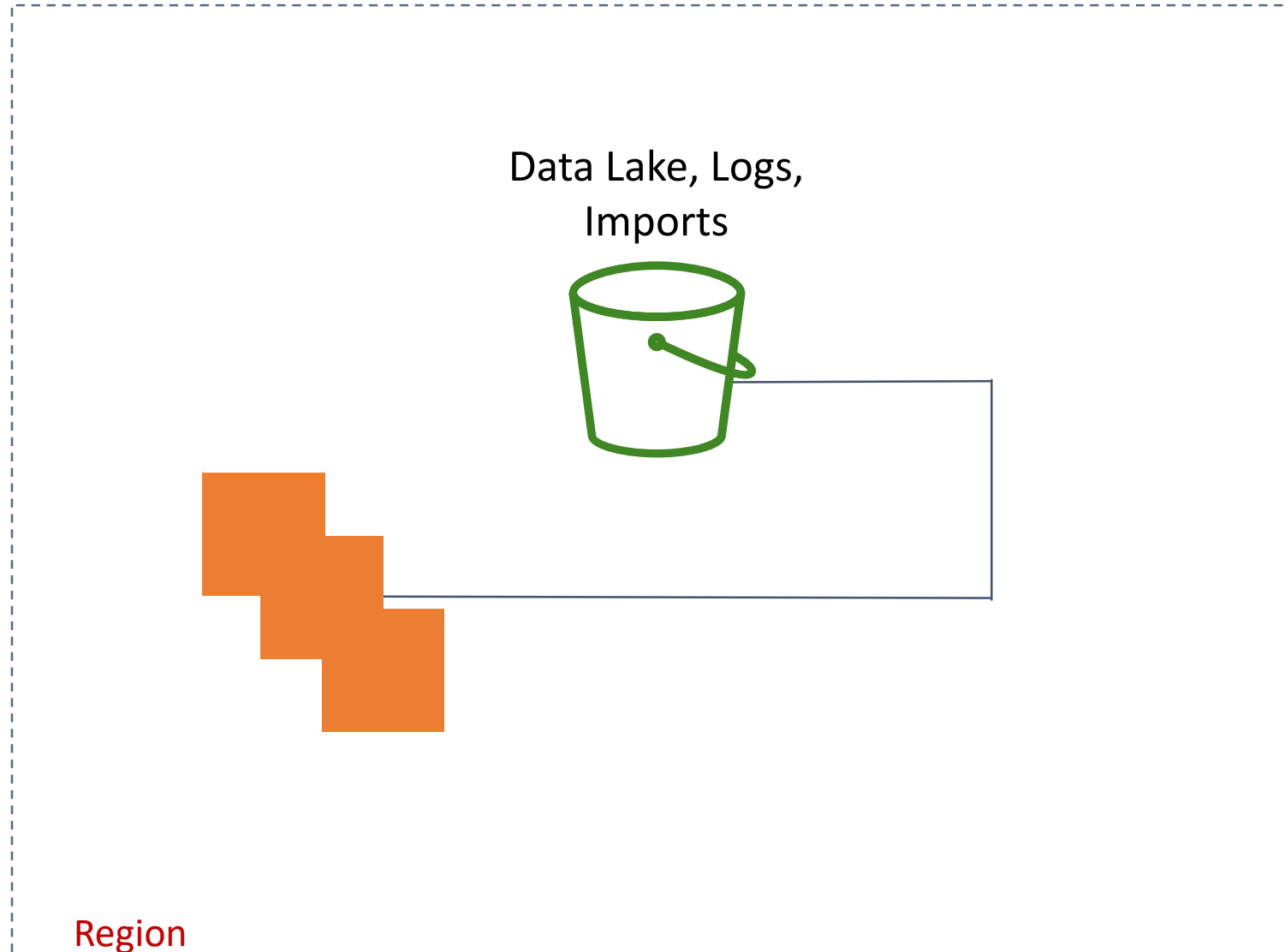


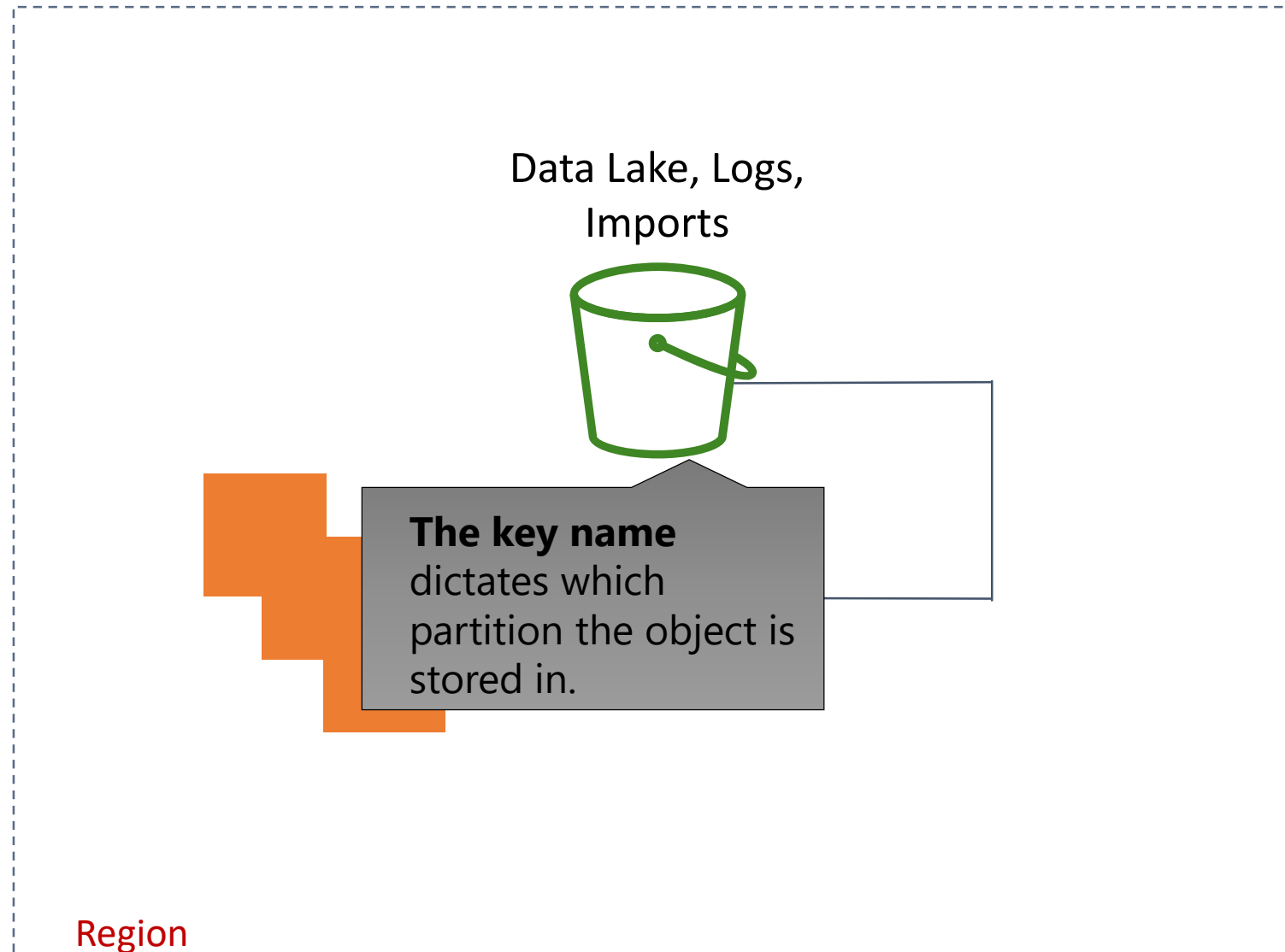
# S3 PERFORMANCE WITH A MIX OF REQUEST TYPES



# S3 PERFORMANCE WITH A MIX OF REQUEST TYPES

- If our requests are typically a mix of GET, PUT, DELETE or GET Bucket (list objects), how can we ensure consistent performance for a bucket?
- How do we avoid *SlowDown* exceptions?
  - Add random hash prefixes to the object key

# S3 PERFORMANCE WITH A MIX OF REQUEST TYPES



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```
testbucketclaydesk/2019-04-03/vendor-1432/imports.json
testbucketclaydesk/2019-04-03/vendor-5044/imports.json
testbucketclaydesk/2019-04-03/vendor-2546/imports.json
testbucketclaydesk/2019-04-03/vendor-1983/imports.json
testbucketclaydesk/2019-04-03/vendor-1671/imports.json
...
...
testbu 3658/imports.json
```

**Lexicographical sequences** introduces a performance problem by forcing too much information into too few partitions.

# S3 PERFORMANCE WITH A MIX OF REQUEST TYPES

```
testbucket/2019-04-03/vendor-1432/imports.json
testbucket/2019-04-03/vendor-5044/imports.json
testbucket/2019-04-03/vendor-2546/imports.json
testbucket/2019-04-03/vendor-1983/imports.json
testbucket/2019-04-03/vendor-1671/imports.json
