Load & Go for Db2 Warehouse on the IBM Cloud

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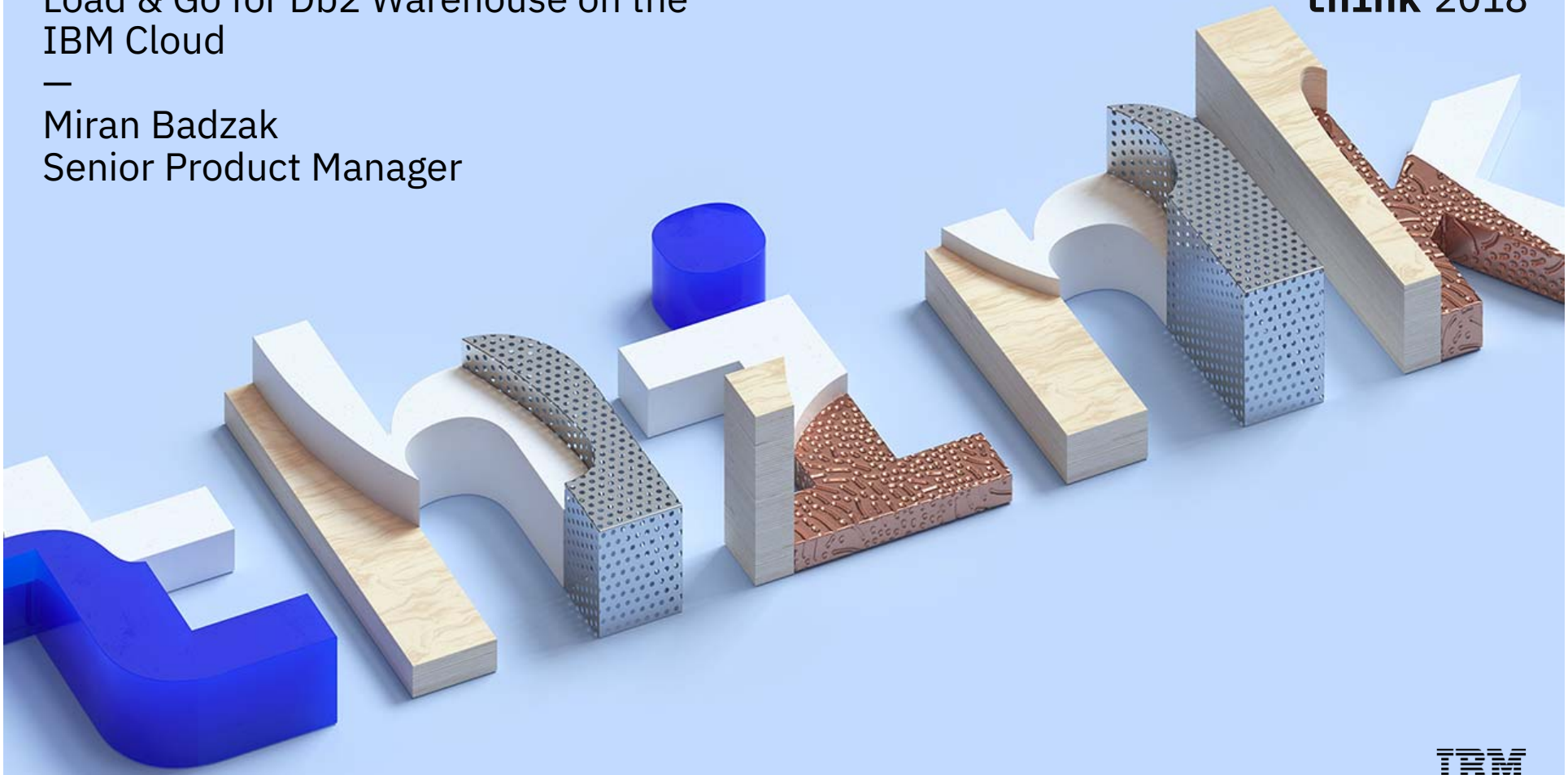
think 2018



