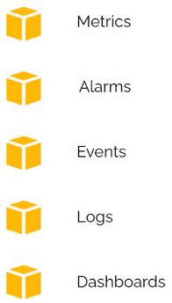
CLOUD CONCEPTS

(AWS Core Services Overview: Cloud Watch, RDS & Route 53, SNS and Load Balancer)

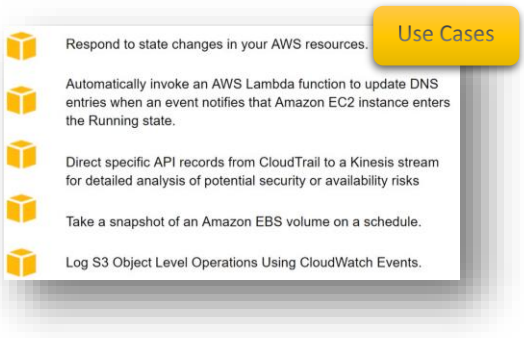
Amazon CloudWatch monitors your Amazon Web services (AWS) resources and the applications you run on AWS in real time.

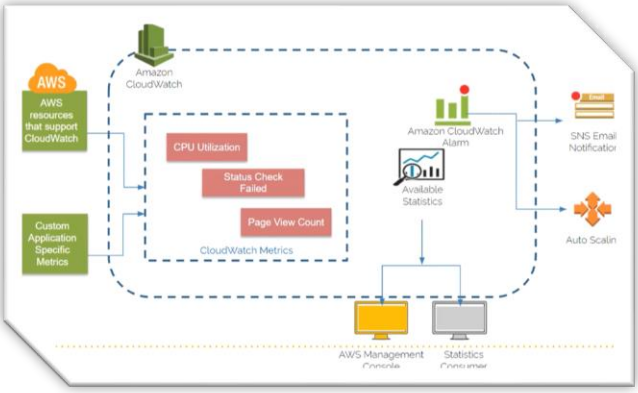
Amazon Cloud Watch

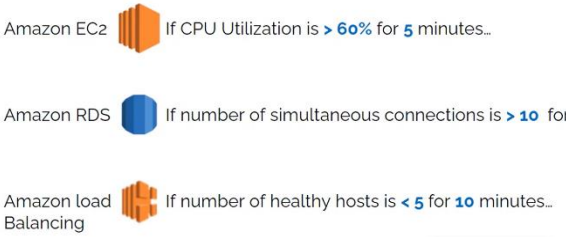
monitors Amazon Web Services Resources and applications that are run on AWS in real time. It also talks about the traffic coming towards the server i.e., the type of traffic, amount, or percentage of traffic. Amazon Cloud Watch is just like the task manager running on your computer that gives you the insights of your system resources like CPU utilization, storage, network consumption etc.

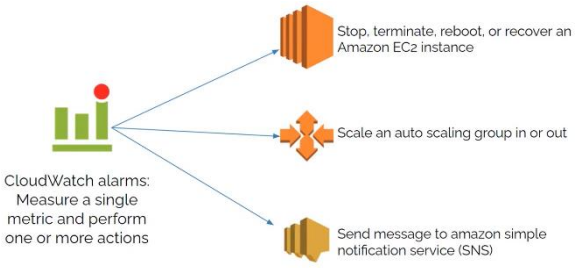


Cloud watch is a monitoring service and provides you with different metrics, generates alarms under certain conditions and creates logs. It is an integrated service used with other services.









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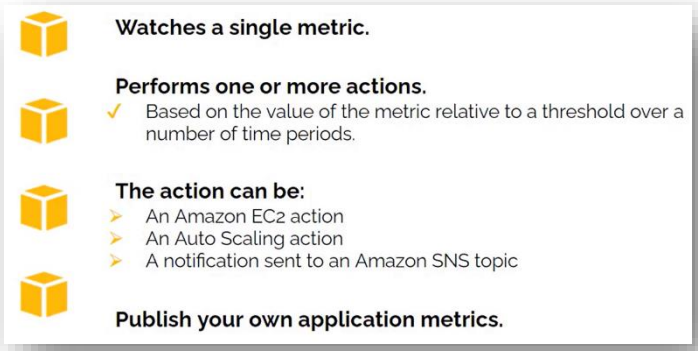
- Amazon cloud watch basic level monitoring is free but detailed monitoring is paid. The resources are monitored after 5 miniutes but this span can be reduced to 1 minute.
- All the logs generated by AWS Services are stored in S3 even custom logs generated are also stored in S3.



