
AWS
re:Invent
NOV. 28 – DEC. 2, 2022 | LAS VEGAS, NV

PRT329

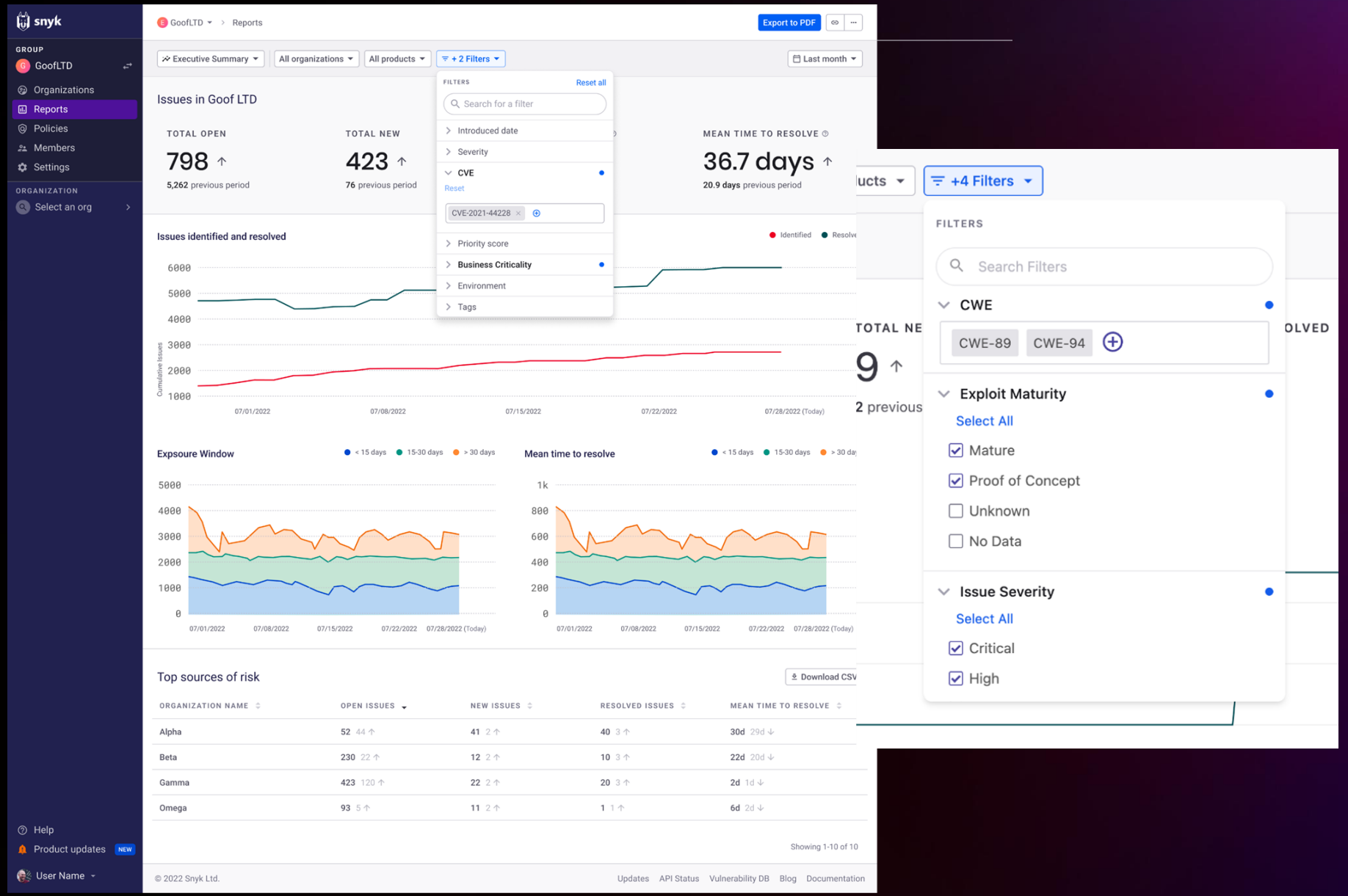
SPONSORED BY SNOWFLAKE

Advancing security analytics with Snowflake and AWS at Snyk

Seth Rosen

Product Director
Snyk

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Agenda

Snyk overview + why is data so important to our customers?

Five key architectural requirements for our new platform

How we solved the problem

Summary – Why Snowflake?

What's next?

