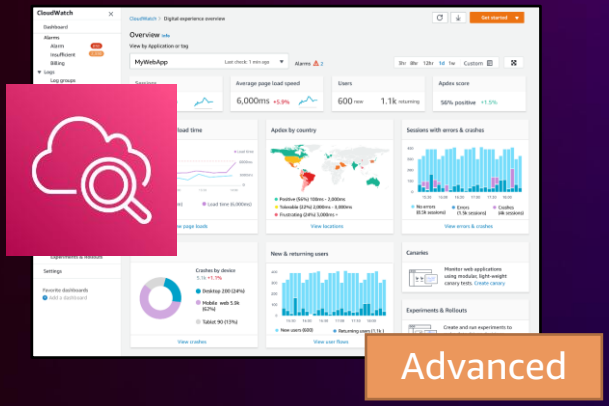
S3 Storage Lens



Integrated dashboard



Metrics export
(daily to S3 bucket)



Amazon CloudWatch
(Dashboards, API)

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Comparing Storage Lens free and advanced tiers

- 13 new metrics are included in the free tier and 21 new metrics are included in the advanced tier
- No changes to existing pricing tiers

	Free	Advanced
NEW *Metrics*	15 + 13 (28)	29 + 34 (63)
Granularity	Lowest level = bucket	Lowest level = prefix
Dashboard history	14 days	15 months
CloudWatch publishing	N/A	Included (metrics only)[1]
Pricing	**FREE**	**$0.20 per mil. objects/mo.**

[1] Metrics publishing charges are waived by CloudWatch, but other CloudWatch features are billed separately (e.g., alarms, dashboards, and API calls)

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Workshop overview

- How to create a custom dashboard
- Learning how to navigate the S3 Storage Lens dashboard
- Answering common storage questions with S3 Storage Lens

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Getting started with this workshop

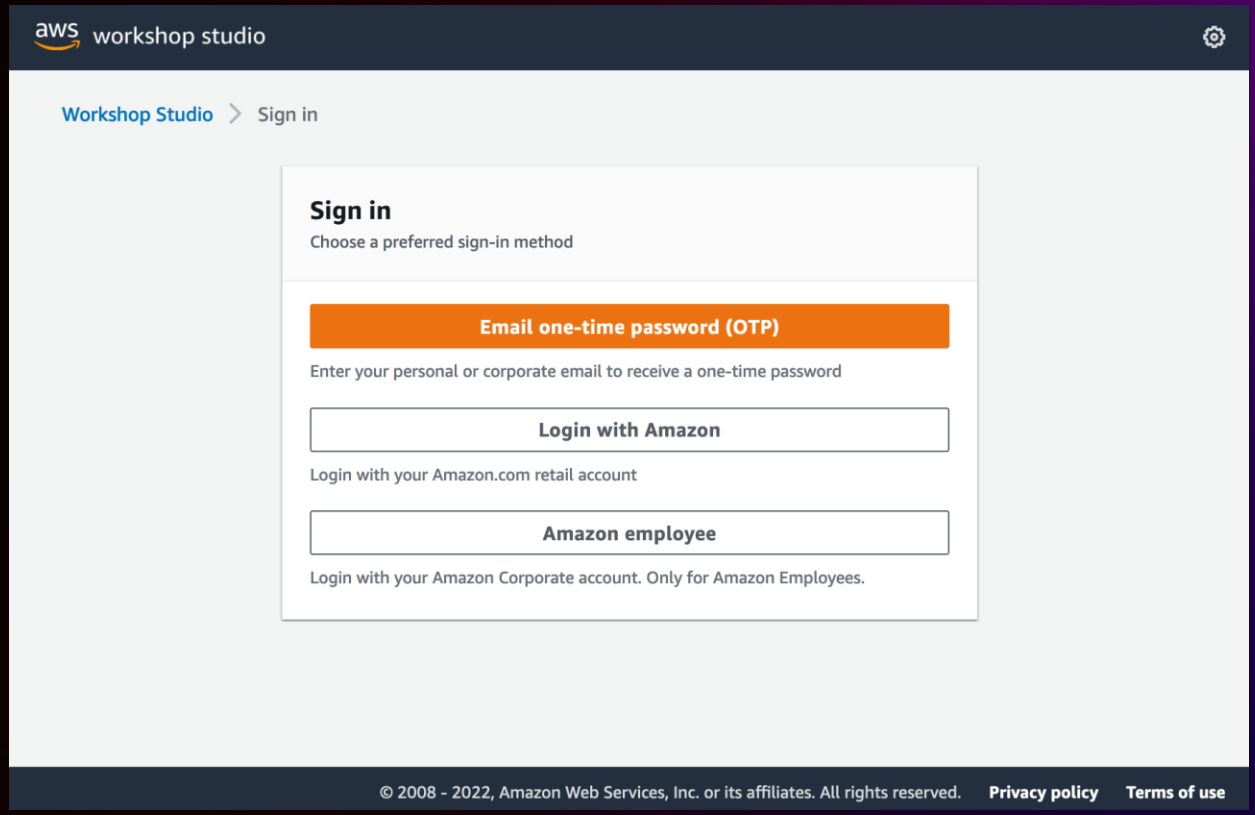
- As a participant, you will have access to an AWS account with any pre-provisioned infrastructure and IAM policies needed to complete this workshop
- The AWS account will only be available for the duration of this workshop; you will lose access to the account thereafter
- The pre-provisioned infrastructure will be deployed to a specific Region; check your workshop content to determine whether other Regions will be used
- Be sure to review the terms and conditions of the event; do not upload any personal or confidential information in the account

