



Get started with Azure Cosmos DB for NoSQL



Agenda



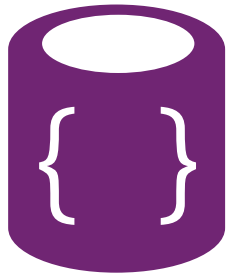
- Introduction to Azure Cosmos DB for NoSQL
- Try Azure Cosmos DB for NoSQL

Introduction to Azure Cosmos DB for NoSQL



NoSQL Concepts

NoSQL databases are defined by these shared characteristics:



Non-relational



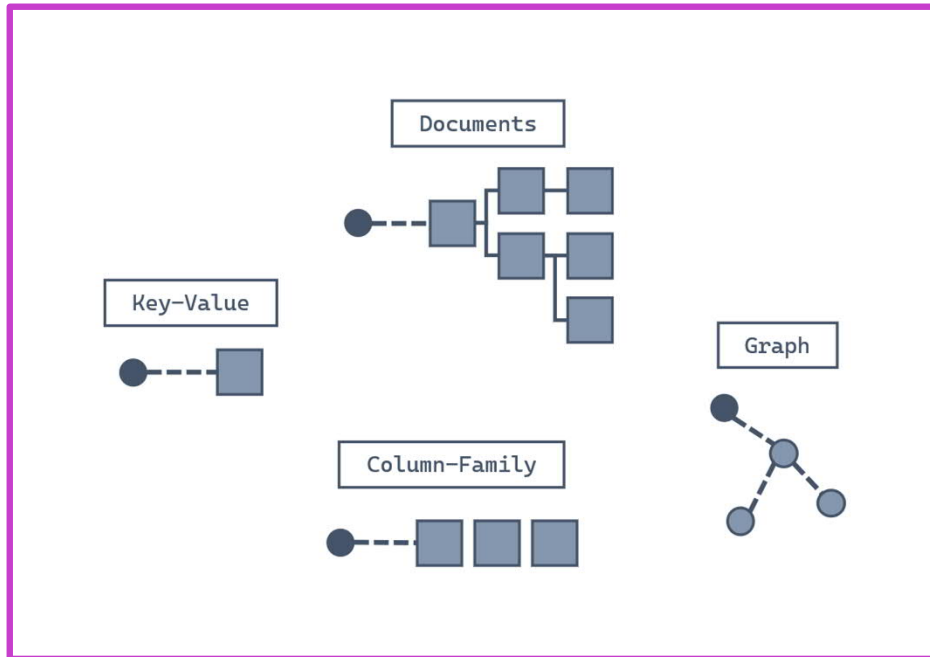
