Query Data with DynamoDB

RU Rubanpreet Singh

```
[cloudshell-user@ip-10-140-109-24 nextworksampledata]$ aws dynamodb get-item \
>     --table-name ContentCatalog \
>     --key '{"Id":{"N":"202"}}' \
>     --projection-expression "Title, ContentType, Services" \
>     --return-consumed-capacity TOTAL
{
    "Item": {
        "Title": {
            "S": "Don’t miss out!"
        },
        "ContentType": {
            "S": "Video"
        }
    },
    "ConsumedCapacity": {
        "TableName": "ContentCatalog",
        "CapacityUnits": 0.5
    }
}
[cloudshell-user@ip-10-140-109-24 nextworksampledata]$
```

RU
Rubanpreet Singh
NextWork Student
NextWork.org

Introducing Today's Project!

What is Amazon DynamoDB?

Amazon DynamoDB is a managed NoSQL database service provided by Amazon Web Services. It supports key-value and document data structures and is designed to handle a wide range of applications requiring scalability and performance.

How I used Amazon DynamoDB in this project

Today, I created two DynamoDB tables and then loaded data into them by running commands on Amazon CLI. I was able to query data and also run a transaction command that updated two tables at the same time.

One thing I didn't expect in this project was...

the ability to modify two tables at once using transactions. It makes the updating process a lot easier than having to click and change each attribute using the console.

This project took me...

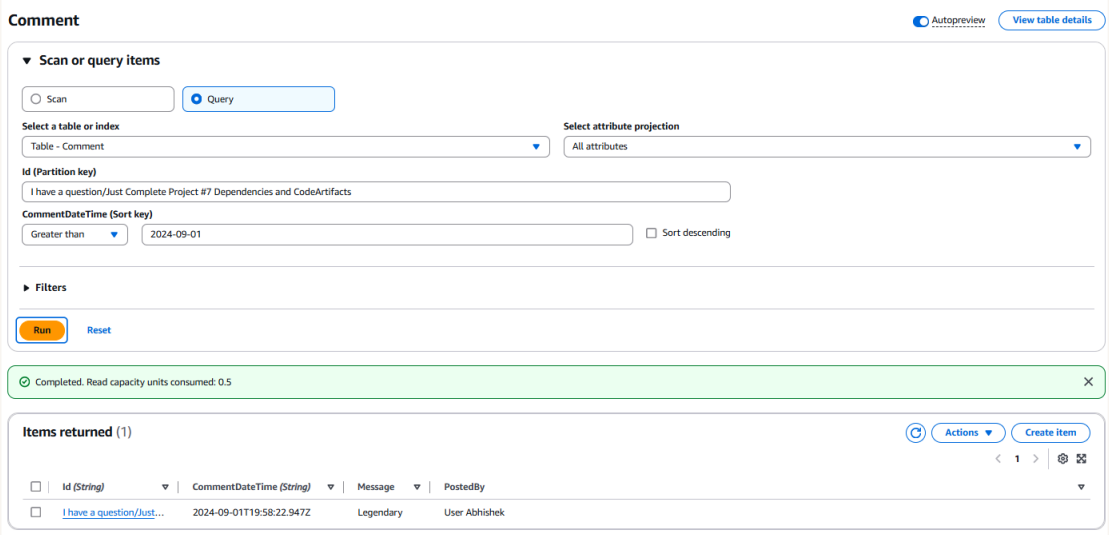
This project took me 1 hour.

RU
Rubanpreet Singh
NextWork Student

Querying DynamoDB Tables

A partition key is a filter that DynamoDB will use to split and find data. These keys are not always unique.

A sort key is a secondary key used to filter the results again after filtering using the partition key. Sort keys work after the partition key so a query can still work without them.

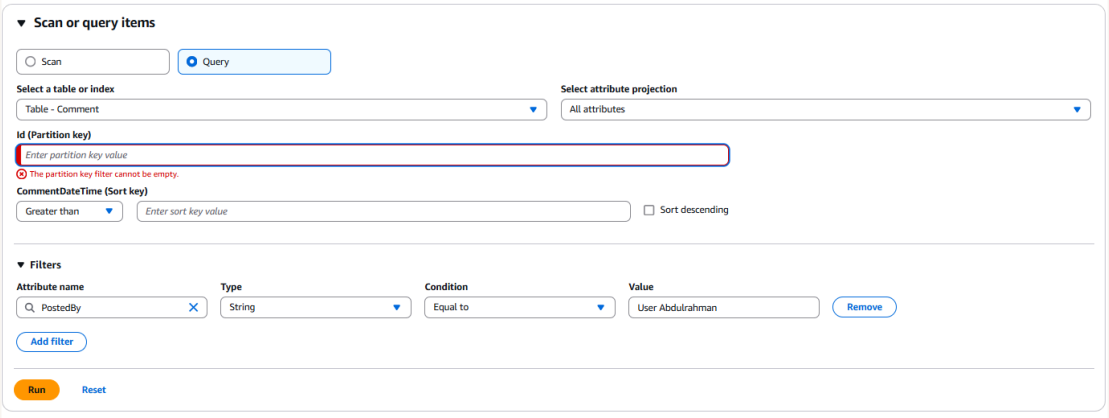


RU
Rubanpreet Singh
NextWork Student

Limits of Using DynamoDB

I ran into an error when I queried for all the comments posted by User Abdulrahman. This was because the partition key needs to be used when querying items.