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Step 1: Sign in with your preferred method

https://s12d.com/stg335

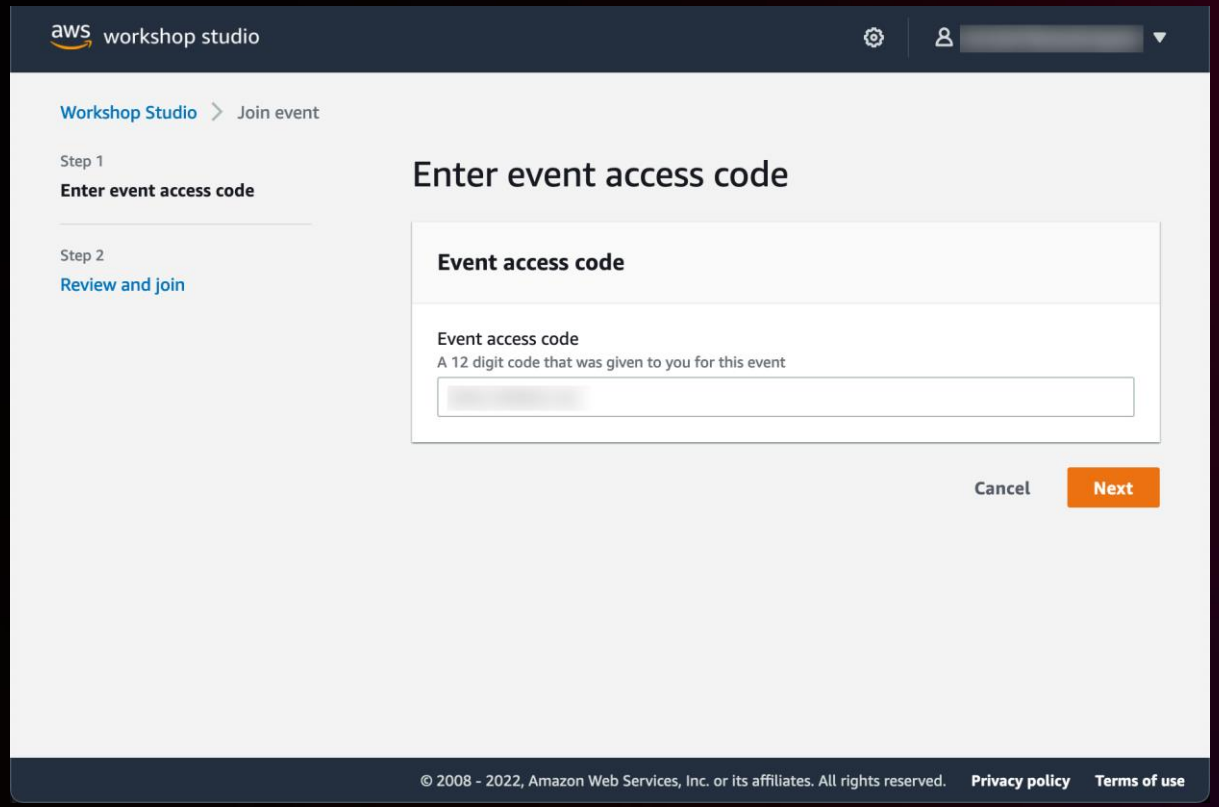




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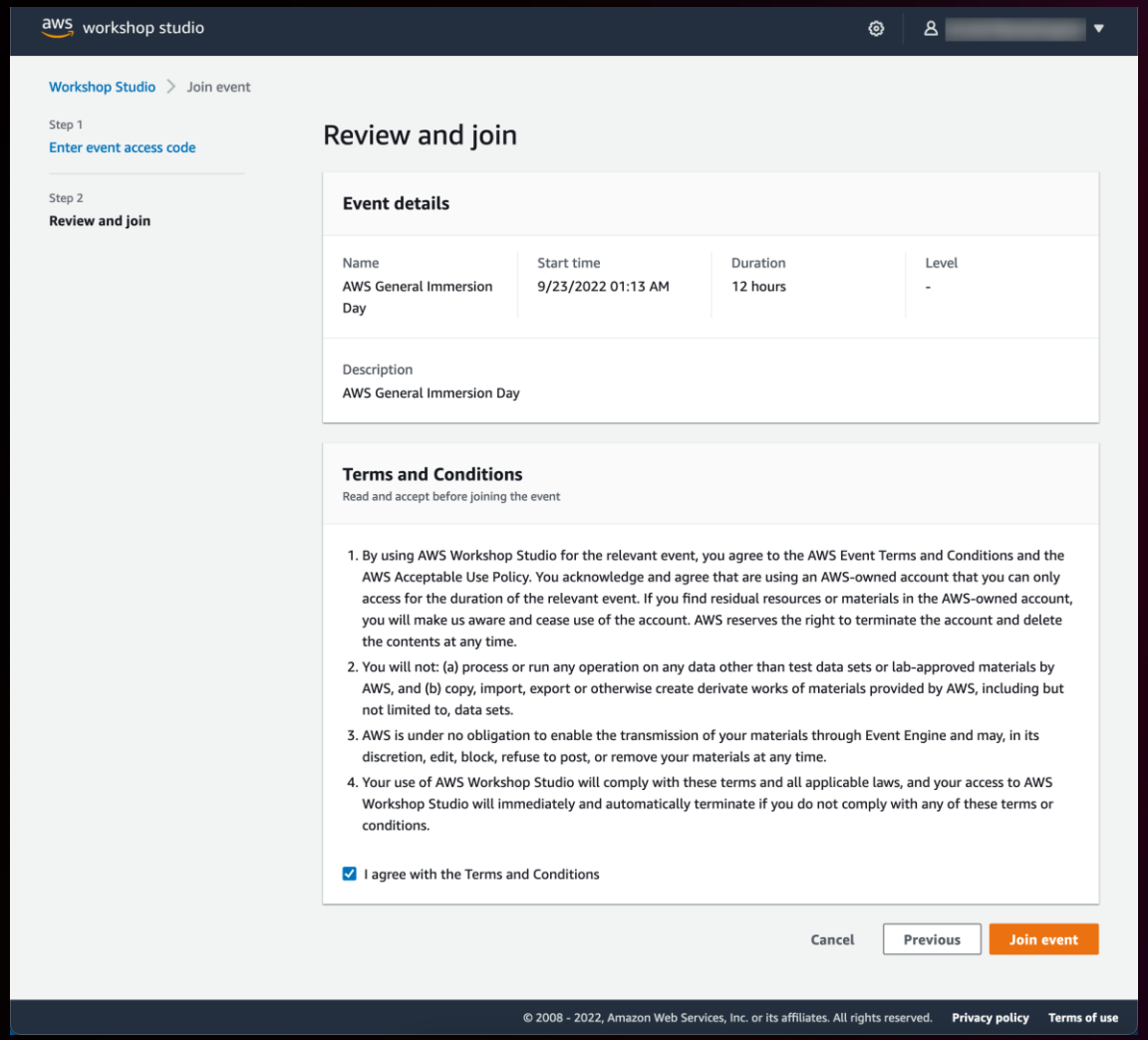
Step 2: Enter event access code

