1. **WAF:** SQL Injection, Cross-site Scripting. AWS WAF is a web application firewall that lets you monitor web requests that are forwarded to Amazon CloudFront distributions or an Application Load Balancer.

2. **AWS Shield:** Protection against [distributed denial-of-service (DDoS) attack](https://www.cloudflare.com/learning/ddos/what-is-a-ddos-attack/). Request from the same IP address will be blocked.

3. Ability to scale the infrastructure based on demand: **Elasticity, Scalability, Auto-scaling.**

4.**No interdependencies:** Loose-coupling Decoupled architecture, queue-based(**SQS**)

5. **Comprehend** Natural language processing (NLP) service that uses machine learning to discover insights from text.

6. **AWS Artifact** On-demand downloads of AWS security and compliance documents, such as AWS ISO certifications, Payment Card Industry (PCI), and Service Organization Control (SOC) reports, HIPPA.

7. **VPC Flow Log:** VPC Flow Logs is a feature that enables you to capture information about the IP traffic going to(**inbound**) and from(**outbound**) network interfaces in your VPC.

8. **Agility**: Ability to deploy the features quickly.

9. **Spot Instance:** can be terminated/interrupted/flexible, the advantage of unused Amazon EC2 capacity in the AWS Cloud

10. **Reserved Instance:** For more than a year. For recurring needs **Scheduled RI’s** used.

11. **Dedicated Hosts:** physical EC2 server dedicated for your use. Dedicated Hosts can help you reduce costs by allowing you to use your existing server-bound software licenses, including Windows Server, SQL Server, and SUSE Linux Enterprise Server (subject to your license terms), and can also help you meet compliance requirements.

12. **IAM** is a **global service** and **S3** is a **region-based** service.

13. Permissions are associated with the roles. We don’t have the credentials and we want to write on S3 it can be done by using the **IAM role**.

14. Programmatically Access the AWS account: **Access ID** and **Secret Access Key** needed.

15. Patching of the database on **EC2** is customer responsibility using Automated way by using **AWS System Manager**.

16. For Managed Services like RDS, DynamoDB we don’t need to manage OS or patched.

17. **AWS Organisation** helps in consolidated billing and it tracks the cost using Cost Explorer. By pooling the usage across multiple accounts to achieve the tier discount.

18. **AWS CloudFormation:** Infrastructure as a code.

19. AWS charges for inbound traffic/data.

20. On-premises storage can be done by **EFS**(Elastic File Storage) **NFS** (Network File System)

21. **Amazon EC2 instances** running the Linux to AMI are bill with a minimum of 60-sec and after that charge per sec.

22. **AWS OpsWorks** is a configuration management service that helps you configure and operate applications in a cloud enterprise by using Puppet or Chef.

23. **Tagging:** helps in cost allocation/separation.

24. Always enable Multi-factor authentication on the root account. And always use a strong username/password.

25. **Cloud Front:** Letancy/less response time/global accelerator/Edge location

26. **Redshift:** Data warehouse.

27. **RDS:** automated backups. Amazon Redshift data warehouse is a collection of computing resources called *nodes*, which are organized into a group called a *cluster*. Each cluster runs an Amazon Redshift engine and contains one or more databases.

28. **Availability Zone:** highly available.

29. **Security for AWS account:** don’t generate access key or use temporary security credentials(IAM roles).

30. **Reserved services** are EC2, Redshift, DynamoDB, ElastiCache, RDS

31. **CloudTrail:** Account login details on the server.

32. **CloudWatch:** Application logs, internal activities, custom metrics of your own application.

33. TCO includes all the expenses to calculate the total cost of ownership on-premises.

34. **AWS Storage Gateway:** helps in hybrid cloud storage between on-premises and AWS Cloud. Storage Gateway offers file gateway, volume gateway, and tape gateway storage solutions.

35. **Access Advisor:** unnecessary permissions detection to a user.

36. **Fault Tolrent:** Multi AZ’s

37. **Cloud Compute:** Increase speed & agility benefit from massive economies of scale

38. **Concierge Support Team:** Enterprise plan

39. **Cognito:** Authentication integration

40. **Route 53:** DNS (Domain Naming Service)Amazon Route 53 is a highly available and scalable Domain Name System (DNS) web service.

41. **Network ACL(Subnet)** are stateless and have Allow/Deny rule and order of execution is in ascending order and **Security Groups(instance)** are stateful.

42. **AWS Config** manages the versions of configuration.

