* **AWS Security & Encryption** *

To enable In flight encryption = HTTPS, and HTTPS can not be enabled without an SSL certificate.

- Server side encryption means the server will encrypt the data for us.
- In server-side encryption, both encryption and decryption happen on the server.
- AWS KMS supports both symmetric and asymmetric KMS keys. Symmetric: 256 bit key, Asymmetric: RSA key pair.
- For automatic Rotation on your KMS key, the backing key is rotated every 1 year.
- Control access to KMS CMKs: KMS key policies.
- SSM Parameter Store: Can be used to store secrets and has built-in version tracking capability. Each time you edit the value of the parameter, SSM parameter store creates a new version of the parameter and retains th previous versions.
- AWS GuardDuty scans: CloudTrail logs, VPC flow logs, DNS logs.
- Store RDS DB password with automatic rotation: AWS secret manager.
- AWS firewall manager is a security management service that allows you to centrally configure and manage firewall rules across your accounts and applications in AWS organizations. It is integrated with AWS Organization so you can enable AWS WAF rules, AWS shield Advanced

protection, security groups, AWS Network Firewall rules, and Amazon Route 53 Resolver DNS firewall rules
- Amazon Macie: Protect sensitive data stored in s3 buckets.