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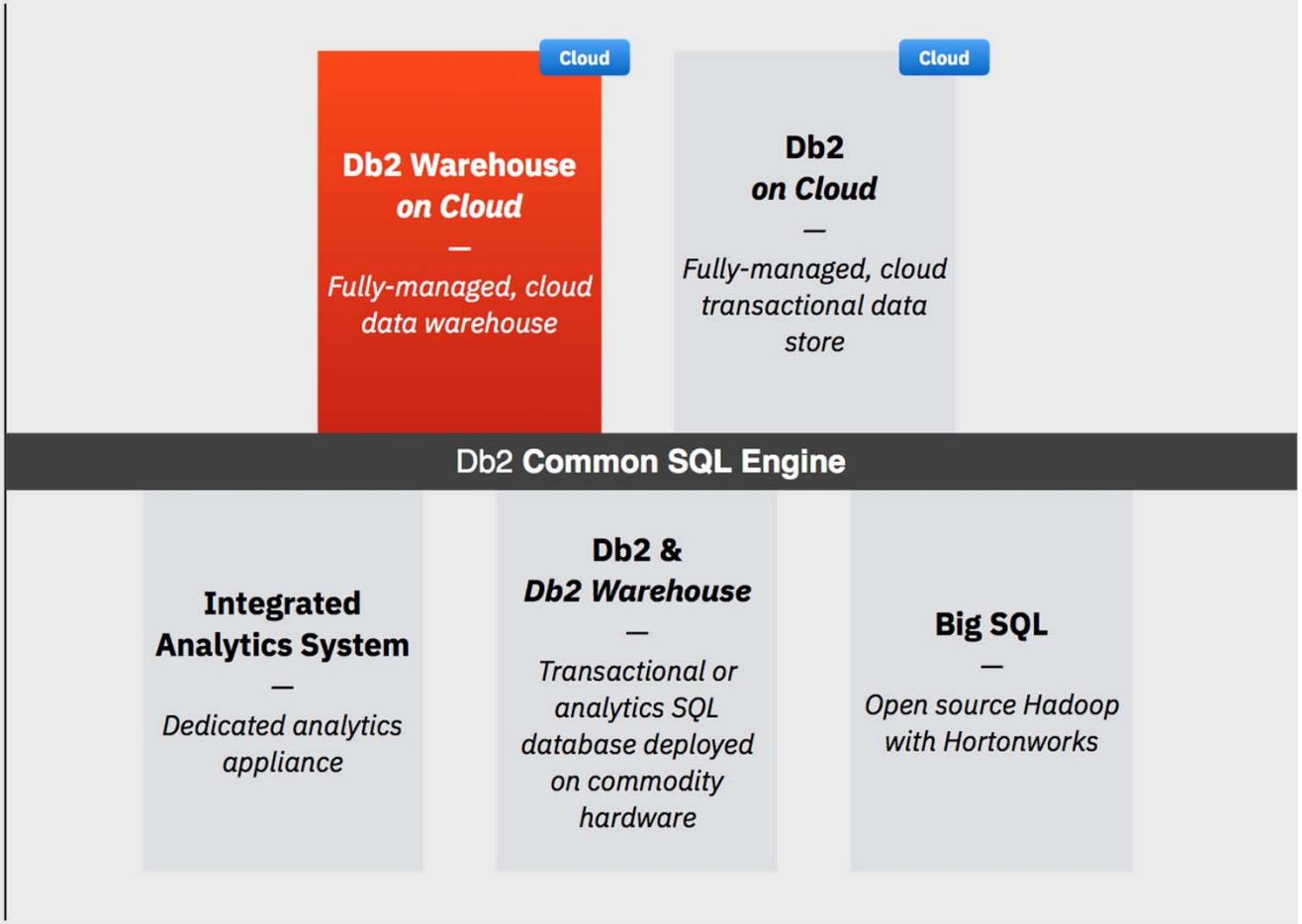
IBM Db2 Warehouse on Cloud is a fully-managed, high performance, petabyte-scale cloud data warehouse.

It delivers true elasticity with independent scaling of storage and compute, a highly-optimized columnar data store, actionable compression and in-memory processing, all working together to supercharge your analytics workloads.