...
...
testbucket/2019-04-03/vendor-3658/imports.json
```

```
testbucket/7f03-2019-04-03/vendor-1432/imports.json
testbucket/fe98-2019-04-03/vendor-5044/imports.json
testbucket/4-03/vendor-2546/imports.json
testbucket/4-03/vendor-1983/imports.json
testbucket/4-03/vendor-1671/imports.json
...
testbucket/cd48-2019-04-03/vendor-3658/imports.json
```

## Random hashes

spread load evenly  
across partitions for  
better performance.

# S3 PERFORMANCE WITH A MIX OF REQUEST TYPES

```
testbucket/2019-04-03/vendor-1432/imports.json
testbucket/2019-04-03/vendor-5044/imports.json
testbucket/2019-04-03/vendor-2546/imports.json
testbucket/2019-04-03/vendor-1983/imports.json
testbucket/2019-04-03/vendor-1671/imports.json
...
...
testbucket/2019-04-03/vendor-3658/imports.json
```

```
testbucket/7f03-2019-04-03/vendor-1432/imports.json
testbucket/fe98-2019-04-03/vendor-5044/imports.json
testbucket/dc77-2019-04-03/vendor-2546/imports.json
testbucket/ae52-2019-04-03/vendor-1983/imports.json
testbucket/2f65-2019-04-03/vendor-1671/imports.json
...
...
testbucket/cd48-2019-04-03/vendor-3658/imports.json
```

**Random hashes** improve performance, but remove predictable prefixes, making search more difficult.