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Modern application risk profile

Your code

~20% of an application's code
– pressure to deliver faster

Open source

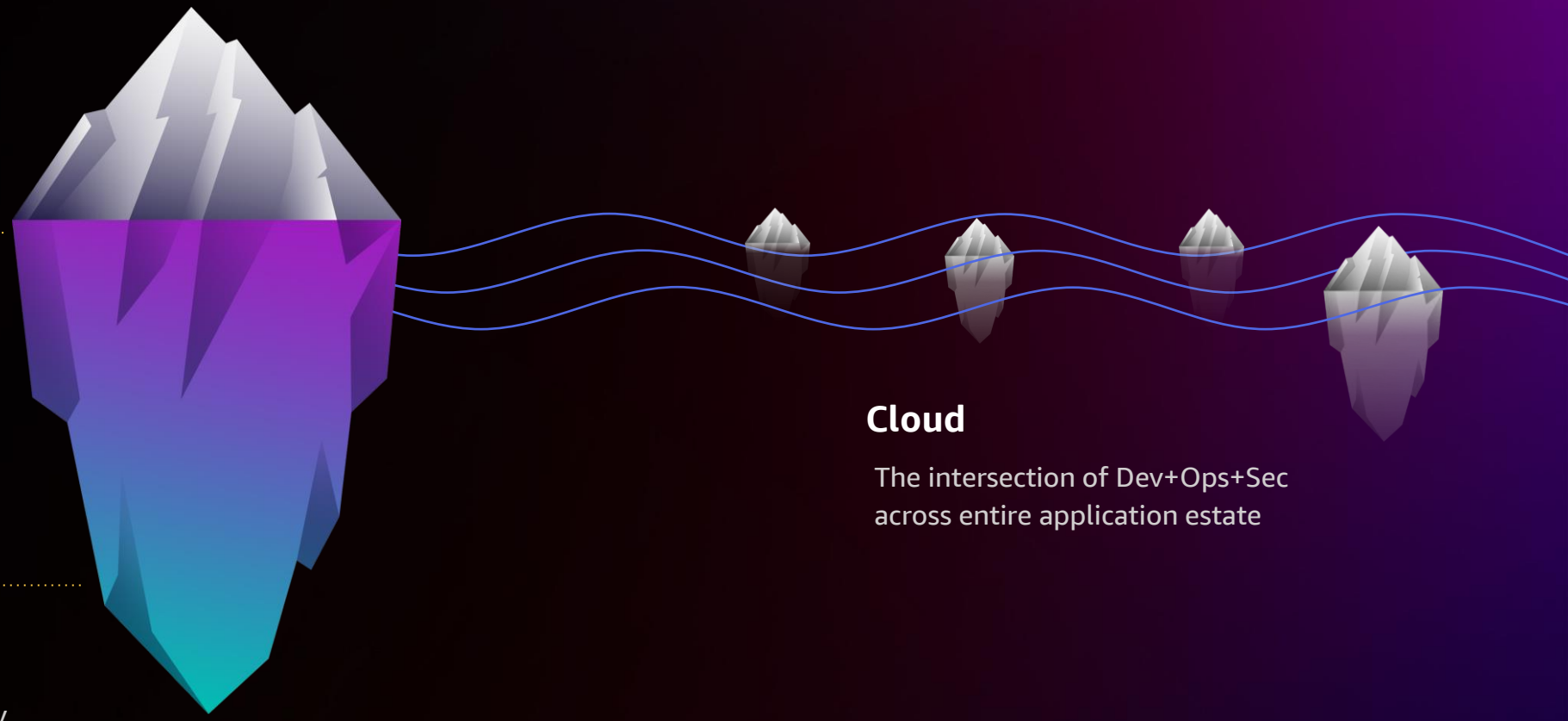
~80% of an application's code
– 80% of vulnerabilities are indirect