Our family of **Hybrid Data Management** solutions built on the **Db2** SQL engine

Write your SQL once deploy against any form factor ***run anywhere***



Db2 Warehouse on Cloud

Fully-managed

by our world-class DevOps team, 24x7x365

Blazing fast analytics

with IBM BLU acceleration

Multiple architectures

to fit your performance requirements and your budget

And highly-compatible with your existing Netezza workloads

98%+ DDL, 95%+ DML, 50%+ stored procedures — with improvements continuously rolled out

Elasticity

with independent scaling of storage and compute

Scale up your compute
during peak demand

Scale down your compute
when demand falls

Ramp up your data storage
as you data needs grow

Self-service backup & restore

with up to seven retained snapshots

Schedule your backups
to run when it's most convenient for your business

Lightening fast restore from snapshot backup,
there when you need it

High Availability

with our robust MPP architecture

Kubernetes-based container service
manages all your compute nodes and automatically responds on node failure

Highly-redundant, highly-performance block storage, *for all your data*

Db2 Warehouse on Cloud *Flex*

Our scalable and elastic Cloud data warehouse

We'll cover a variety of options to load data in today.

Some apply to both Db and Db2 Warehouse on the IBM Cloud. Others will be product-dependent.

We'll use insignia to indicate which method applies to which product.

Db2 / Db2W

Db2 / Db2W

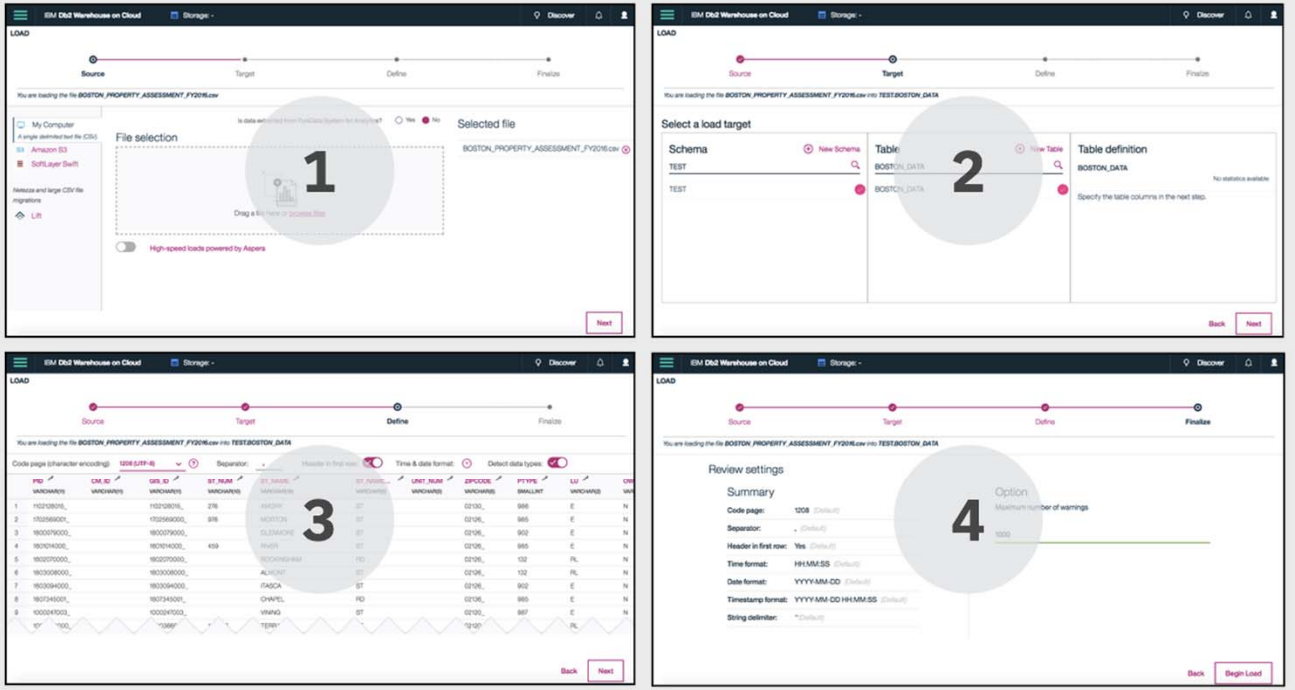
Simple file load through the built-in console

Pros

really easy to go from a CSV file data set to running SQL queries

Cons

one file at a time file size limits



Choose Load, My Computer and drop a CSV file. Check the column type mapping and hit go.

