**Task: S3 Bucket Cross-Region Access Setup**

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This guide provides a comprehensive walkthrough of setting up Cross-Region Replication (CRR) for an Amazon S3 bucket. This process allows for the automatic, asynchronous copying of objects to a destination bucket in a different AWS Region, enhancing data durability and reducing latency for geographically dispersed users.

**## 1. Prerequisites and Bucket Creation**

Before setting up a replication rule, you must create and configure both a source and a destination bucket in different AWS Regions.

* **Create and Configure the Source Bucket**
  + **Name and Region**: Create a bucket in your primary region. For this example, a bucket named crr-ap-south-1 is created in the Asia Pacific (Mumbai) region.
  + **Enable Versioning**: Bucket versioning must be enabled on the source bucket to allow for the replication of objects.
* **Create and Configure the Destination Bucket**
  + **Name and Region**: Create a second bucket in a different AWS region. In this example, crr-us-east-1 is created in the US East (N. Virginia) region.
  + **Enable Versioning**: Just like the source bucket, the destination bucket must also have versioning enabled.

**## 2. Creating the Replication Rule**

With the source and destination buckets prepared, you can now create a replication rule.

* **Step 1: Navigate to Replication Rules**
  + In the S3 console, open your source bucket (crr-ap-south-1).
  + Go to the **Management** tab and click **Create replication rule**.
* **Step 2: Configure Replication Rule Details**
  + **Rule Name**: Provide a descriptive name for your rule (e.g., Backup-to-Mumbai-Region).
  + **Status**: Ensure the rule is **Enabled**.
* **Step 3: Define Scope and Destination**
  + **Scope**: Choose whether to apply the rule to all objects in the bucket or to limit it by prefix or tags.
  + **Destination**: Select **Choose a bucket in this account**, then browse and select your destination bucket (crr-us-east-1).
* **Step 4: Configure IAM Role**
  + S3 needs permissions to replicate objects on your behalf. Select **Create new role** to have S3 automatically create an IAM role with the necessary permissions.
* **Step 5: Save and Verify**
  + Review your settings and save the rule. Once the rule is active, any new objects uploaded to the source bucket will be automatically replicated to the destination bucket.

