

# Database Migration

When managing production-grade services, the ability to perform reliable and repeatable database migrations is critical. Whether you're applying schema changes, updating seed data, or managing version-controlled transitions, Elestio provides a built-in mechanism to execute migrations safely from the dashboard. This functionality is especially relevant when running containerized database services like ClickHouse, or similar within a managed cluster.

## Need for Migrations

Database migrations are commonly required when updating your application's data model or deploying new features. Schema updates such as adding columns, modifying data types, creating indexes, or introducing new tables need to be synchronized with the deployment lifecycle of your application code.

Migrations may also be needed during version upgrades to introduce structural or configuration changes required by newer database engine versions. In some cases, teams use migrations to apply baseline datasets, adjust permissions, or clean up legacy objects. Running these changes through a controlled migration system ensures consistency across environments and helps avoid untracked manual changes.

## Running Database Migration

To run a database migration in Elestio, start by logging into the [Elestio dashboard](#) and navigating to the **Clusters** section. Select the cluster that contains the target database service. From the **Cluster Overview** page, scroll down until you find the **"Migration"** option.

clickhouse-67xrs

ClickHouse Cluster Running

Open terminal Delete cluster Add node

Overview Nodes Backups Audit

Termination protection Disabled. VM can be powered off and terminated. Protection deactivated

Auto-Failover Disabled. Automatic cluster recovery will not be triggered in case of failure. Auto-Failover deactivated

Nodes 2 Nodes: 1 Primary, 1 Replica Add node

Database Admin Display your database credentials Display DB Credentials

Admin Display your software credentials Display Admin UI

Support plan Level1 Upgrade plan

Resync Cluster Resync cluster on all nodes. Resync Cluster

Migration Migrate database Show migration logs Migrate Database

Clicking this option will open the migration workflow, which follows a **three-step process**: **Configure**, **Validation**, and **Migration**. In the **Configure** step, Elestio provides a migration configuration guide specific to the database type, such as ClickHouse. At this point, you must ensure that your target service has sufficient **disk space** to complete the migration. If there is not enough storage available, the migration may fail midway, so it's strongly recommended to review storage utilization beforehand.

## Migrate database



### ClickHouse migration configuration guide

Before you start the migration, you need to ensure that your target service has enough disk space to migrate your database.

Cancel

Get started

Once configuration prerequisites are met, you can proceed to the **Validation** step. Elestio will check the secondary database details you have provided for the migration.

## Migrate database



Please provide the connection details from your source database

Enter hostname

Enter port

Enter Database name

kaiwalya@elest.io

.....

Back

Run check

If the validation passes, the final **Migration** step will become active. You can then initiate the migration process. Elestio will handle the actual data transfer, schema replication, and state synchronization internally. The progress is tracked, and once completed, the migrated database will be fully operational on the target service.

# Considerations Before Running Migrations

- Before running any migration, it's important to validate the script or changes in a staging environment. Since migrations may involve irreversible changes such as dropping columns, altering constraints, or modifying data careful review and version control are essential.
- In production environments, plan migrations during maintenance windows or low-traffic periods to minimize the impact of any schema locks or temporary unavailability. If you're using replication or high-availability setups, confirm that the migration is compatible with your architecture and will not disrupt synchronization between primary and secondary nodes.
- You should also ensure that proper backups are in place before applying structural changes. In Elestio, the backup feature can be used to create a restore point that allows rollback in case the migration introduces issues.

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