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| AWS Tutorial: Basics to Advanced | | |
| 1. Compute |  |  |
| **Category** | **Service** | **Descri­ption** |
| Instances(Virtual machines) | EC2 | Web-scale cloud computing is simplified using It. |
|  | EC2 Spot | Up to 90% off fault-tolerant workloads are run by using this. |
|  | EC2 Autosc­aling | To meet changing demand, automatically add or remove compute capacity. |
|  | Lightsail | To create & operate a virtual private server with AWS using the simplest method available. A cloud platform that includes everything you need to create an application or website. |
|  | Batch | Allows developers, scientists, and engineers to create and run hundreds of thousands of batch processing jobs on Amazon Web Services (AWS) |
| Containers | Elastic Container Service (ECS) | A scalable, secure, and highly efficient way to run containers. |
|  | Elastic Container Registry (ECR) | You can store, manage, and deploy container images easily. |
|  | Elastic Kubernetes Service (EKS) | A fully managed service. |
|  | Fargate | Its is used as Serverless compute for containers |
| Serverless | Lambda | Pay only for the compute time you consume, instead of running code without thinking about servers. |
| Edge and hybrid | Outposts | You can have a truly consistent hybrid experience with AWS infrastructure and services on your own premises. |
|  | Snow Family | Formalise, process, and store data in rugged or disconnected edge environments. |
|  | Wavelength | It is used to deliver ultra-low latency applic­ation in devices using 5G |
|  | VMware Cloud on AWS | Work faster by innovating faster, rapidly shifting to the cloud, and securely working from anywhere. |
|  | Local Zones | It runs latency-sensitive applic­ations closer to the end-users. |
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| **Service** | **Description** | |
| AWS S3 | S3 is a distributed database that is connected to every device in the network through the Internet. It uses a peer-to-peer model, meaning that data is not stored on a central server. Instead, data is stored directly between the user and the service that the user is trying to access. This provides a faster and more reliable service than a traditional database would because it does not have to be transferred when a change is made. | |
| AWS Backup | AWS Backup automates the entire backup process from storage to delivery — removing the need to manually input and process backup data. It provides end-to-end encryption of your backup data to help keep your data secure. AWS Backup is a highly efficient and cost-effective way to protect your business data. | |
| Amazon EBS | Amazon Elastic Block Store provides block-level storage volumes. These storage volumes are created and managed from the web service's dashboard and can be used to backup your application data and store your logs. By providing storage volumes for your applications, you can create a controlled, low-­cost way to backup your application data and store your application logs in the cloud. You can also use the Elastic Block Store as a way to automatically rotate your application data to prevent data loss in the case of a hard or software failure. | |
| Amazon EFS Storage | EFS is a blob Storage. Amazon EC2 instances can store files in EFS. You can think of it as a hosting service that offers you cloud storage for free. You can store any type of file with this cloud storage, and it's very fast. You can get up to 2 TB storage for free. You can increase this storage limit by purchasing more space. EFS provides an option to encrypt your files. | |
| Amazon FSx | FSx for Windows Server and Lustre (fully managed high-performance file systems built on Windows Server) offer native compatibility and characteristic sets for workloads. FSx for Windows Server (favourite storage built on Windows Server) and Lustre (favourite file system integrated with S3) are available as FSx for Windows Server. | |
| AWS Storage Gateway | A storage gateway enables an on-premise software appliance to communicate with cloud-based storage. It provides an edge-­led, no-­premium, high-­speed connection between the software and storage provider, allowing for a more cost-­effective and efficient delivery of software and data to customers. The service can be accessed via a mobile device or web browser and eliminates the need for customers to maintain large, expensive on-premises data centres. Some of the benefits of using a data centre as opposed to a cloud provider include lower costs, longer operational flexibility due to lower operational costs, and availability of human resources for support. A data centre can be more than just a place to park servers. It can be a hub for other business processes, enabling a higher level of integration between the data and the applications that generate it. | |
| AWS DataSync | DataSync is simple and efficient data transfer between on-premises storage and S3, EFS, or FSx for Windows File Server. DataSync can also be used to migrate your on-premises data to S3 and other cloud storage providers. DataSync offers both a server software and client software option. With the client software, you can create a disconnected storage pool and then connect the server to the storage pool using DataSync. With the server software, you can create a disconnected storage pool and then connect the storage pool to the on-premises data hub using DataSync. | |
| AWS Transfer Family | Transfer Family is designed to provide seamless file transfers into & out of S3. | |
| AWS Snow Family | Snow Family devices are highly­-sec­ured, port­able com­puters that collect and trans­mit data at the edge, and migrate data between AWS and other systems. | |
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