Compute

Category	Service	Description
Instances (Virtual machines)	EC2	Provides secure, resizable compute capacity in the cloud. It makes web-scale cloud computing easier for developers. EC2
	EC2 Spot	Run fault-tolerant workloads for up to 90% off. EC2Spot
	EC2 Autoscaling	Automatically add or remove compute capacity to meet changes in demand. EC2_AustoScaling

Compute (cont)

	Lightsail	Designed to be the easiest way to launch & manage a virtual private server with AWS. An easy-to-use cloud platform that offers everything need to build an application or website. Lightsail
	Batch	Enables developers, scientists, & engineers to easily & efficiently run hundreds of thousands of batch computing jobs on AWS. Fully managed batch processing at any scale. Batch
Containers	Elastic Container Service (ECS)	Highly secure, reliable, & scalable way to run containers. ECS

Compute (cont)

	Elastic Container Registry (ECR)	Easily store, manage, & deploy container images. ECR
	Elastic Kubernetes Service (EKS)	Fully managed Kubernetes service. EKS
	Fargate	Serverless compute for containers. Fargate
Serverless	Lambda	Run code without thinking about servers. Pay only for the compute time you consume. Lamda
Edge and hybrid	Outposts	Run AWS infrastructure & services on premises for a truly consistent hybrid experience. Outposts
	Snow Family	Collect and process data in rugged or disconnected edge environments. SnowFamily

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Compute (cont)

Wavelength	Deliver ultra-low latency application for 5G devices. Wavelenth
VMware Cloud on AWS	Innovate faster, rapidly transition to the cloud, & work securely from any location. VMware_On_AWS
Local Zones	Run latency sensitive applications closer to end-users. LocalZones

Storage

Service	Description
AWS S3	S3 is the storehouse for the internet i.e. object storage built to store & retrieve any amount of data from anywhere S3
AWS Backup	AWS Backup is an externally-accessible backup provider that makes it easier to align & optimize the backup of data across AWS services in the cloud. AWS_Backup

Storage (cont)

Amazon EBS	Amazon Elastic Block Store is a web service that provides block-level storage volumes. EBS
Amazon EFS Storage	EFS offers file storage for the user's Amazon EC2 instances. It's kind of blob Storage. EFS
Amazon FSx	FSx supply fully managed 3rd-party file systems with the native compatibility & characteristic sets for workloads. It's available as FSx for Windows server (Fully managed file storage built on Windows Server) & Lustre (Fully managed high-performance file system integrated with S3). FSx_Windows FSx_Lustre
AWS Storage Gateway	Storage Gateway is a service which connects an on-premises software appliance with cloud-based storage. Storage_Gateway

Storage (cont)

AWS DataSync	DataSync makes it simple & fast to move large amounts of data online between on-premises storage & S3, EFS, or FSx for Windows File Server. DataSync
AWS Transfer Family	The Transfer Family provides fully managed support for file transfers directly into & out of S3. Transfer_Family
AWS Snow Family	Highly-secure, portable devices to collect & process data at the edge, and migrate data into and out of AWS. Snow_Family

Classification:
Object storage: *S3*
File storage services: *Elastic File System, FSx for Windows Servers & FSx for Lustre*
Block storage: *EBS*
Backup: *AWS Backup*
Data transfer:
Storage gateway --> 3 types: Tape, File, Volume.
Transfer Family --> SFTP, FTPS, FTP.
Edge computing and storage and Snow Family --> Snowcone, Snowball, Snowmobile

Databases

Database type	Use cases	Service	Description

Databases (cont)

Relational	Traditional applications, ERP, CRM, e-commerce	Aurora, RDS, Redshift	RDS is a web service that makes it easier to set up, control, and scale a relational database in the cloud. Aurora RDS Redshift
Key-value	High-traffic web apps, e-commerce systems, gaming applications	DynamoDB	DynamoDB is a fully administered NoSQL database service that offers quick and reliable performance with integrated scalability. DynamoDB

Databases (cont)

In-memory	Caching, session management, gaming leaderboards, geospatial applications	ElastiCache for Memcached & Redis	ElastiCache helps setting up, managing, and scaling in-memory cache conditions. Memcached Redis
Document	Content management, catalogs, user profiles	DocumentDB	DocumentDB (with MongoDB compatibility) is a quick, dependable, and fully-managed database service that makes it easy for you to set up, operate, and scale MongoDB-compatible databases. DocumentDB

