

- EC2
 - Instance Store
 - AMI
 - EBS
 - Volumes
 - Snapshots
 - Encryption
 - Network & Security
 - Network Interface
 - Placement Group
 - Security Groups
 - Elastic IP
 - Enhanced networking
 - ELB
 - ASG
 - Health Check
 - Launch Configuration
 - Target Group ?
 - Health Check

VPC

- Internet Gateway (+ Egress Only)
- Route Table
- Subnets
- NACL
- Security Groups
- VPC Peering
- NAT Instance/Gateway
- Endpoints (S3 & DYNAMODB)
- VPN Connection

S3 – Simple Storage Service

- Buckets
- Storage Classes
- Cross Region Replication
- Static Websites Hosting
- Lifecycle Policies (IA, Glacier)
- Versioning
- Transfer Acceleration
- Metadata
- MultiPart Upload
- read-after-write consistency for puts new objects, eventual for puts & deletes

Storage Gateway

- Modes

Storage (on-prem main, s3 backup)

Cache (only frequently used)

VTL (?)

- Backed by S3
- Just an image, can be installed on Vmware eSXI

Glacier

- Encryption
- Retrieval time (3-5h)
- Vaults

EFS

- NFSv4
- Can be shared
- Region

RDS

- Databases:

MySQL:

InnoDB

MySAM (can't be used for multi AZ ?(double check))

Postgres

Aurora

MariaDB

Oracle

SQL Server

- Multi AZ
- Read Replica
- Maintenance window
- Parameter Group
- Automatic Backup
- Snapshots
- Point in Time recovery
- Subnet Group?
- Option Group?

DynamoDB

- hash key & partition key
- low latency
- by default eventually consistent reads
- can do consistent reads (more expensive)
- auto scaling
- up to 400kb of data per key
- Cross region replication
- Dynamo streams
- Provisioned Capacity
- Acceleration ?
- Encryption

ElastiCache

- Memcached & Redis
- Low latency

Redshift

- SQL at peta byte scale
- Warehouse
- Columnar storage
- 1MB blocks

Route53

- DNS service
- Hosted Zones (domains?)
- Record Set
- All Dns Records
- Alias records for A and CNAME
- targets:
 - ELB
 - S3
 - CloudFront
- Modes
 - simple
 - weighted
 - latency
 - failover
 - geolocation
- Health Checks

CloudFront

- Edge Locations
- Caches contents based on TTL
- Supported Sources
 - web server (URL) (EC2, ELB & on-prem)
 - S3 bucket
- Origin Access Identity for restricting access

DirectConnect

- direct line from on-prem
- terminates in VPC? how?
- using VLAN protocol?

Snowball

- new version Edge
- box you can upload your data to and mail it
- Supported Destinations?
- Can you export?

ElasticBean Stack

- Deploys your app to EC2 (zip file)
- Creates load balancers ASG etc

Lambda

- Event Driven
- Can respond to triggers
- Supported Triggers:
 - HTTP from API Gateway
 - SQS

- SNS
- ???
- Needs warm up
- Pay per execution
- Memory/CPU balance to increase performance
- AutoScaling
- Supported Languages:
- JAVA
- Python
- Nodejs

How Security Works?

EMR (Elastic Map Reduce)

- Supported Engines
- Hadoop
- Spark
- Hbase

ECS (Elastic Container Service)

- Tasks
- Allows you to run container on your cluster of EC2 instance
- Requires agent installed
- How security works?

CloudWatch

- Monitoring
- Can collect custom metrics via installed agent/script
- You can specify Alerts
- Alerts targets:
- SNS
- Email?
- ??
- Logs
- how it works

CloudFormation

- Infrastructure as a code
- You can script whole infrastructure through it
- JAML or Json

CloudTrail

- Audit of all API calls to amazon
- Events
- Trails? what's that
- Cross region? - yes

OpsWorks? What's that?

IAM

- Users
- Roles
- Policies
- Groups

- keys (KMS)
- Identity Providers? What's that?
- Password Policy

WAF

- Web Application Firewall
- what it does?
- cost?

Directory Service

- what's that? Types?

Config

- what's that?

CloudHSM

- Hardware Security Module
- Key Store
- Physical Appliance

Kinesis

- Retention
- Multi Consumer
- 1000 puts/s 1MB/s per shard

Types:

- Streams (kind of like KAFKA)
- Shards
- Resharding
- Capacity per shard
- Firehose
- what's that?
- Analytics
- SQL on the stream?

Data Pipeline

- Moves data from one place to another?

AWS Glue

what's that?

Step Functions

- what's that

SWF – Simple Workflow Services

- distribution coordination framework, kind of like biz talk
- Deciders
- Workers
- Triggers
- exactly once processing
- can use both on-prem and aws as well as human input

API Gateway

- Can connect to lambda
- how it works?

- moving parts?

ElasticTranscoder

- Transcodes videos to different format
- has presets
- pay per minute

SQS

- small messages (up to 256 kb)
- max retention x days
- Visibility Timeout
- AutoScaling
- Long Polling
- By default at least once
- Supports FIFO (not default)
- FIFO has exactly once

SNS

- Fan out
- Multiple destinations
- SQS
- Lambda
- ???
- Email

SES

- Simple email service
- how it works?