Schema less



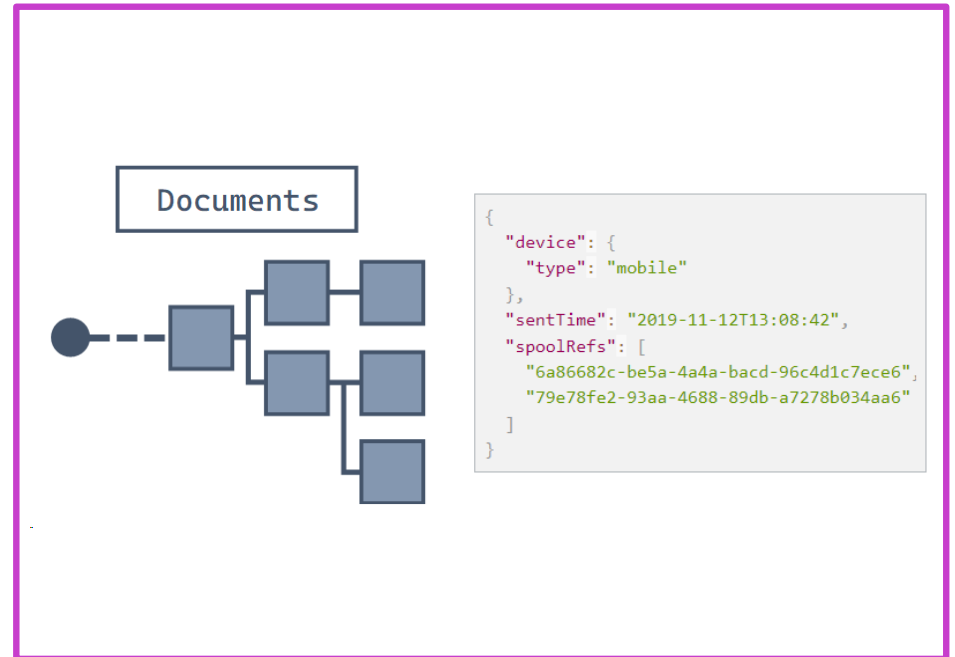
Designed for scale-out

NoSQL data models

NoSQL data models supported
by Azure Cosmos DB



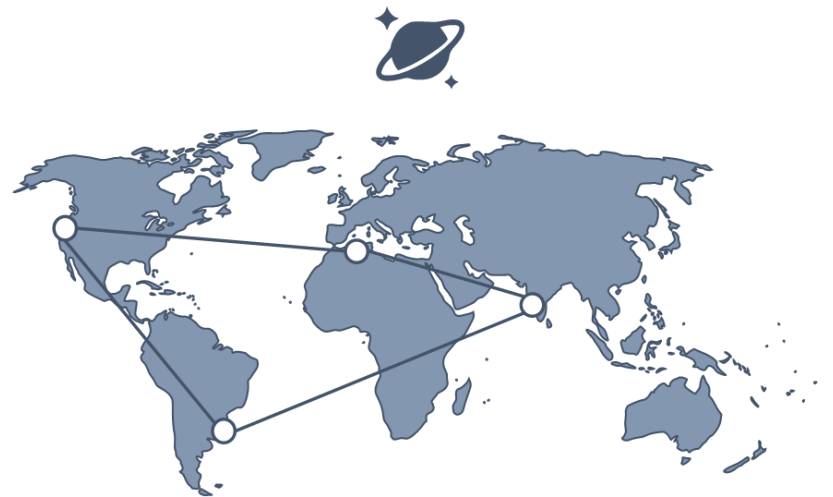
Azure Cosmos DB for NoSQL, the NoSQL
document data model and JSON documents



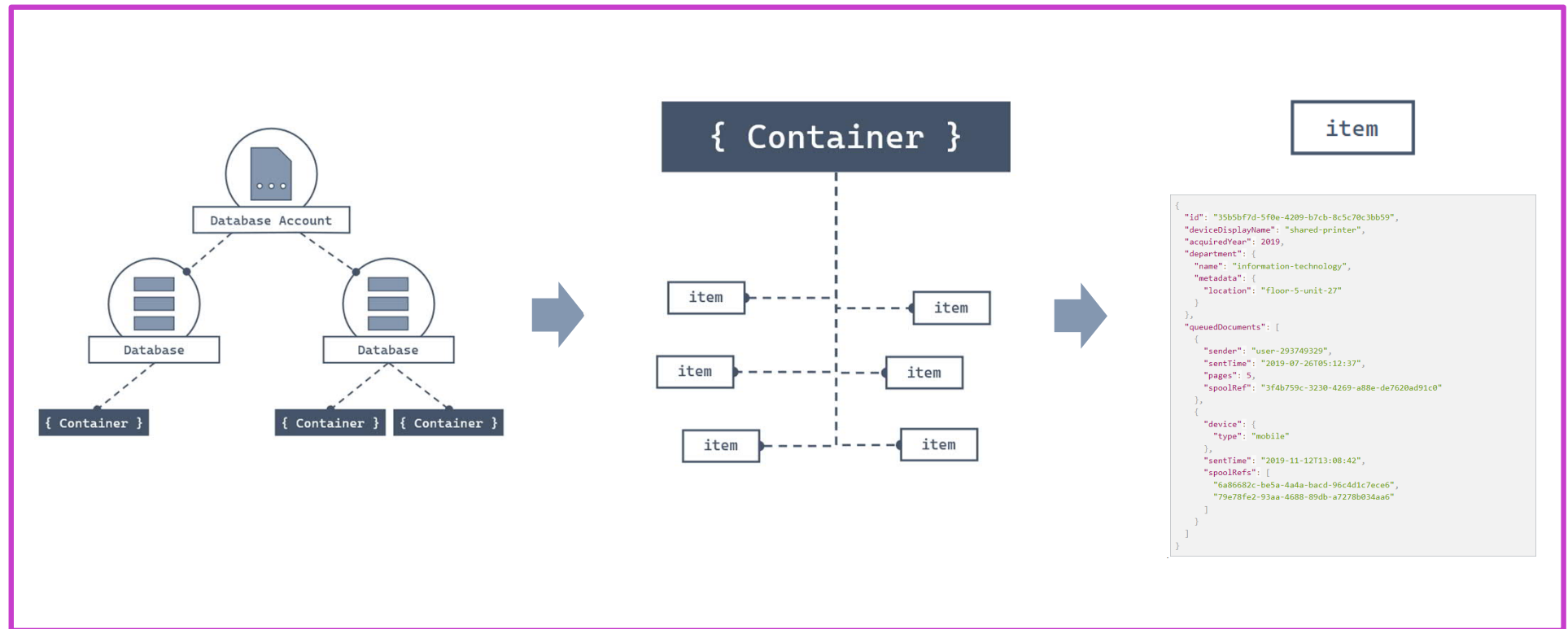
What is Azure Cosmos DB for NoSQL?