Db2W

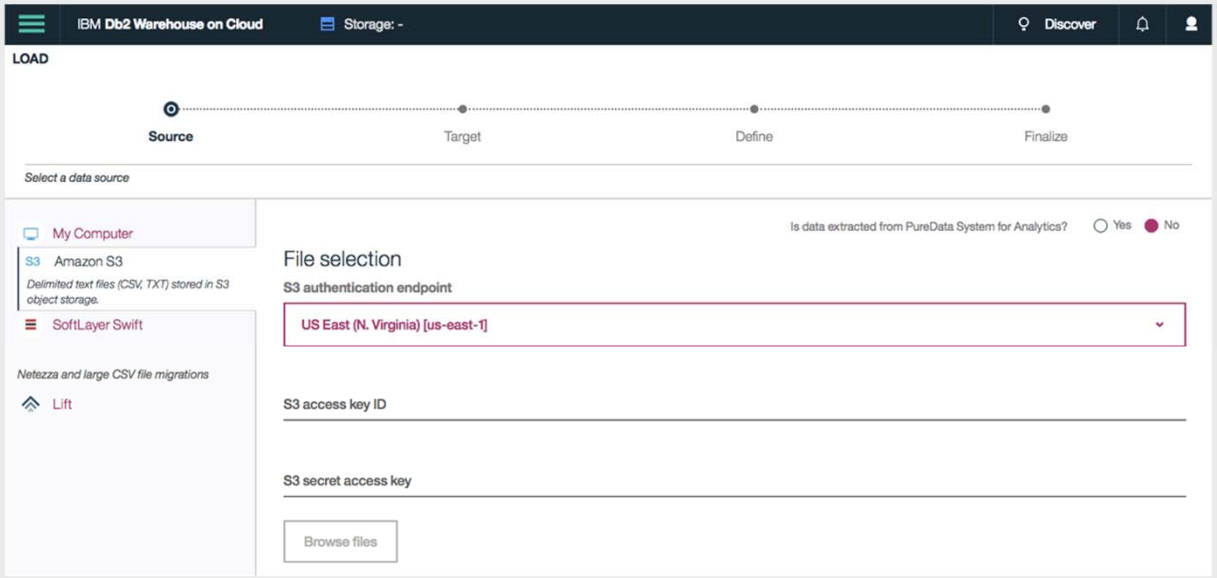
Pulling data from our IBM Cloud Object Storage with external tables

```
INSERT INTO BOSTON_PROPERTY_ASSESSMENTS
SELECT * FROM EXTERNAL 'BOS_PROP_ASSESSMENTS.csv'
USING(s3('s3-api.us-
geo.objectstorage.service.networklayer.com',
'sJ8uHeupJR4roOFy7NDh',
'xwg72FVrEA47qu09L4tyY3HxksY0sy6yeFZwDzTs',
'property_files_bucket' ));
```

Pros	***Cons***
programmatically load large data files into existing tables via SQL (no additional tooling needed)	*not point & click, but that's ok*

Pulling data from AWS S3

Grab data sets directly from an S3 bucket and ingest into Db2 Warehouse on the IBM Cloud



Pros

a simple way to liberate your CSV or TXT files by bringing them over to the IBM Cloud

Cons

one file at a time

Db2 / Db2W

Over-the-wire migration with the Lift CLI

Lift is...

Blazing-fast

Lift uses IBM Aspera under the covers to move your data to the cloud at blazing fast speeds.

Secure

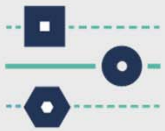
Nobody wants to end up on the front page of the news. Any data moved over the wire to the IBM Cloud is completely secure via a 256-bit encrypted connection.

Free

Who would charge for data movement, anyway? We want you to try our cloud data services. Cost shouldn't be an issue.

Resilient

Automatically recovers from common problems you'll hit during the migration.

