Create a Cosmos DB instance for Table

Azure Cosmos DB offers a multi-model database service for large-scale applications. Among its supported data models is the Table API, which provides a NoSQL data store with automatic scaling, global distribution, and fast access to data using the familiar Azure Table Storage API.

1. Sign in to the Azure Portal:
    a. Go to Azure Portal and log in with your account credentials.
2. Create a new Azure Cosmos DB account:
    a. In the Azure portal left-side navigation pane, click on "Create a resource."
    b. In the "New" window, click on "Databases" and then select "Azure Cosmos DB."
3. Configure the new Cosmos DB account:
    a. Subscription: Choose your Azure subscription.
    b. Resource Group: Create a new resource group or select an existing one.
    c. Account Name: Enter a unique name for your Cosmos DB account. This will also be a part of your Cosmos DB endpoint.
    d. API: Choose "Azure Table" as the API for the Cosmos DB account. This determines which API you will use to interact with the data stored in this Cosmos DB account.
    e. Location: Choose a location/region where you want your DB to reside.
    f. Capacity Mode: Decide between "Provisioned throughput" or "Serverless". For most cases, provisioned throughput is suitable, but if you have unpredictable workloads, you might consider serverless.
    g. Account Type: Choose between "Production" and "Non-Production".
    h. Geo-Redundancy: Enable or disable this based on your need for global distribution.
    i. Multi-region Writes: Enable or disable this based on your need for automatic failover.
4. Review advanced settings (optional):
    a. You can review and modify additional settings like networking, tags, or security by navigating through the tabs. For the purpose of creating a basic Cosmos DB for Table, default settings are usually sufficient.
5. Review + Create:
    a. After filling in the details, click the "Review + Create" button. Azure will validate the configuration.
    b. Once validation passes, click the "Create" button to deploy the Cosmos DB account.
6. Access the Cosmos DB account:
    a. Once your Cosmos DB account is deployed (this may take a few minutes), navigate to it through the Azure Portal.
    b. In the left-side navigation pane of your Cosmos DB account, click on "Data Explorer."

    c. From here, you can create new tables, add entities to those tables, and perform other operations related to your Table API data.
7. Add Tables:
    a. Inside the Data Explorer, click on "New Table" to create tables as required and then add data/entities to those tables.

Remember, although Azure Cosmos DB's Table API offers the same Table Storage API, there are differences in terms of pricing, scalability, and global distribution features. Ensure that Cosmos DB with Table API aligns with your application's requirements and budget before proceeding.

Create a Table with azure Storage Explorer

1. Install Azure Storage Explorer:
    a. If you haven't already, download and install Azure Storage Explorer for your platform.
2. Open Azure Storage Explorer:
    a. Launch the application.
    b. Connect to Storage account or service:
    c. In the left panel, you'll see a plug icon representing "Connect to Azure Storage". Click on it.
    d. In the "Connect" window, select "Use a connection string" and click the 'Next' button.
3. Get the Connection String:
    a. Log in to the Azure Portal.
    b. Navigate to your Azure Cosmos DB account.
    c. In the left-side navigation pane, under "Settings", select "Connection String".
    d. Copy the PRIMARY or SECONDARY connection string. (Both work, but typically you'll use the primary unless there's a specific need for the secondary.)
4. Enter the Connection String:
    a. Go back to Azure Storage Explorer.
    b. Paste the copied connection string into the "Connection string" box.
5. Click the 'Next' button.
    a. Review the connection summary and click the 'Connect' button.
6. Access Azure Cosmos DB Tables
    a. You should now see your tables listed. From here, you can browse, query, add, or modify data in your tables.
7. Create a table
8. Add a new entry in the table

Explore Azure Cosmos DB Table Features

1. Global Data Replication:
    a. Navigate to your Azure Cosmos DB account within the Azure Portal.
    b. Select the "Replicate data globally" section.
    c. Here, you'll see a map indicating your current and available regions.
    d. Set Up Multiple Regions:
        i. Add additional regions by clicking on them in the map.
    e. Enable Multi-Region Writes:
        i. Toggle the option to enable writes in multiple regions. This ensures that your data can be written to and read from multiple geographic locations, enhancing availability and performance.
2. Backup and Restore:
    a. From your Cosmos DB account pane, select "Backup and Restore".
    b. Backup Interval:
        i. Observe the frequency at which your data is being backed up.
    c. Backup Retention:
        i. Check how long each backup is retained.
    d. Backup Storage Redundancy Options:
        i. Review the available storage redundancy options to understand the resiliency of your backup storage.
3. Consistency Levels:
    a. Navigate to "Default Consistency" in your Cosmos DB account.
    b. For each consistency model (e.g., Strong, Bounded Staleness, Session, Consistent Prefix, Eventual), observe the lag time between regions. This lag time represents the latency in data propagation between your primary and secondary regions, which varies based on the chosen consistency model.