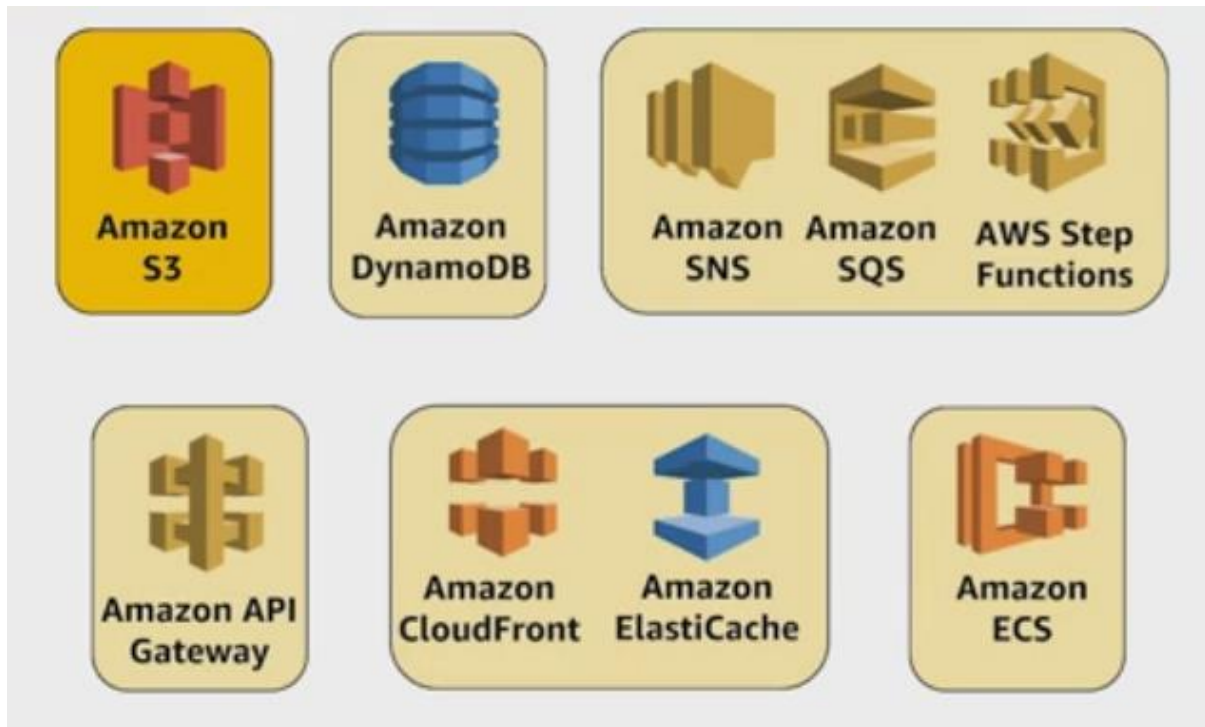


Domain 3:

Development with AWS services:

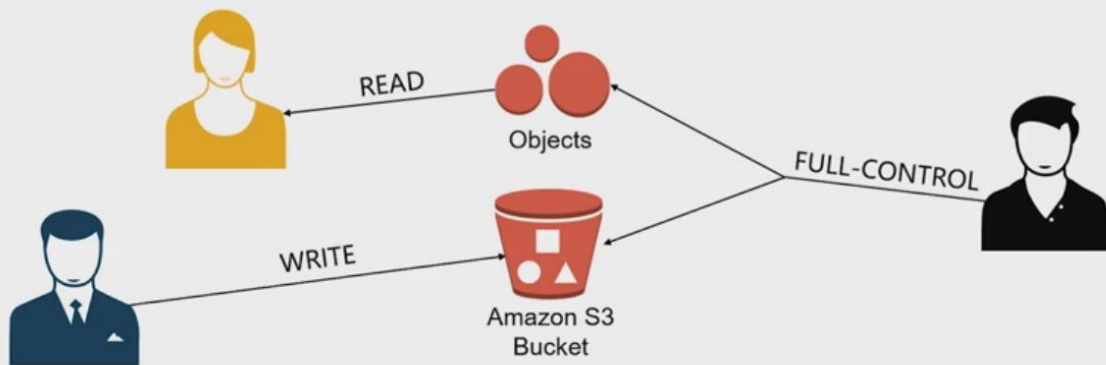


Amazon S3:

- ✓ Bucket: Choose region based on latency, cost, and regulatory requirements
- ✓ Object: Each object has a unique key
 - SomeDocument.doc
 - prog/java/collections.htm
 - 94531/xstreet/JohnSmith.pdf
- ✓ Path-style URL
- ✓ Virtual hosted-style URL
- ✓ Pre-Signed URL
- ✓ Cross Origin Resource Sharing (CORS)

S3 ACLs:

Grant permissions at the object or bucket level



S3 bucket policy:

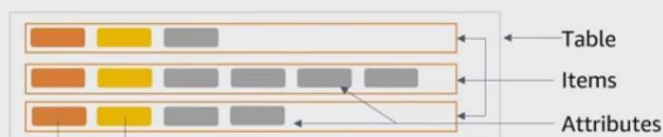
A bucket policy is an access policy language option that's available to grant granular permissions to S3 resources.

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": [
        "s3:PutObject",
        "s3:GetObject",
        "s3:GetObjectVersion",
        "s3:DeleteObject",
        "s3:DeleteObjectVersion"
      ],
      "Resource": "arn:aws:s3:::examplebucket/Alice/*"
    }
  ]
}
```

Amazon DynamoDB:

DynamoDB is a fully managed NoSQL Database.

Table



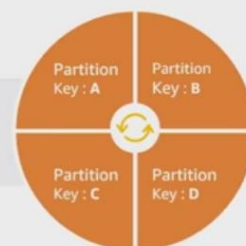
Sort key (previously range key)
Partition key (previously hash key)

Primary key

Partition key

Partition key and sort key

Partitions based on partition key



Secondary indexes

- Define alternate key to query with non-primary key attributes.



Data consistency

- Decide between *eventually consistent reads* and *strongly consistent reads*.

Throughput

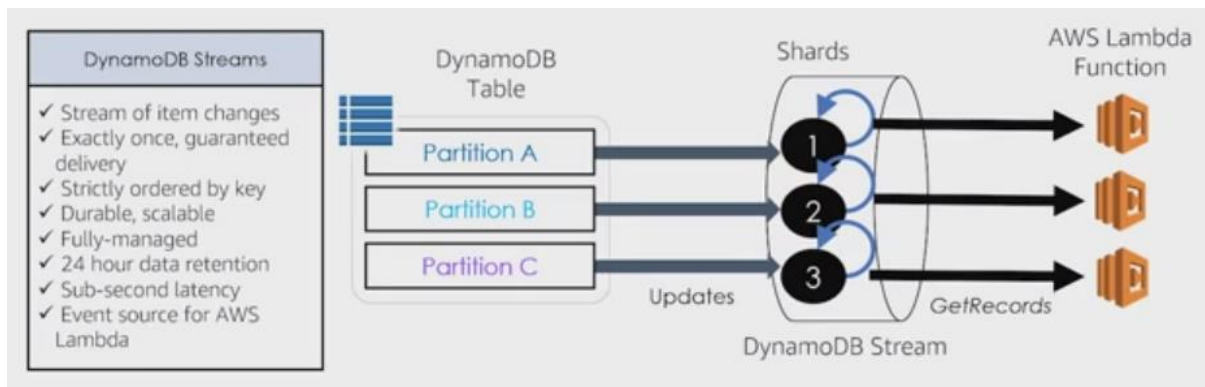
Read capacity units (RCU)

- Number of strongly consistent reads per second or two eventually consistent reads per second for items up to 4 KB in size (eventually consistent reads use half the provisioned read capacity).

Write capacity units (WCU)

- Number of writes per second, for items up to 1 KB in size.

Amazon DynamoDB Streams:



Amazon DynamoDB features:

- Conditional write operations
- Optimistic locking with version number
- Batch operations
 - BatchGetItem
 - BatchWriteItem

DynamoDB Accelerator:

Add in-memory acceleration to DynamoDB tables.