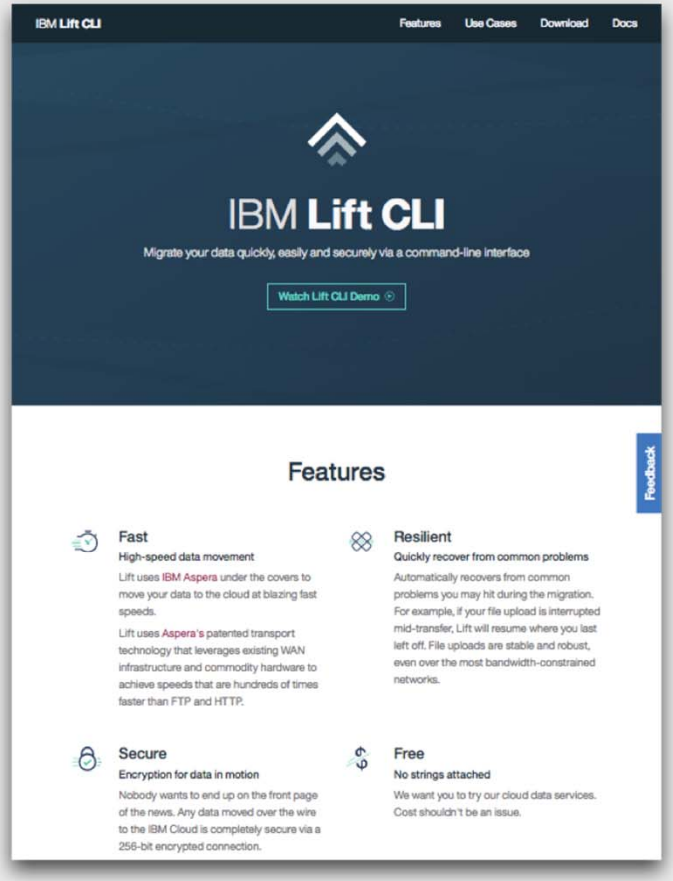


Flexible

Every data migration is split into three steps: extract from source, transport over the wire, and load into target. Run them independently, and on your schedule.

Built for the cloud

You'll install the Lift CLI only once on your on-premises machine. Updates stream automatically.



Migrate data to Db2 or Db2 Warehouse on Cloud in 15 minutes

1. **Download the package appropriate to your operating system from ibm.biz/get-lift**
2. **Unzip the downloaded package**
3. **Install the package**
   % lift-cli-installer/install ~/lift-cli
4. **Extract data from your Netezza database table**
   % lift extract -s SCHEMA -t TABLE —f /tmp/TABLE.csv
5. **Transport the file to the Db2 Warehouse on Cloud landing zone**
   % lift put -f TABLE.csv
6. **Load the file into the Db2 Warehouse on Cloud engine**
   % lift load -f TABLE.csv -s SCHEMA -t TABLE
   —action replace

Db2 / Db2W

Key Lift CLI capabilities

- **Bulk data migration:**
  - **Source:** CSV files, Netezza/PureData System for Analytics, Integrated Analytics System, Db2, Db2 Warehouse, Oracle
  - **Target:** Db2 & Db2 Warehouse on Cloud
- **High-speed data movement:** Aspera connection with the ability to throttle the speed
- **High-speed extract** on Linux, Windows & macOS via external tables
- **Flexible load options** for Db2 Warehouse on Cloud
- **Over-the-wire data security:** 256-bit encryption for your data traveling over the public Internet
- **Continuous status reporting & end of migration report**
- **Rejected rows** and other logs retrieved automatically for each table
- **Selective extract** with row & column filtering
- **Connection check** route to help get your install ready for data movement
- **Built for the cloud**: new capabilities are automatically rolled out to every instance
- **HIPAA-ready**
- **CLI documentation** with samples

