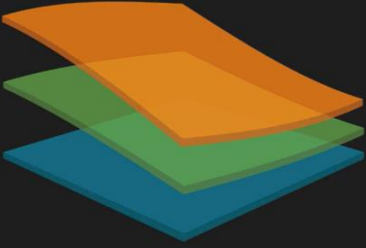


RDS Security:

Layers of security:



The database is the heart of an application, and your company....

Security should be built with layers:

- Network Isolation
- IAM for access control
- Encryption at rest
- SSL for database connectivity

Network isolation:

Network isolation is a fundamental layer in your security model

- AWS enables this using Virtual Private Cloud (VPC)


Private Subnet Private subnet makes it secure from public routes on the internet	Security Group Database Instance IP firewall protection, lets you securely control network configuration	Public Accessibility Turn off Public Accessibility to restrict access outside the VPC
ClassicLink Use ClassicLink to network with non-VPC resources	DirectConnect Use DirectConnect to replicate with an on premise database	VPC Peering Next lesson Access Control

Access Control:

Many options to control access to your database

Managing the Database

- Use IAM to control who can perform actions on RDS resources.
- Do not use AWS root credentials.
- Can use MFA to provide extra level of protection .



Grant access to within the database

- Same as on premise
- Do not use Master credentials
 - Credentials created on provisioning of Database Instance
- Integrated Security
 - Active Directory for SQL Server
 - IAM Authentication MySQL, PostgreSQL



Next lesson
Encryption at rest

Encryption at rest:

It is free

No costs associated and no performance impact, provided by AWS KMS, using industry standard AES-256 encryption algorithm

Encryption is replicated

If Primary is encrypted, all nodes are encrypted, including backups, & snapshots. This includes cross region.

Access to Keys is Logged

Centralized Key access enables logging of all access to the keys.

Encrypted at Rest

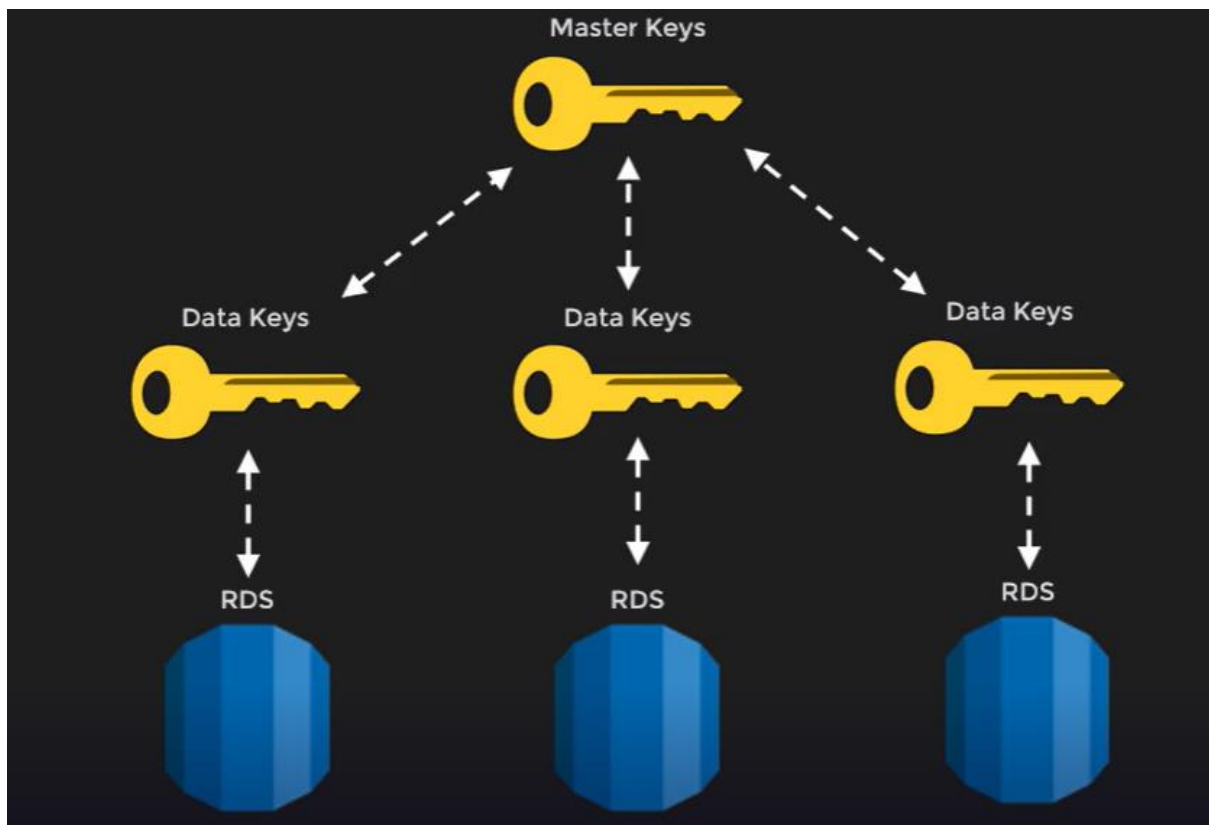
Encryption is done at the volume level, and that means no impact to the application.

Encrypt once

Can rotate keys, but you can't unencrypt once you encrypt

Two Tier Encryption

Master Keys created by you, each instance with its own data key



Encryption work:



SSL Connectivity:

