AWS re:Invent

TLC204-R

Implementing telecommunication data analytics

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Amazon Web Services

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Prerequisites

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Prerequisites

Internet connectivity

- Download raw data record for the lab

https://builder2019.s3.amazonaws.com/rawdata.csv

AWS account

- Amazon S3 access
- AWS Glue access
- Amazon Athena access
- Amazon QuickSight access

AWS data analytics for telco

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AWS can help solve data analytics for telco professionals

1

2

3

Meaningful data analytics

Operations

Sales

Data analytics made accessible

Deployed quickly with tools for staff at all levels of data science capability

Simplified pre-processing and ETL, freeing time and resources for experimentation

Reduced time and costs of data analytics with AWS services

Data analytics with AWS Glue and Athena

1. Setup a crawler to run periodically, scan your data, and automatically populate the Glue Data Catalog

2. Once your data in the Glue Data Catalog, it is readily available for querying in Amazon Athena and Amazon Redshift Spectrum – no additional steps required!

Telco-specific data: Event data record (EDR)

EDR provides a range of information related to subscriber detailed information, which is useful for carriers

=

Gain valuable insights!

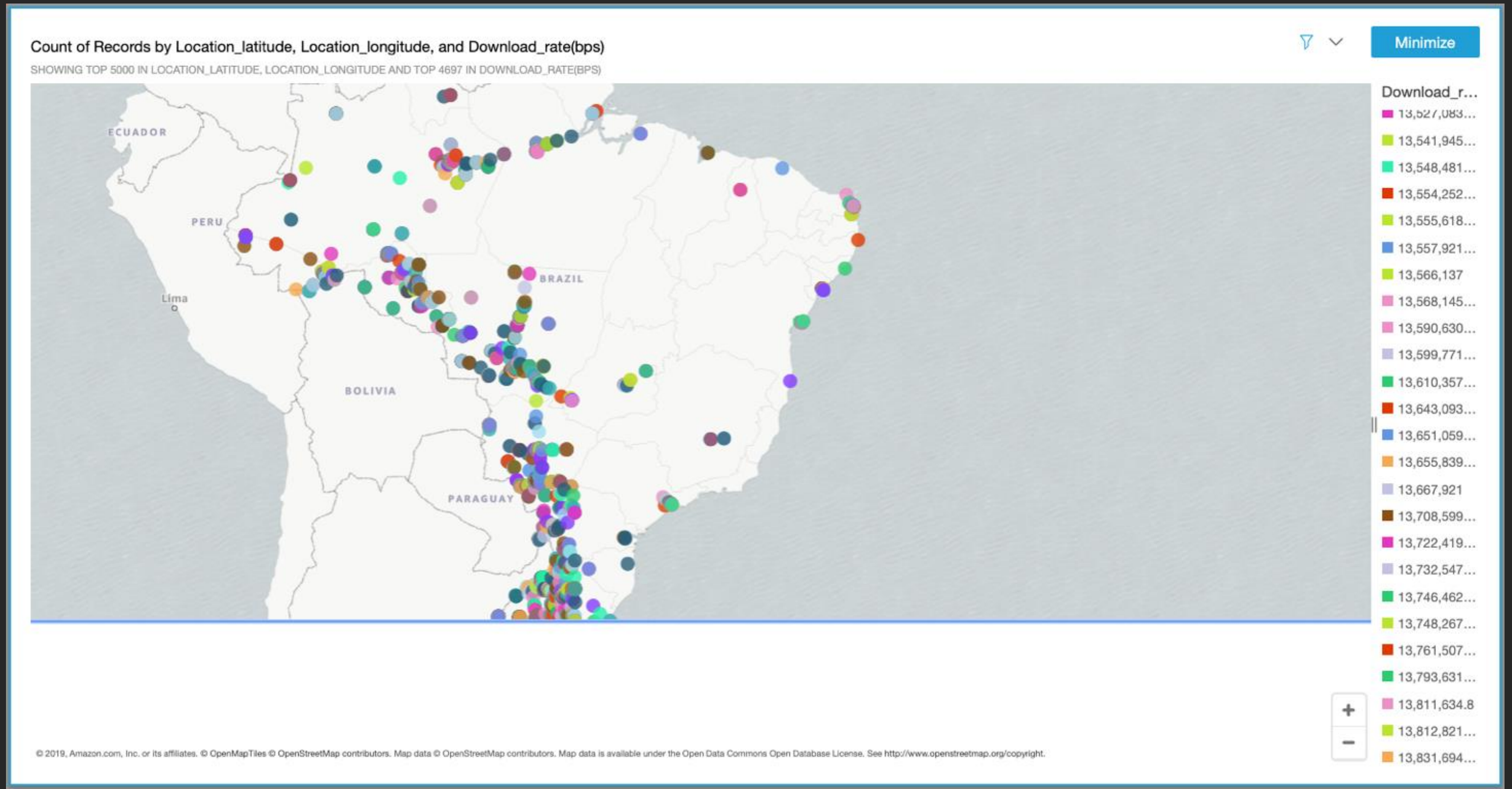
“NMS, OSS, CS”

EDR

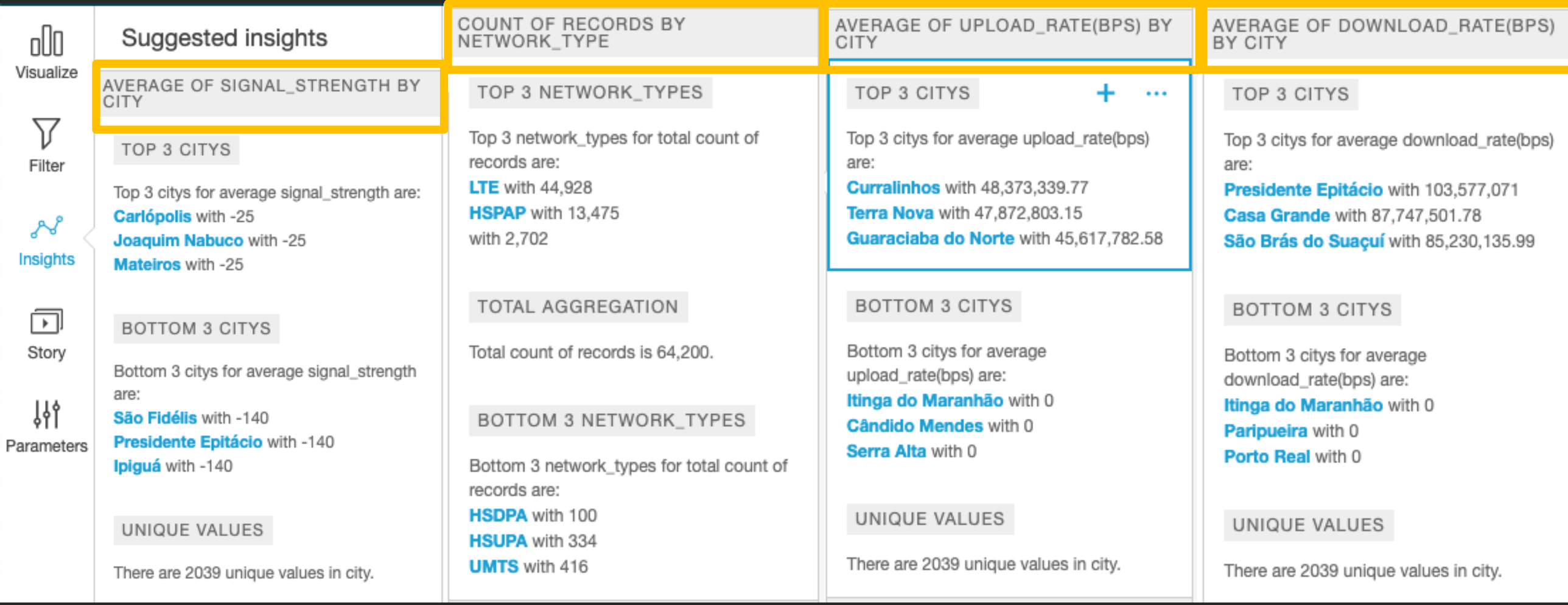
Information example

Network performance data	Network Management System (NMS): provides raw data related to network performance
Network health status	Operation Support System (OSS): provides raw data related to network health status
Subscriber behavior	Charging System (CS): provides raw data related to subscriber specific behavior

Gain value from EDR: Download rate per city (example)



Gain value from EDR: Quick insights into your network



Build time!

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How to get these insights?

Time for a hands-on lab!

Requirements:

- Amazon S3 access
- AWS Glue access
- Athena access
- Amazon QuickSight access

Amazon S3: Uploading your EDR

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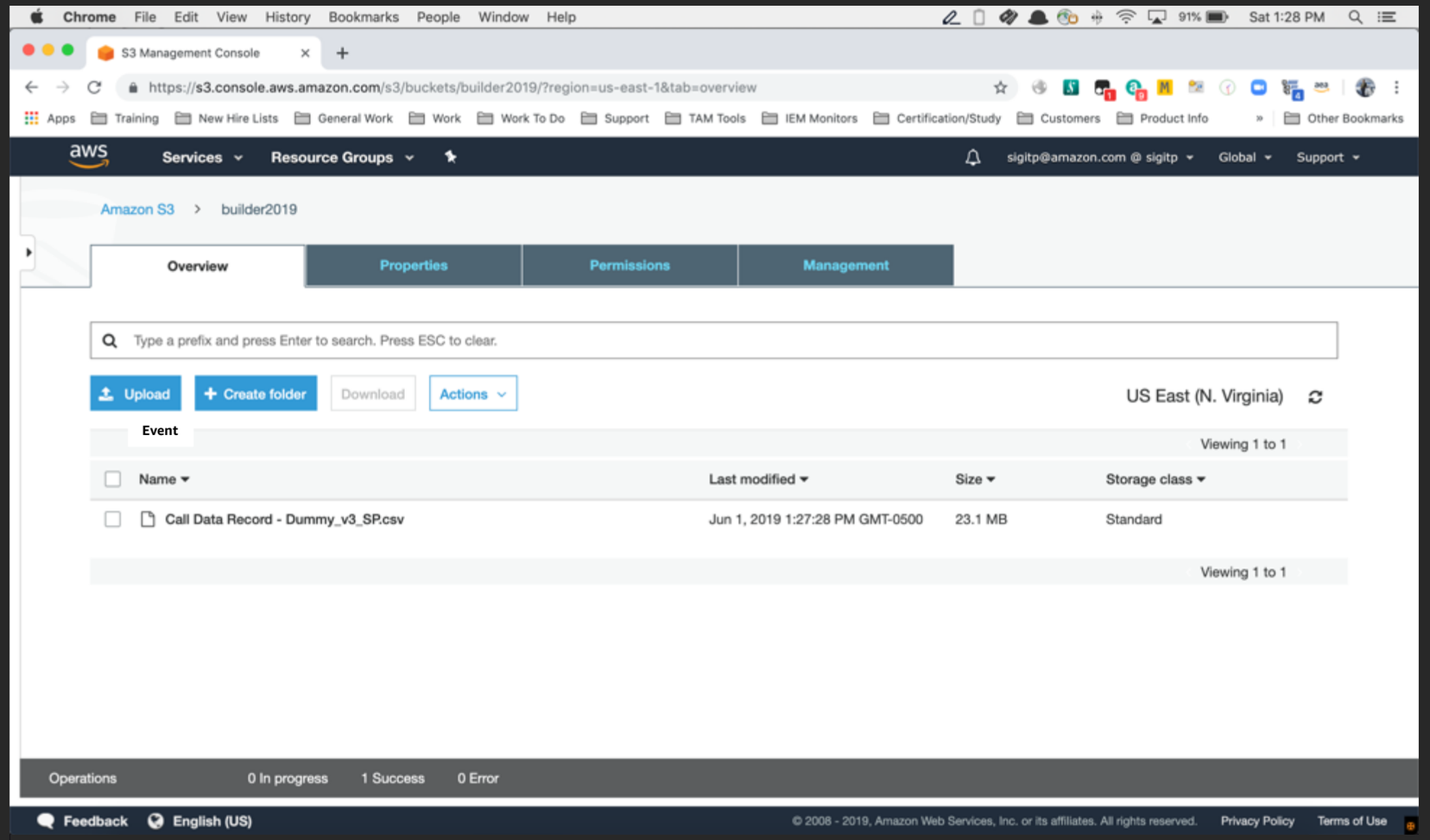
Amazon S3: Store EDR file



AWS Glue crawler for your EDR

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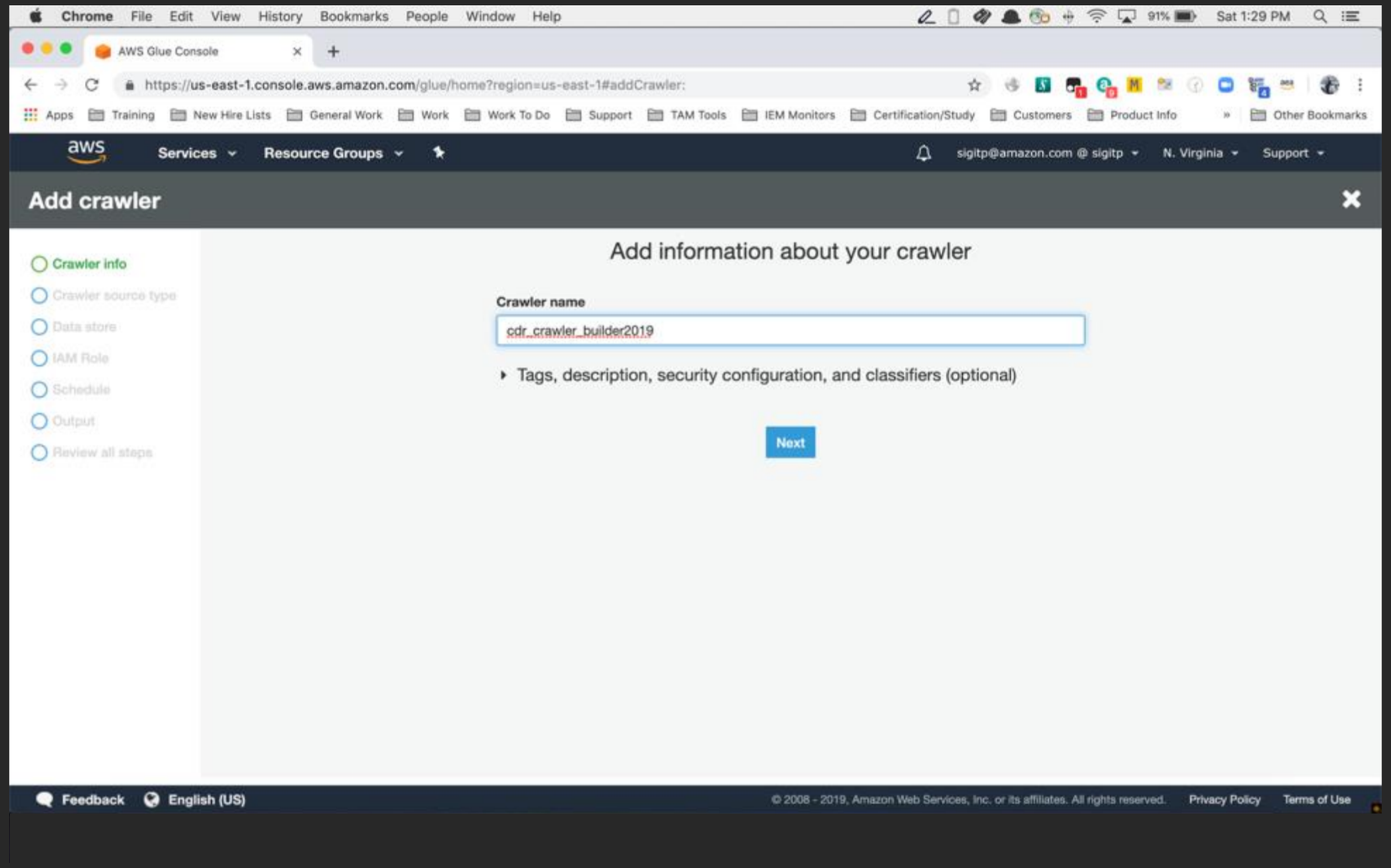
AWS Glue: Create data crawler



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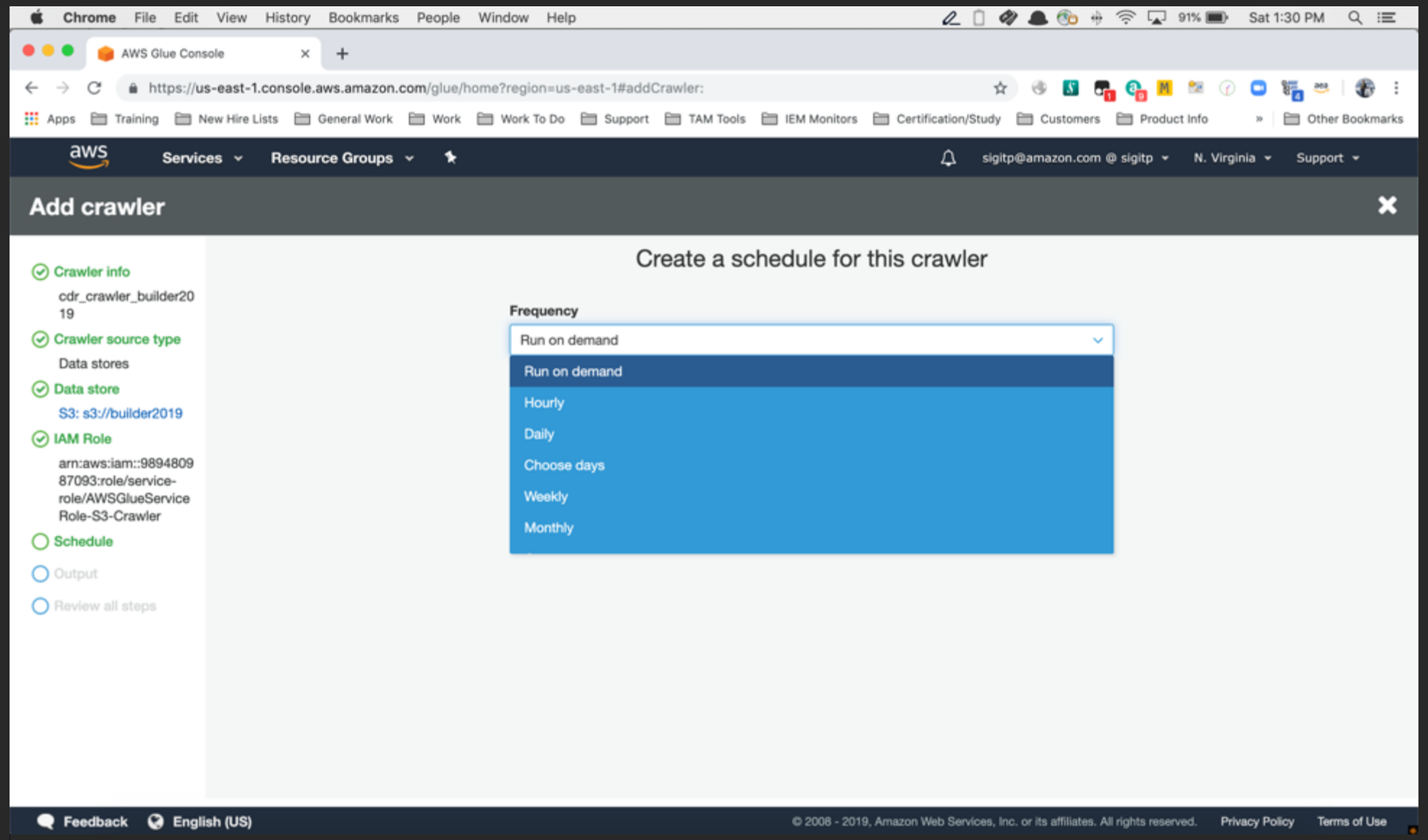

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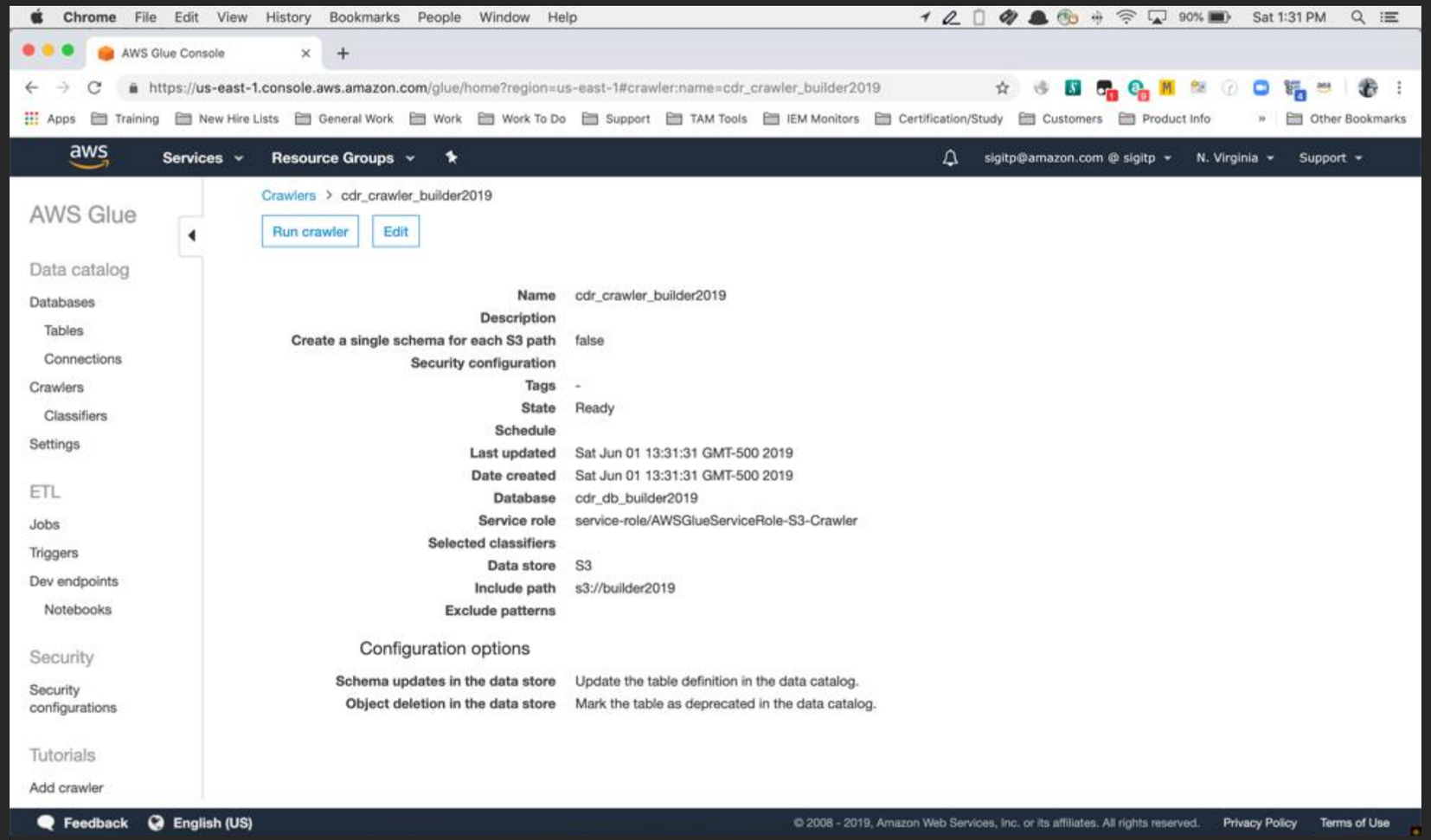