Containers

Hundreds of Linux packages
inherited via layered build process

Infrastructure as code

Misconfiguration is the
#1 most common cloud vulnerability

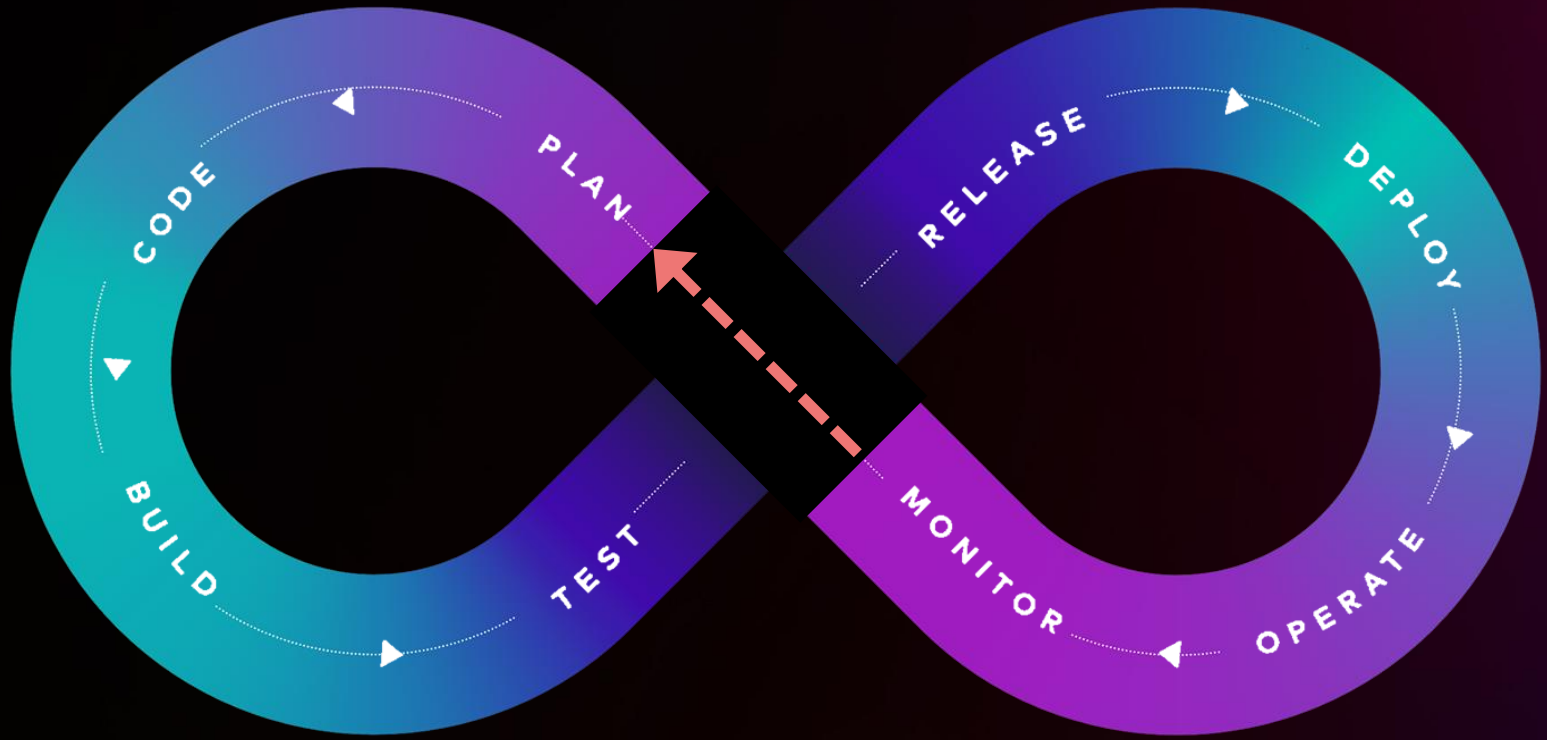


Cloud

The intersection of Dev+Ops+Sec
across entire application estate

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