It's a fast fully managed NoSQL database service that offers:

- Rich querying over diverse data
- Helps deliver configurable and reliable performance
- Is globally distributed
- Enables rapid development
- Guaranteed single-digit millisecond response times
- 99.999-percent availability
- SLAs that cover throughput, consistency, availability, and latency.



What are the components of Azure Cosmos DB for NoSQL?



When should you use Azure Cosmos DB for NoSQL?

To support applications that require a database platform that is:

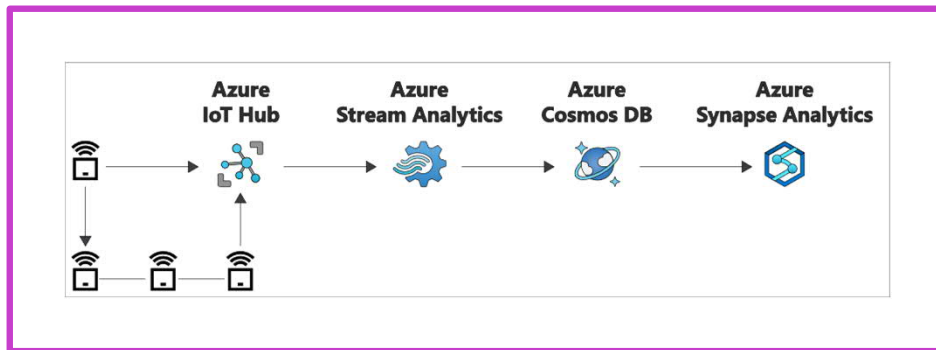
- Flexible
- Has a low response time
- Globally available
- Processing transactions at massive volume or velocity
- Elastically scalable to meet the application needs

To support application workloads like:

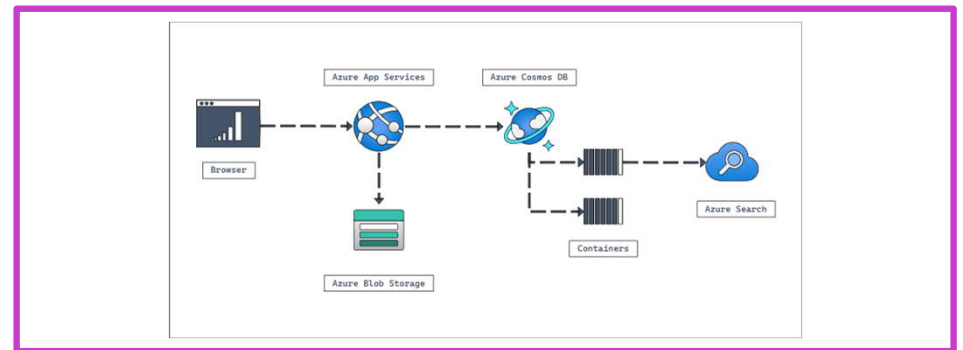
- Web
- Retail
- IoT
- Gaming
- Mobile

Common use cases for the Azure Cosmos DB for NoSQL

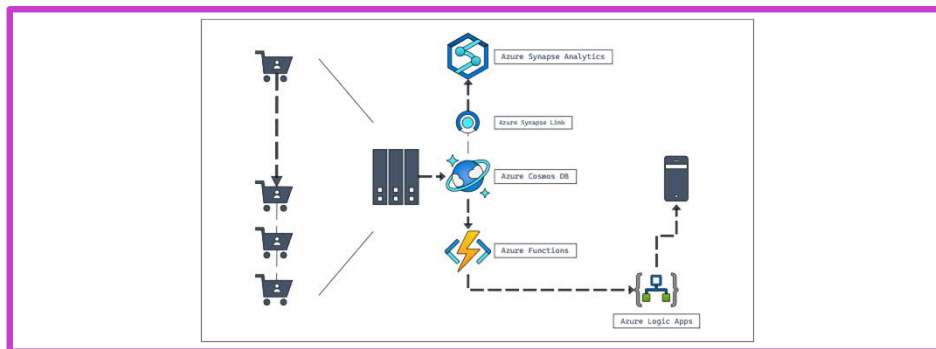