Databases (cont)

Wide column	High-scale industrial apps for equipment maintenance, fleet management, and route optimization	Keyspaces (for Apache Cassandra)	Keyspaces is a scalable highly available and managed Apache Cassandra–compatible database service. Keyspaces
Graph	Fraud detection, social networking, recommendation engines	Neptune	Neptune a fast, reliable, fully managed graph database service that makes it easy to build and run applications that work with highly connected datasets Neptune

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Databases (cont)

Time series	IoT applications, DevOps, industrial telemetry	Timestream	Timestream is a fast, scalable, and serverless time series database service for IoT and operational applications that makes it easy to store and analyze trillions of events per day. Timestream

Databases (cont)

Ledger	Systems of record, supply chain, registrations, banking transactions	Quantum Ledger Database (QLDB)	QLDB is a fully managed ledger database that provides a transparent, immutable, and cryptographically verifiable transaction log owned by a central trusted authority. QLDB

Developer Tools

Service	Description
Cloud9	Cloud9 is a cloud-based IDE that enables the user to write, run, and debug code. Cloud9

Developer Tools (cont)

CodeArtifact	CodeArtifact is a fully managed artifact repository service that makes it easy for organizations of any size to securely store, publish, & share software packages used in their software development process. CodeArtifact
CodeBuild	CodeBuild is a fully managed service that assembles source code, runs unit tests, & also generates artefacts ready to deploy. CodeBuild
CodeGuru	CodeGuru is a developer tool powered by machine learning that provides intelligent recommendations for improving code quality & identifying an application's most expensive lines of code. CodeGuru

Developer Tools (cont)

Cloud Development Kit	Cloud Development Kit (AWS CDK) is an open source software development framework to define cloud application resources using familiar programming languages. CDK
CodeCommit	CodeCommit is a version control service that enables the user to personally store & manage Git archives in the AWS cloud. CodeCommit
CodeDeploy	CodeDeploy is a fully managed deployment service that automates software deployments to a variety of compute services such as EC2, Fargate, Lambda, & on-premises servers. CodeDeploy
CodePipeline	CodePipeline is a fully managed continuous delivery service that helps automate release pipelines for fast & reliable app & infra updates. CodePipeline

Developer Tools (cont)

CodeStar	CodeStar enables to quickly develop, build, & deploy applications on AWS. CodeStar
CLI	AWS CLI is a unified tool to manage AWS services & control multiple services from the command line & automate them through scripts. CLI
X-Ray	X-Ray helps developers analyze & debug production, distributed applications, such as those built using a microservices architecture. X-Ray

Migration & Transfer services

Service	Description
Migration Evaluator	Build a data-driven business case for AWS. ME
Migration Hub	Migration Hub provides a single location to track the progress of app migrations across multiple AWS & partner solutions. MigrationHub

Migration & Transfer services (cont)

Application Discovery Service	Application Discovery Service helps enterprise customers plan migration projects by gathering information about their on-premises data centers. ADS
Server Migration Service (SMS)	SMS is an agentless service which makes it easier & faster to migrate thousands of on-premises workloads to AWS. SMS
Database Migration Service (DMS)	DMS helps migrate databases to AWS quickly & securely. DMS
CloudEndure Migration	CloudEndure Migration simplifies, expedites, & reduces the cost of cloud migration by offering a highly automated lift-&-shift solution. CloudEndure
VMware Cloud on AWS	Refer compute section.
DataSync	Refer storage section.
Transfer Family	Refer storage section.
Snow Family	Refer storage section.

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Cost Management

Use cases	Capabilities	Service	Description
Organize	Construct cost allocation & governance foundation with your own tagging strategy	1) Cost Allocation Tags 2) Cost Categories	Cost Categories is a feature within AWS Cost Management product suite that enables group cost & usage information into meaningful categories based on needs. CostAllocationTags CostCategories

Cost Management (cont)

Report	Raise awareness & accountability of your cloud spend with the detailed, allocable cost data	1) Cost Explorer 2) Cost & Usage Report	Cost & Usage Report contains the most comprehensive set of AWS cost & usage data available, including additional metadata about AWS services, pricing, & reservations. CostExplorer CUR
Access	Track billing information across the organization in a consolidated view	1) Consolidated Billing 2) Credits	credits are applied to bills to help cover costs that are associated with eligible services. ConsolidatedBilling Credits

