13 Best Data Migration Tools For Complete Data Integrity [2021 LIST]

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The list and comparison of the Most Popular Data Migration Tools in 2021:
When we hear the term "Data Migration", questions like – What is data migration? Why is it needed? How is it done? etc., pop up into our mind instantly.

This article will address all the basic queries on Data Migration along with the Top Data Migration Tools that are available in the market. We will be discussing the key features of these top tools in detail for your easy understanding.

What is Data Migration?

As the name itself suggests, data migration is the process in which data is transferred between systems. These transfer systems can be data storage types or file formats. Data from the old system is transferred to a new system through a particular mapping pattern.

Mapping patterns contain designs for data extraction as well as data load activities.
The **design** acts as a translator between the old data formats and the new system formats, thereby ensuring smoother data migration.

Why is Data Migration Needed?

Data migration can be required due to a variety of reasons where we need to move data among systems.

Commonly observed reasons include:

- Application migration
- Maintenance or upgrade activities
- Storage/Server equipment replacements
- Data center migration or relocation
- Website consolidation, etc.

Also Read => **Top 14 Test Data Management Tools**

How is Data Migration done?

Data migration is a tedious task that would require a lot of human resources to complete the activity manually. Hence, it has been automated and is done programmatically with the help of the tools that are designed to serve the purpose.

Programmatic data migration comprises of phrases like extract data from the old system, load data to the new system, data verification to ensure if data is migrated accurately.

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Most Popular Data Migration Tools

In today's high paced IT trends, everybody is expanding or trying to expand, and this, in turn, lays more focus on data migration.

Let's discuss the top 14 tools that are best suited for data migration and are on the hotlist as of 2021.

#1) IRI NextForm

Availability: Licensed

IRI NextForm is available in multiple editions as a standalone data and database migration utility, or as an included capability within the larger IRI data management and ETL platform, Voracity.

You can use NextForm to convert: file formats (like LDIF or JSON to CSV or XML); legacy data stores (like ACUCOBOL Vision to MS SQL targets); data types (like packed decimal to numeric); endian states (big to little), and, database schema (relational to star or data vault, Oracle to MongoDB, etc.).

Key features:
- Reaches, profiles, and migrates data graphically in IRI Workbench, a familiar and free Eclipse IDE for job design, deployment, and management.
- Supports close to 200 legacy and modern data sources and targets, with the ability for more through custom I/O procedures or API calls.
- Uses standard drivers like ODBC, MQTT, and Kafka for data movement, and supports local, cloud and HDFS file systems.
- Data definition and manipulation metadata are in simple, self-documenting 4GL text files that are also represented in dialogs, outlines, and diagrams for easy understanding and modification.
- Builds job tasks or batch scripts for execution, scheduling, and monitoring from the GUI, command line, etc., plus secure team sharing in a Git Hub for version control.

=> **Visit IRI NextForm Website**

#2) Xplenty

Availability: Licensed

Xplenty is a cloud-based data integration platform. It is a complete toolkit for building data pipelines. It provides solutions for marketing, sales, customer support, and developers. These solutions are available for retail, hospitality, and advertising industries. Xplenty is an elastic and scalable platform.

Key Features:
- Xplenty has features for easy migrations. It will help you migrate to the cloud.
- Xplenty provides the features to connect to legacy systems.
- It will help you to connect easily to on-premise, legacy systems, and migrate data from them.
- It supports Oracle, Teradata, DB2, SFTP, and SQL servers.

#3) DBConvert Studio

Availability: Licensed
DBConvert Studio Exclusive Discount: Get 20% off with coupon code **"20OffSTH"** during checkout.
DBConvert Studio by SLOTIX s.r.o. is the most suitable tool for database migration and synchronization. It supports ten the most popular on-premises databases, including SQL Server, MySQL, PostgreSQL, Oracle, and more.

For large data storage volumes, it would be reasonable to consider migrating databases to one of the following cloud platforms like Amazon RDS/ Aurora, MS Azure SQL, Google Cloud SQL, and Heroku Postgres.

Key Features:
- The following three scenarios of data migration are possible: Source to Target migration, One-way synchronization, Bidirectional synchronization.
- All database objects can be renamed during migration.
- Data types can be mapped as for all Target tables as for separate tables.
- Filters can be applied to extract the necessary data from the Source database.
- The source table can be reassigned to an existing Target table.
- Flexible built-in Scheduler can be used to launch tasks at a specific time without GUI running.

=> **Exclusive DBConvert Studio 20% discount for STH Readers – Use coupon code "20OffSTH" during checkout**

#4) AWS Data Migration

Availability: Licensed
AWS Data Migration tool that is owned by Amazon is best suited for cloud data migration. It helps to migrate databases to AWS in a secure and easy manner.

Key features:

- AWS data migration tool supports homogeneous as well as heterogeneous migrations such as Oracle to Oracle (homogeneous) or Oracle to Microsoft SQL(heterogeneous) etc.
- It minimizes the application downtime to a remarkable extent.
- It facilitates the source database to remain fully operational throughout the migration activity.
- It is a very flexible tool and can migrate data among the most widely used commercial & open-source databases.
- It can be used for continuous data migrations due to its high-availability.

Official URL: AWS Data Migration

#5) Informix (IBM)

Availability: Licensed

Informix by IBM is another excellent tool repository that can be used to move data from one IBM database to another IBM database. It primarily supports homogeneous data migrations.

Key features:

- It supports data migration between different operating systems like UNIX or Linux etc.
- It also carries out data migration from one server to another.
- It is capable of performing high-speed data checking transfers with the help of utilities like db export & db import utility, db load utility, on load and on unloading utility, Non-logging tables, high-performance loader etc.

For data **imports from non-Informix sources**, IBM has special tools/utilities to facilitate that too like – External tables, High-Performance Loader (HPL) and IBM Informix Enterprise Gateway products.

Official URL: IBM Informix

#6) Azure DocumentDB

Availability: Licensed

Azure Document DB Data Migration Tool is owned by Microsoft. It is an excellent tool to be used for data movement from various data sources into Azure Document DB.

Key features:
- It can successfully import data from any of the mentioned sources: CSV files, SQL, MongoDB, JSON files, Azure Table storage, Azure Document DB, Amazon Dynamo DB, HBase.
- It supports a wide range of Windows operating systems and .NET frameworks 4.5.1 or higher versions.

Official URL: Azure DocumentDb

#7) Rsync

Availability: Open-source

Rsync is a data migration tool for transferring data across computer systems efficiently.
It migrates data based on the time stamp and file size.

Key features:
- It best works with Unix-like systems and acts as a file synchronization and data transfer program.
- Rsync processes act as a sender and receiver to establish a data transfer connection between peers. It is capable of performing local and remote data transfers by forming peer connections.
- It uses SSH to connect to the remote system and invokes the remote host's Rsync to determine which parts of data need to be transferred over the secure connection.

Official URL: Rsync

#8) EMC Rainfinity

Availability: Licensed

EMC Rainfinity File Management Appliance (FMA) is a product of Dell EMC Corporation. It is designed to help organizations to reduce storage management costs.

Key features:
- It implements automated file archiving algorithms that can perform data migration across heterogeneous servers and NAS environments.
- It comes with easy to use wizards to transparently move files across NAS and CAS.
- Rainfinity introduces files into the environment through simple and light-weight solutions offering an excellent solution to its customers.
- Its prime features include scalability, availability, and flexibility.

Official URL: EMC Rainfinity

#9) Configero Data Loader

Availability: Licensed

Configero's Data Loader for Salesforce is a web-based data loader application. It speeds up the activities of inserting, updating, and deleting Salesforce data. It has much-improved error handling as errors are displayed in the grid, thereby allowing direct editing of errors.

Key features:
- External ID support and ability to save field mappings.
- Comes with integrated error handling and provides basic support for mass editing.
- Powerful multi-column filtering allows users to perform final edits prior to data loading.

Official URL: Configero

#10) Brocade's DMM (Data Migration Manager)

Availability: Licensed

DMM by Brocade is an innovative, powerful and performance-oriented solution for high – performance data migration activities. It works efficiently in heterogeneous storage environments. It stands among the top 15 products of the year.

Key features:
- DMM is a rapid and easily deployed data migration software for enterprise environments
- It gives a high-throughput speed of up to one terabyte (TB) per hour.
- It optimizes migrations across Storage Area Networks (SANs) with an easy setup facility.
- It has a unique feature to determine the migration time in advance. This feature allows the clients to plan time, budget, and resources associated with the migration activity.

Official URL: **Brocade's DMM**

#11) HDS Universal Replicator

HITACHI
Inspire the Next

Availability: Licensed

Hitachi Universal Replicator software provides enterprise-level storage system replication while delivering business continuity at the same time. It is capable of working with heterogeneous operating systems.

Key features:
- It provides powerful data management and recovery solutions and has the ability to replicate data to one or more remote sites.
- HDS replicator reduces resource consumption and provides significant data protection.
- It permits data to be copied from any supported device to any permitted device regardless of the operating systems or protocol differences.

Official URL: **Hitachi Universal Replicator**

#12) Informatica Cloud Data Wizard

Informatica

Availability: Licensed

Informatica Cloud Data Wizard is a flexible next-generation data loader for any type of user.

It is an excellent Salesforce app that allows its users to easily synchronize common as well as custom Salesforce objects with CSV files, with SaaS applications such as NetSuite and cloud storage like Box.