IoT/telemetry



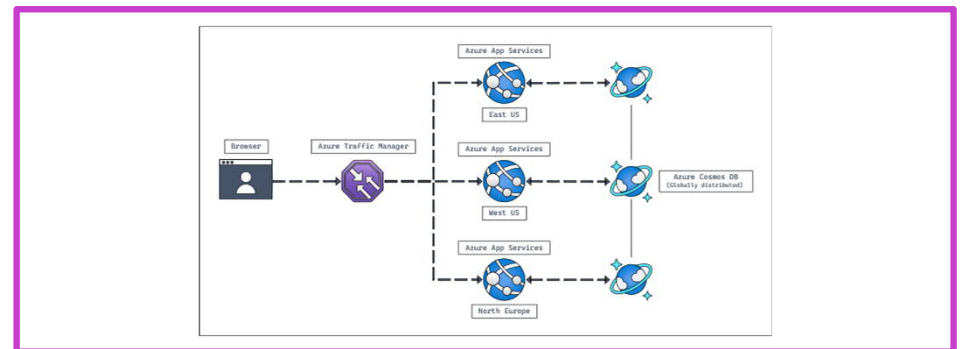
Retail/marketing



Online Storefront



Web/mobile

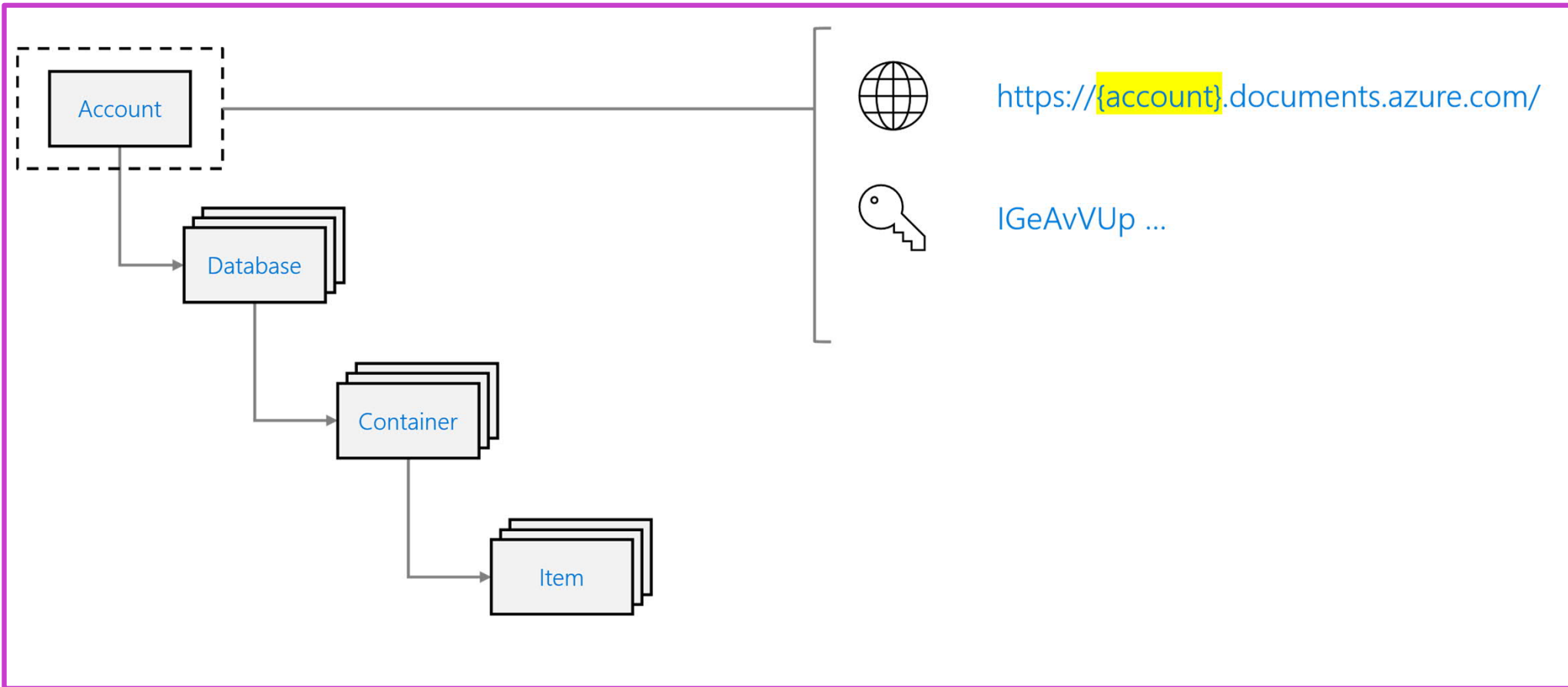


Try Azure Cosmos DB for NoSQL

