



Accelerate End-to-End  
Migration to the Cloud

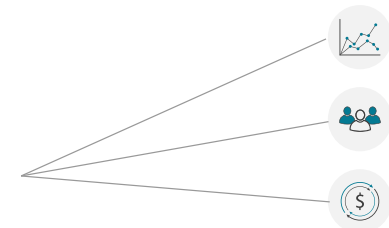
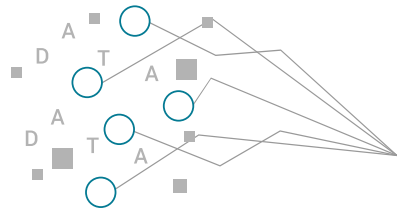
# The **SHIFT™ MIGRATION SUITE**

helps our customers accelerate their migration to the cloud, by automating key tasks in the end to end process



Whether the attraction is increased operational efficiencies, ability to perform advanced analytics, or simply cost containment and getting out of the data center, there are countless benefits companies know and realize.

We automate the **three core steps** in migrating to the cloud:



## 1. Pipelines

Automate the discovery of how data flows into, and within, the warehouse/ application, in order to migrate those pipelines to the cloud



## 2. Legacy Data Warehouse and Legacy Applications

Automate the translation of legacy code contained within the applications in a warehouse to run within the cloud



## 3. Downstream Consuming Applications

Automate the lineage and traceability for how data flows to downstream consuming applications, in order to define their migration path – repoint, refactor or rebuild





# Benefits of **SHIFT™ MIGRATION SUITE** offers over manual migration

Through the use of SHIFT™ Migration Suite, code translation happens in minutes and not years

## PLANNING

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Whether you're translating complex workloads, or testing, **SHIFT™**'s automation parallelizes development efforts to deliver faster, more efficiently and in a truly agile model

## TESTING

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By applying automation to the migration life-cycle and removing manual efforts, human error is eliminated, and standardization is enforced to respect and enforce various governance and security controls for your organization

## TRANSLATION

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**SHIFT™**'s automation brings HUGE benefits over manual efforts, in order for your business to focus their time on downstream tasks that matter most

## END-TO-END APPROACH

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**SHIFT™** automates key parts of the end-to-end migration life cycle to get you to cut-over faster, including ETL and BI conversion, in addition to code translation and testing

## SCALABILITY

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**SHIFT™**'s unique architecture enables it to support any custom requirement or edge-cases with the simple addition of new rules, and thus avoid typical project bottlenecks



## SHIFT™ MIGRATION SUITE



**SHIFT™ CRAWLER** automatically scans and catalogs legacy data sources, including ETL pipelines, scheduler jobs, and downstream consuming applications, to uncover actionable insights to plan your migration more effectively



**SHIFT™ ANALYZER** assesses various code types within legacy applications to create an inventory of all objects, define complexity, and provide automation rates in order to size your migration



**SHIFT™ TRANSLATOR** automates the translation of complex workloads when executing your migration to the cloud – including SQL, Stored Procedures, ETL, and various other code types – for various source and target platforms



**SHIFT™ TESTER** automates key tasks in the testing life-cycle when executing and optimizing workloads within the cloud



**SHIFT™ CRAWLER** automatically scans and catalogs legacy data sources, including ETL pipelines, scheduler jobs, and downstream consuming applications, to uncover actionable insights within the data flow to accelerate the migration to the cloud.

## CRAWLER



### How it Works?

**SHIFT™ CRAWLER** generates detailed representations of the data it scans, either as lineage trees or network graphs, in order to help:

- Plan the end to end migration, and
- Migrate downstream consuming applications



### What are the Benefits?

- Untangle complex data pipelines and build lineage trees to understand which pipelines feed which applications
- Determine read/write dependencies throughout the data warehouse or application and identify hotspots based on which tables are most frequently used
- Determine which pipelines can be automatically migrated, and which need further analysis as they feed multiple applications
- Develop the lineage and traceability between consuming applications and their data sources



## ANALYZER

**SHIFT™ ANALYZER** automatically assesses legacy application workloads to know exactly what code types and objects are present in order to plan your migration.