Insights we could extract from our Comment table includes comments made under 'Just Complete Project #7 Dependencies and CodeArtifacts'. Insights we can't easily extract from the Comment table includes all comments by a specific user.

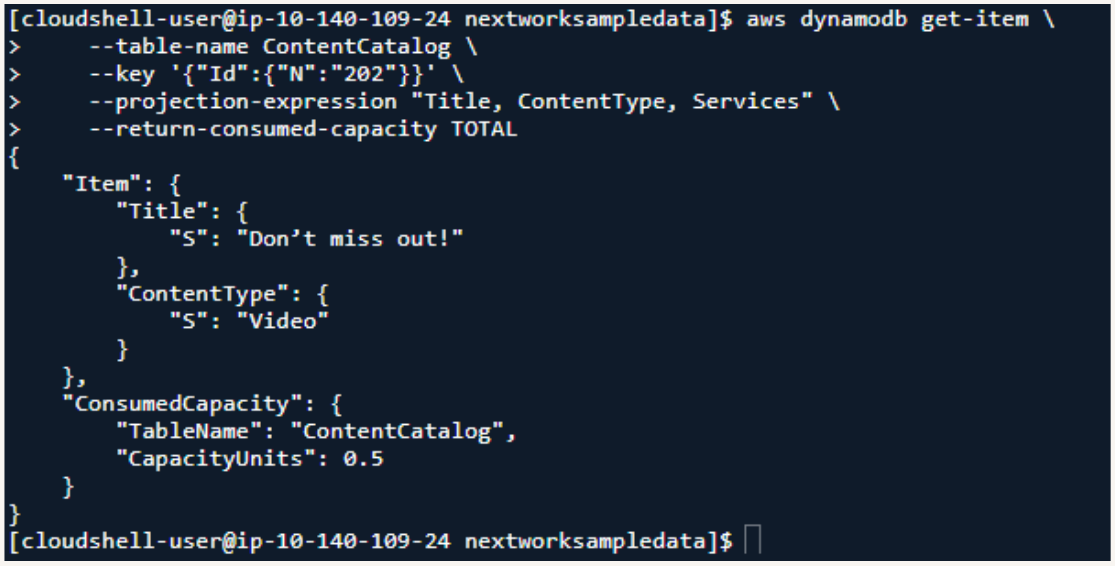


RU
Rubanpreet Singh
NextWork Student

Running Queries with CLI

A query I ran in CloudShell was to get an item with id 202 from the ContentCatalog table. The query will project Title, ContentType and Services attribute from the item along with the capacity units consumed for the request.

Query options I could add to my query are --project-expression and --return-consumed-capacity. These options help to display only the selected attributes as well as additional attributes like consumed capacity in this case.

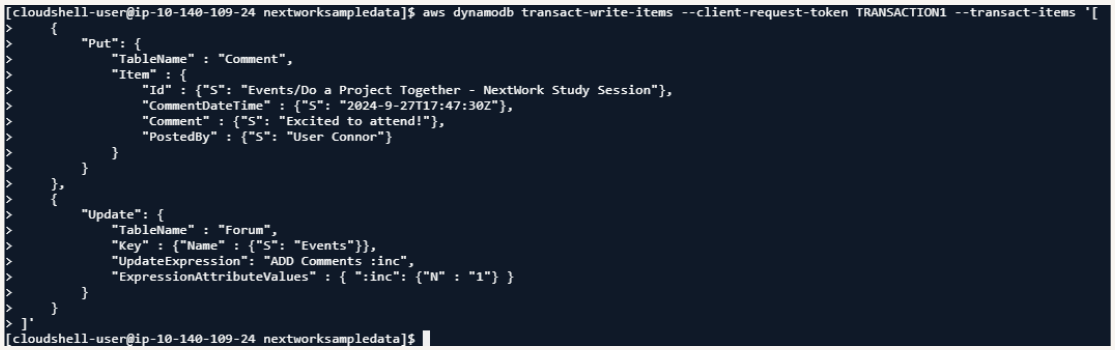


RU
Rubanpreet Singh
NextWork Student

Transactions

A transaction is a group of operations that all have to succeed otherwise none of the changes will get applied. These commands ensure consistency across all the tables.

I ran a transaction using a command on Amazon CLI. This transaction did two things: First, it inserted a new item in the Comment table and then it updated the Forum table to increase the count of Comments by 1 for the Events item.



NextWork.org

Everyone should be in a job they love.

Check out nextwork.org for more projects