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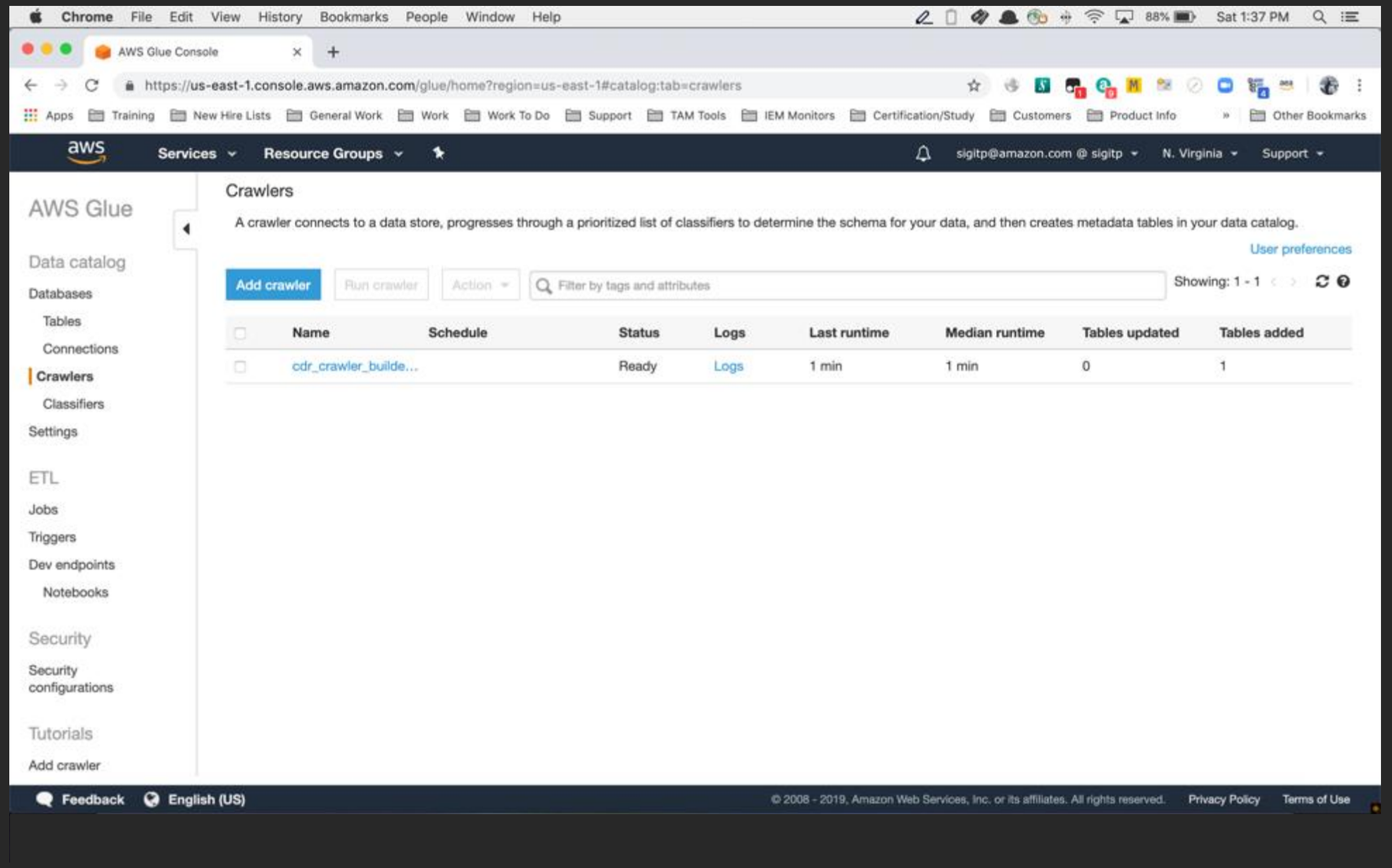
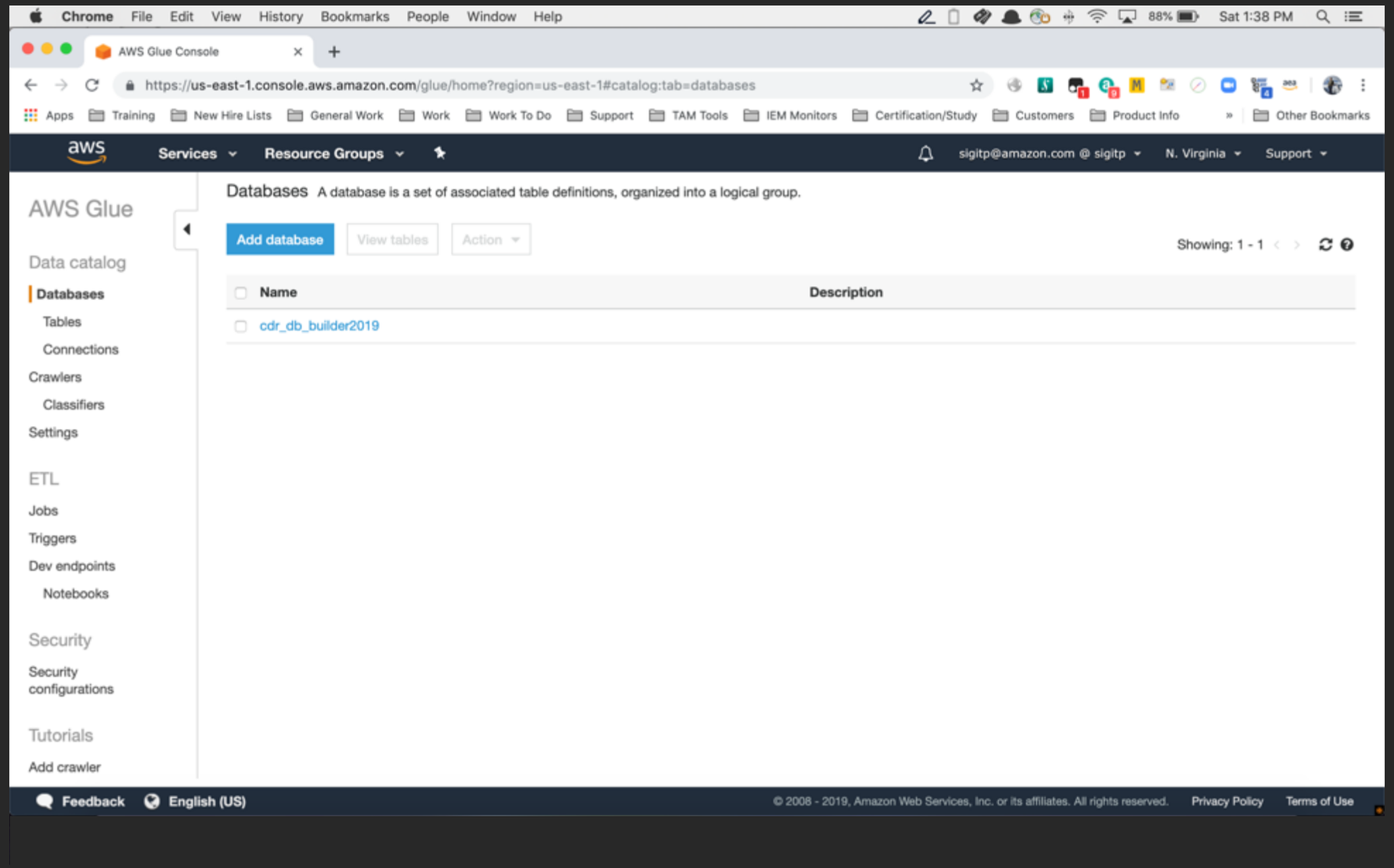
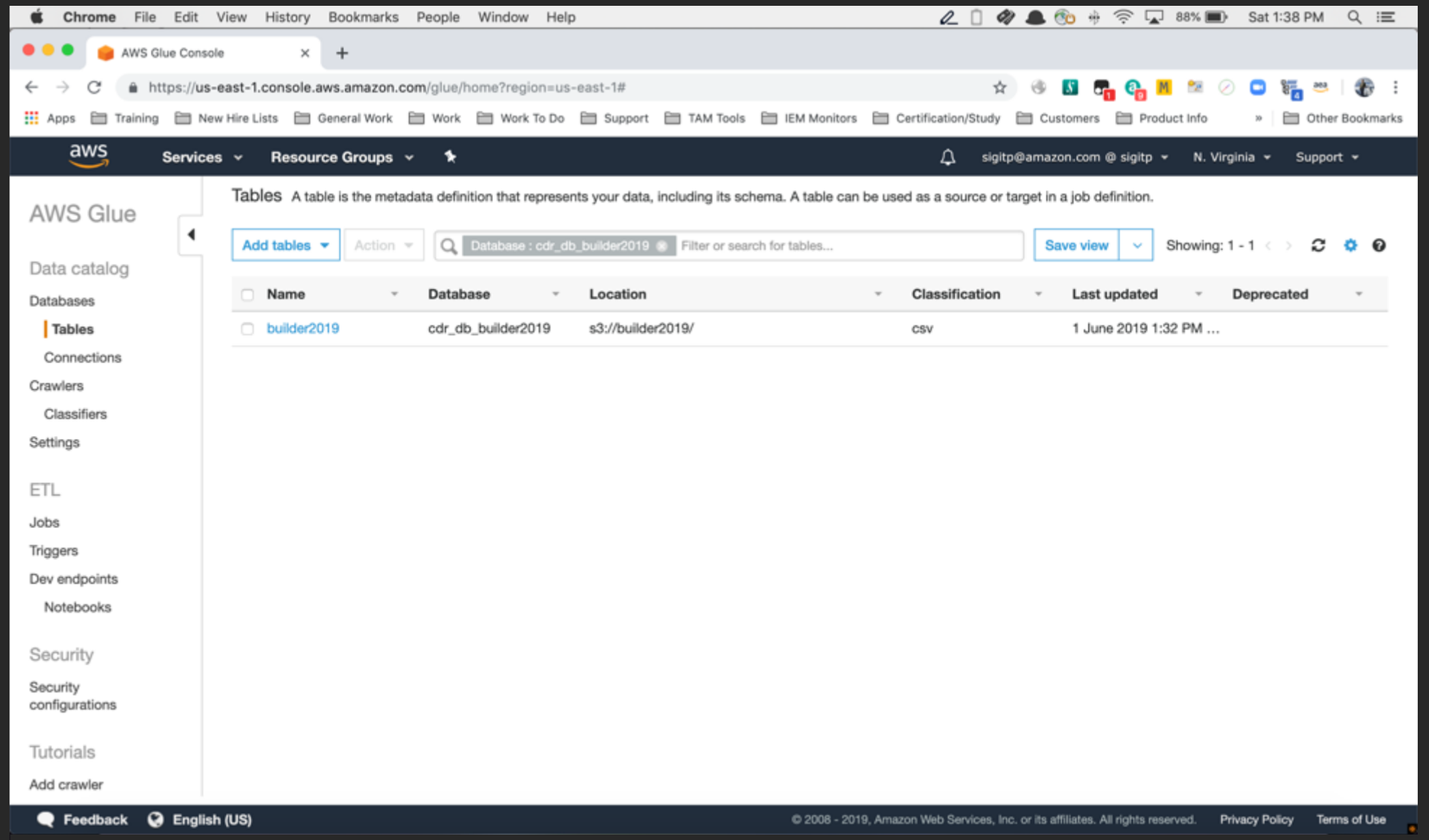


AWS Glue: Database created by crawler



AWS Glue: Table inside the database



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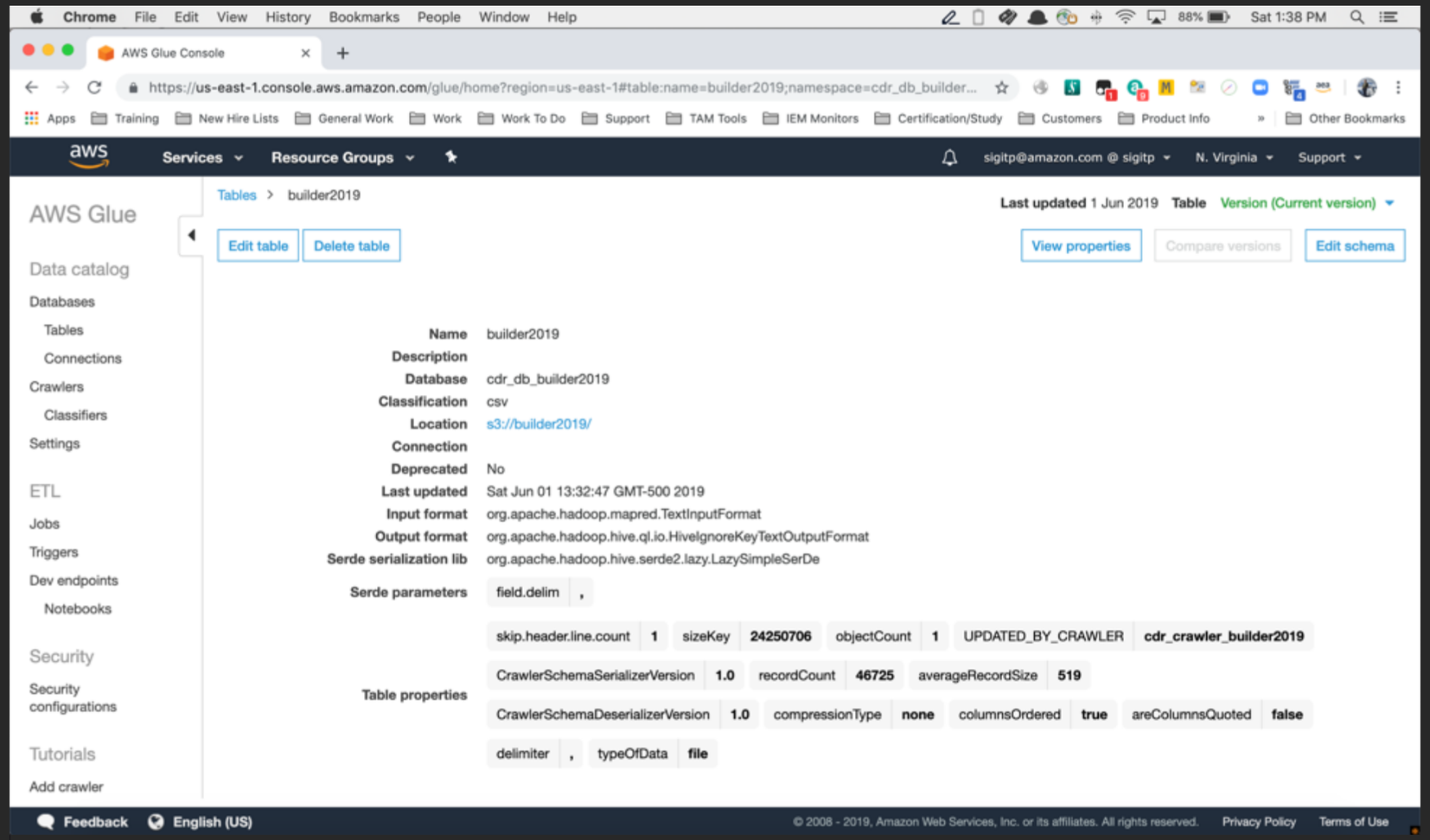
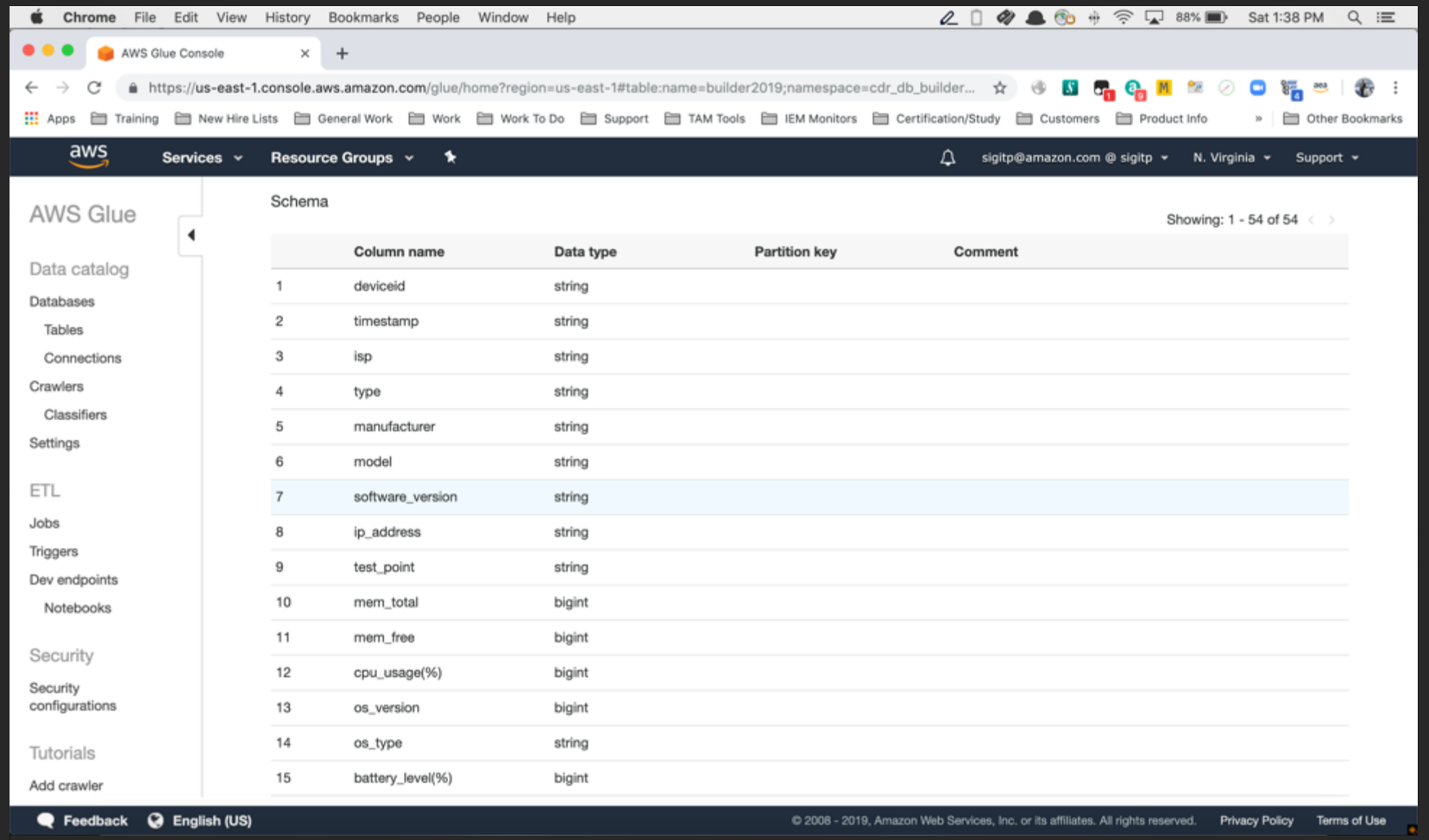