Cost Management (cont)

Control	Establish effective governance mechanisms with the right guardrails in place	1) IAM 2) Organizations 3) Control Tower 4) Service Catalog	Organizations helps centrally govern environment as you grow & scale workloads on AWS. Control tower is the easiest way to set up & govern a new, secure multi-account AWS environment. ControlTower

Cost Management (cont)

Forecast	Estimate resource utilization & spend with forecast dashboards.	1) Cost Explorer (Self-Service) 2) Budgets (Event-Driven)	A forecast is a prediction of how much you will use AWS services over the forecast time period that you selected, based on your past usage. Forecasting EventDrivenBudgets
Budget	Keep spend in check with custom budget threshold & auto alert notification	1) Budgets 2) Budget Alerts via Chime & Slack 3) Service Catalog	Budgets allows to set custom budgets to track cost & usage from the simplest to the most complex use cases. Budgets BudgetAlerts ServiceCatalog

Cost Management (cont)

Purchase	Leverage free trials & programmatic discounts based on workload pattern & needs	1) Free Tier 2) Reserved Instances 3) Savings Plans 4) Spot Instances 5) DynamoDB On-demand	RI provide significant discount (up to 75%) compared to On-Demand pricing. RI FreeTier SavingsPlan SpotEC2 DynamoDBOD
Elasticity	Scale & schedule services based on expected utilization pattern & needs	1) Instance Scheduler 2) Redshift pause & resume 3) EC2 Auto Scaling 4) Trusted Advisor	Trusted Advisor is an online tool that provides real time guidance to help provision resources following AWS best practices. InstanceScheduler RedshiftP&R EC2ASG TrustedAdvisor

Cost Management (cont)

Rightsize	Align service allocation size to actual workload demand	1) Cost Explorer Right Sizing Recommendations 2) Compute Optimizer 3) Redshift resize 4) S3 Intelligent Tiering	Compute Optimizer recommends optimal Compute resources your workload reduce & improve perform by usin to anal historic utilizati metrics
Inspect	Stay up-to-date with resource deployment & cost optimization opportunities	Cost Explorer	Cost Explore an easy use int that let visualiz unders & mana AWS usage time. CostEx

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SDKs & Toolkits

Service	Description
CDK	CDK uses the familiarity & expressive power of programming languages for modeling apps. CDK
Corretto	Corretto is a no-cost, multiplatform, production-ready distribution of the OpenJDK. Corretto
Crypto Tools	Cryptography is hard to do safely & correctly. The AWS Crypto Tools libraries are designed to help everyone do cryptography right, even without special expertise. Crypto Tools
Serverless Application Model (SAM)	SAM is an open-source framework for building serverless applications. It provides shorthand syntax to express functions, APIs, databases, & event source mappings. SAM

SDKs & Toolkits (cont)

Tools for developing and managing applications on AWS	Complete list of tools can be found here: Tools

Networking & Content Delivery

Use cases	Functionality	Service	Description
Build a cloud network	Define and provision a logically isolated network for your AWS resources	VPC	VPC lets you provision a logically isolated section of the AWS Cloud where you can launch AWS resources in a virtual network that you define. VPC

Networking & Content Delivery (cont)

Connect VPCs and on-premises networks through a central hub	Transit Gateway	Transit Gateway connects VPCs & on-premises networks through a central hub. This simplifies network & puts an end to complex peering relationships. TransitGateway
Provide private connectivity between VPCs, services, and on-premises applications	PrivateLink	PrivateLink provides private connectivity between VPCs & services hosted on AWS or on-premises, securely on the Amazon network. PrivateLink

Networking & Content Delivery (cont)

	Route users to Internet applications with a managed DNS service	Route 53	Route 53 is a highly available & scalable cloud DNS web service. Route53
Scale your network design	Automatically distribute traffic across a pool of resources, such as instances, containers, IP addresses, and Lambda functions	Elastic Load Balancing	Elastic Load Balancing automatically distributes incoming application traffic across multiple targets, such as EC2's, containers, IP addresses, & Lambda functions. ElasticLoadBalancing

Networking & Content Delivery (cont)