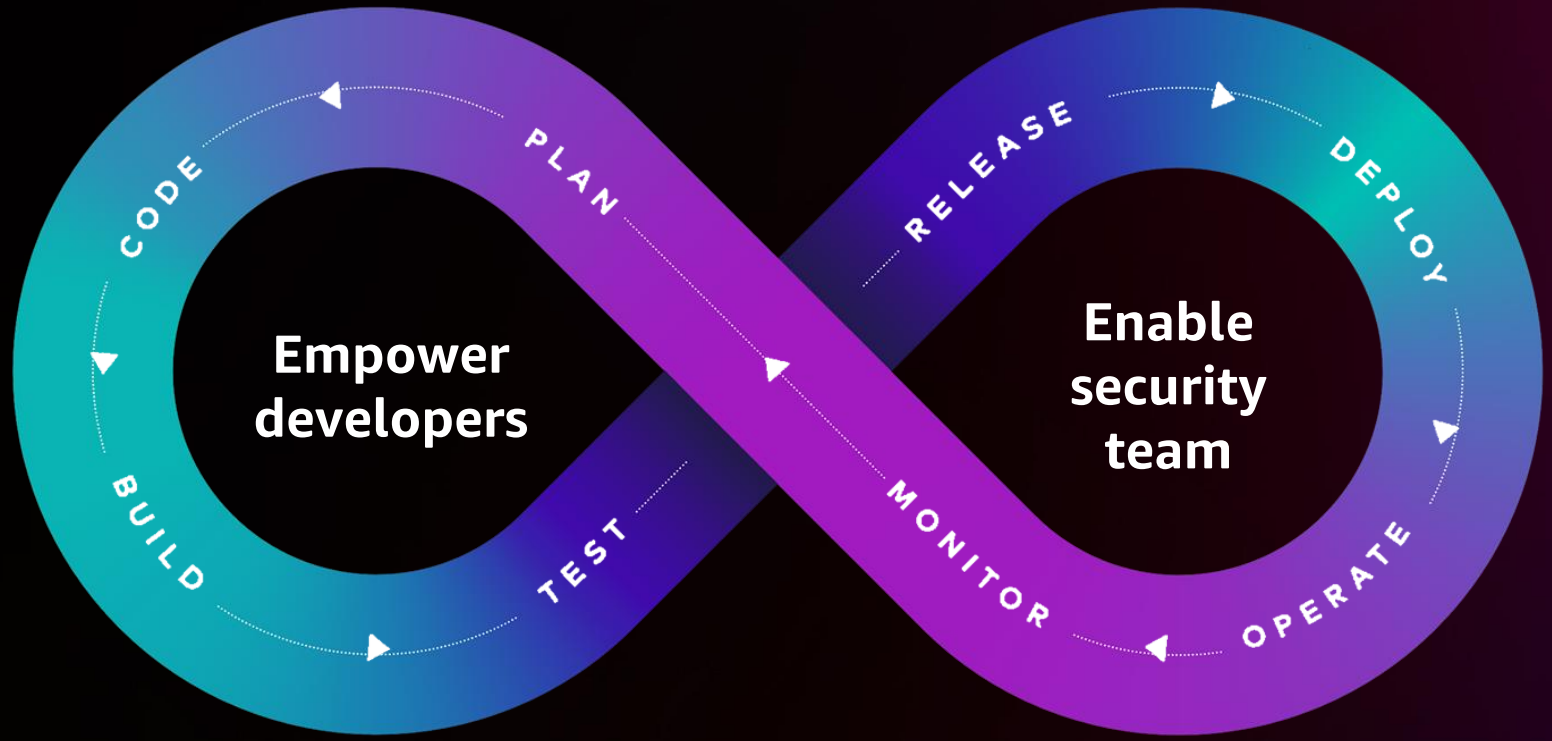
The link from monitoring to planning is critical . . . and often missing



aws
© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Snyk improves the DevSecOps lifecycle

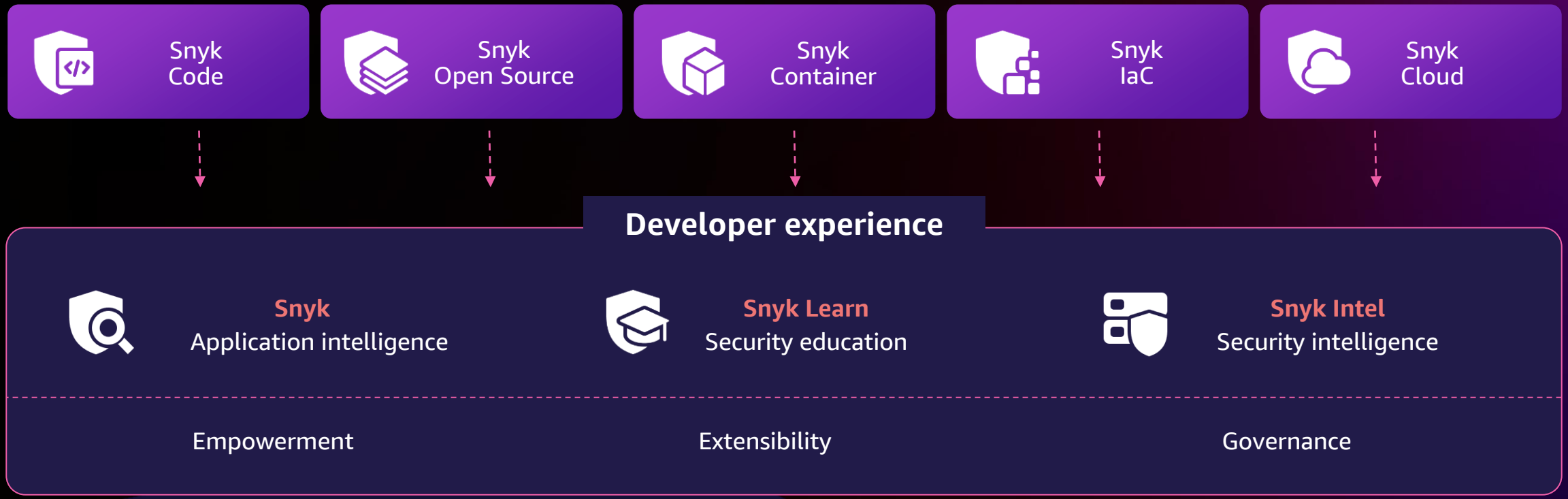
Extend the reach of your security team with a developer-centric approach