AWS Glue: Columns and types automatically crawled



AWS Glue: Correcting data type

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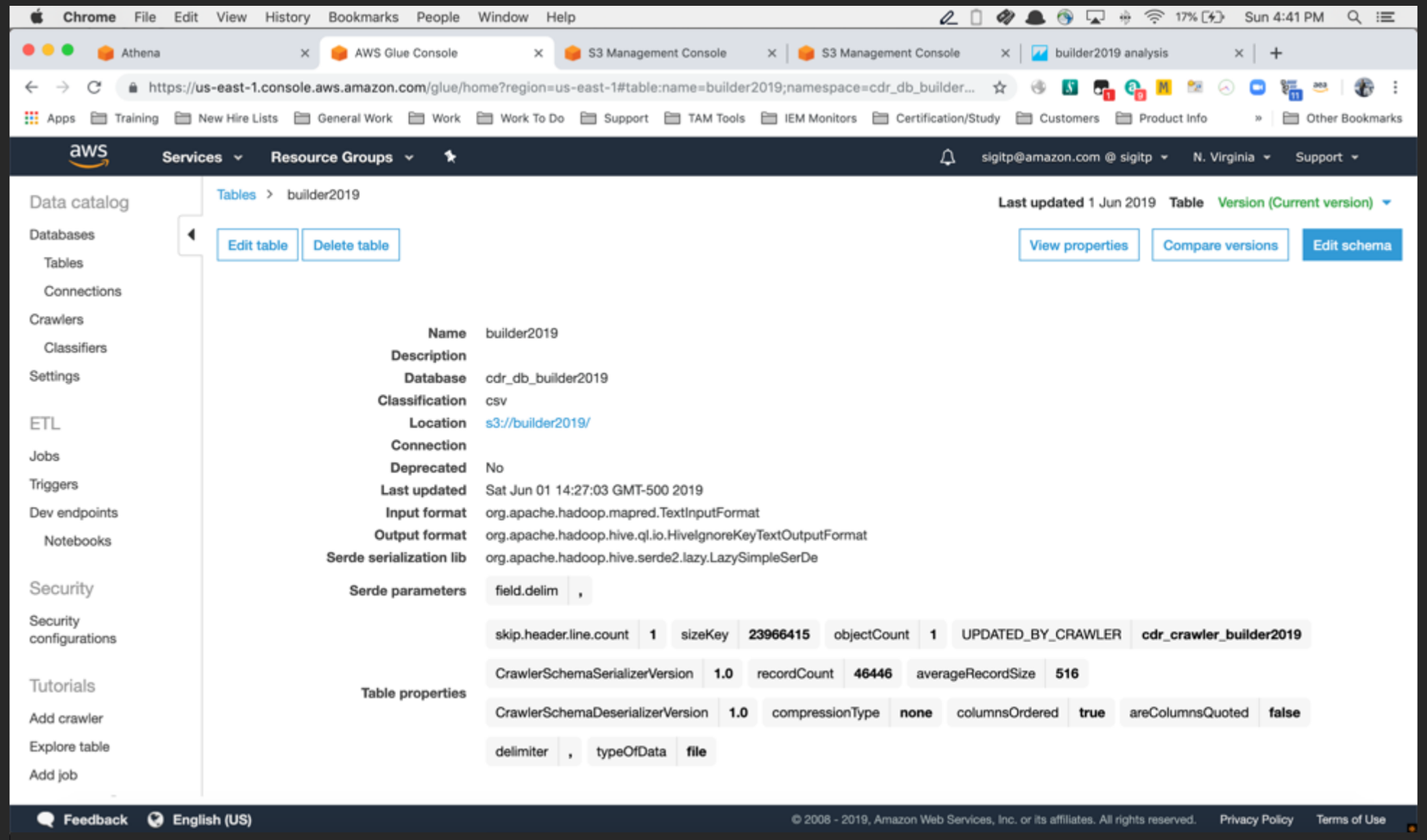
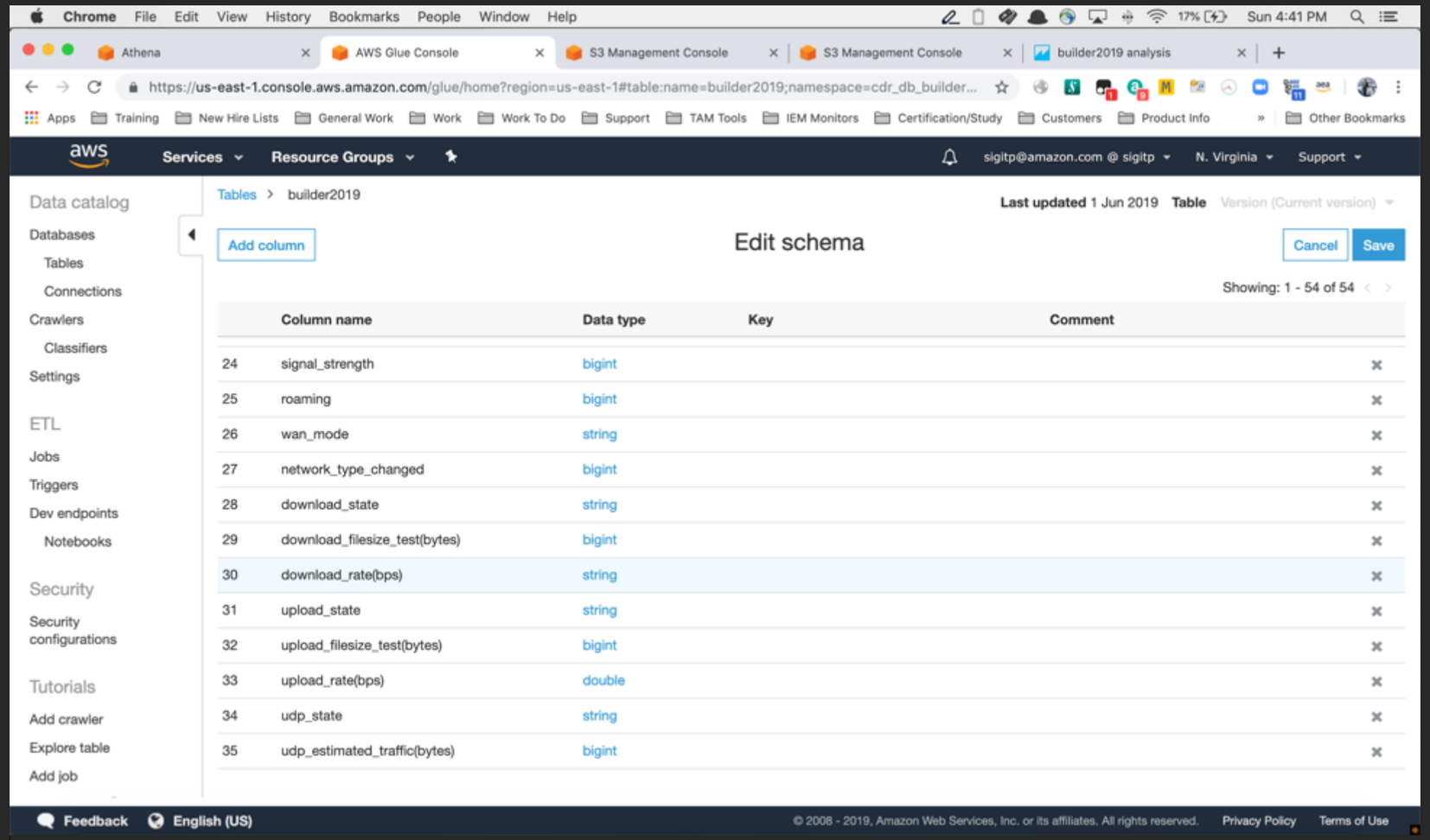
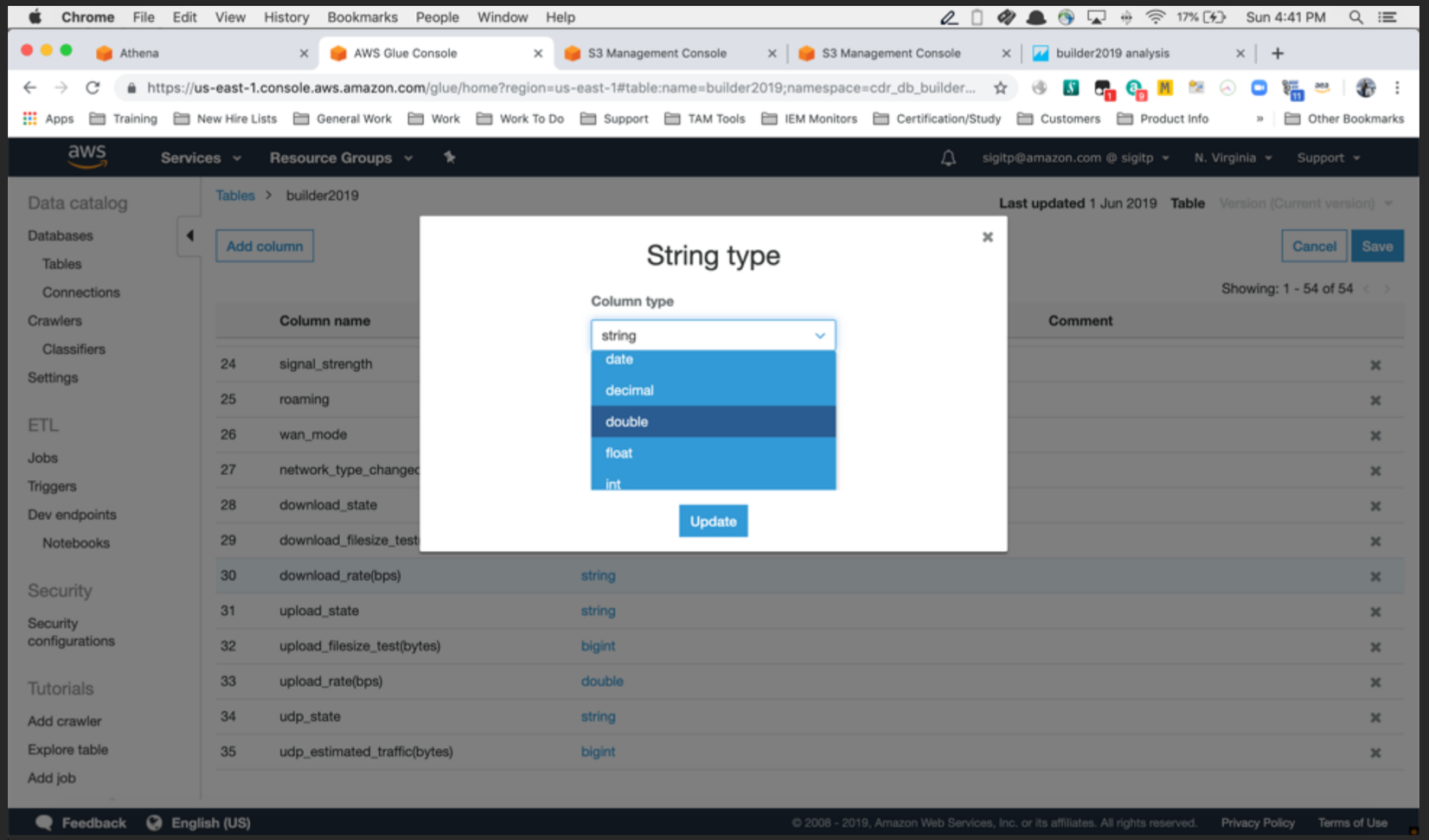
AWS Glue: Edit schema



AWS Glue: Download rate (string)