	Direct traffic through the AWS Global network to improve global application performance	Global Accelerator	Global Accelerator is a networking service that sends user's traffic through AWS's global network infrastructure, improving internet user performance by up to 60%. GlobalAccelerator
Secure your network traffic	Safeguard applications running on AWS against DDoS attacks	Shield	Shield is a managed Distributed Denial of Service (DDoS) protection service that safeguards applications running on AWS. Shield

Networking & Content Delivery (cont)

Protect your web applications from common web exploits	WAF	WAF is a web application firewall that helps protect your web applications or APIs against common web exploits that may affect availability, compromise security, or consume excessive resources. WAF

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Networking & Content Delivery (cont)

Centrally configure and manage firewall rules	Firewall Manager	Firewall Manager is a security management service which allows to centrally configure & manage firewall rules across accounts & apps in AWS Organization. link text
Build a hybrid IT network	Connect your users to AWS or on-premises resources using a Virtual Private Network	(VPN) - Client	VPN solutions establish secure connections between on-premises networks, remote offices, client devices, & the AWS global network. VPN

Networking & Content Delivery (cont)

Create an encrypted connection between your network and your Amazon VPCs or AWS Transit Gateways	(VPN) - Site to Site	Site-to-Site VPN creates a secure connection between data center or branch office & AWS cloud resources. site_to_site
Establish a private, dedicated connection between AWS and your datacenter, office, or colocation environment	Direct Connect	Direct Connect is a cloud service solution that makes it easy to establish a dedicated network connection from your premises to AWS. Direct-Connect

Networking & Content Delivery (cont)

Content delivery networks	Securely deliver data, videos, applic- ations, and APIs to customers globally with low latency, and high transfer speeds	CloudFront	CloudF expedi distribu of stati dynam web conten CloudF
Build a network for micros- ervices archit- ectures	Provide applicati- on-level networking for containers and micros- ervices	App Mesh	App M makes access to guid control micros ervices operat AWS. AppMe
	Create, maintain, and secure APIs at any scale	API Gateway	API Gatew allows user to design expand own R and WebS APIs a scale. APIGa

Networking & Content Delivery (cont)

Discover AWS services connected to your applications	Cloud Map	Cloud Map permits the name & handles the cloud resources. CloudMap

Security, Identity, & Compliance

Category	Use cases	Service	Description
Identity & access management	Securely manage access to services and resources	Identity & Access Management (IAM)	IAM is a web service for safely controlling access to AWS services. IAM
	Securely manage access to services and resources	Single Sign-On	SSO helps in simplifying, managing SSO access to AWS accounts & business applications. SSO

Security, Identity, & Compliance (cont)

Identity management for apps	Cognito	Cognito lets you add user sign-up, sign-in, & access control to web & mobile apps quickly and easily. Cognito
Managed Microsoft Active Directory	Directory Service	AWS Managed Microsoft Active Directory (AD) enables your directory-aware workloads & AWS resources to use managed Active Directory (AD) in AWS. Directory-Service

Security, Identity, & Compliance (cont)

Simple, secure service to share AWS resources	Resource Access Manager	Resource Access Manager (RAM) is a service that enables you to easily & securely share AWS resources with any AWS account or within AWS Organization. RAM
Central governance and management across AWS accounts	Organizations	Organizations helps you centrally govern your environment as you grow and scale your workloads on AWS. Orgs

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Security, Identity, & Compliance (cont)

Detection	Unified security and compliance center	Security Hub	Security Hub gives a comprehensive view of security alerts & security posture across AWS accounts. **SecurityHub**
	Managed threat detection service	GuardDuty	GuardDuty is a threat detection service that continuously monitors for malicious activity & unauthorized behavior to protect AWS accounts, workloads, & data stored in S3. **GuardDuty**

Security, Identity, & Compliance (cont)

Analyze application security	Inspector	Inspector is a security vulnerability assessment service improves the security & compliance of the AWS resources. **Inspector**
Record and evaluate configurations of your AWS resources	Config	Config is a service that enables to assess, audit, & evaluate the configurations of AWS resources. **Config**

Security, Identity, & Compliance (cont)

Track user activity and API usage	CloudTrail	CloudTrail is a service that enables governance, compliance, operational auditing, & risk auditing of AWS account. **CloudTrail**
Security management for IoT devices	IoT Device Defender	IoT Device Defender is a fully managed service that helps secure fleet of IoT devices. **IoTDD**

Security, Identity, & Compliance (cont)