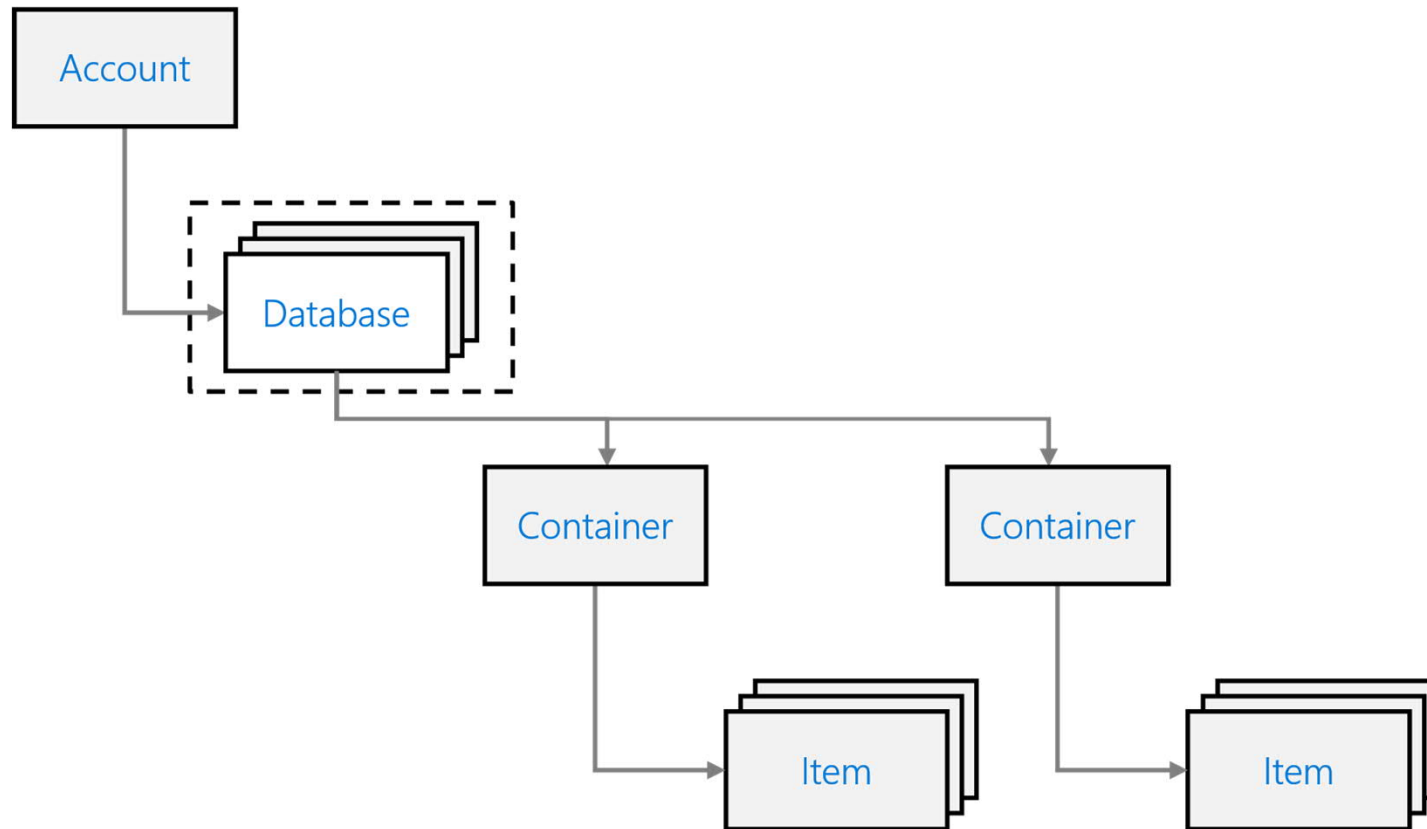
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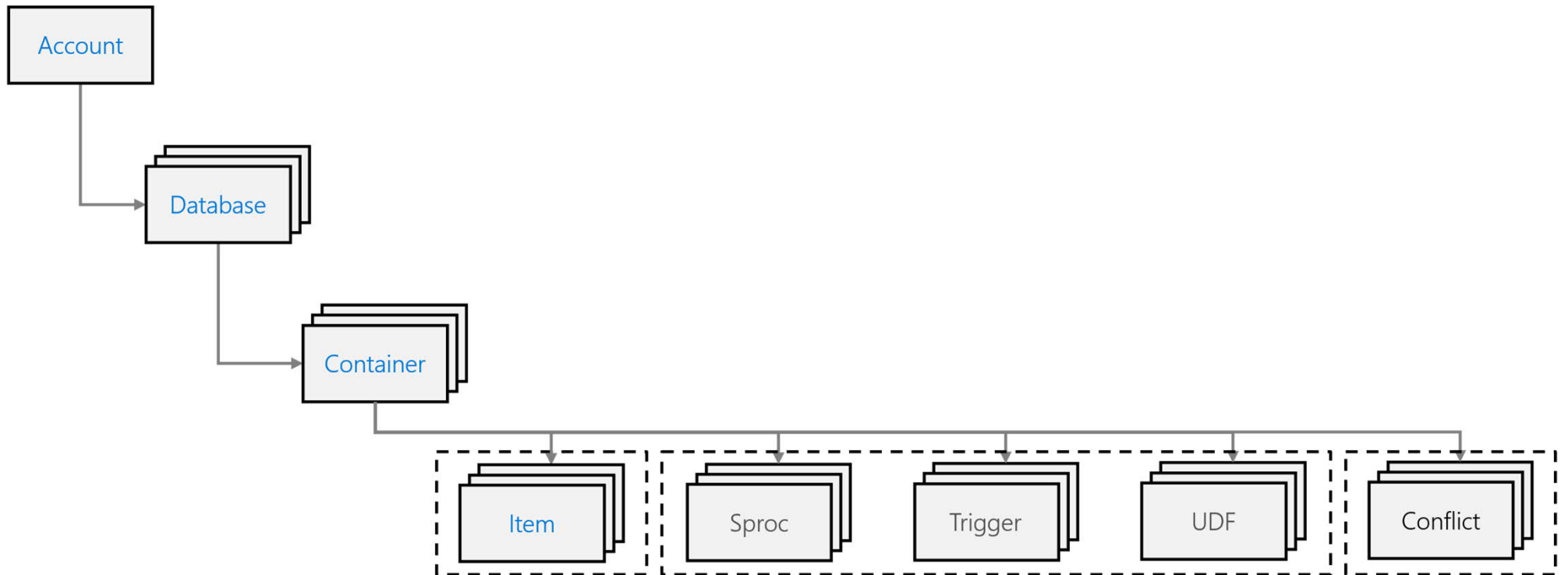
Explore Azure Cosmos DB for NoSQL resources