AWS Glue: Download rate fixing to double



Athena: Query your database

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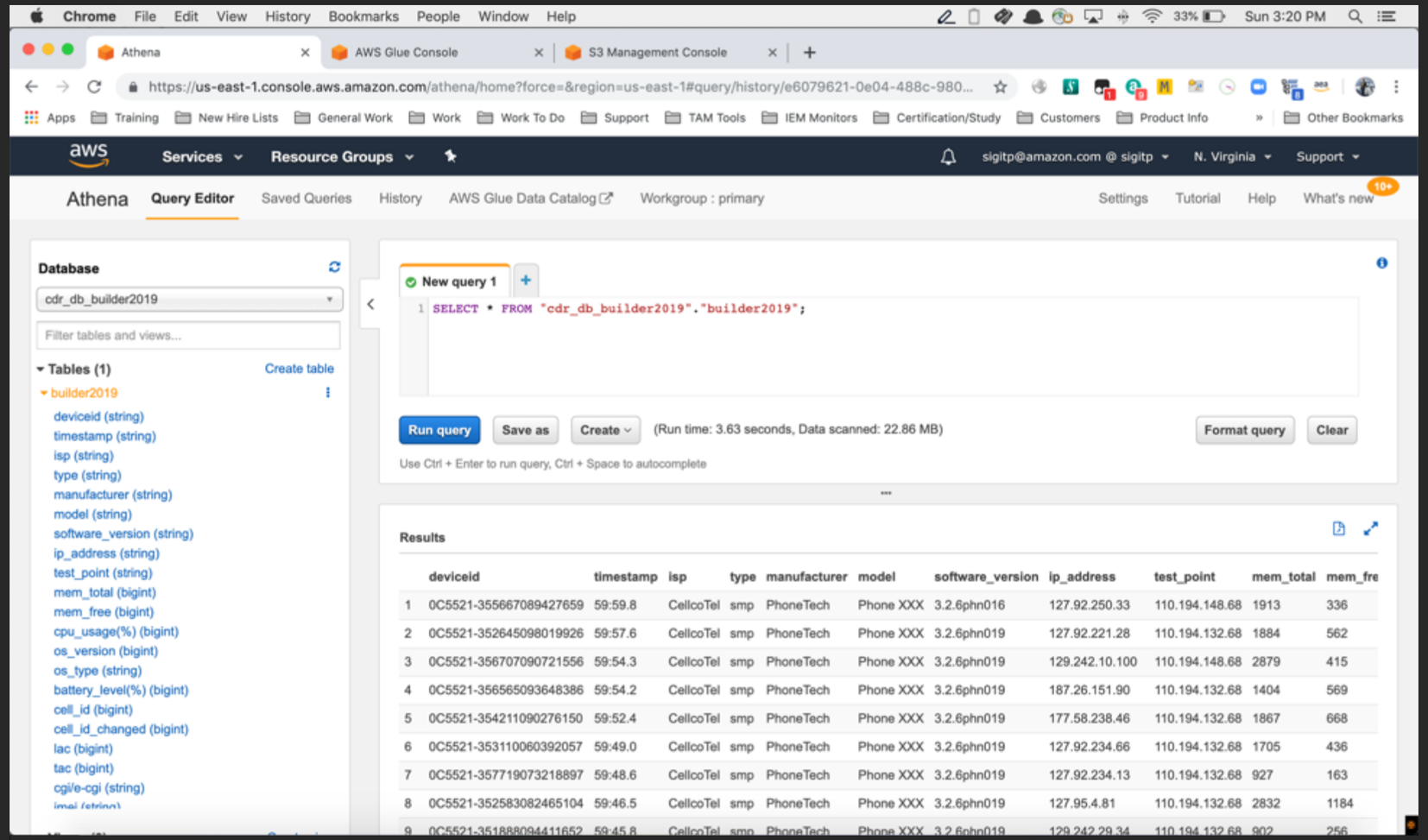
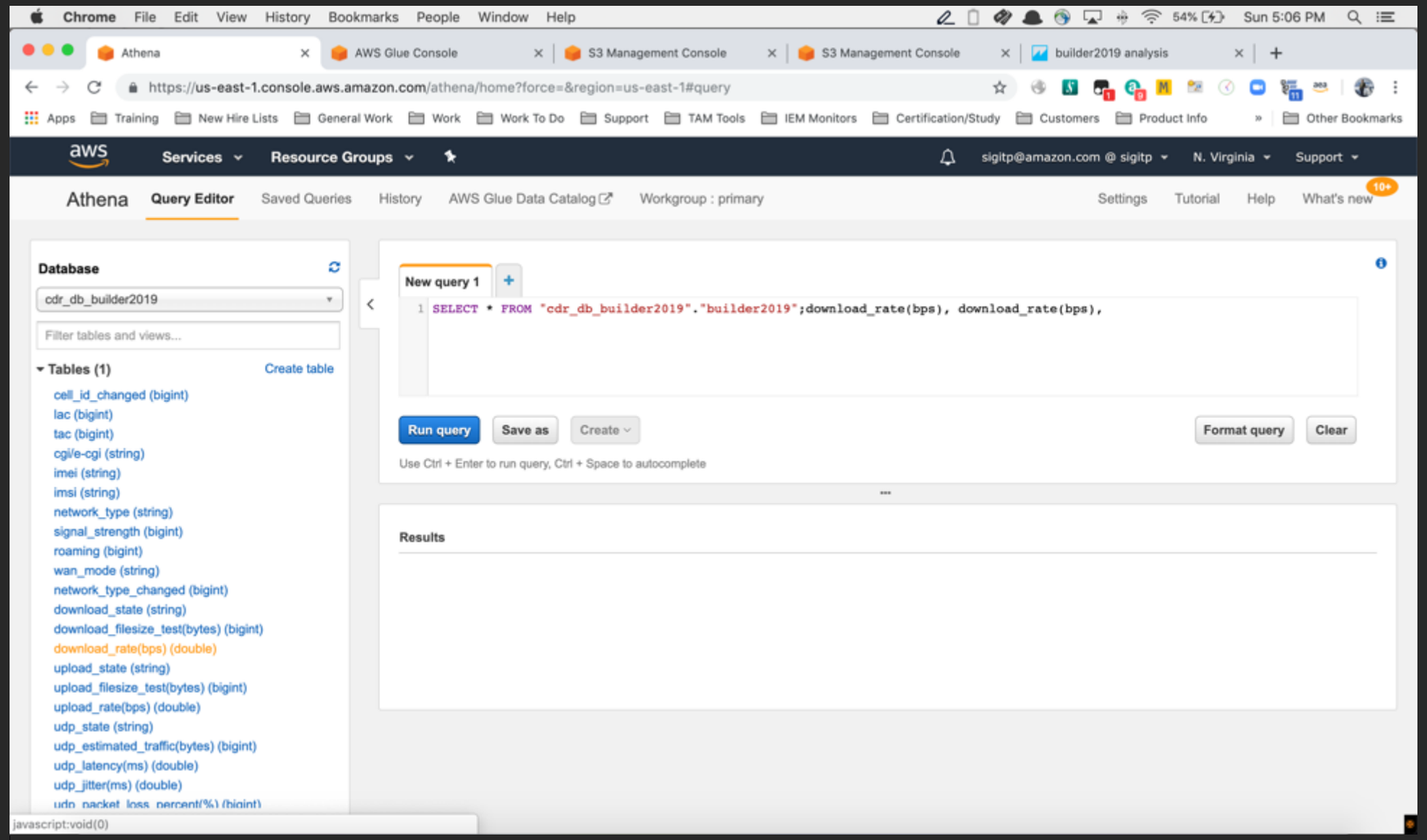
Athena: Query your database



Athena: Query your database



Amazon QuickSight: Visualize your insights!

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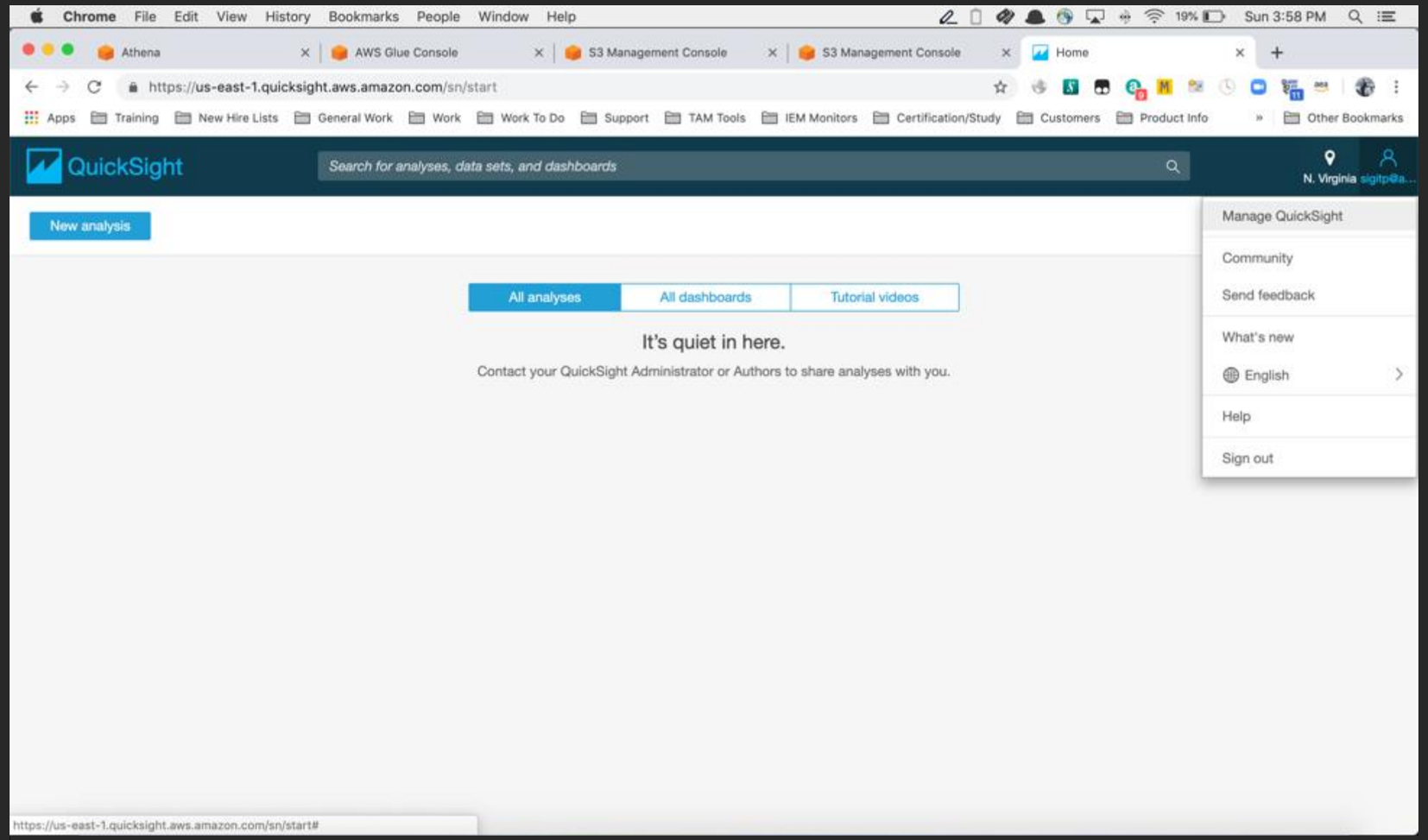
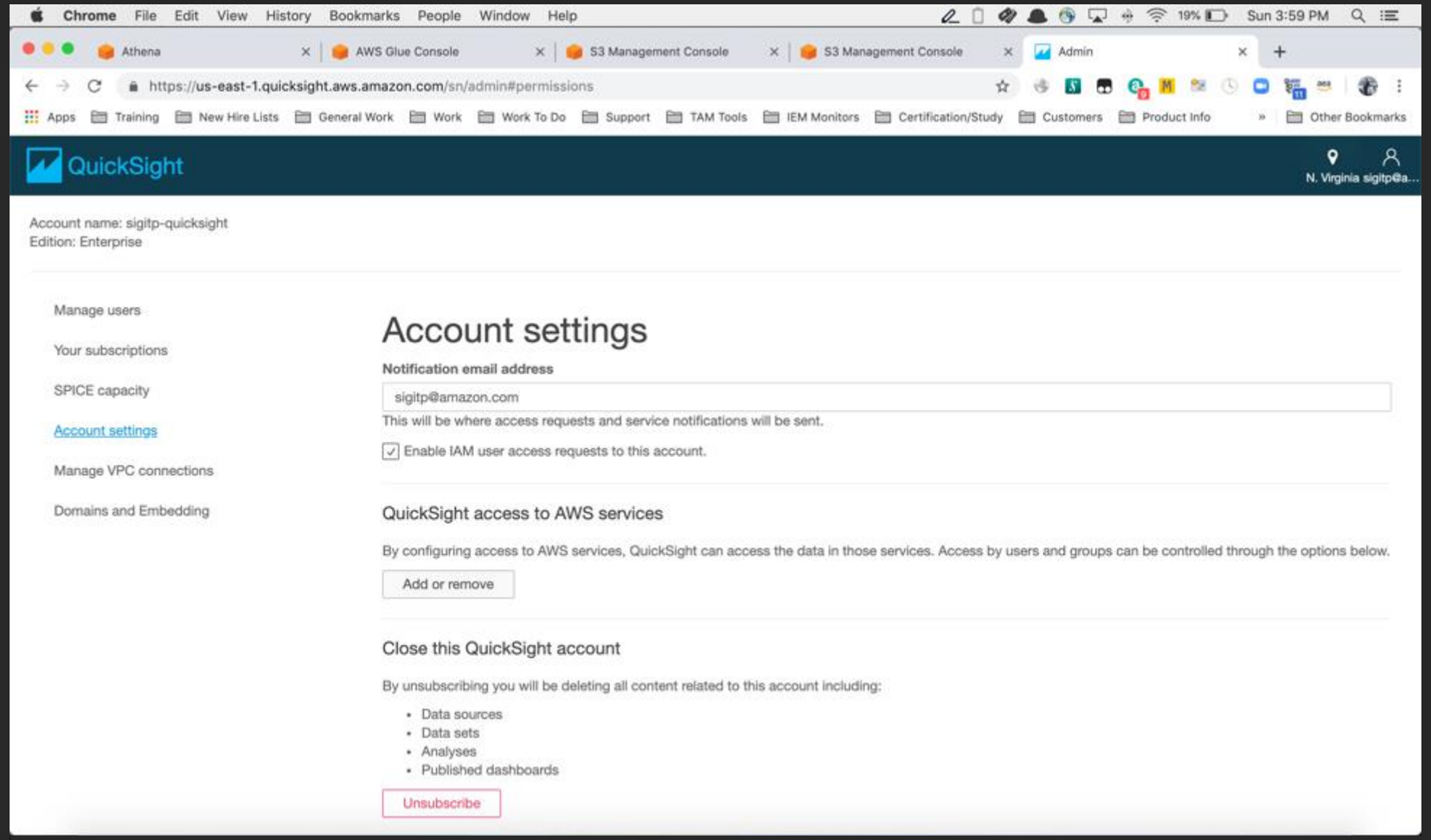
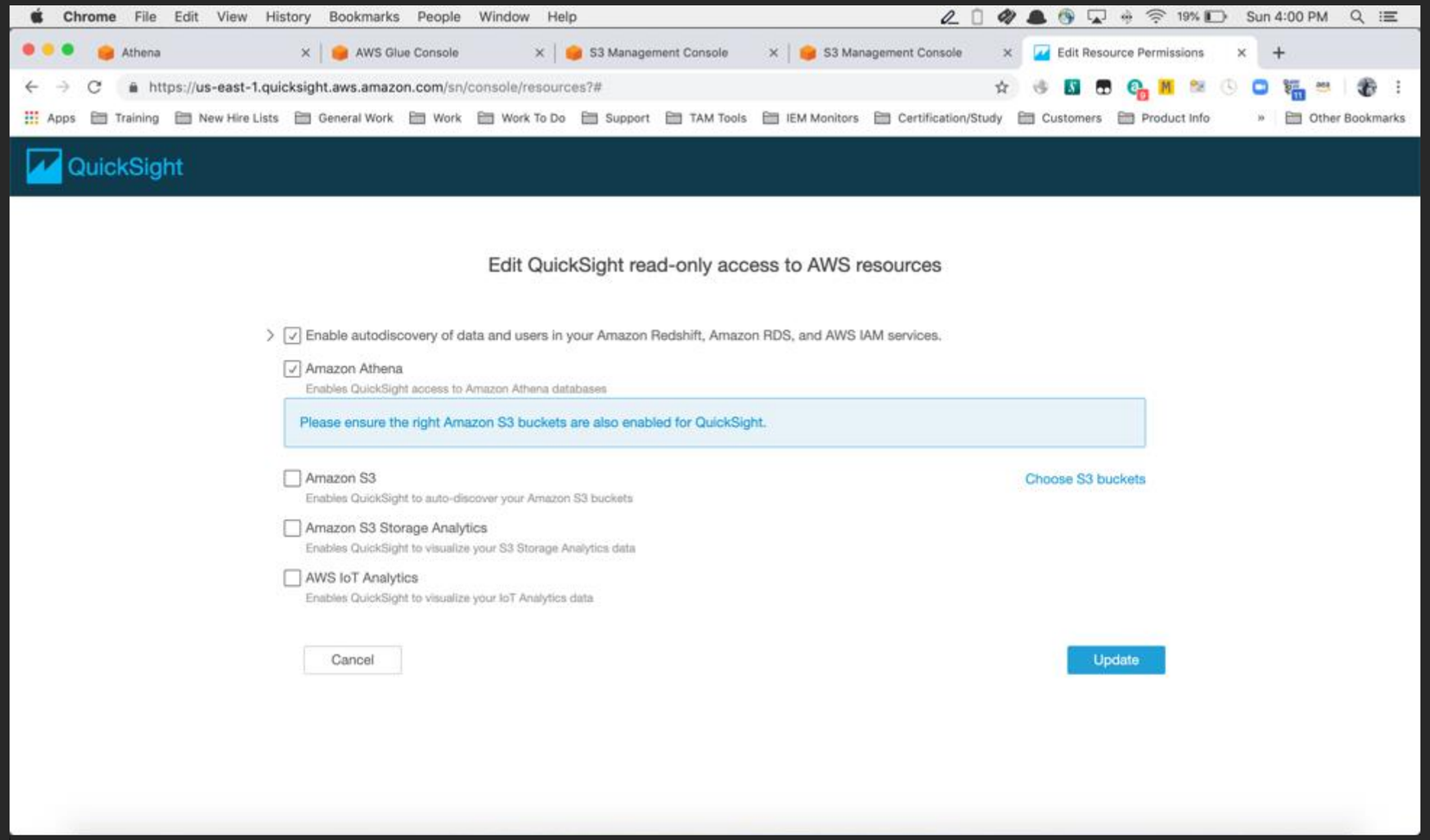
Amazon QuickSight: Manage Amazon QuickSight



