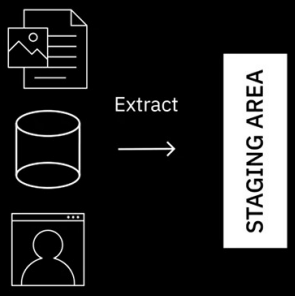
ETL, ELT, and Data Pipelines

Extract, Transform, and Load Process

Extract, Transform, and Load Process is an automated process which includes:

- Gathering raw data
- Extracting information needed for reporting and analysis
- Cleaning, standardizing, and transforming data into usable format
- Loading data into a data repository

Extract, Transform, and Load Process

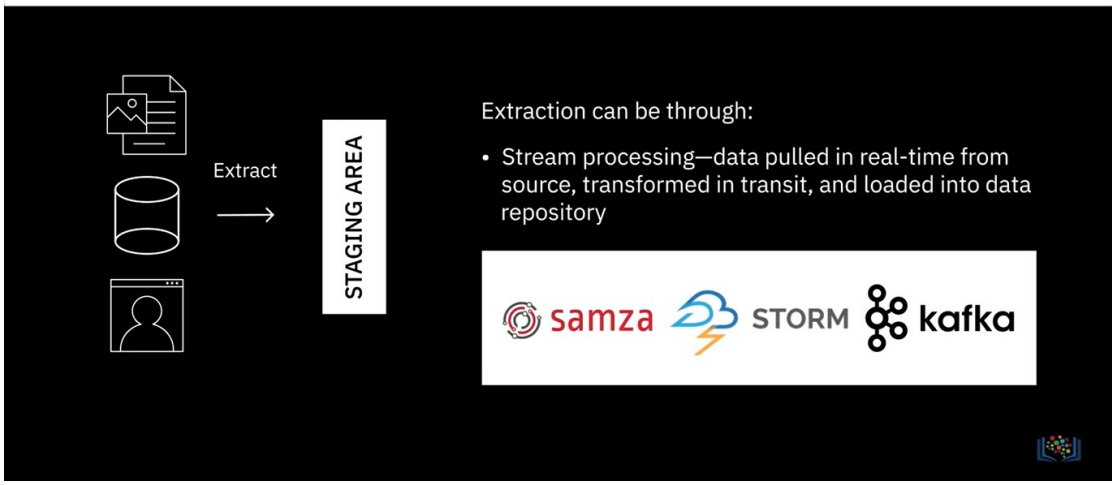


Extraction can be through:

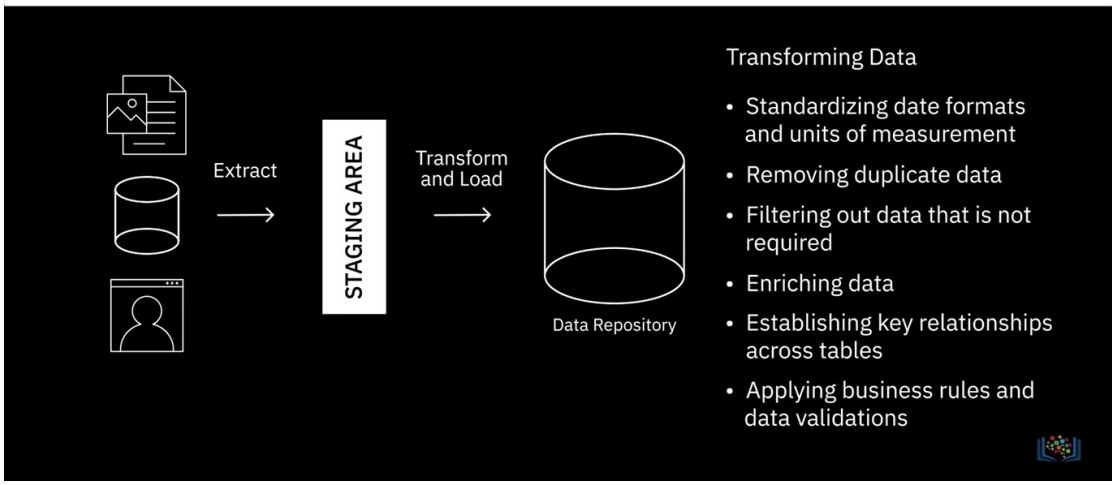
- Batch processing—large chunks of data moved from source to destination at scheduled intervals

BLENDO Stitch

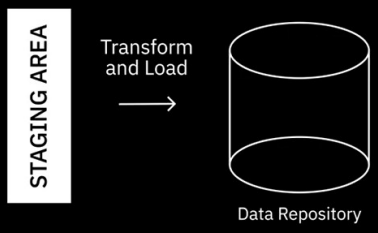
Extract, Transform, and Load Process



Extract, Transform, and Load Process



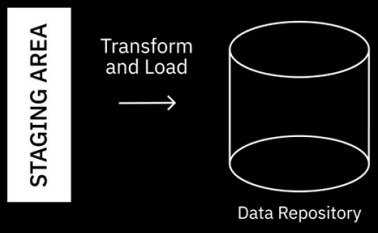
Extract, Transform, and Load Process



Loading is the transportation of processed data in to a data repository. It can be