Enter 12-digit event access code; if you were given a one-click join link, you can skip this step



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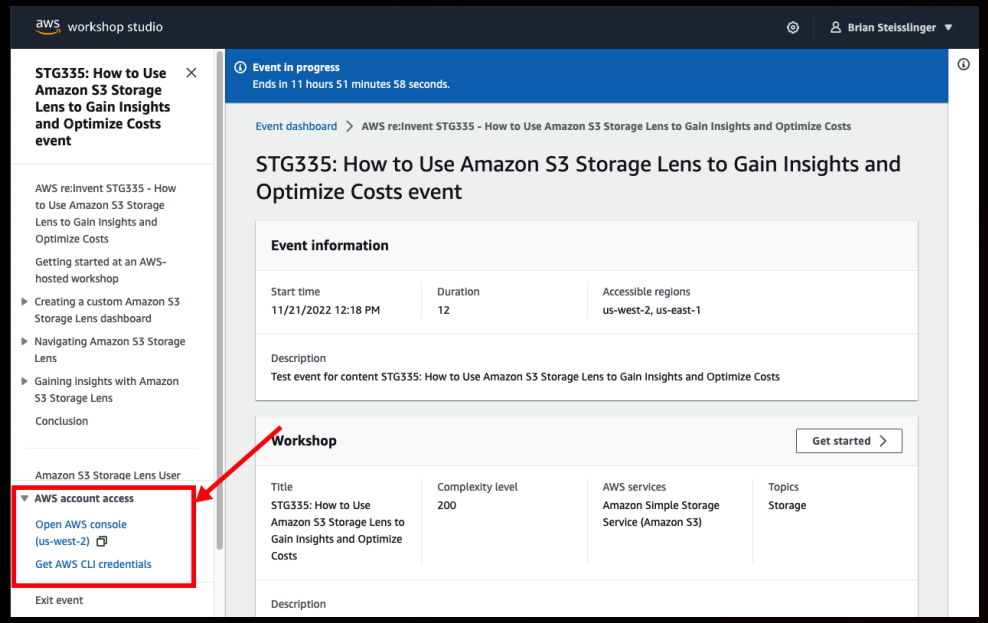
Step 3: Review terms and join event