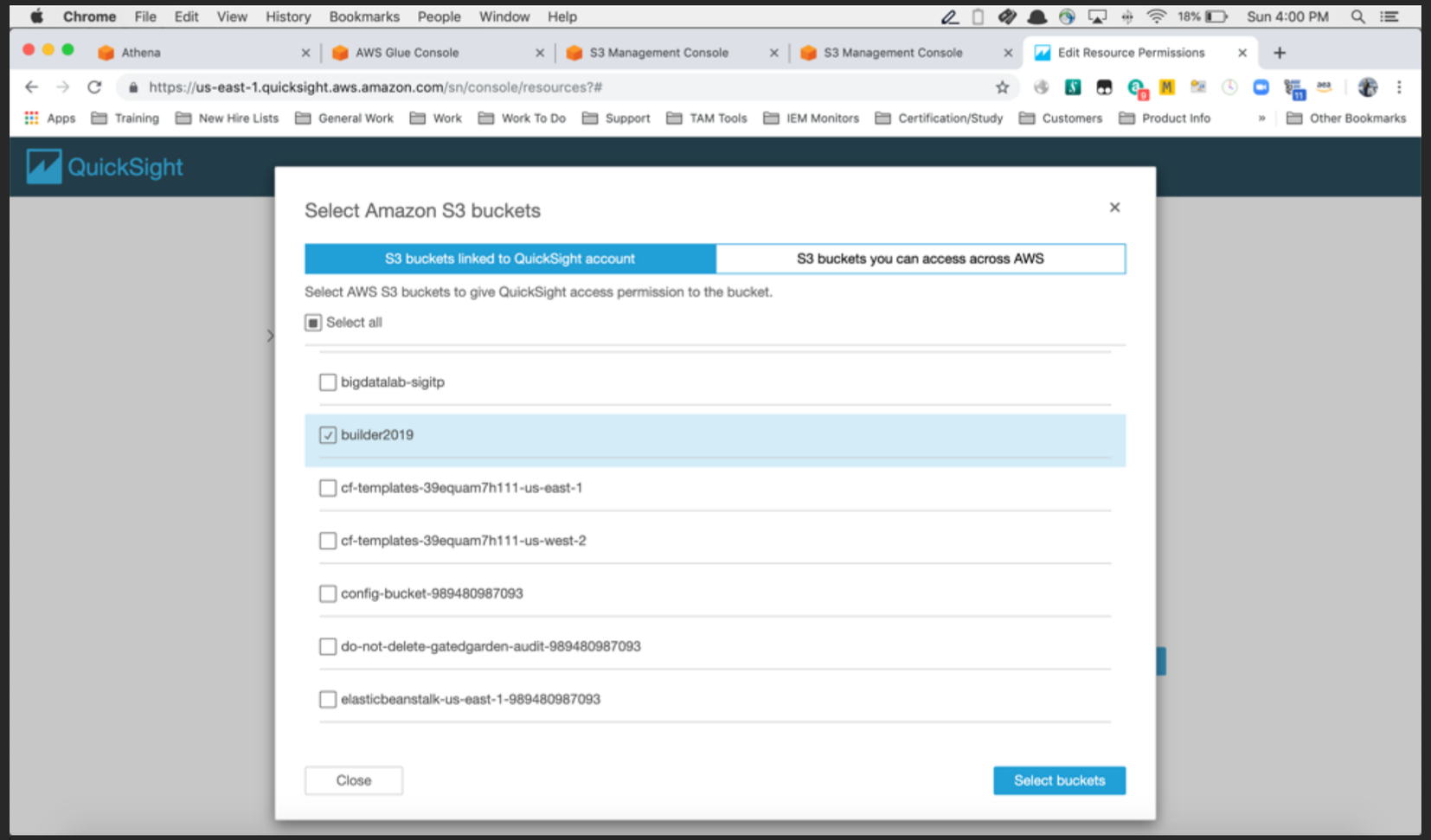
Amazon QuickSight: Manage AWS service permissions



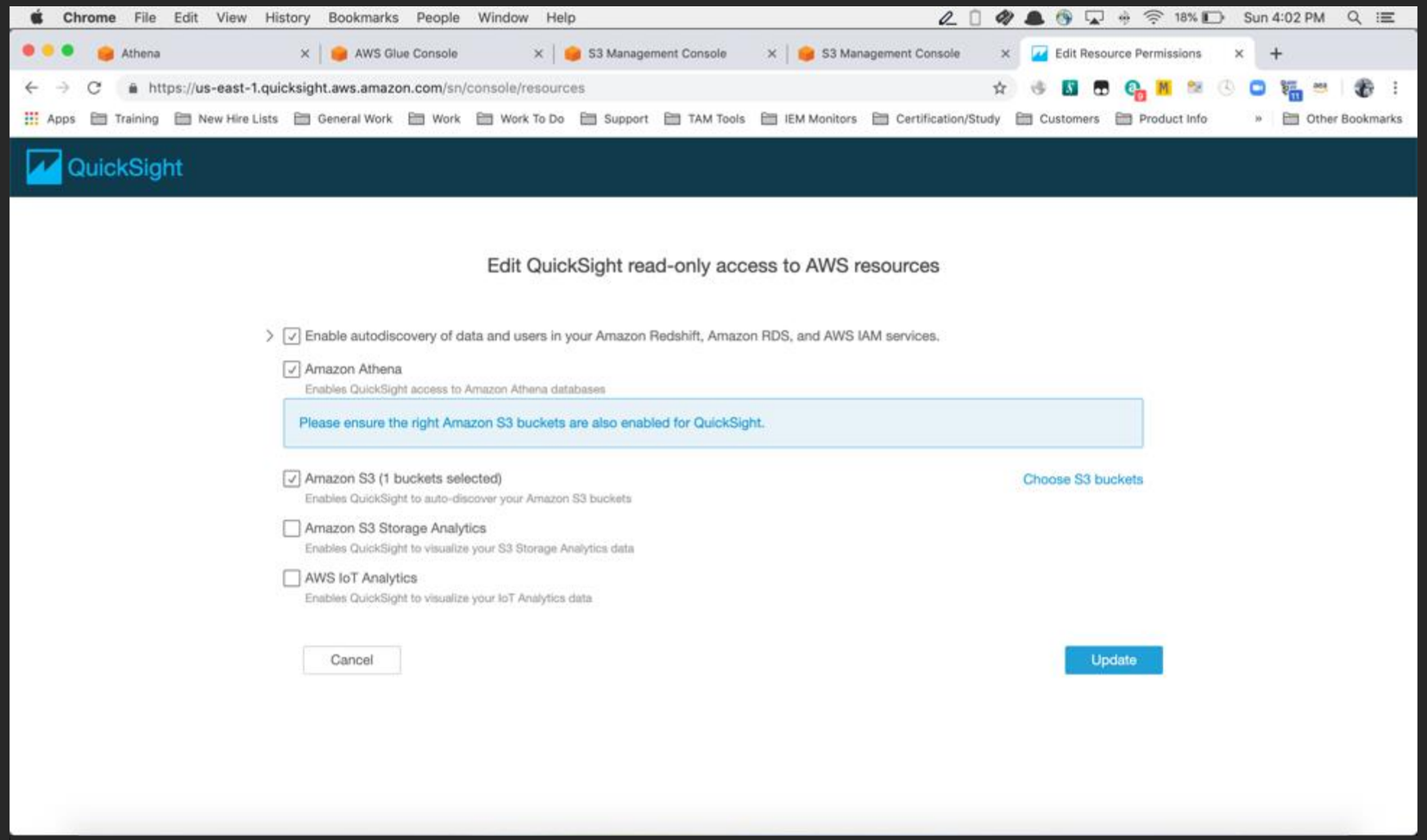
Amazon QuickSight: Allow access to Athena and S3



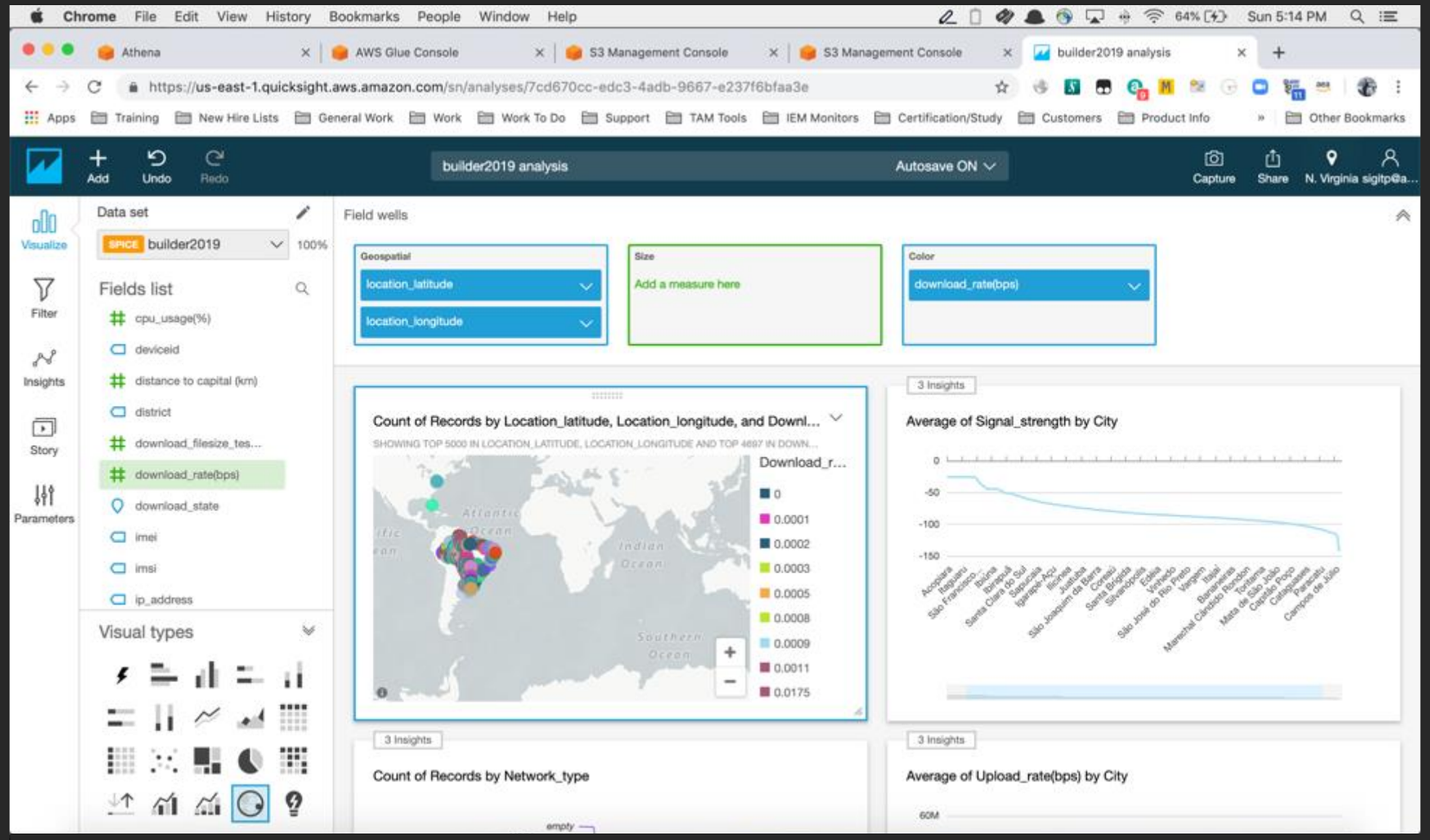
Amazon QuickSight: S3 bucket access



Amazon QuickSight: Update permissions



Amazon QuickSight: Start to explore your visuals!



