# Data Migration

## Types of Data Migration

There are numerous business advantages to upgrading systems or extending a data center into the cloud. For many firms, this is a very natural evolution. Companies using cloud are hoping that they can focus their staff on business priorities, fuel top-line growth, increase agility, reduce capital expenses, and pay for only what they need on demand.

The following are the major types of data migration:

* **Storage migration.** The process of moving data off existing arrays into more modern ones that enable other systems to access it. Offers significantly faster performance and more cost-effective scaling while enabling expected data management features such as cloning, snapshots, and backup and disaster recovery.
* **Cloud migration.** The process of moving data, application, or other business elements from either an on-premises data center to a cloud or from one cloud to another. In many cases, it also entails a storage migration.
* **Application migration.** The process of moving an application program from one environment to another. May include moving the entire application from an on-premises IT center to a cloud, moving between clouds, or simply moving the application's underlying data to a new form of the application hosted by a software provider.

## How to Plan a Data Migration

Data migration involves 3 basic steps:

1. Extract data
2. Transform data
3. Load data

Moving important or sensitive data and decommissioning legacy systems can put stakeholders on edge. Having a solid plan is a must. We plan to do the data migration in a 7-phase process:

* **Premigration planning.** Evaluate the data being moved for stability.
* **Project initiation.** Identify and brief key stakeholders.
* **Landscape analysis.** Establish a robust data quality rules management process and brief the business on the goals of the project, including shutting down legacy systems.
* **Solution design.** Determine what data to move, and the quality of that data before and after the move.
* **Build & test.** Code the migration logic and test the migration with a mirror of the production environment.
* **Execute & validate.** Demonstrate that the migration has complied with requirements and that the data moved is viable for business use.
* **Decommission & monitor.** Shut down and dispose of old systems.