- Initial loading—populating all of the data in the repository
- Incremental loading—applying updates and modifications periodically
- Full refresh—erasing a data table and reloading fresh data

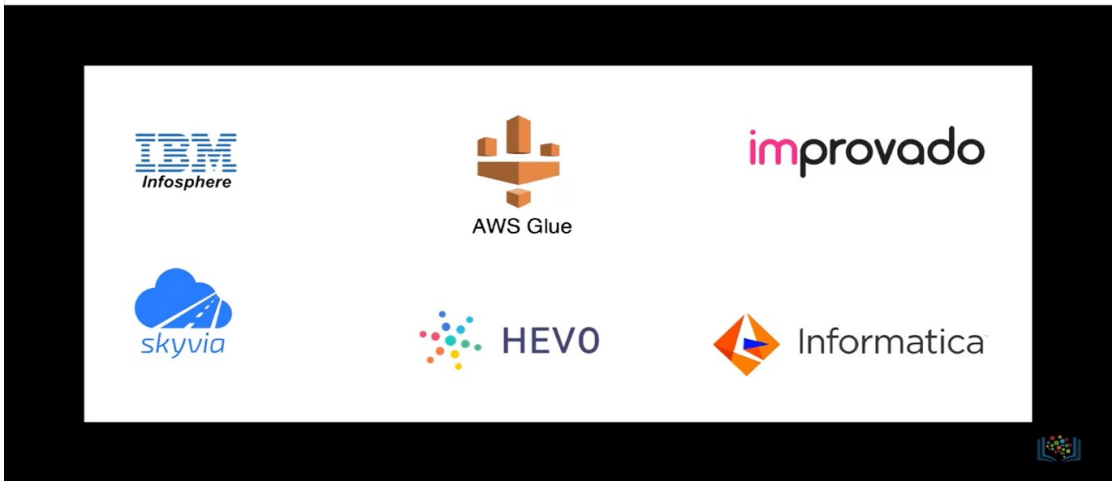
Extract, Transform, and Load Process



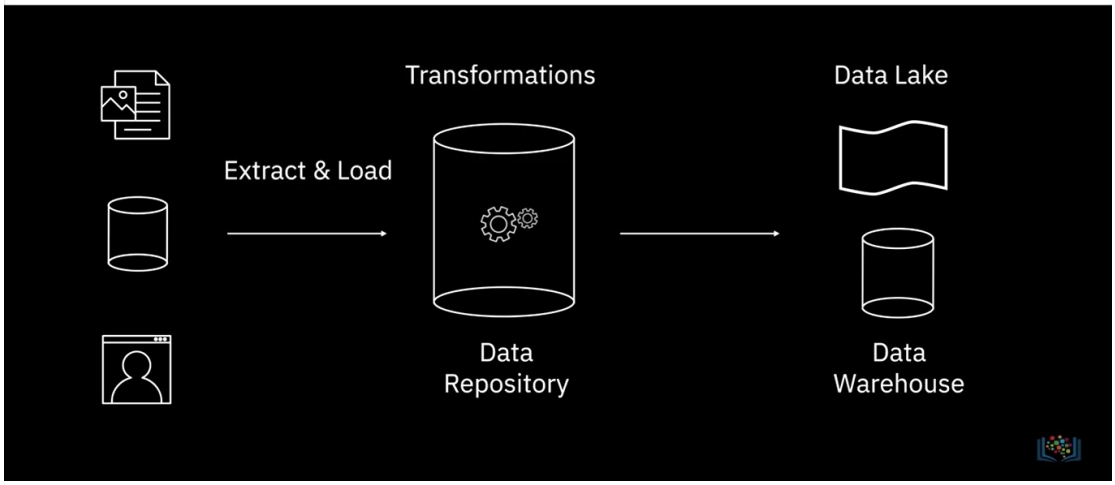
Load Verification includes checks for:

- Missing or null values
- Server performance
- Load failures

Extract, Transform, and Load Process



Extract, Load, and Transform Process



Extract, Load, and Transform Process

Advantages:

- Shortens the cycle between extraction and delivery
- Allows you to ingest volumes of raw data as immediately as the data becomes available
- Affords greater flexibility to analysts and data scientists for exploratory data analytics
- Transforms only that data which is required for a particular analysis so it can be leveraged for multiple use cases

Data Pipelines

A Data Pipeline

- Can be used for both batch and streaming data
- Supports both long-running batch queries and smaller interactive queries
- Typically loads data into a data lake but can also load data into a variety of target destinations—including other applications and visualization tools