Infrastructure protection	DDoS protection	Shield	Shield is a managed DDoS protection service that safeguards apps running. It provides always-on detection & automatic inline mitigations that minimize application downtime & latency. Shield

Security, Identity, & Compliance (cont)

Filter malicious web traffic	Web Application Firewall (WAF)	WAF is a web application firewall that helps protect web apps or APIs against common web exploits that may affect availability, compromise security, or consume excessive resources. WAF
Central management of firewall rules	Firewall Manager	Firewall Manager eases the user AWS WAF administration & maintenance activities over multiple accounts & resources. FirewallManager

Security, Identity, & Compliance (cont)

Data protection	Discover and protect your sensitive data at scale	Macie	M a m d (s & p s th M p m t d & s d M
	Key storage and management	Key Management Service (KMS)	K m e t & m c g k c th a w r A s & a a K

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Security, Identity, & Compliance (cont)

Hardware based key storage for regulatory compliance	CloudHSM	CloudHSM is a cloud-based hardware security module (HSM) that enables you to easily generate & use your own encryption keys. CloudHSM	
Provision, manage, and deploy public and private SSL/TLS certificates	Certificate Manager	Certificate Manager is a service that easily provision, manage, & deploy public and private SSL/TLS certs for use with AWS services & internal connected resources. ACM	

Security, Identity, & Compliance (cont)

	Rotate, manage, and retrieve secrets	Secrets Manager	Secrets Manager assist the user to safely encode, store, & recover credentials for any user's database & other services. SecretsManager
Incident response	Investigate potential security issues	Detective	Detective makes it easy to analyze, investigate, & quickly identify the root cause of potential security issues or suspicious activities. Detective

Security, Identity, & Compliance (cont)

	Fast, automated, cost-effective disaster recovery	CloudEndure Disaster Recovery	Prov scala cost-ctive busir conti for phys virtu clou serv Clou ndur
Compliance	No cost, self-service portal for on-demand access to AWS' compliance reports	Artifact	Artifa web servi enab user down AWS secu comp reco Artifa

Data Lakes & Analytics

Category	Use cases	Service	Description

Data Lakes & Analytics (cont)

Analytics	Interactive analytics	Athena	Athena is an interactive query service that makes it easy to analyze data in S3 using standard SQL. Athena
	Big data processing	EMR	EMR is the industry-leading cloud big data platform for processing vast amounts of data using open source tools such as Apache Spark, Hive, HBase,-Flink, Hudi, & Presto. EMR

Data Lakes & Analytics (cont)

Data warehousing	Redshift	The most popular & fastest cloud data warehouse. Redshift
Real-time analytics	Kinesis	Kinesis makes it easy to collect, process, & analyze real-time, streaming data so one can get timely insights. Kinesis

Data Lakes & Analytics (cont)

Operational analytics	Elasticsearch Service	Elasticsearch Service is a fully managed service that makes it easy to deploy, secure, & run Elasticsearch cost effectively at scale. ES
Dashboards & visualizations	Quicksight	QuickSight is a fast, cloud-powered business intelligence service that makes it easy to deliver insights to everyone in organization. QuickSight

Data Lakes & Analytics (cont)			
Data movement	Real-time data movement	1) Amazon Managed Streaming for Apache Kafka (MSK) 2) Kinesis Data Streams 3) Kinesis Data Firehose 4) Kinesis Data Analytics 5) Kinesis Video Streams 6) Glue	MSK is a fully managed service that makes it easy to build & run applications that use Apache Kafka to process streaming data. **MSK KDS KDF KDA KVS Glue**

Data Lakes & Analytics (cont)			
Data lake	Object storage	1) S3 2) Lake Formation	Lake Formation is a service that makes it easy to set up a secure data lake in days. A data lake is a centralized, curated, & secured repository that stores all data, both in its original form & prepared for analysis. **S3 LakeFormation**

Data Lakes & Analytics (cont)			
Backup & archive	1) S3 Glacier 2) Backup	S3 Glacier & S3 Glacier Deep Archive are a secure, durable, & extremely low-cost S3 cloud storage classes for data archiving & long-term backup. **S3Glacier**
Data catalog	1) Glue 2)) Lake Formation	Refer as above.
Third--party data	Data Exchange	Data Exchange makes it easy to find, subscribe to, & use third-party data in the cloud. **DataExchange**