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

snyk

Developer Security Platform



aws
© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.
snyk

Background

TopCoat acquired by Snyk in March 2022

Low-code data visualization platform

SQL-based, DBT-inspired

Built on AWS



aws
© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.



Seth Rosen
@sethrosen

Some kids grow up and want to be an astronaut or athlete. I just knew I wanted to build production-grade applications on top of a data warehouse.

7:03 PM · Nov 9, 2022 · Twitter for iPhone

2 Retweets **1** Quote Tweet **82** Likes

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Problem

Customers love Snyk for our developer-first security platform but need better reporting for monitoring and governance

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Problem

Customers love Snyk for our developer-first security platform but need better reporting for monitoring and governance

Legacy reporting built using batch ETL often has up to a 9-hour data lag

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Problem

Customers love Snyk for our developer-first security platform but need better reporting for monitoring and governance

Legacy reporting built using batch ETL often has up to a 9-hour data lag

Legacy reporting interfaces are slow, especially for our larger customers

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Problem

Customers love Snyk for our developer-first security platform but need better reporting for monitoring and governance

Legacy reporting built using batch ETL often has up to a 9-hour data lag

Legacy reporting interfaces are slow, especially for our larger customers

Snyk was expanding deployment options and we needed reporting everywhere

aws

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Problem

Customers love Snyk for our developer-first security platform but need better reporting for monitoring and governance

Legacy reporting built using batch ETL often has up to a 9-hour data lag

Legacy reporting interfaces are slow, especially for our larger customers

Snyk was expanding deployment options and we needed reporting everywhere

Legacy reporting is inflexible and can make it hard to explore data

aws

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.



Seth Rosen
@sethrosen

Them: Can you just quickly pull this data for me?

Me: Sure, let me just:

SELECT * FROM some_ideal_clean_and_pristine.table_that_you_think_exists

1:42 PM · Apr 20, 2020 · Twitter Web App

5,276 Retweets **1,078** Quote Tweets **30.6K** Likes

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Requirements summary

	Requirements
1	Unified data experience across all Snyk products
2	Low-latency data pipeline
3	Responsive/fast dashboard load times
4	Available anywhere Snyk is deployed
5	Flexible and exploratory analytics experience

aws
© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Requirements summary

	Requirements
1	Unified data experience across all Snyk products
2	Low-latency data pipeline
3	Responsive/fast dashboard load times
4	Available anywhere Snyk is deployed
5	Flexible and exploratory analytics experience

aws

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Requirements summary

	Requirements	Solution
1	Unified data experience across all Snyk products	Push upstream and ensure a common data model upstream from reporting and analytics
2	Low-latency data pipeline	
3	Responsive/fast dashboard load times	
4	Available anywhere Snyk is deployed	
5	Flexible and exploratory analytics experience	

aws

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Requirements summary

	Requirements
1	Unified data experience across all Snyk products
2	Low-latency data pipeline
3	Responsive/fast dashboard load times
4	Available anywhere Snyk is deployed
5	Flexible and exploratory analytics experience

aws

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Reducing data latency from hours to minutes



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Upstream expectation testing (data contract implementation)

- Uniqueness
- Relational integrity
- Acceptable values

DBT transformation testing

- Uniqueness
- Ubiquity
- Cardinality



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Requirements summary

	Requirements	Solution
1	Unified data experience across all Snyk products	Push upstream and ensure a common data model upstream from reporting and analytics
2	Low-latency data pipeline	Stream data into Snowflake and use tasks to build initial data model
3	Responsive/fast dashboard load times	
4	Available anywhere Snyk is deployed	
5	Flexible and exploratory analytics experience	