Lift data to Cloud from the IBM Integrated Analytics System

Db2W

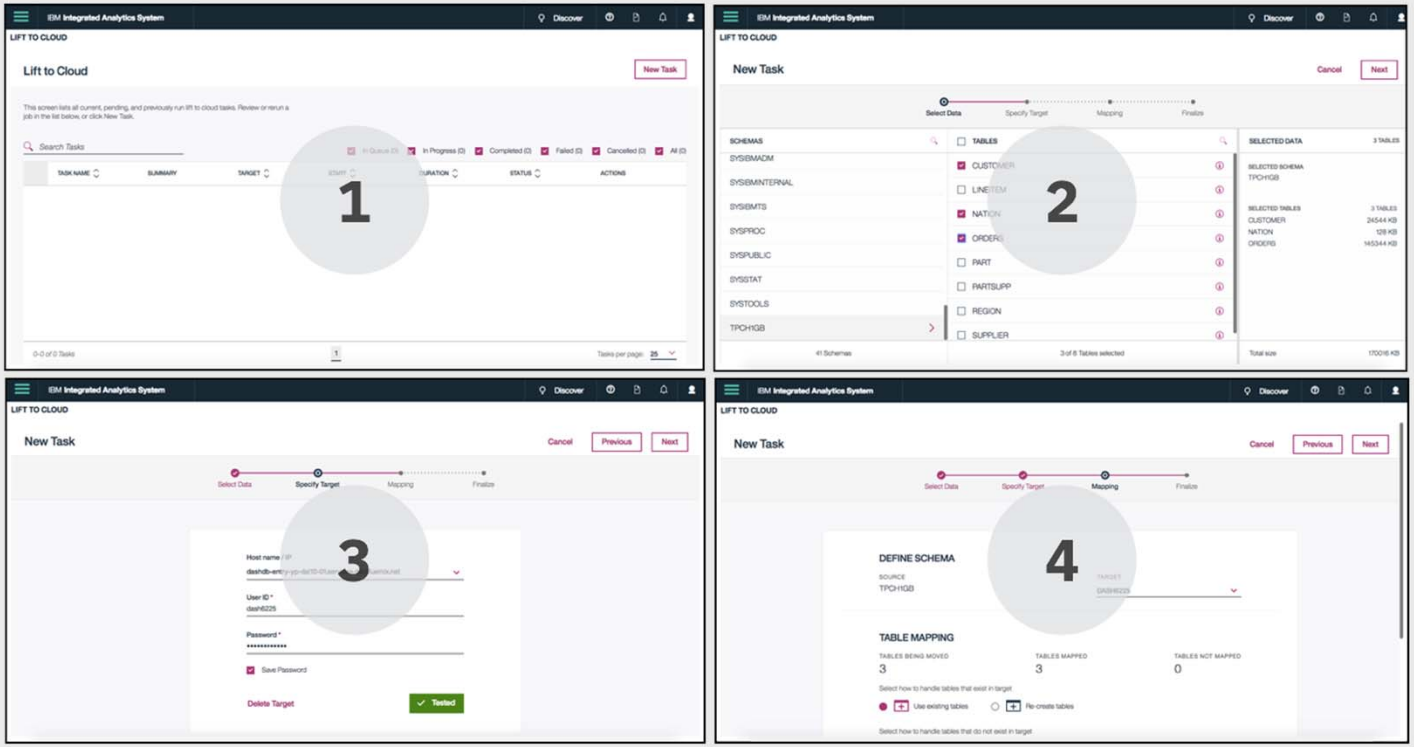
1 Start a new task

2 Pick the schema and tables

3 Provide target connection info

4 Verify table mapping

5 Go

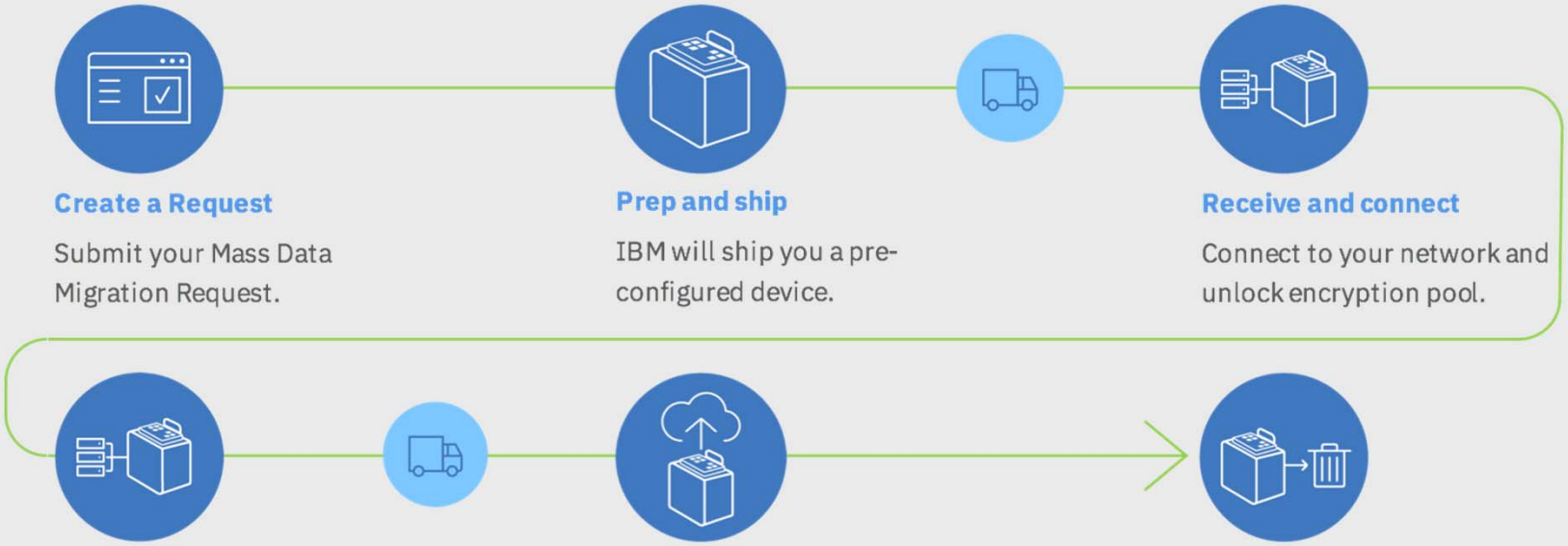


Move large volumes of data to the IBM Cloud with Mass Data Migration

Db2/Db2W

Db2/Db2W

How Mass Data Migration to IBM Cloud works…



Create a Request

Submit your Mass Data Migration Request.

Prep and ship

IBM will ship you a pre-configured device.

Receive and connect

Connect to your network and unlock encryption pool.

Ingest and return

