CredenTek
The NxtGen Technology Company

BeeHive
Transformation Engine

BEEHIVE / PRODUCT BROCHURE

BeeHive

Transformation Engine

Defined input. Controlled transformation. Desired output.

BeeHive Transformation Engine transforms data between different file formats using defined input and output structures, field mapping and configurable transformation logic.

A CONTROLLED DATA TRANSFORMATION FLOW

SOURCE FILE
Defined input format and record structure



TARGET FILE
Required output format and fields

PARSE INPUT > MAP FIELDS > GENERATE OUTPUT

01 **Define file structures**
Record structures, headers and footers

02 **Map and transform fields**
Apply configured rules to output values

THE BUSINESS CHALLENGE

Why Data Transformation Matters

Different systems, different file rules - one consistent target format.

A file accepted by one application may need restructuring before another can use it.

01 Different file structures

Source and target systems may expect fixed-length, CSV, JSON, XML, PDF or spreadsheet formats.

BEEHIVE RESPONSE
Configured input and output definitions.

02 Headers, footers and record layout

A file can have no header, defined trailers, or multiple physical lines for one record.

BEEHIVE RESPONSE
Record separation and file-level validation.

03 Inconsistent field conventions

Dates, thousand separators and DR/CR indicators can be represented differently.

BEEHIVE RESPONSE
Date, number and field-value transformations.

04 Target-specific field requirements

Required order, length, field names and derived values may differ by destination.

BEEHIVE RESPONSE
Field mapping with JavaScript rules.

05 Repeat submissions and traceability

Repeated source files can make it difficult to distinguish new deliveries from earlier inputs.

BEEHIVE RESPONSE
MD5 duplicate checking and stored audit trail.

06 High-volume Transformation

Growing file volumes require a defined processing approach and operational visibility.

BEEHIVE RESPONSE
In-memory processing and parallel engines.

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CONNECT | TRANSFORM | DELIVER

THE PRODUCT

BeeHive Transformation Engine

Seamless Data Transformation for a Connected Enterprise.

BeeHive Transformation Engine is a 24X7 engine that transforms data from one format to another based on defined input and output formats, with the ability to convert header-based files to no-header files and convert multi-line records to a single line or vice versa.

INPUT DEFINITION / JAVASCRIPT-BASED MAPPING / OUTPUT GENERATION



SOURCE SYSTEMS → ANALYZE / MAP / TRANSFORM → OUTPUT FORMATS

1 24x7 Transformation

Continuous, reliable data transformation.

2 Multi-format Processing

Supports multiple input and output formats.

3 Business-rule Based Mapping

Transforms data based on defined input and output formats.

4 Reliable Output Delivery

Generates accurate output in the required format.

PRODUCT CAPABILITIES

Key Features & Customization

Enterprise-grade transformation, high performance and flexible rule-based processing.

BeeHive Transformation Engine delivers a powerful set of capabilities to transform, map and convert data across diverse formats with high performance, complete control and easy customization to meet enterprise integration needs.

PRODUCT CAPABILITIES

24x7 Transformation Engine

Runs continuously to transform data from one format to another.

Designer Module

Define transformation formats, single input format based on in-tray, and single output format.

Input File Formats Supported

Fixed Length, CSV, Custom Separator, PDF, JSON, XML, MTxxx, XLS.

Output File Formats Supported

Fixed Length, CSV, PDF, JSON, XML, MTxxx, XLS, Custom format, HTML.

Duplicate File Check (Md5)

Identifies and prevents re-processing of duplicate files using MD5 checksums.

Template Based Processing

Template based output file generation and template based input file parsing.

High Volume, High Throughput

Designed for large volumes with high performance and reliable processing.

In-Memory Processing

In-memory processing, database independent.

Complete Audit Trail

Persisted in database for later MIS generation.

Parallel Engines

Parallel engines for file processing.

JavaScript-based Easy Customization

- Conditional skipping of records
- Splitting of field
- Merging of multiple fields
- Part value of a field
- Can have complex logic to arrive at value of the field
- Field data translation - e.g. converts DR/CR to D/C or 1/0
- Remove special characters, padding, comma from amount
- Number formatting, text formatting (upper case, lower case etc.)
- Date format changing - e.g. convert YYYYMMDD to DD-MON-YY
- Calculate a field value based on other field value - e.g. based on amount sign, identify Debit/Credit field

INPUT DATA MAPPING

BeeHive Transformation Engine

Input Data Mapping

Controlled Input Definition, Validation and Field-Level Mapping.