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Requirements summary

	Requirements
1	Unified data experience across all Snyk products
2	Low-latency data pipeline
3	Responsive/fast dashboard load times
4	Available anywhere Snyk is deployed
5	Flexible and exploratory analytics experience

aws

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

- Customer data comes in all different shapes and sizes
- Clustering data based on usage patterns allows data to be physically grouped together into micropartitions
- What can be pre-aggregated should be
- Test, optimize, test, and optimize



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Requirements summary

	Requirements	Solution
✓ 1	Unified data experience across all Snyk products	Push upstream and ensure a common data model upstream from reporting and analytics
✓ 2	Low-latency data pipeline	Stream data into Snowflake and use tasks to build initial data model
✓ 3	Responsive/fast dashboard load times	Focus on micropartitions, test and iterate, have good data to test with
4	Available anywhere Snyk is deployed	
5	Flexible and exploratory analytics experience	

aws

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

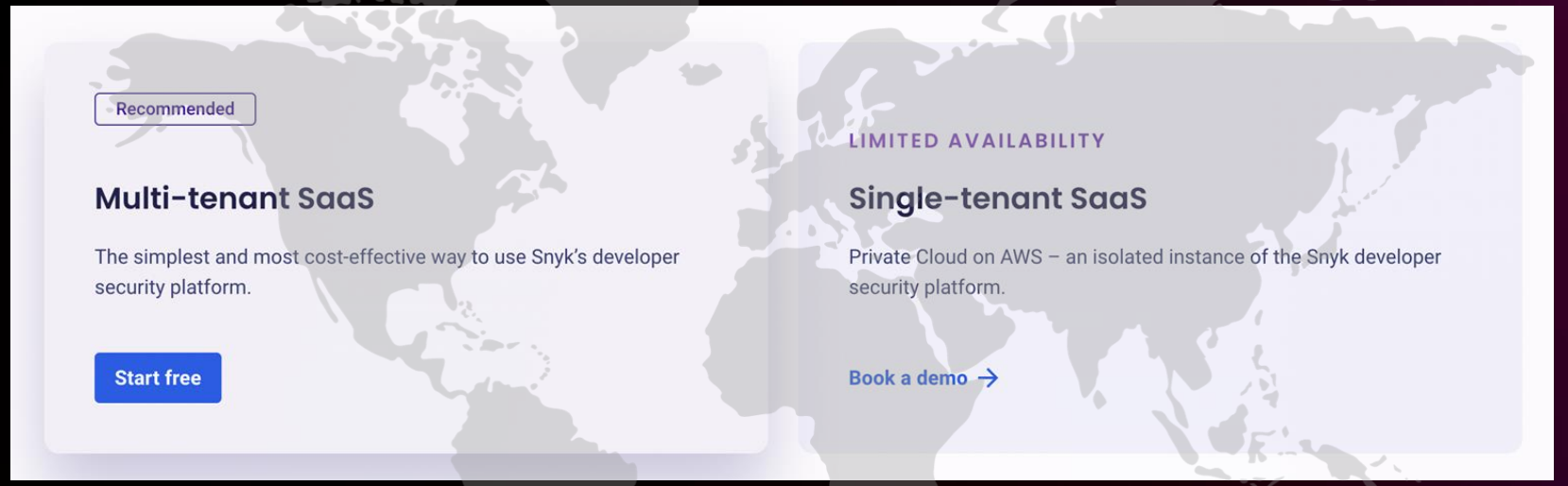
Requirements summary

	Requirements
1	Unified data experience across all Snyk products
2	Low-latency data pipeline
3	Responsive/fast dashboard load times
4	Available anywhere Snyk is deployed
5	Flexible and exploratory analytics experience

aws

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Deployable anywhere via AWS



Multi-tenant SaaS EU

RELEASED

Snyk Private Cloud

LIMITED ACCESS

Multi-tenant SaaS Australia

COMING SOON

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Requirements summary

	Requirements	Solution
1	Unified data experience across all Snyk products	Push upstream and ensure a common data model upstream from reporting and analytics
2	Low-latency data pipeline	Stream data into Snowflake and use tasks to build initial data model
3	Responsive/fast dashboard load times	Focus on micropartitions, test and iterate, have good data to test with
4	Available anywhere Snyk is deployed	IaC everything
5	Flexible and exploratory analytics experience	