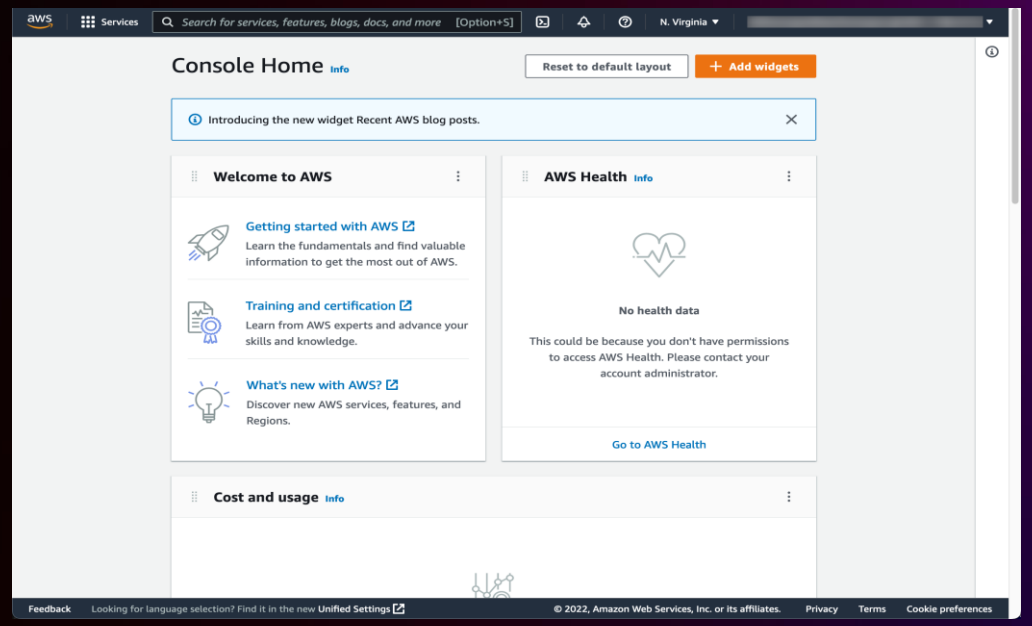


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Step 4: Access AWS account

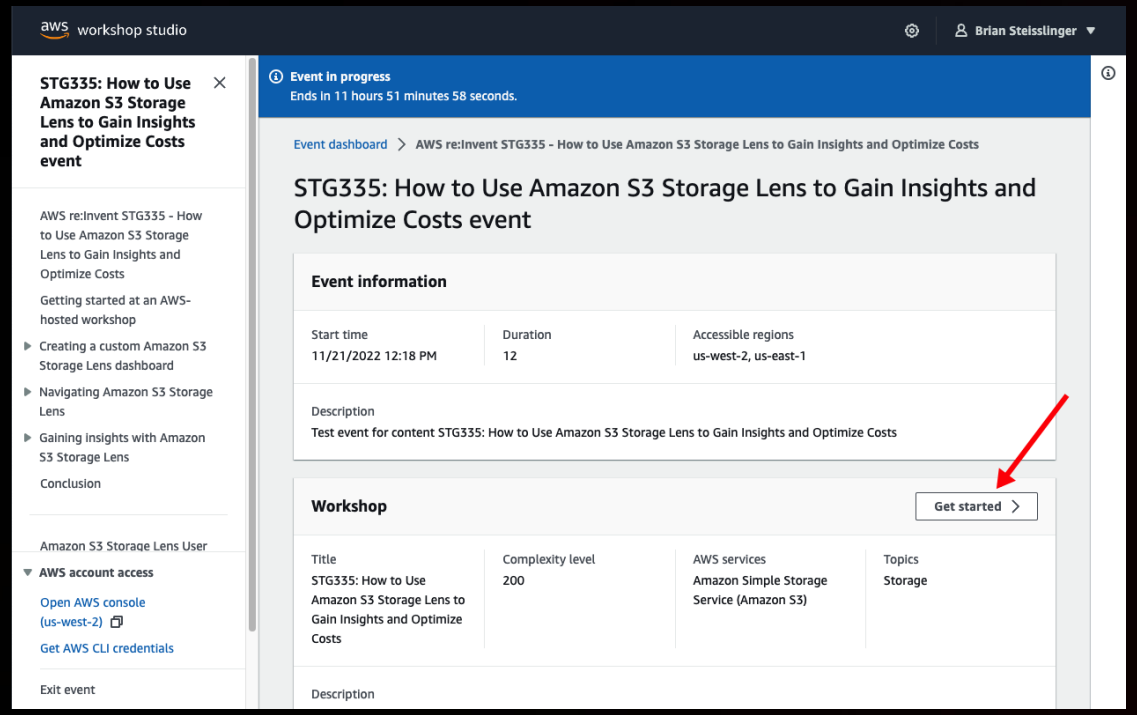
Access the AWS Console, or generate AWS CLI credentials as needed