- Cloud watch function is integrated with AWS lambda so when any event occurs cloud watch triggers lambda function and through IAM.

- Use simple rules to match events and route them to one or more target functions or streams
- Aware of operational chages when occur
- Respond to these changes and takes corrective measures
- Schedule automated actions that trigger at certain times
- Monitor and troubleshoot systems and applications using existing log files
- Retrieve the associated log data from cloud watch logs
- Includes an installable agent for ubunti, Amazon Linux and Windows at no additional charge
- Monitor EC2 instances in real time and AWS Cloudtrail Logged events
- Archive Log Data

- Cloud trails includes user (IAM) level monitoring.

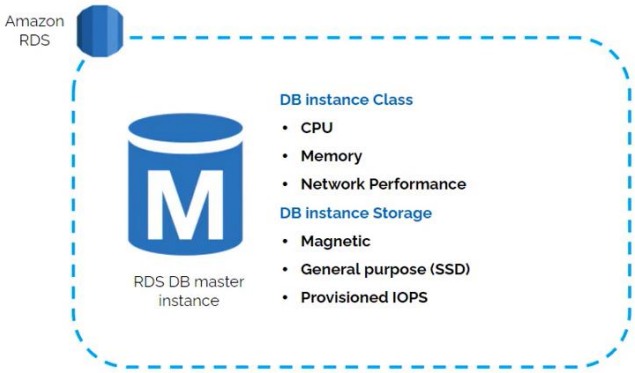
Challenges of Relational Databases

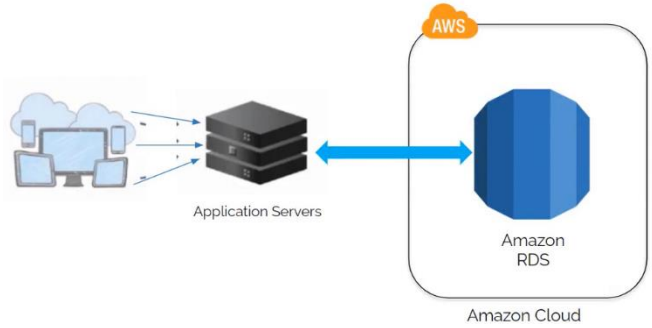
- Server maintenance and energy footprint
- Software install and patches
- Database backups and high availability
- Limits on scalability o Data security
- Data security
- OS install and patches

Amazon Relational Database is already configured and properly set up for you just like EC2 with all initial setup!

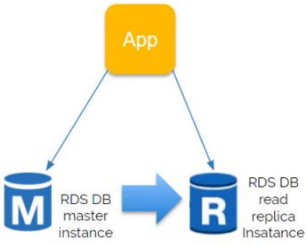
Amazon RDS : is managed service that sets up and operates a relational database in the cloud.

- When you use Amazon RDS service it is launched with an instance (DB instance) containing servers just like EC2 and storage like EBS. Amazon supports six types of data bases and it manages all the related tasks like opearting system installation and patches (time to time updation of packages).

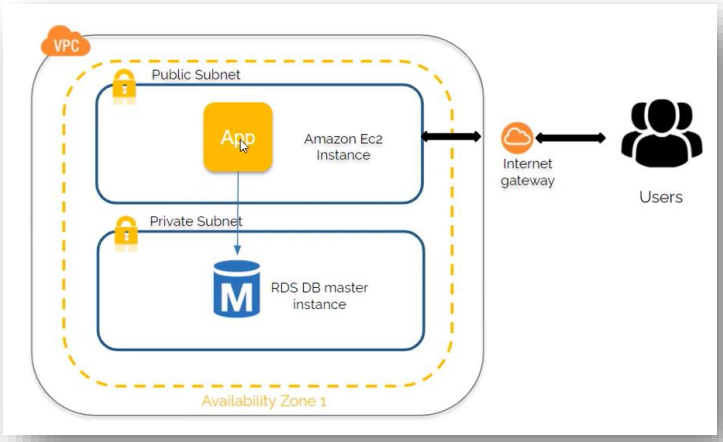


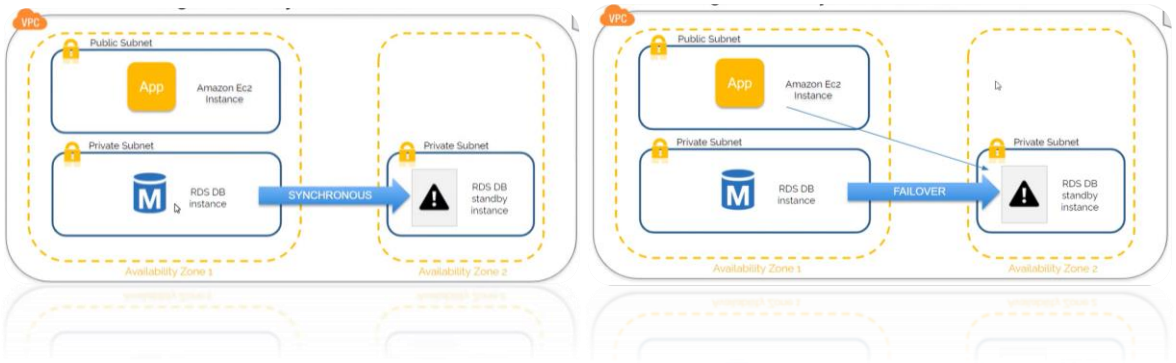


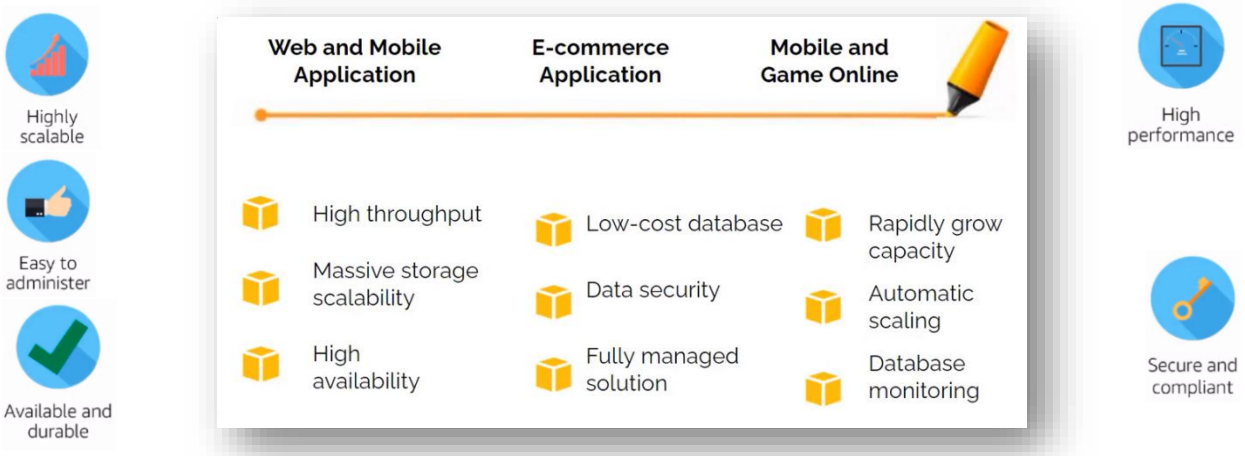
- Read replica is used for READ ONLY queries. In the given scenario many read replicas of the master data base are created to make it highly available. So, in case of any failure data is recoverable. In case of read heavy database workloads read queiries offlaod from master DB instance, if needed read replicas can be prompted to master DB. For replication Asynchronous method is used.



- In the given scenario for high availability DB is launched in multiple AZs, the master DB is in the private network and is accessed thorugh the application installed in the launched (EC2 instance). IN AZ2 the copy of the database is kept as a abckup in case of failure. This all is inside th VPC.







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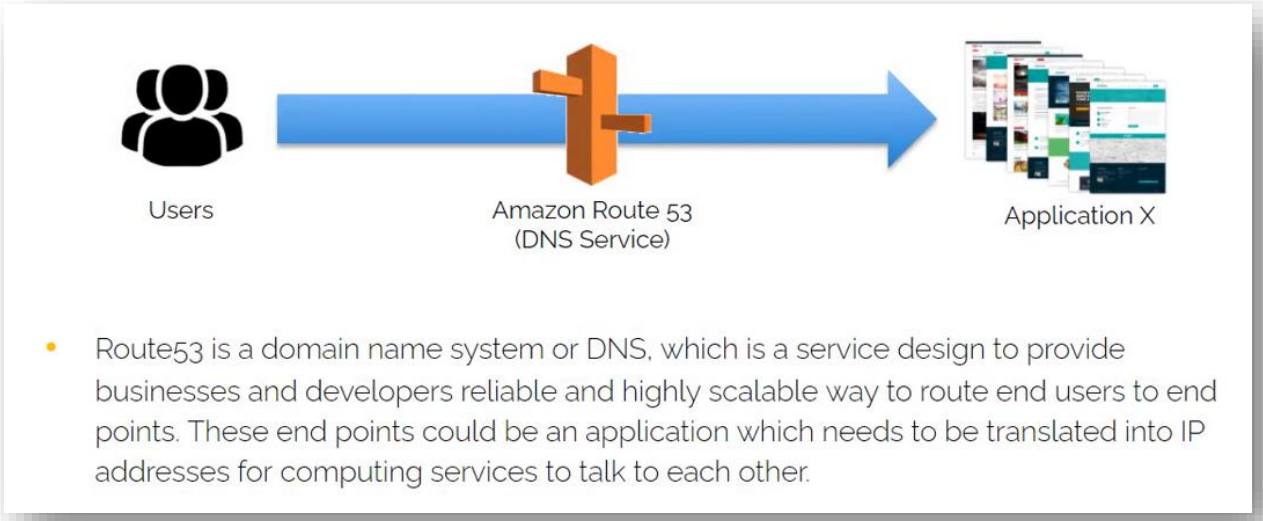
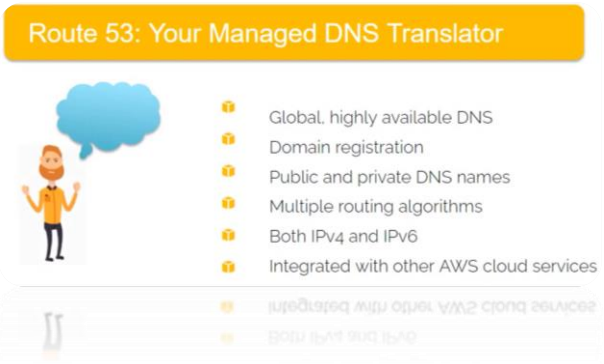
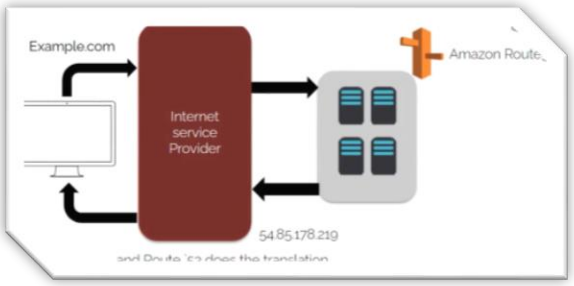
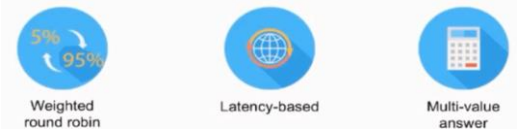
AWS Route 53 translates URL names, such as www.wordpress.com, into their corresponding numeric IP addresses.



- Route53 is a domain name system or DNS, which is a service design to provide businesses and developers reliable and highly scalable way to route end users to end points. These end points could be an application which needs to be translated into IP addresses for computing services to talk to each other.







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