Ingest data onto the device. Attach the provided shipping label and return to IBM.

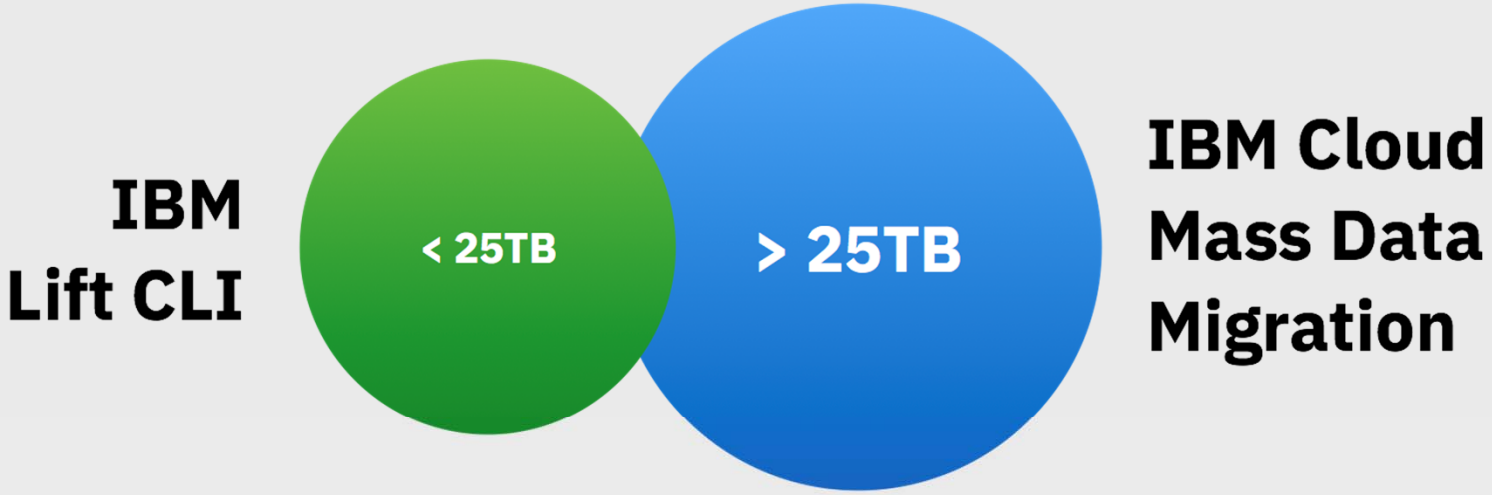
Offload and access

IBM offloads to IBM Cloud Object Storage and provides you with immediate access to your data.

Erase device

IBM promptly and permanently erases data from device according to DOD-level data wipe requirements.

How do I decide between Lift and Mass Data Migration service?



Guidance assumes data is uncompressed.

IBM Lab Services technical consultants available to help with data on boarding

Thank you

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