Migrate the MSSQL Databases from On-Prem VM to AWS Cloud EC2 Instances.

Step 1:

Before migrating a database to an AWS EC2 instance, there are several items that you should verify to ensure a successful migration. Here are some key things to consider:

1. Database Compatibility: Check that the version of the database you are migrating is compatible with the EC2 instance's operating system and the database software that will be installed on it.
2. EC2 Instance Configuration: Ensure that the EC2 instance you choose has sufficient resources, such as CPU, RAM, and storage to handle the database workload.
3. Security Group Configuration: Set up security groups to restrict access to your database instance, only allowing authorized IP addresses or network ranges.
4. Networking: Ensure that your EC2 instance is connected to the appropriate VPC and subnet, and that the security group associated with the instance is configured correctly.
5. Analyze the IOPS on the On-prem and configure same amount of IOPS on AWS cloud.
6. Backup and Restore Processes: Verify that you have a reliable backup and restore process in place to minimize data loss in the event of a migration issue or other disaster.
7. Data Migration Method: Determine the best way to migrate your database to the EC2 instance, such as using a tool like AWS Database Migration Service, or exporting and importing data using standard database tools.

Step 2:

1. Set up an Amazon EC2 instance: Launch a new EC2 instance with the appropriate operating system and storage configurations that meet your requirements. You should also make sure that the security group associated with the instance allows access to the SQL Server port.
2. Set up an Amazon S3 bucket: Create a new S3 bucket to store the backup files of your on-premises SQL Server database.
3. Backup the on-premises SQL Server database: Use SQL Server Management Studio (SSMS) or another backup tool to create a full backup of your on-premises SQL Server database. Save the backup file to the S3 bucket created in step 2.
4. Restore the database backup on the EC2 instance: Connect to the EC2 instance using Remote Desktop Protocol (RDP), install SQL Server on the instance, and restore the database backup file to the new SQL Server instance.
5. Configure the SQL Server instance on the EC2 instance: Configure the SQL Server instance on the EC2 instance according to your requirements, including setting up security, logins, and any necessary database maintenance tasks.
6. Test the migrated database: After configuring the SQL Server instance, test the migrated database to make sure it is functioning correctly.
7. Update the application: If your application is already pointing to the on-premises SQL Server database, update the connection string in your application to point to the new database instance running on the EC2 instance.

Step 3:

Database Performance Testing: Perform performance testing to ensure that the database performs well on the new EC2 instance, and that there are no unexpected issues or bottlenecks.

Application Connectivity: Verify that all applications that connect to the database have the correct connection string and that they can connect to the new database instance.

By verifying these items before migrating your database to an AWS EC2 instance, you can help ensure a successful migration with minimal downtime and data loss.