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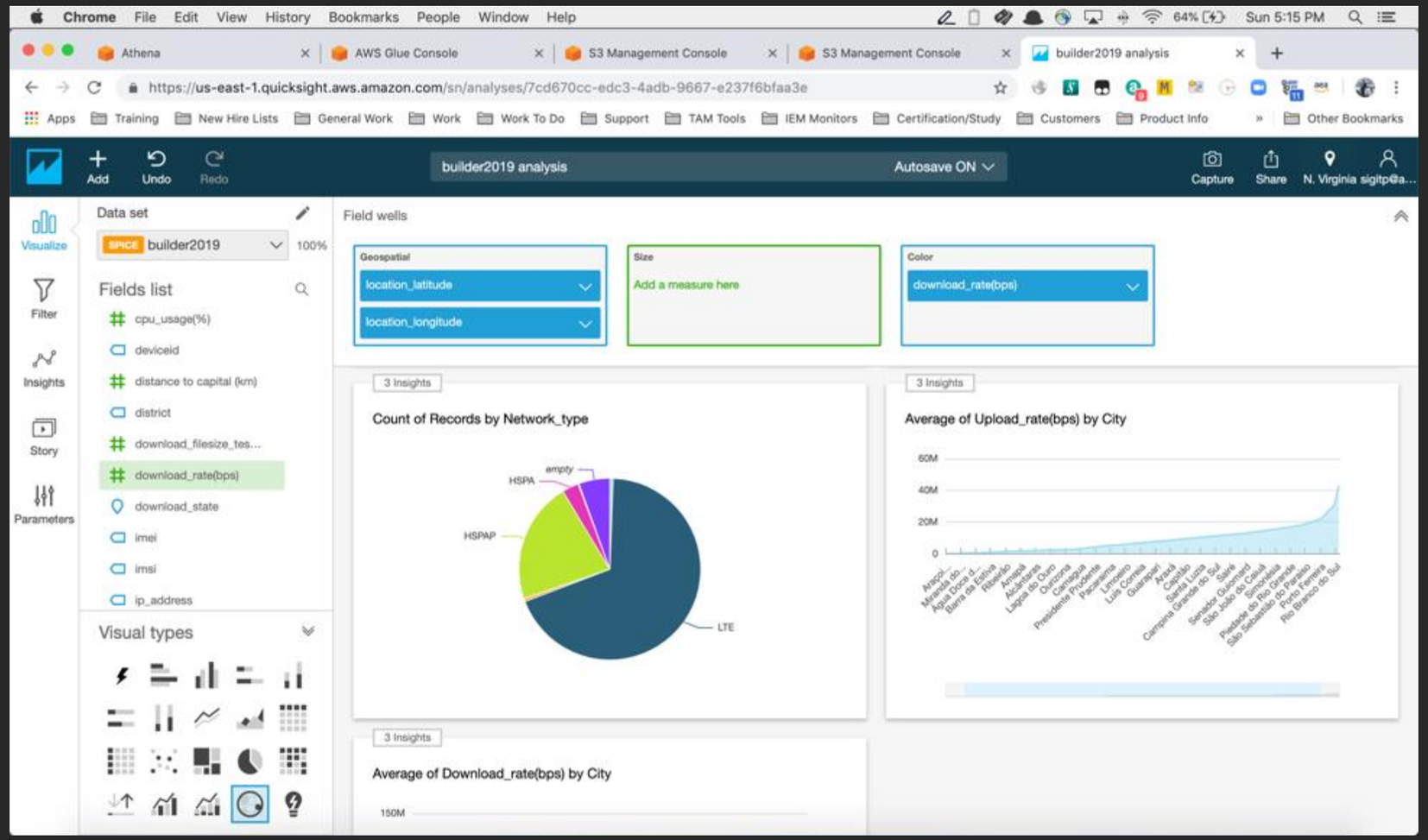

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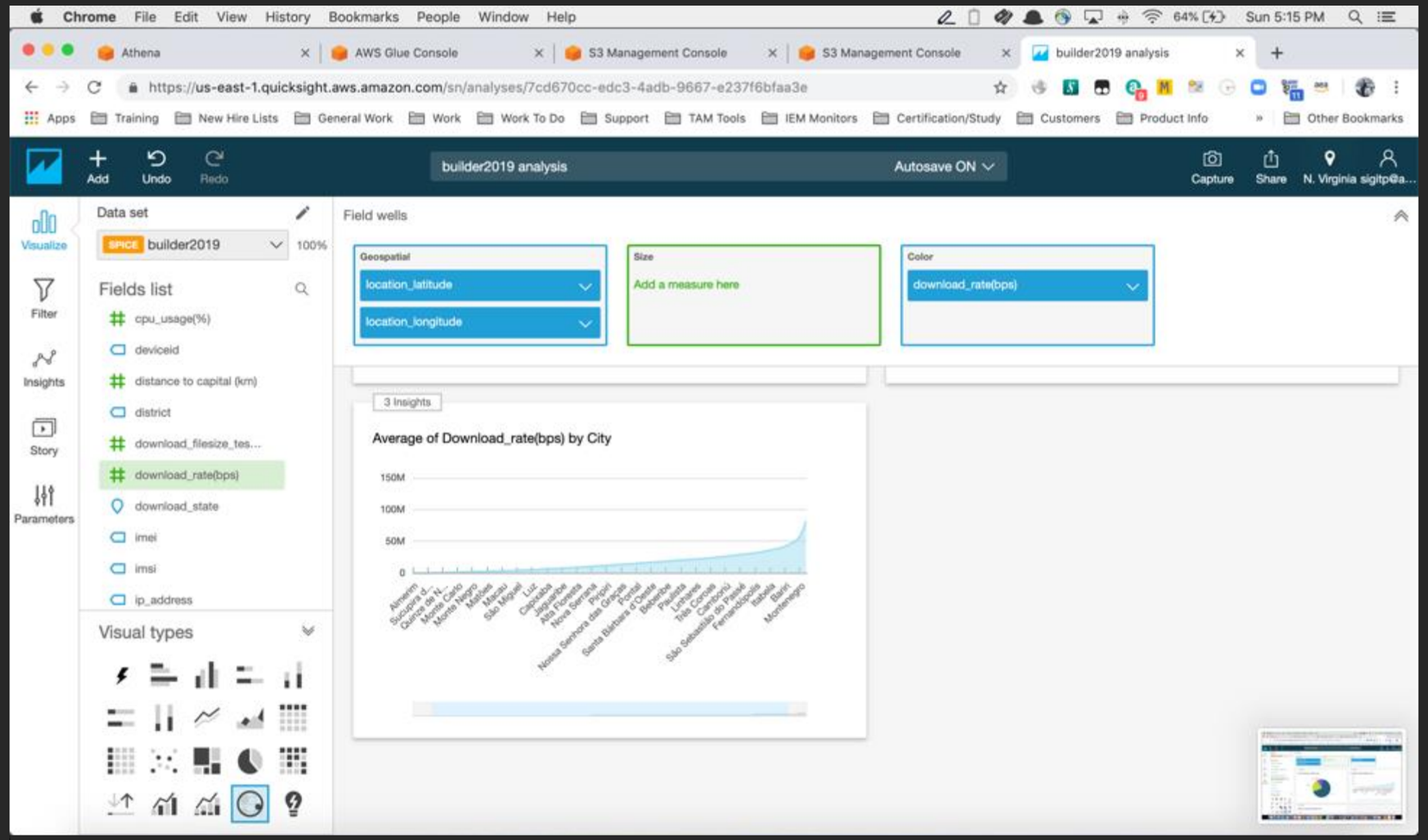

Amazon QuickSight reports

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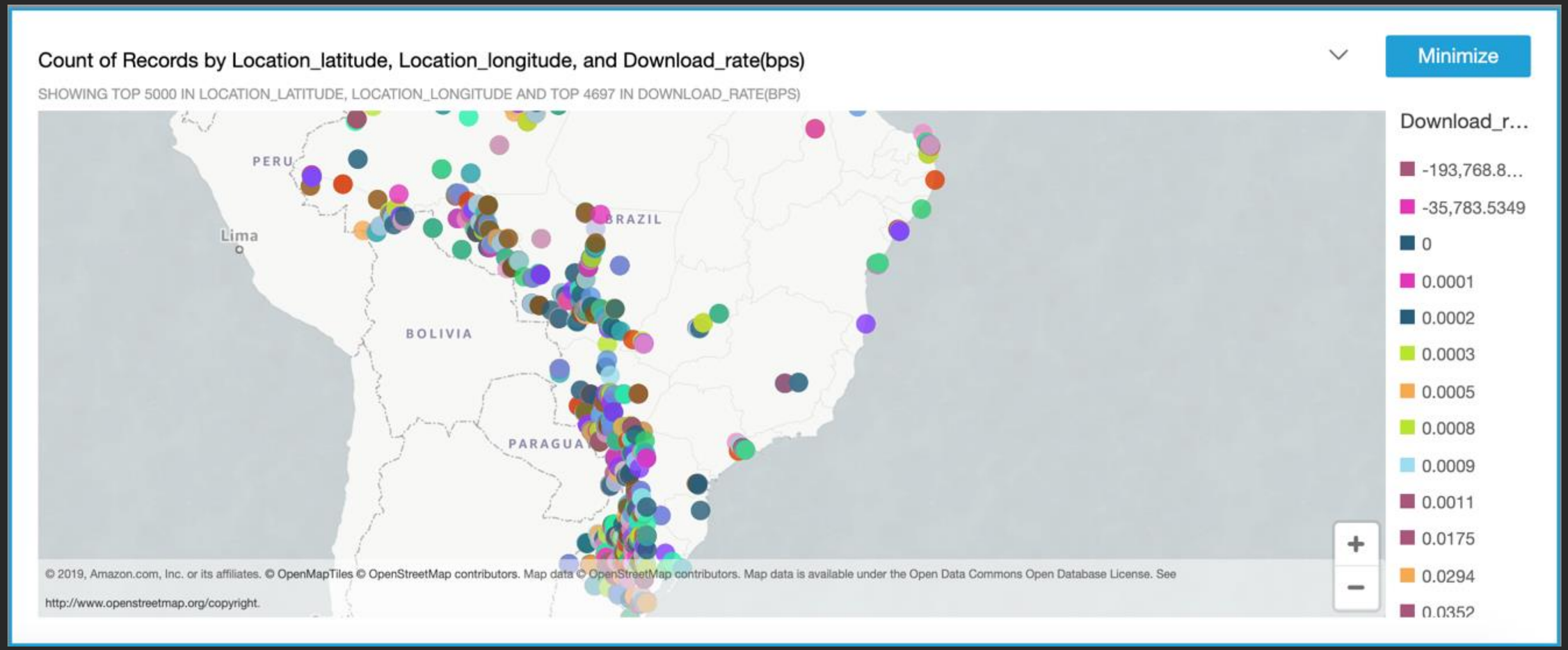
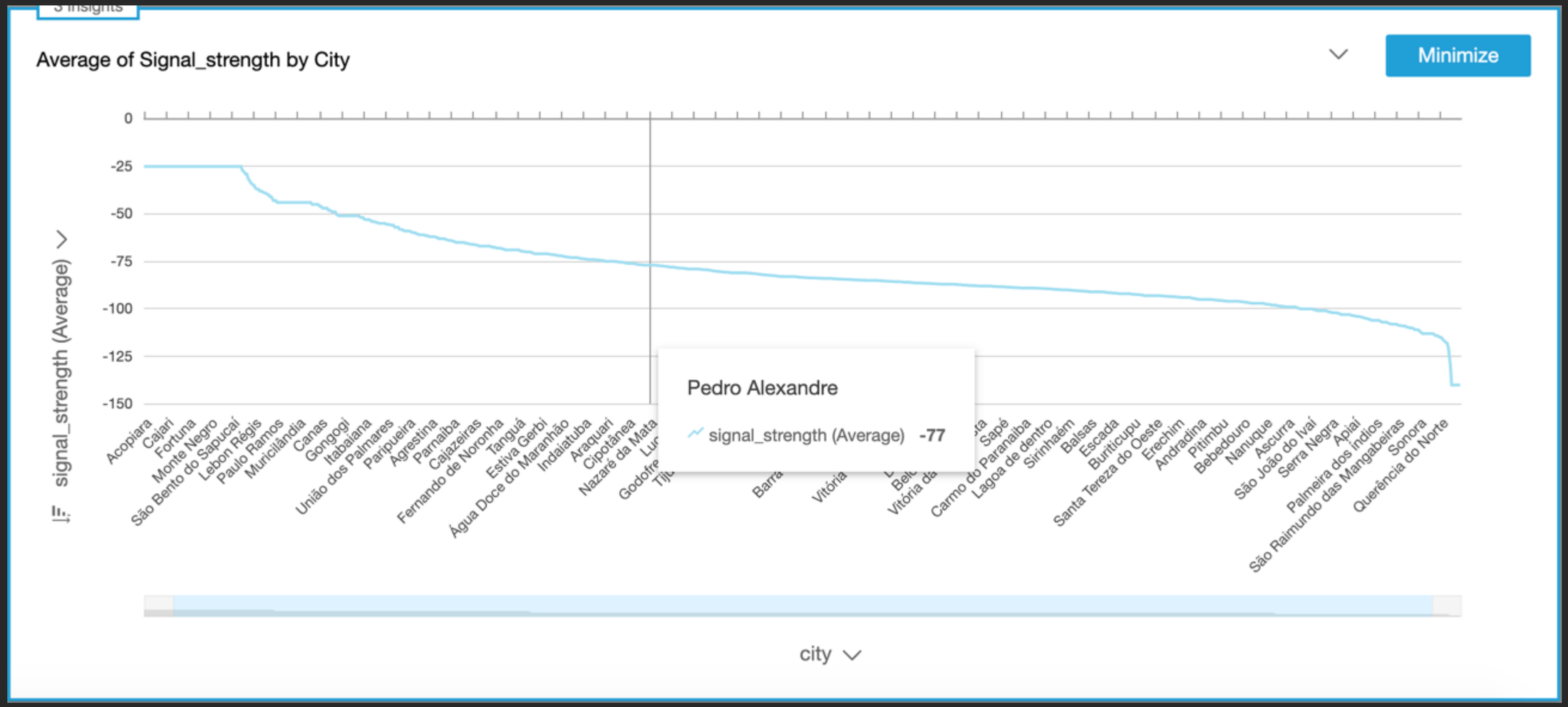
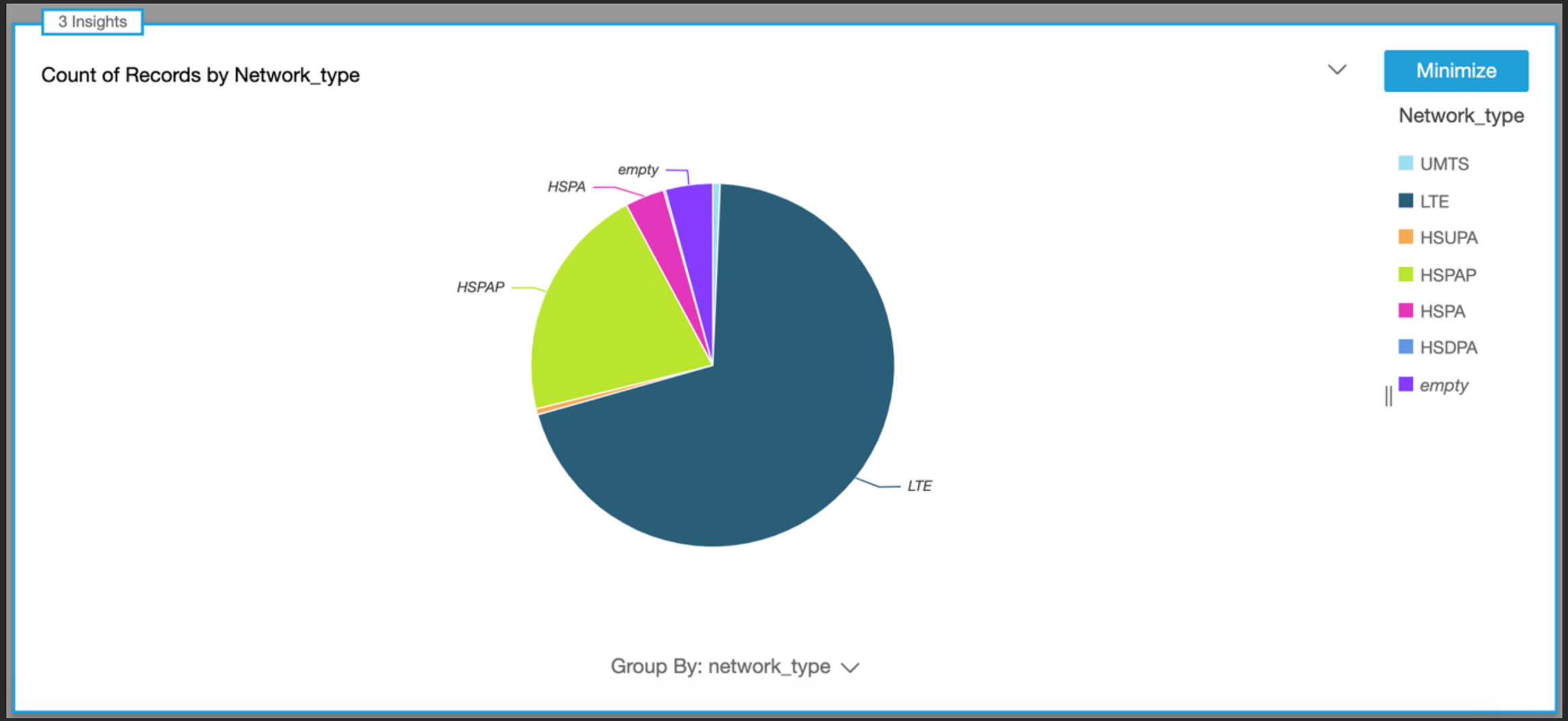
Amazon QuickSight report: DL rate mapped to location