Define input-file structures for single-line or multi-line records. Configure header and footer details, perform file-level checks and map source fields to the required target structure.

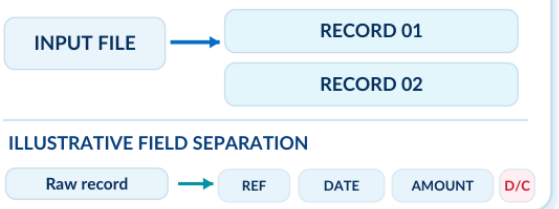
01 DEFINE THE RECORD FORMAT

Illustrative source fields and expected types

SOURCE FIELD	TYPE	LENGTH
Account reference	Text	20
Value date	Date	8
Amount	Amount	15
Debit/Credit indicator	Text	2

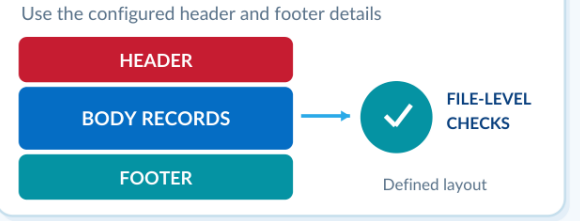
02 IDENTIFY RECORDS & FIELDS

Separate records and identify individual values



03 VALIDATE FILE STRUCTURE

Use the configured header and footer details



04 MAP VALUES USING DEFINED RULES

Illustrative example: map and format source data for a target file.

SOURCE VALUE	TRANSFORMATION RULE	RESULTING VALUE
AC-204	Keep reference value	→ AC-204
20261117	Date: YYYYMMDD to DD-MON-YY	→ 17-NOV-26
12,500.00	Remove comma from amount	→ 12500.00
DR	Translate DR to D	→ D

Field changes shown here use rule types described in the original brochure.

ILLUSTRATIVE CONVERSION

The same source record can be expressed using destination-specific rules:

- **DATE**
  YYYYMMDD to DD-MON-YY
- **AMOUNT**
  Remove thousand separator
- **DR / CR**
  Translate debit indicator

EX ONE RECORD, TWO FORMATS

Illustrative transformation - not a product screen

SOURCE RECORD

```
AC-204|20261117|12,500.00|DR
```

FORMATTED OUTPUT

```
AC-204,17-NOV-26,12500.00,D
```

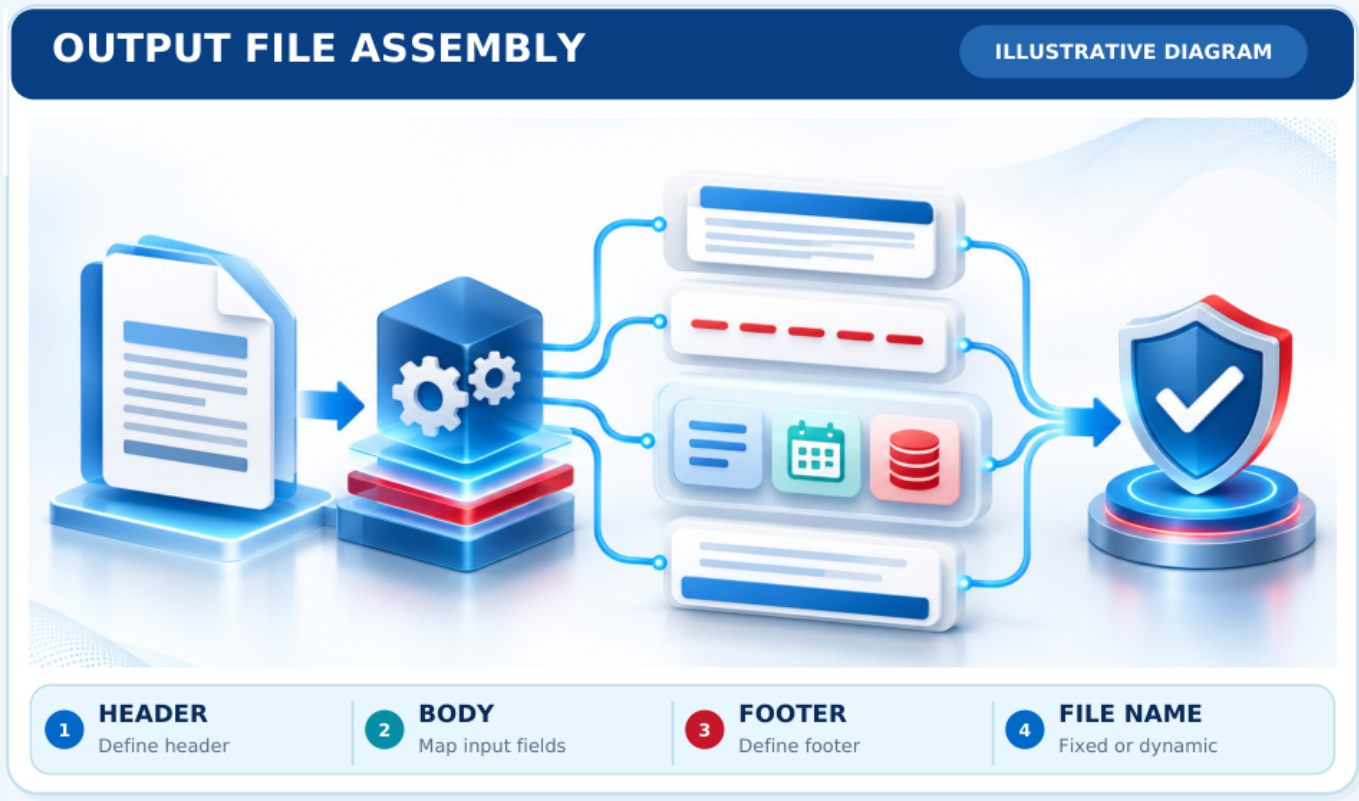
Actual output is governed by configured mapping rules.