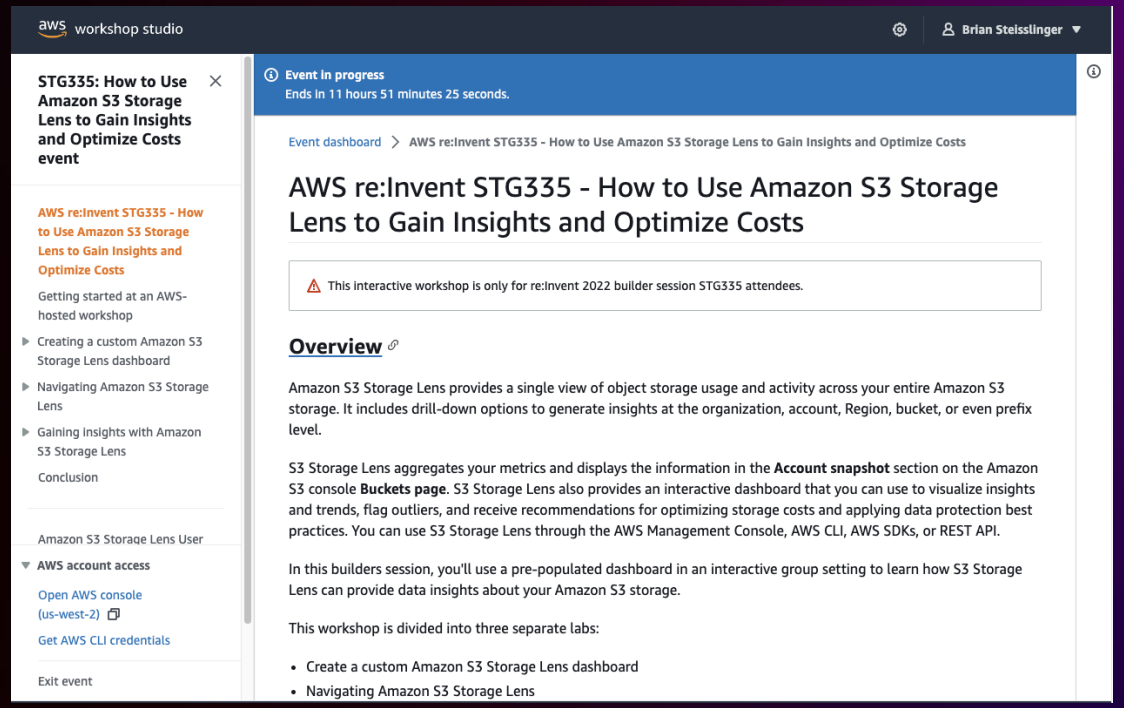




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Step 5: Get started with the workshop





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Workshop link

Workshop link: https://s12d.com/stg335

Main Workshop Studio link: https://catalog.workshops.aws/join

Event code: de87-025167-f2

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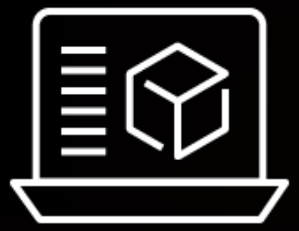
Next steps

- Go out and explore the default dashboard; it’s free!
- Configure organization-level dashboards to roll up information.
- Upgrade to Advanced metrics for more even visibility.

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Thank you!

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Brian Steisslinger

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Kip Hacking



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