Databases are used to store large quantities of data that applications can draw on to help them perform various functions. A relational database uses tables to store data. It is called relational because it organizes data points with defined relationships.

Administrators control Amazon RDS with the AWS Management Console, Amazon RDS API calls or the AWS Command Line Interface. They use these interfaces to deploy database instances to which users can apply specific settings.

Amazon provides several instance types with different combinations of resources, such as CPU, memory, storage options and networking capacity. Each type comes in a variety of sizes to suit the needs of different workloads.

Amazon RDS features include the following:

**Replication**. RDS uses the **Replication** feature to create **read replicas**. These are read-only copies of database instances that applications use without altering the original **production database**. Administrators can also enable automatic failover across multiple availability zones through **RDS Multi-AZ deployment** and with **synchronous data replication**.

Diagram

Description automatically generated

Storage. RDS provides three types of storage:

General-purpose solid-state drive (SSD). Amazon recommends this storage as the default choice.

Provisioned input-output operations per second (IOPS). SSD storage for I/O-intensive workloads.

Magnetic. A lower cost option.

Monitoring. The Amazon CloudWatch service enables managed monitoring. It lets users view capacity and I/O metrics.

Patching. RDS provides patches for whichever database engine the user chooses.

Backups. Another feature is failure detection and recovery. RDS provides managed instance backups with transaction logs to enable point-in-time recovery. Users pick a **retention period** and restore databases to any time during that period. They also can manually take snapshots of instances that remain until they are manually deleted.

Graphical user interface, text, application, email

Description automatically generated

Amazon RDS helps organizations handle relational database management tasks such as migration, backup, recovery and patching. Some of the main features of Amazon RDS are replication, high performance storage and failure detection.

One of the biggest advantages of Amazon RDS is its ease of use. It lets administrators manage multiple database instances without having to learn other database management tools.

These features enable RDS to help organizations cut costs that come from time-consuming database administration tasks and manage the hidden costs that come with using high-performance storage in AWS.

**Synchronous replication** is the process of copying data over a **storage area network,** **local area network**, or **wide area network** so there are multiple, current copies of the data. **Synchronous replication** is mainly used for **high-end transactional applications** that need instant failover if the primary node fails.

is a process of writing data to two systems at once, rather than one at a time. It allows for simultaneous updates of multiple repositories and is often used with a storage area network (SAN), local area network (LAN), wireless network, or other types of segmented system.