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

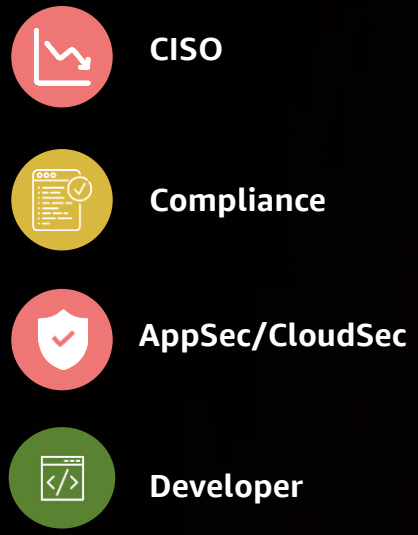
Requirements summary

	Requirements
1	Unified data experience across all Snyk products
2	Low-latency data pipeline
3	Responsive/fast dashboard load times
4	Available anywhere Snyk is deployed
5	Flexible and exploratory analytics experience

aws

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

What do our customers want?



Prioritization

Quick, auto-fixable wins for critical severity issues
Focus teams to relevant domains
Tackle license issues with legal and compliance
Knock out the most prevalent issues

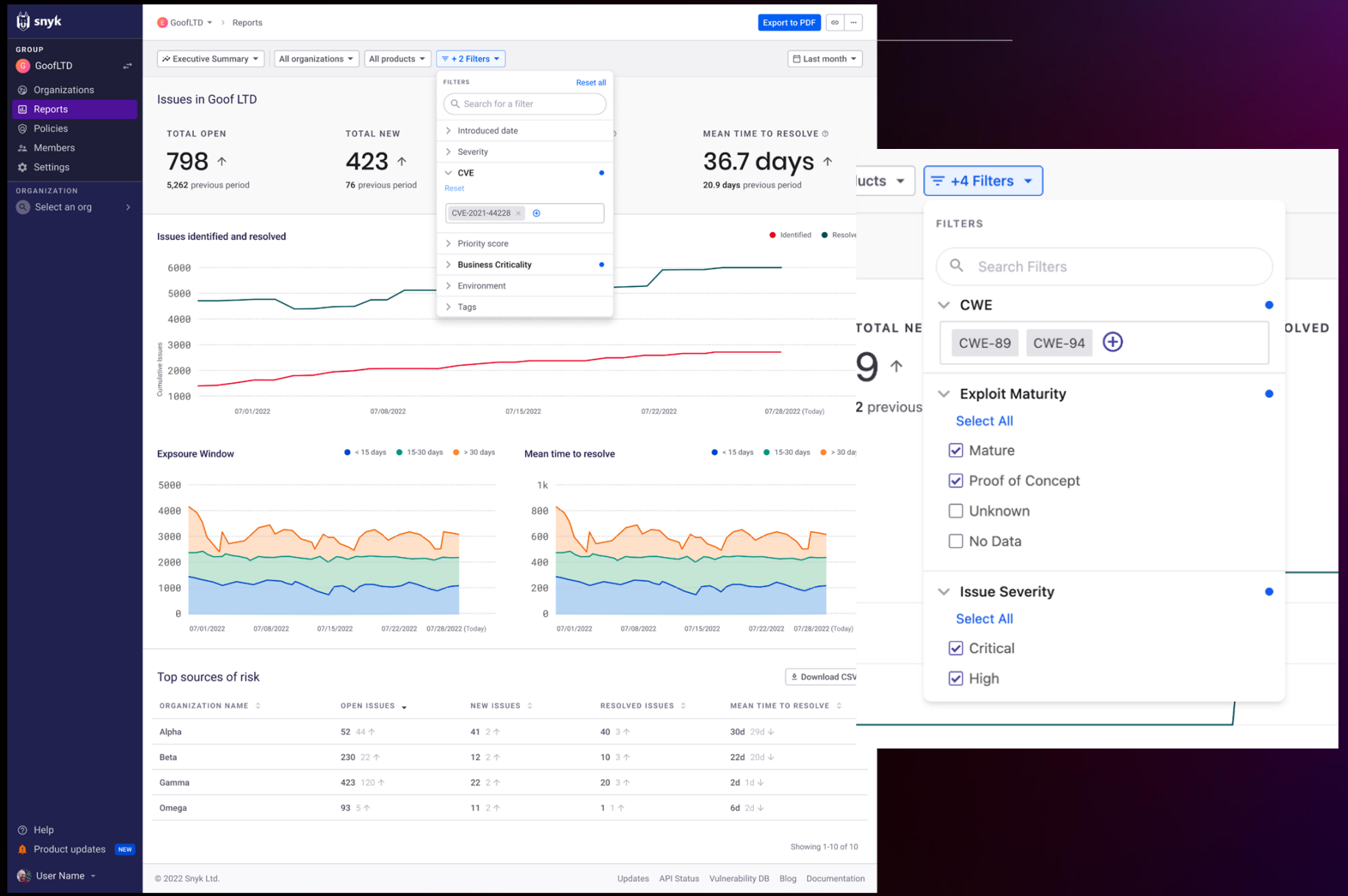
Manage/audit

Establish baselines and track trends for team performance
Measure progress against industry standards like OWASP Top 10
Attest to the absence or resolution of key issues identified by auditors
Audit internal issue ignore practices