Data Lakes & Analytics (cont)

Predictive analytics && machine learning	Frameworks & interfaces	Deep Learning AMIs	Deep Learning AMIs provide machine learning practitioners & researchers with the infrastructure & tools to accelerate deep learning in the cloud, at any scale. DeepLearningAMIs

Data Lakes & Analytics (cont)

Platform services	SageMaker	SageMaker is a fully managed service that provides every developer & data scientist with the ability to build, train, & deploy machine learning (ML) models quickly. SageMaker

Containers

Use cases	Service	Description
Store, encrypt, and manage container images	ECR	Refer compute section
Run containerized applications or build microservices	ECS	Refer compute section

Containers (cont)

Manage containers with Kubernetes	EKS	Refer compute section
Run containers without managing servers	Fargate	Fargate is a serverless compute engine for containers that works with both ECS & EKS. Fargate
Run containers with server-level control	EC2	Refer compute section
Containerize and migrate existing applications	App2Container	App2Container (A2C) is a command-line tool for modernizing .NET & Java applications into containerized applications. App2Container
Quickly launch and manage containerized applications	Copilot	Copilot is a command line interface (CLI) that enables customers to quickly launch & easily manage containerized applications on AWS. Copilot

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Serverless

Category	Service	Description
Compute	Lambda	Lambda lets you run code without provisioning or managing servers. You pay only for the compute time you consume.
	Lambda-@Edge	Lambda@Edge is a feature of Amazon CloudFront that lets you run code closer to users of your application, which improves performance & reduces latency.
	Fargate	Refer containers section
Storage	S3	Refer storage section
	EFS	Refer storage section
Data stores	DynamoDB	DynamoDB is a key-value & document database that delivers single-digit millisecond performance at any scale.

Serverless (cont)

	Aurora Serverless	Aurora Serverless is an on-demand, auto-scaling configuration for Amazon Aurora (MySQL & Postgr-eSQL-compatible editions), where the database will automatically start up, shut down, & scale capacity up or down based on your application's needs.
	RDS Proxy	RDS Proxy is a fully managed, highly available database proxy for RDS that makes applications more scalable, resilient to database failures, & more secure.
API Proxy	API Gateway	API Gateway is a fully managed service that makes it easy for developers to create, publish, maintain, monitor, & secure APIs at any scale.

Serverless (cont)

Category	Service	Description
Application integration	SNS	SNS is a fully managed messaging service for both system-to-system & app-to-person (A2P) communication.
	SQS	SQS is a fully managed message queuing service that enables to decouple & scale microservices, distributed systems, & serverless applications.
	AppSync	AppSync is a fully managed service that makes it easy to develop GraphQL APIs by handling the heavy lifting of securely connecting to data sources like AWS DynamoDB, Lambda.

Serverless (cont)

	EventB-ridge	EventBridge is a serverless event bus that makes it easy to connect applications together using data from apps, integrated SaaS apps, & AWS services.
Orches-tration	Step Functions	Step Functions is a serverless function orchestrator that makes it easy to sequence Lambda functions & multiple AWS services into business-critical applications.
Analytics	Kinesis	Kinesis makes it easy to collect, process, & analyze real-time, streaming data so one can get timely insights.
	Athena	Athena is an interactive query service that makes it easy to analyze data in Amazon S3 using standard SQL.

Application Integration

Category	Service	Description
Messaging	SNS	Reliable high throughput pub/sub, SMS, email, and mobile push notifications
	SQS	Message queue that sends, stores, and receives messages between application components at any volume
	MQ	Message broker for Apache ActiveMQ that makes migration easy and enables hybrid archit-ectures
Workflows	Step Functions	Coordinate multiple AWS services into serverless workflows so you can build and update apps quickly
API management	API Gateway	Create, publish, maintain, monitor, & secure APIs at any scale for serverless workloads & web apps

Application Integration (cont)

	AppSync	Create a flexible API to securely access, manipulate, & combine data from one or more data sources
Event bus	EventB-ridge	Build an event-driven architecture that connects application data from your own apps, SaaS, & AWS services
	AppFlow	Automate the flow of data between SaaS applications & AWS services at nearly any scale, without code.