### How it Works?

**SHIFT™ ANALYZER** creates an inventory of all code objects, defines complexity, and provides automation rates when moving to the translation phase of the migration.

### What are the Benefits?

- Develop a complete inventory of all code objects and rank by complexity to understand the breadth and size of the legacy application
- Identify “x-factor” cases within the code that will require a custom solution in the cloud based on source-target differences
- Identify automation percentage for code translation for the identified code types



# TRANSLATOR



**SHIFT™ TRANSLATOR** automates the translation of complex workloads when executing your migration to the cloud – including SQL, Stored Procedures, ETL, and various other code types – for various source and target platforms

## How it Works?

**SHIFT™ TRANSLATOR's** syntax and semantic based translation capability allows for high-automation levels for all code types, including:

- DDL/DML
- Views/Materialized Views
- Stored Procedures
- Dynamic SQL
- Embedded SQL
- Scripting Frameworks
- Proprietary Functions
- ETL
- and More

## What are the Benefits?

- Complete automation of code – alleviating manual development efforts
- Removes the need for developers with knowledge of both source and target languages
- Continuous learning functionality to improve automation; the more code **SHIFT™ TRANSLATOR** sees, the smarter and more accurate the translation results become
- Ability to scale to address any custom requirement or edge case based on rules engine

## TESTER



### How it Works?

**SHIFT™ TESTER** automates data validation and hash-level comparison between the legacy application and cloud environment, to accelerate testing cycles to get to cut-over fast.

### What are the Benefits?

- Test-ready code that is optimized for the cloud environment
- Built-in automation to execute user-defined test cases





## CASE STUDY

### Overall, our solution accelerated the company's end to end migration by 40%

*"Our early estimates for code conversion, through a manual/offshore approach, were coming to 1.5 years. This was a non-starter for us. Leveraging Next Pathway's SHIFT™ Translator, we not only accelerated the entire migration timeline, but it allowed our teams to focus on other value-adding tasks to get us cloud-ready."*

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### The Challenge:

A US retail giant decided that a move to the cloud – and off their legacy data warehouse – was the best way to manage their data, perform complex analytics, and lower TCO going forward. However, the migration posed a number of challenges, including:

#### 1. EDW Code Translation:

- Over 2.5 MM lines of K-Shell scripts, SQL, and embedded SQL within ETL had to be converted to the target cloud environment.
- Complex Teradata functions – like BTEQ – that did not have native support within the cloud data warehouse had to be addressed.

#### 2. Migrate Downstream Consuming Applications:

- Over 2000 reports on various BI tools had to be triaged to determine which needed to be repointed, refactored or rebuilt for the cloud.

### The Results:

**We employed the SHIFT™ Migration Suite to help automate each part of the migration effort.**

1. Via *SHIFT™ Translator* and *Tester*, all 2.5 MM lines of code was translated to the cloud native dialect with 100% accuracy within 3 weeks
2. Translated all embedded SQL within the 2000+ reports within 1 week via *SHIFT™ Translator*.

Through automation, we get you to the cloud faster.

Ready to get started? Here's where we can help:



### Complex Workload Migration

Our workload migration technology accelerates the migration of the most complex legacy applications and databases to the cloud, while keeping costs down and getting to market faster

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### Downstream Consuming Application Migration

Our solution ensures all consuming users, reports and applications are addressed to minimize disruption to the business, while refactoring, repointing or rebuilding applications to take advantage of compute in the cloud

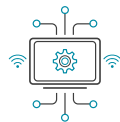
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### Pipeline Modernization

With large and complex ETL pipelines built-up over time, it's hard to identify which pipelines are relevant as part of a migration project. Our solution accelerates both the identification of high-priority pipelines, and a path to modernizing them to work within the cloud

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### Data Platform Modernization

Our Data Platform Modernization solution addresses the early stages for a company considering cloud platforms, and reconciling it against their legacy, on-prem environments. We help customers build hybrid or cloud-only platforms that are cost effective and high-performant to provide value-adding benefits to their business

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