43. **Gateway Virtual Tape Library:** A tape gateway provides cloud-backed virtual tape storage. The tape gateway is deployed into your on-premises environment as a VM running on VMware ESXi, KVM, or Microsoft Hyper-V hypervisor.

44. **Athena:** SQL query on S3 Amazon Athena is an interactive query service that makes it easy to analyze data in Amazon S3 using standard SQL.

45. **EMR:** Hadoop based big data solution

46. **Quicksight:** Data visualization

47. **Snowball:** Data transfer

48. **Global Accelerator:** Latency, edge location

49. **Kendra:** ML-based search engine

50. **S3 Glacier** for the archival storage

51. **Serverless** functions are Lambda, Step Function

52. **KMS** (Key Management Service) for data encryption **CloudHSM** is used to Key management.

53. **AWS Trusted Advisor Role:** Cost Optimization, Security, Performance, Fault Tolerance, Service Limits.

54. **Glue:** ETL based Service

55. Use **Amazon S3** to store and retrieve any amount of data using highly scalable, reliable, fast, and inexpensive data storage.

56. **Amazon S3 Glacier** to provide durable and extremely low-cost storage for infrequently used data with security features for data archiving and backup.

57. **Amazon S3 File Gateway** supports a file interface into Amazon Simple Storage Service (Amazon S3) and combines service and a virtual software appliance. By using this combination, you can store and retrieve objects in Amazon S3 using industry-standard file protocols such as Network File System (NFS) and Server Message Block (SMB).

58. **Amazon Neptune** is a fast, reliable, fully-managed graph database service that makes it easy to build and run applications that work with highly connected datasets.

59. **Amazon ElastiCache** is a web service that makes it easy to set up, manage, and scale a distributed in-memory data store or cache environment in the cloud.

60. **Amazon Aurora** (Aurora) is a fully managed relational database engine that's compatible with MySQL and PostgreSQL.

61. **Amazon DocumentDB** (with MongoDB compatibility)

62. **Amazon DynamoDB** is a fully managed NoSQL database service that provides fast and predictable performance with seamless scalability.

63. **Amazon GuardDuty** is a continuous security monitoring service. Amazon GuardDuty can help to identify unexpected and potentially unauthorized or malicious activity in your AWS environment.

64. **AWS Marketplace** is an online store where you can buy or sell software that runs on Amazon Web Services.

65. **The AWS Cloud Development Kit (AWS CDK)** is a software development framework for defining your cloud infrastructure in code and provisioning it through AWS CloudFormation.

66. **Amazon Sumerian** is a set of tools for creating high-quality virtual reality (VR) experiences on the web. With Sumerian, you can construct an interactive 3D scene without any programming experience, test it in the browser, and publish it as a website that is immediately available to users.

67. Logging features are available in the following AWS services:

* **Amazon CloudFront** – Logs user requests that CloudFront receives. For more information, see [Access Logs](https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/AccessLogs.html) in the Amazon CloudFront Developer Guide.
* **AWS CloudTrail** – Logs AWS API calls and related events made by or on behalf of an AWS account.
* **Amazon CloudWatch** – monitors your AWS Cloud resources and the applications you run on AWS. You can set alarms in CloudWatch based on metrics that you define.
* **AWS Config** – Provides detailed historical information about the configuration of your AWS resources, including your IAM users, user groups, roles, and policies. For example, you can use AWS Config to determine the permissions that belonged to a user or user group at a specific time.
* **Amazon Simple Storage Service (Amazon S3)** – Logs access requests to your Amazon S3 buckets.

68. **AWS Pricing Calculator** lets you explore AWS services and create an estimate for the cost of your use cases on AWS.

69. **Step Functions** is a serverless orchestration service that lets you combine AWS Lambda functions and other AWS services to build business-critical applications.

70. **Amazon MQ** is a managed message broker service for Apache ActiveMQ and RabbitMQ that makes it easy to set up and operate message brokers on AWS.

71. **AWS Glue** is a serverless data-preparation service for extract, transform, and load (ETL) operations. Data engineers and ETL developers can use **AWS Glue Studio** to create, run, and monitor ETL jobs with a few clicks. Data analysts and data scientists can use **AWS Glue DataBrew** to visually clean up and normalize data without writing code.

72. **Amazon Kinesis** makes it easy to collect, process, and analyze video and data streams in real-time.

73. **AWS Data Pipelin**e is a web service that you can use to automate the movement and transformation of data.

74. **Amazon Macie** is a fully managed data security and data privacy service that uses machine learning and pattern matching to discover, classify, and help you protect your sensitive data in Amazon S3.