Management & Governance

Category	Service	Description
Enable	Control Tower	The easiest way to set up and govern a new, secure multi--account AWS enviro-nment. ControlTower
	Organi-zations	Organizations helps centrally govern environment as you grow & scale workloads on AWS Organizations

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Management & Governance (cont)

	Well-Architected Tool	Well-Architected Tool helps review the state of workloads & compares them to the latest AWS architectural best practices. **WATool**
	Budgets	Budgets allows to set custom budgets to track cost & usage from the simplest to the most complex use cases. **Budgets**
	License Manager	License Manager makes it easier to manage software licenses from software vendors such as Microsoft, SAP, Oracle, & IBM across AWS & on-premises environments. **LicenseManager**
Provision	CloudFormation	CloudFormation enables the user to design & provision AWS infrastructure deployments predictably & repeatedly. **CloudFormation**

Management & Governance (cont)

	Service Catalog	Service Catalog allows organizations to create & manage catalogs of IT services that are approved for use on AWS. **ServiceCatalog**
	OpsWorks	OpsWorks presents a simple and flexible way to create and maintain stacks and applications. **OpsWorks**
	Marketplace	Marketplace is a digital catalog with thousands of software listings from independent software vendors that make it easy to find, test, buy, & deploy software that runs on AWS. **Marketplace**
Operate	CloudWatch	CloudWatch offers a reliable, scalable, & flexible monitoring solution that can easily start. **CloudWatch**

Management & Governance (cont)

CloudTrail	CloudTrail is a service that enables governance, compliance, operational auditing, & risk auditing of AWS account. **CloudTrail**
Config	**Config**
Systems Manager	Systems Manager to plan, proctor, & automate administration tasks on the AWS resources. **SystemsManager**
Cost & usage report	Refer cost management section
Cost explorer	Refer cost management section
Managed Services	Operate your AWS infrastructure on your behalf. **ManagedServices**
X Ray	**X-Ray**

Recommend security best practices

Turn on multifactor authentication for the "root" account

Turn on CloudTrail log file validation.

Enable CloudTrail multi-region logging.

Integrate CloudTrail with CloudWatch.

Enable access logging for CloudTrail S3 buckets.

Enable access logging for Elastic Load Balancer (ELB).

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Recommend security best practices (cont)

Enable Redshift audit logging.

Enable Virtual Private Cloud (VPC) flow logging.

Require multifactor authentication (MFA) to delete CloudTrail buckets

Enable CloudTrail logging across all AWS.

Turn on multi-factor authentication for IAM users.

Enable IAM users for multi-mode access.

Attach IAM policies to groups or roles

Rotate IAM access keys regularly, and standardize on the selected number of days

Set up a strict password policy.

Set the password expiration period to 90 days and prevent reuseCustomer Visual-force pages with standard headers

Don't use expired SSL/TLS certificates

User HTTPS for CloudFront distributions

Restrict access to CloudTrail bucket.

Encrypt CloudTrail log files at rest

Encrypt Elastic Block Store (EBS) database.

Provision access to resources using IAM roles.

Ensure EC2 security groups don't have large ranges of ports open

Configure EC2 security groups to restrict inbound access to EC2.

Avoid using root user accounts.

Use secure SSL ciphers when connecting between the client and ELB.

Use secure SSL versions when connecting between client and ELB.

Recommend security best practices (cont)

Use a standard naming (tagging) convention for EC2.

Encrypt RDS.

Ensure access keys are not being used with root accounts.

Use secure CloudFront SSL versions.

Enable the require_ssl parameter in all Redshift clusters.

Rotate SSH keys periodically.

Minimize the number of discrete security groups.

Reduce number of IAM groups.

Terminate unused access keys

Disable access for inactive or unused IAM users

Remove unused IAM access keys

Delete unused SSH Public Keys

Restrict access to AMIs.

Restrict access to EC2 security groups.

Restrict access to RDS instances.

Restrict access to Redshift clusters.

Restrict outbound access.

Disallow unrestricted ingress access on uncommon ports.

Restrict access to well-known ports such as CIFS, FTP, ICMP, SMTP, SSH, Remote desktop

Inventory & categorize all existing custom apps by the types of data stored, compliance requirements & possible threats they face.

Involve IT security throughout the development process.

Recommend security best practices (cont)

Grant the fewest privileges as possible for application users

Enforce a single set of data loss prevention policies across custom applications and all other cloud services.

Encrypt highly sensitive data such as protected health information (PHI) or personally identifiable information (PII).

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