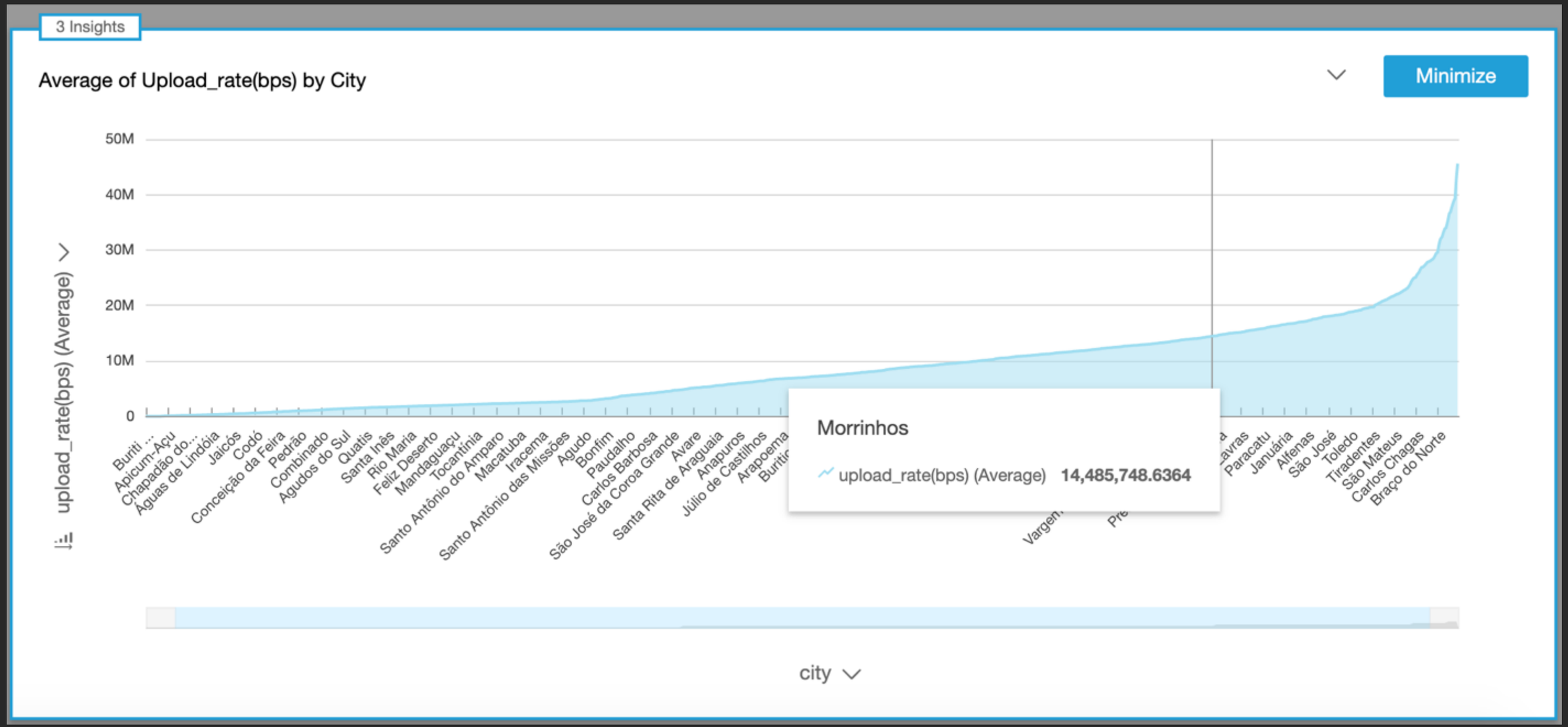
Amazon QuickSight report: Signal strength by city



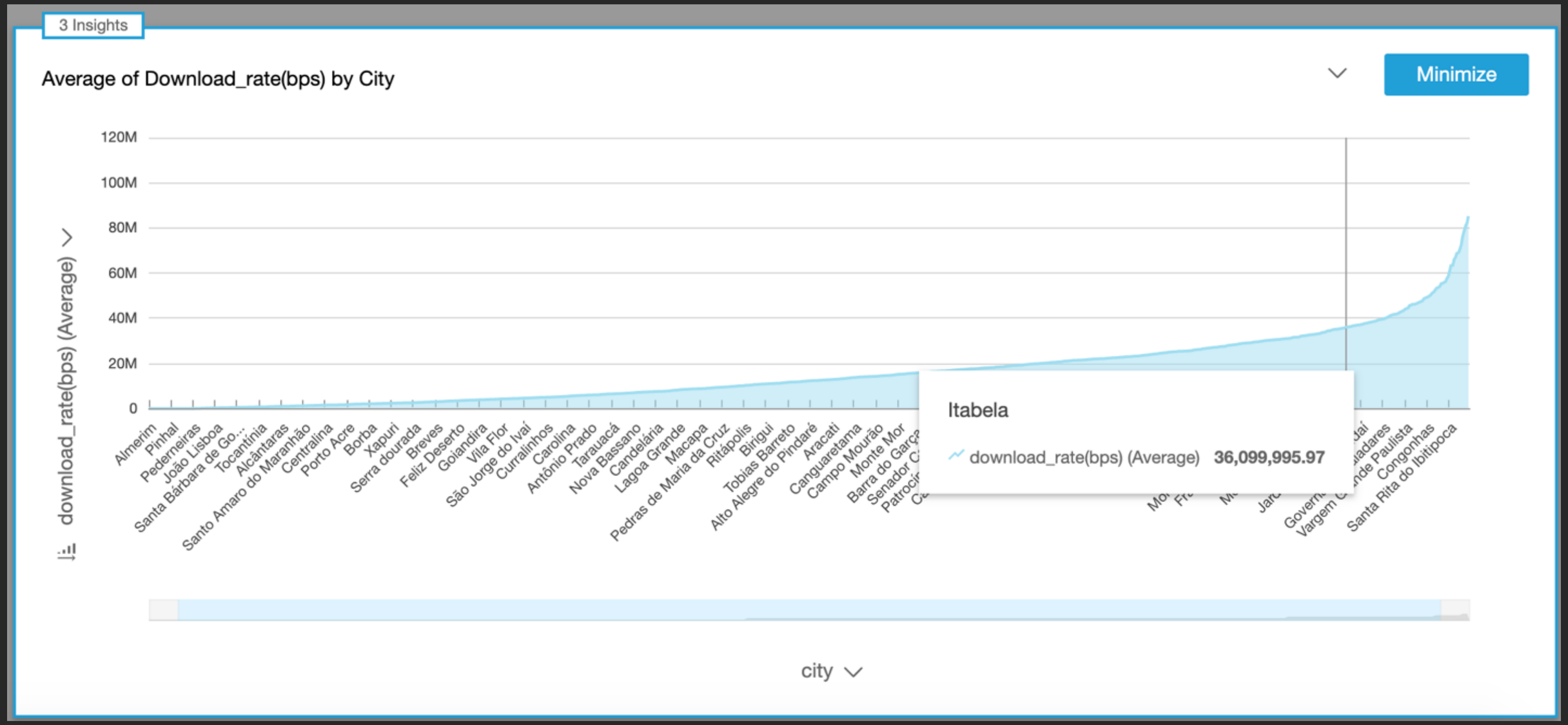
Amazon QuickSight report: Users access type, 3G, 4G, LTE



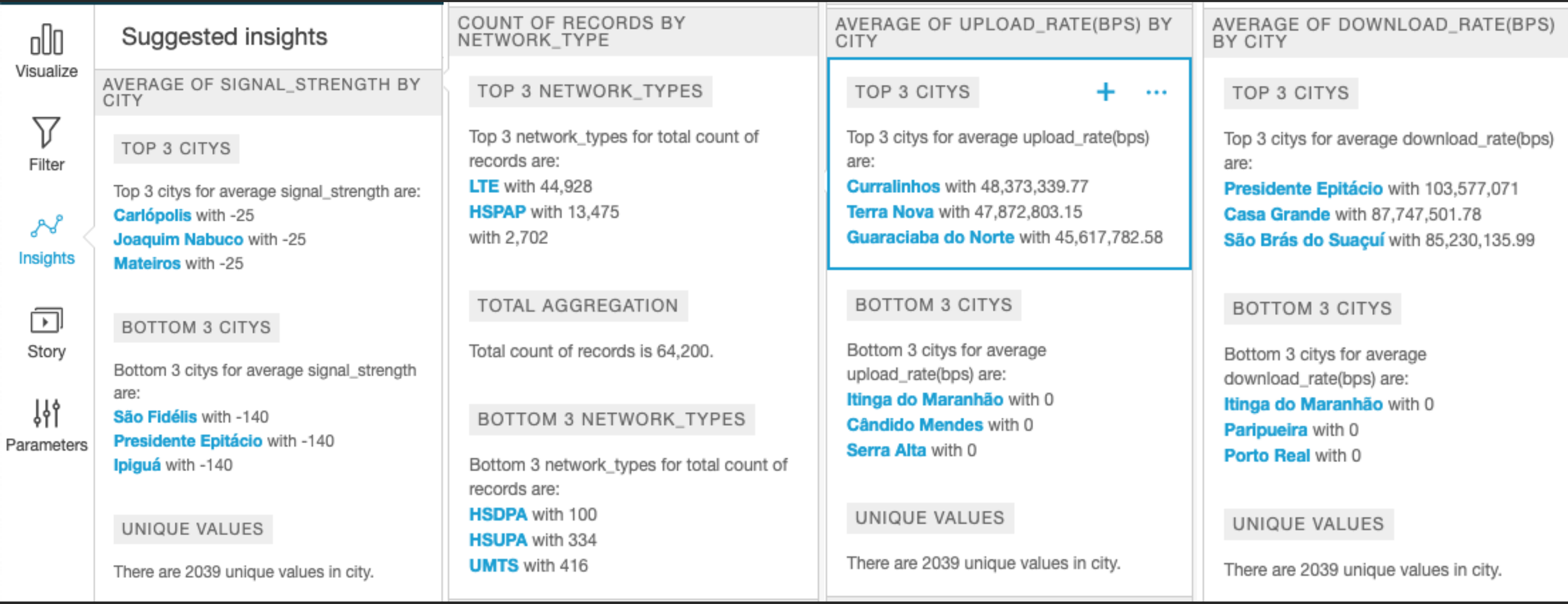
Amazon QuickSight report: Upload rate by city



Amazon QuickSight report: Download rate by city



Insights: Automated suggestion by Amazon QuickSight



Please join us
for a meet and greet!

Telecom Lounge

MGM | Level 3 | Pre-Function Foyer

Thank you!

Sigit Priyanggoro

sigitp@amazon.com

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