OUTPUT DATA MAPPING

Output Data Mapping

Structured Output Generation and Accurate Final File Creation.

Define header, body and footer formats for the target file. Map input fields to the required output columns and apply business rules to derive output values or file names.





1 Maintain Header and Footer

User will maintain the header and footer line in the desired format.

2 Map Input Fields in Body

In 'Body Format', user must map the input file field as per the required column.

3 Apply Business Logic

User can also develop some logic to derive the output value.

4 Dynamic or Fixed File Name

User can write logic to derive the output file name dynamically or fixed as per requirement.

KEY CAPABILITIES FOR OUTPUT PROCESSING

Template Based Output File Generation
Create structured output files using configurable templates.

High Volume, High Throughput Processing
Handles large file volumes with optimized, high performance processing.

In-memory Processing, DB Independent
Ultra-fast in-memory processing without database dependency.

Complete Audit Trail
All processing details persisted in database for later MIS generation.

Parallel Engines for File Processing
Multiple parallel engines for faster and scalable file processing.

ADVANCED TRANSFORMATION CONTROLS

Advanced Transformation Controls

How field definitions, business rules and processing controls shape the output.

A CONTROLLED SOURCE-TO-OUTPUT PROCESS



EXAMPLE: ONE SOURCE RECORD, FOUR FIELD RULES

SOURCE VALUE	RULE APPLIED	ILLUSTRATIVE RESULT
20261117	Date format: YYYYMMDD to DD-MON-YY	**17-NOV-26**
12,500.00	Remove thousand separator	**12500.00**
DR	Translate debit indicator to D	**D**
AC-204	Retain account reference	**AC-204**

FLEXIBLE TRANSFORMATION RULES

- Skip records conditionally; split or merge fields
- Use part of a field; apply text/number formatting
- Derive values from other fields (e.g. amount sign)
- Define fixed or dynamic output-file names

FILE PROCESSING CONTROLS

- Template-based input parsing and output generation
- MD5 duplicate-file checks; processing audit trail
- In-memory, database-independent processing
- Parallel engines for high-volume file processing

Illustrative example only. Actual mapping and file output follow configured rules.

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BeeHive

Transformation Engine

Transform data for the format your systems need.

BeeHive Transformation Engine helps configure how input files are interpreted and how target files are generated. Its purpose is straightforward: transform source data to the structure required by the receiving system.

What BeeHive Transformation Engine supports

File definitions

Input and output structures, including header, body and footer formats.

Field transformation

Field mapping, date and number formatting, and JavaScript-based business rules.

Processing controls

MD5 duplicate-file checks, template parsing, audit trail and parallel engines.

Request a product demonstration sales@credentek.com