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✓ 100 XP

# Explore the resource hierarchy

3 minutes

The Azure Cosmos DB account is the fundamental unit of global distribution and high availability. Your Azure Cosmos DB account contains a unique DNS name and you can manage an account by using the Azure portal or the Azure CLI, or by using different language-specific SDKs. For globally distributing your data and throughput across multiple Azure regions, you can add and remove Azure regions to your account at any time.

Elements in an Azure Cosmos DB account

An Azure Cosmos DB container is the fundamental unit of scalability. You can virtually have an unlimited provisioned throughput (RU/s) and storage on a container. Azure Cosmos DB transparently partitions your container using the logical partition key that you specify in order to elastically scale your provisioned throughput and storage.

Currently, you can create a maximum of 50 Azure Cosmos DB accounts under an Azure subscription (this is a soft limit that can be increased via support request). After you create an account under your Azure subscription, you can manage the data in your account by creating databases, containers, and items.

The following image shows the hierarchy of different entities in an Azure Cosmos DB account:
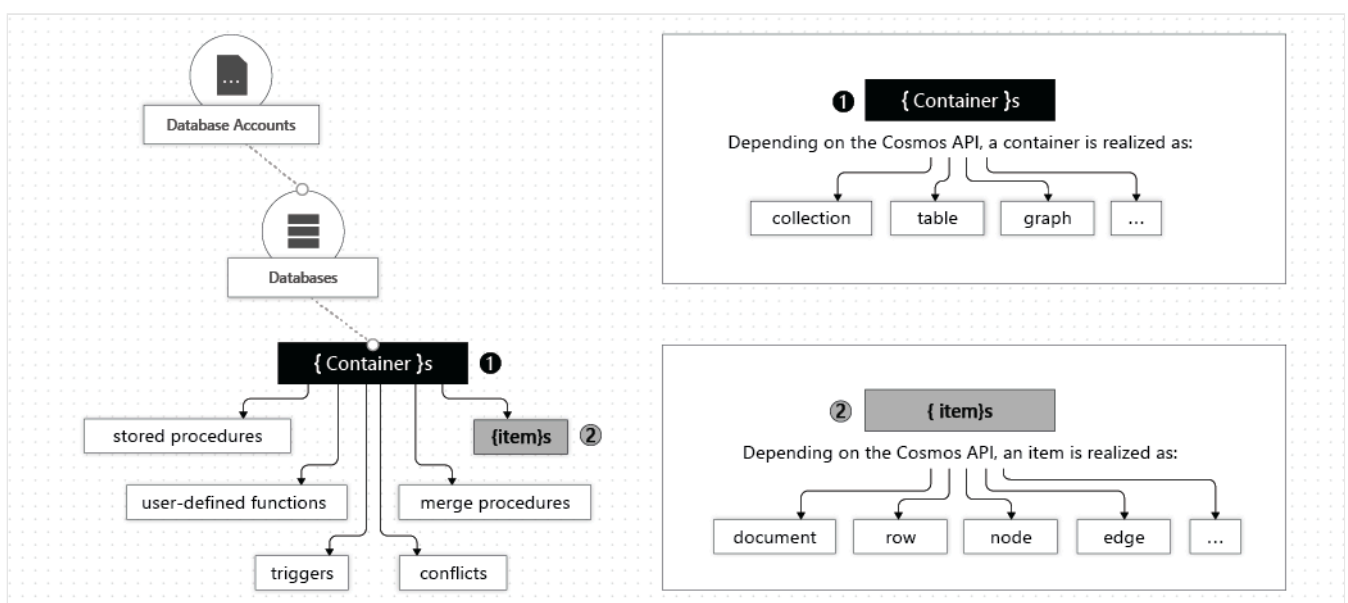
Azure Cosmos DB databases

You can create one or multiple Azure Cosmos DB databases under your account. A database is analogous to a namespace. A database is the unit of management for a set of Azure Cosmos DB containers.

Azure Cosmos DB containers

An Azure Cosmos DB container is the unit of scalability both for provisioned throughput and storage. A container is horizontally partitioned and then replicated across multiple regions. The items that you add to the container are automatically grouped into logical partitions, which are distributed across physical partitions, based on the partition key. The throughput on a container is evenly distributed across the physical partitions.

When you create a container, you configure throughput in one of the following modes:

- **Dedicated provisioned throughput mode**: The throughput provisioned on a container is exclusively reserved for that container and it's backed by the SLAs.

- **Shared provisioned throughput mode**: These containers share the provisioned throughput with the other containers in the same database (excluding containers that have been configured with dedicated provisioned throughput). In other words, the provisioned throughput on the database is shared among all the "shared throughput" containers.

A container is a schema-agnostic container of items. Items in a container can have arbitrary schemas. For example, an item that represents a person and an item that represents an automobile can be placed in the same container. By default, all items that you add to a container are automatically indexed without requiring explicit index or schema management.

Azure Cosmos DB items

Depending on which API you use, an Azure Cosmos DB item can represent either a document in a collection, a row in a table, or a node or edge in a graph.

Next unit: Explore consistency levels

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