Value confirmation

Visualize all scan types in a single pane of glass
Understand what Snyk has identified and what Snyk has helped me resolve
Measure improvements to resolution time following program changes

aws
© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Requirements summary

	Requirements	Solution
1	Unified data experience across all Snyk products	Push upstream and ensure a common data model upstream from reporting and analytics
2	Low-latency data pipeline	Stream data into Snowflake and use tasks to build initial data model
3	Responsive/fast dashboard load times	Focus on micropartitions, test and iterate, have good data to test with
4	Available anywhere Snyk is deployed	IaC everything
5	Flexible and exploratory analytics experience	Focus on UX and work closely with design team

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Requirements summary

	Requirements
☑	1 Unified data experience across all Snyk products
☑	2 Low-latency data pipeline
☑	3 Responsive/fast dashboard load times
☑	4 Available anywhere Snyk is deployed
☑	5 Flexible and exploratory analytics experience

aws

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Summary: Benefits of Snowflake

- Improved performance of our pipeline and application layer queries
- Deployable anywhere, along with our AWS application stack
- Use the data tools we know and love
- The ecosystem and extensibility

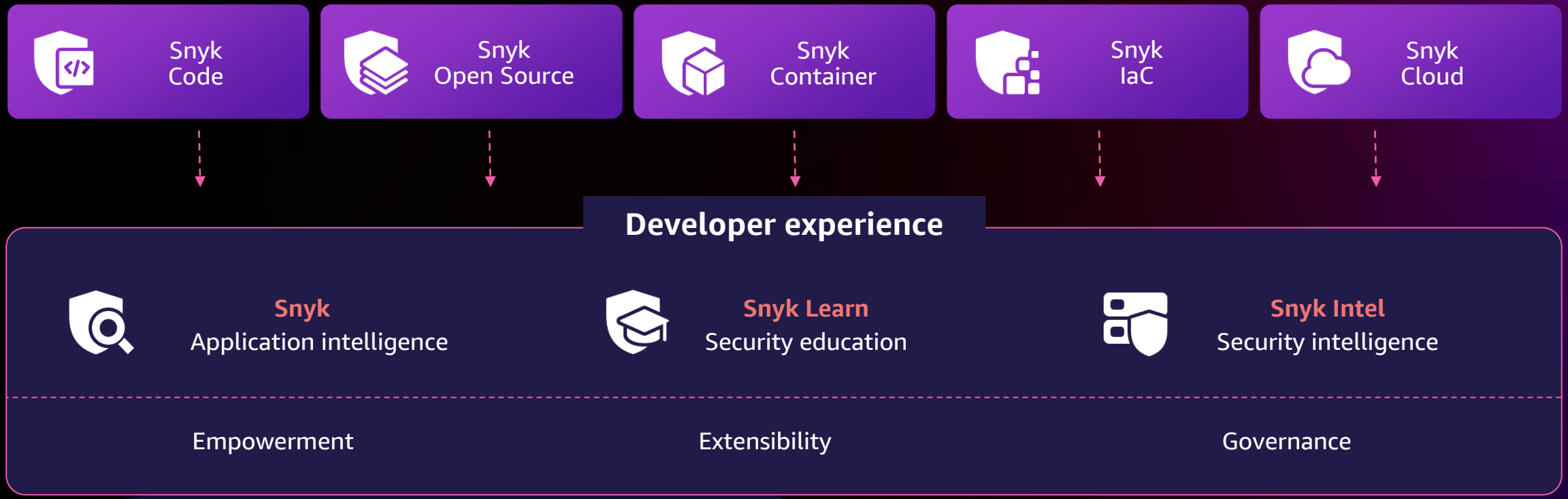
© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

What’s next

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

snyk

Developer Security Platform



aws
© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.
snyk



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Thank you!



Please complete the session survey in the **mobile app**

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.