Managed	AWS Component	Description
		SECURITY
No	IAM	1. Controls individual AND group access to a resource 2. Supports MFA
No	Amazon S3	1. Stores unstructured data 2. Stores files as object 3. Max file size: 5TB
Yes	AWS Transfer Family	1. Transfer files to S3 AND Amazon EFS 2. Protocols available (SSH, SFTP, FTPS, FTP, AS2)
No	EBS volume	1. **Persistent** block storage 2. Can attach to any instance **in the same availability zone** 3. HDD or SSD 4. Can be encrypted 5. Snapshot persisted to S3 6. Data persistence independent from instance status
Yes	Amazon EFS	1. File system storage for Linux based 2. Fully managed 3. Scaling up and down automatically 4. Supports NFS 5. Mount the FS to the EC2 instance
Yes	Amazon FSx for Windows File Server	1. File system for windows 2. NTFS 3. Integrates with MS Active Directory and supports Windows Access Control Lists (ACLs)

		COMPUTE	
No	**Amazon Elastic Compute Cloud (Amazon EC2)**	**Virtual Machine**	
		1. Can scale up or down as needed	
Yes	EC2 Image Builder	1. Produces secure, validated and up to date images 2. Enforces version control	
No	AWS Compute Optimizer	1. Recommends optimal instance 2. Analyses workload and makes recommendation	
No	**Amazon Elastic Container Service (Amazon ECS)**	**Container**	
No	**Amazon Elastic Kubernetes Service (Amazon EKS)**	Container	
No	**Amazon Lightsail**	Virtual Private Server (VPS)	
No		Platform as Service (PaaS)	

	AWS Elastic Beanstalk	
No	AWS Lambda	Serverless
No	AWS Fargate	Serverless
DATABASE		
Yes	Amazon RDS	1. Relational database 2. 7 choices including Aurora 3. Uses Amazon EBS for database and log storage (done within the RDS instance)
Yes	Aurora	1. Full MySQL/PostgreSQL compatibility 2. Multi-AZ deployment with Aurora Replicas
Yes	Amazon DynamoDB	1. Key-value and document data models 2. MongoDB compatibility
Yes	DocumentDB	1. JSON Document database 2. Different from DynamoDB 3. MongoDB compatible
Yes		1. Graph database

	Amazon Neptune	
Yes	Amazon Keyspaces	1. Wide column data model 2. Apache Cassandra compatible
Yes	Amazon ElastiCache	
Yes	Amazon Timestream	1. Timeseries database
Yes	Amazon Quantum Ledger Database (Amazon QLDB)	1. Ledger database 2. Tracks every application change
Yes	Amazon MemoryDB for Redis	1. Redis compatible 2. In memory database service
Yes		1. Data warehousing service 2. Has serverless option

	 Amazon Redshift	
Yes	 AWS DMS	1. Migration and replication service 2. Helps moving database to AWS
	NETWORKING	
	COMPONENTS	
No	 Amazon VPC	1. Isolated virtual network 2. Belongs to ONE region 3. Sized by range of IP addresses (=CIDR block)
No		**Public Subnet** 1. When associated to an internet gateway, it has access to internet 2. Instances in a public subnet require a public and private IP address
No		**Private Subnet** 1. No direct access to internet
No		**Elastic IP address** 1. Public 2. Static 3. Associated with 1 instance 4. Can be transferred to another instance
No	 172.16.0.0 172.16.1.0 172.16.2.0	**Route table**
No		**NAT gateway**

		A NAT gateway is a Network Address Translation (NAT) service. You can use a NAT gateway so that instances in a private subnet can connect to services outside your VPC but external services cannot initiate a connection with those instances.
No		**Network ACL (Access Control List)** An access control list (ACL) is a list of rules that specifies which users or systems are granted or denied access to a particular object or system resource.
No		**AWS Network Firewall**
No		**Elastic Network Interface**
No		**Interface VPC endpoint**
No		**Gateway load balancer**
No	Site-to-Site VPN	1. Creates a secure connection an on-premises gateway and AWS virtual private OR transit gateway 2. Creates 2 encrypted tunnels for each connection
No	AWS Global Accelerator	1. Accelerate site-to-site VPN connection

No		1.
	Transit Gateway	
No		**Transit Gateway Attachment**
Yes	Direct Connect	1. Dedicate and private VLAN 2. Extend on-premises network

	TROUBLESHOOTING	
No		**Reachability analyser** Test connectivity between a source and destination resources in a VPC
No		**Network Access analyser** Identify unintended network access to your resources on AWS
No		**Traffic Mirroring** Make a copy of network traffic to send to security and monitoring appliances.

	SECURITY	
No		**AWS Identity and Access Management (IAM)**
No		**AWS IAM Identity Center (successor to AWS Single Sign-On)** 1. Create/connect identities and manage access centrally across AWS accounts 2. Unified administration

No		**AWS Security Token Service** 1. Web API to request temporary access 2. Credentials can be used by IAM users, federated users and applications
Yes		**Amazon Cognito** 1. Authentication, authorization and user management 2. Federated identities
Yes	AWS Organizations	1. Account management service to consolidate AWS accounts 2. Hierarchical grouping of accounts 3. Central policy control
Yes	AWS Control Tower	1. Facilitate setup and governance over multi-AWS accounts 2.
No	AWS KMS	1. Create/manage cryptographic keys 2. Uses HSM to protect the keys 3. Set usage policies by users
?		**AWS WAF** Web application firewall
?		**Macie** Service that discovers sensitive data in S3
?		**Amazon inspector**

		Vulnerability management service on EC2, ECR and AWS lambda.
?		**Amazon Detective** Analyse, investigate and identify the root cause of security findings or suspicious activities Collect logs automatically from AWS resources.
?		**AWS Security Hub** Collects security data across AWS accounts
Yes	Trusted Advisor	Provides recommendations based on AWS best practices: 1. cost optimization 2. security 3. fault tolerance 4. service limits 5. performance improvement
		1.