Explore Azure Cosmos DB for NoSQL resources



Explore Azure Cosmos DB for NoSQL resources



Creating a new Azure Cosmos DB for NoSQL account

Which API best suits your workload?

Azure Cosmos DB is a fully managed NoSQL database service for building scalable, high performance applications. [Learn more](#)

To start, select the API to create a new account. The API selection cannot be changed after account creation.

Azure Cosmos DB for NoSQL

Azure Cosmos DB's core, or native API for working with documents. Supports fast, flexible development with familiar SQL query language and client libraries for .NET, JavaScript, Python, and Java.

[Create](#) [Learn more](#)

Azure Cosmos DB for MongoDB

Fully managed database service for apps written for MongoDB. Recommended if you have existing MongoDB workloads that you plan to migrate to Azure Cosmos DB.

[Create](#) [Learn more](#)

Azure Cosmos DB for Apache Cassandra

Fully managed Cassandra database service for apps written for Apache Cassandra. Recommended if you have existing Cassandra workloads that you plan to migrate to Azure Cosmos DB.

[Create](#) [Learn more](#)

Azure Cosmos DB for Table

Fully managed database service for apps written for Azure Table storage. Recommended if you have existing Azure Table storage workloads that you plan to migrate to Azure Cosmos DB.

[Create](#) [Learn more](#)

Azure Cosmos DB for Apache Gremlin

Fully managed graph database service using the Gremlin query language, based on Apache TinkerPop project. Recommended for new workloads that need to store relationships between data.

[Create](#) [Learn more](#)

Azure Cosmos DB for PostgreSQL

Fully-managed relational database service for PostgreSQL with distributed query execution, powered by the Citus open source extension. Build new apps on single or multi-node clusters—with support for JSONB, geospatial, rich indexing, and high-performance scale-out.

[Create](#) [Learn more](#)

Create Azure Cosmos DB Account - Azure Cosmos DB for NoSQL

[Basics](#) [Global Distribution](#) [Networking](#) [Backup Policy](#) [Encryption](#) [Tags](#) [Review](#) [+ create](#)

Azure Cosmos DB is a fully managed NoSQL database service for building scalable, high performance applications. [Try it for free](#), for 30 days with unlimited renewals. Go to production starting at \$24/month per database. [Learn more](#)

Project Details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription *
Resource Group *
[Create new](#)

Instance Details

Account Name *
Location *

Capacity mode ☒ Provisioned throughput ☐ Serverless

[Learn more about capacity mode](#)

With Azure Cosmos DB free tier, you will get the first 1000 RU/s and 25 GB of storage for free in an account. You can enable free tier on up to one account per subscription. Estimated \$64/month discount per account.

Apply Free Tier Discount ☐ Apply ☒ Do Not Apply

Limit total account throughput ☒ Limit the total amount of throughput that can be provisioned on this account.

[?](#) This limit will prevent unexpected charges related to provisioned throughput. You can update or remove this limit after your account is created.

Creating a database, container and item

New Database

* Database id ⓘ

Type a new database id

☒ Provision throughput ⓘ

* Database throughput (autoscale) ⓘ

☒ Autoscale ☐ Manual

Estimate your required RU/s with [capacity calculator](#).

Database Max RU/s ⓘ

4000

Your database throughput will automatically scale from 400 RU/s (10% of max RU/s) - 4000 RU/s based on usage.

Estimated monthly cost (USD) ⓘ: \$35.04 - \$350.40 (1 region, 400 - 4000 RU/s, \$0.00012/RU)

OK

New Container

* Database id ⓘ

☒ Create new ☐ Use existing

Type a new database id

☒ Share throughput across containers ⓘ

* Database throughput (autoscale) ⓘ

☒ Autoscale ☐ Manual

Estimate your required RU/s with [capacity calculator](#).

Database Max RU/s ⓘ

4000

Your database throughput will automatically scale from 400 RU/s (10% of max RU/s) - 4000 RU/s based on usage.

Estimated monthly cost (USD) ⓘ: \$35.04 - \$350.40 (1 region, 400 - 4000 RU/s, \$0.00012/RU)

* Container id ⓘ

e.g., Container1

* Partition key ⓘ

/pk

Unique keys ⓘ

+ Add unique key

Query

Items

x

New Item

Save

Discard

Upload Item

SELECT * FROM c

Edit Filter

id

/pk

1

2

3

Load more

"id": "replace_with_new_document_id"

Lab – Create an Azure Cosmos DB for NoSQL account

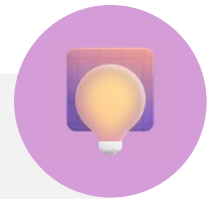
Create a new Azure Cosmos DB account

Use the Data Explorer to create new items

Use the Data Explorer to create a new database and container

Use the Data Explorer to issue a basic query

Review



- 1 Which API is considered the "native API" for Azure Cosmos DB?
 - ☐ MongoDB.
 - ☐ Cassandra.
 - ☒ NoSQL.
- 2 Which property is required to be specified when creating a new Azure Cosmos DB for NoSQL container?
 - ☐ Time-to-live.
 - ☒ Partition key path.
 - ☐ Indexing policy.
- 3 Which one of these resources is a child resource of an Azure Cosmos DB for NoSQL account and parent resource for a container?
 - ☐ Triggers
 - ☒ Database
 - ☐ Stored procedure