Suggested reading =>> **How to open CSV files**
Key features:
- It comes with Prebuilt integration templates that allow the users to select Salesforce objects.
- Salesforce admins can establish connections with external applications and conduct on-the-fly transformations.
- It provides in-app integration in order to enhance its user productivity.

Official URL: **Informatica Cloud Data Wizard**

#13) Apex Data Loader

Availability: Open source

The Apex Data Loader is a Salesforce product. It is a java based application that can process bulk insert, update and delete commands on all the data objects. Users can build queries to extract data using the Apex Web Services (SOAP) API.

Key features:
- Data Loader is a graphical tool that is easy to use and helps users to get their data into Salesforce objects.
- It is an easy-to-use wizard interface that supports large files with up to millions of rows.
- Provides support for local as well as custom objects.
- It has a built-in CSV file viewer and is supported on windows7 and XP.

Official URL: **Apex Data Loader**

#14) Talend Open Studio

Availability: Open source

Talend open studio is an open architecture product that provides unmatched flexibility to users to solve migration and integration challenges in a better way easily. It is quite easy to adopt for data integration, big data, application integration, etc.

Key features:

- It simplifies ETL processes for large and multiple data sets.
- Maintains the precision and integrity of data throughout the migration.

Official URL: Talend

#15) Rocket Data Migration

Availability: Licensed

Rocket Data Migration solutions include all aspects of data migration comprehensively. It is designed to boost the established migration procedures with the least manual effort. This tool simultaneously provides any level of support required throughout the migration.

Key features:

- Ensures data integrity by safeguarding against data corruption or loss.
- Reduces storage costs and thereby improves return on investment.
- Minimizes the interference of migration activities in meeting the daily objectives.

Official URL: Rocket Data Migration

#16) Data Migrator

Availability: Licensed

Data-migrator is another excellent and powerful automated tool that simplifies ETL processes (extract, transform, load) in a comprehensive manner.

It is a product of information builders organization.

Key features:

- It is capable of working with data from all the platforms and is the most flexible tool.
- Proficient in the expansion of data warehouses, operational data stores, and data marts.

- Enables fast and end-to-end heterogeneous data migration and thus provides seamless integration.
- It comes with a brilliant feature of the management of ETL processes in a secure environment. Administrators can easily monitor and review job statistics, job logs, job queues, start, and schedule jobs. It ensures efficient remote review and administration of migration activities.

Official URL: Data Migrator

Some Additional Tools

#17) JitterBit Data Loader

It is a simplified wizard-based Data Management tool that comes with a graphical point and clicks configuration. It is capable of handling bulk insert, query, delete and load. It keeps on maintaining automatic backups to the jitterbit cloud to manage operations from any device from anywhere.

Official URL: Jitterbit Data Loader

#18) Starfish ETL

It provides a fast, flexible, powerful and precise solution to data migration challenges. The Starfish ETL tool is extremely rapid paced and can move the data seamlessly. It ensures that data is transformed to meet the needs of the new platform where it will be moved.

Official URL: Starfish ETL

#19) Midas

Midas is a well-known tool for carrying out ETLE processes (Extract, Transform, Loading, and Enrichment).

It simplifies the migration activities to a great extent. It enforces seamless integration between Salesforce.com and other ERPs like Oracle E-Business Suite, SAP etc. This tool reduces implementation cost and saves time effectively.

#20) Magento

Magento migration tool is a command-line interface (CLI) based tool that is used for transferring data between Magento interfaces. It verifies uniformity among Magento database structures, tracks the transfer progress, generates logs, and finally runs data verification tests to ensure accuracy.

Official URL: Magento

#21) Microsoft Data Migration Assistant

DMA enables users to work with a modern data platform by detecting compatibility challenges that impact database performance on new servers (SQL Server and Azure SQL Database). It improves performance and reliability in the target environment.

DMA facilitates schema and data movement from the source server to the target server. It is most commonly used for upgrades for most SQL Server versions.

Official URL: Microsoft DMA
#22) Oracle Data Migration Utility
DMU is a distinctive next-generation migration tool that provides an end-to-end solution for database migrations from legacy encodings to Unicode. It comes with a scalable architecture for migration that reduces effort as well as downtime requirements significantly during data conversion.

Post-migration, it runs a validation mode to ensure that data is correctly encoded in Unicode by providing a basic health check on potential problems.

Official URL: Oracle DMU
#23) MassEffect
MassEffect is a flexible ETL tool for Salesforce. It is capable of supporting import/export of advanced file formats like CSV, UDL, XLS, MDB etc. It has many distinctive features like supporting the international characters and full data loading power that make it unique.

Conclusion

We have seen the Top free open source Data Migration Tools along with few equally brilliant extra tools that mainly cover each of the migration categories.

Choose the best-suited solution, depending on which of these tools bring more value and revenue to the organization or customers. To conclude we can say that different tools work best for different situations, and the best match depends on the in-hand task.

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