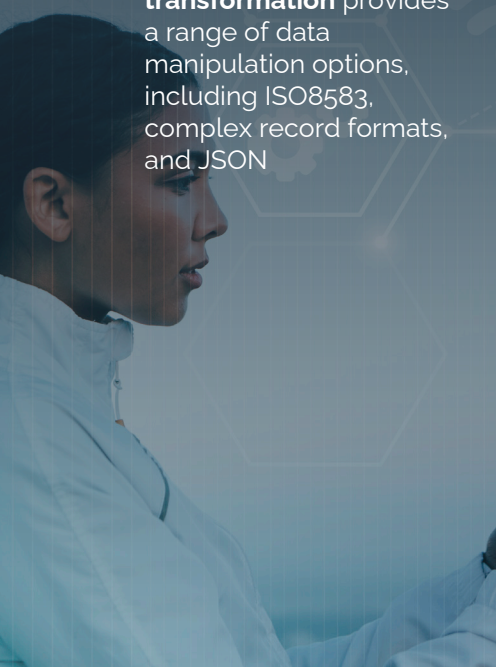
ULINGA FOR KAFKA

Lightweight, high performance Kafka streaming for NonStop data and applications

Key Features

- **Easy set up** Through online configuration, with no application changes required.
- **Support for both Kafka Producer and Kafka Consumer functionality,** allows for data to be streamed to and from Kafka.
- **Support for a range of data input and output options,** including TMF, Enscribe files, Pathsend/IPC, HTTP and Intercept Library
- > Powerful **data transformation** provides a range of data manipulation options, including ISO8583, complex record formats, and JSON



Many NonStop users are seeing a move to Kafka within their enterprise. Kafka provides support for high performance "streams" and can give a complete view of an enterprise's activity quickly and easily. According to the Kafka Apache project, Kafka is "the most popular open-source stream-processing software for collecting, processing, storing and analysing data at scale." Kafka is used by thousands of companies, including 60% of the Fortune 100.

These organizations use Kafka to manage "streams" of data, which have become prevalent as internet usage massively boosts the amount of data being generated and needing to be processed. Kafka allows these huge volumes of data to be processed in real-time, via a combination of "producers" and "consumers", which work with a Kafka "cluster" – the main data repository.

Purpose

NonStop application developers and system managers that find themselves with a need to move NonStop data to and from Kafka are looking for solutions to move that data in a variety of ways, without needing application modifications.

uLinga for Kafka takes a unique approach to Kafka integration: it runs as a natively compiled Guardian process pair, and supports the Kafka communications protocols directly over TCP/IP. This removes the need for Java libraries or intermediate databases, providing the best possible performance on NonStop. It also allows uLinga for Kafka to directly communicate with the Kafka cluster, getting streamed data across as quickly and reliably as possible.

Other NonStop Kafka integration solutions require an interim application and/or database, generally running on another platform. This can be less than ideal as that additional platform may not have the reliability of the NonStop, and could introduce a single point of failure. It can also increase latency, in terms of getting the data to and from Kafka as quickly as possible.

Features

uLinga for Kafka supports a wide range of access points to enable NonStop users to stream data to and from Kafka. These include Inter-Process Communication (IPC), Pathsend, HTTP/REST and a number of file-oriented approaches. IPC and Pathsend interfaces allow NonStop applications to open uLinga for Kafka and send data via Guardian IPC, or via a Pathsend message. uLinga for Kafka also supports TMF audit trails, allowing for any TMF-protected files to be monitored and changes to those files sent to Kafka. The FILEREADER/FILEWRITER option allows entry-sequenced Enscribe files to be a source (and destination) for Kafka data. Finally, the uLinga Enscribe Intercept Library captures any changes to other types of Enscribe files, including relative and key-sequenced.

Benefits

- Native Guardian implementation gives high performance and accustomed uLinga reliability to Kafka streaming. uLinga for Kafka offers a simpler, and often cheaper, solution for Kafka integration.
- No additional software or server platforms required.
- No changes required to application, minimising risk and effort.
- uLinga's access options mean applications and data can be processed in the simplest possible manner.

System Requirements

HPE NonStop System

- H06.24 or later
- J06.13 or later
- L17.02 or later

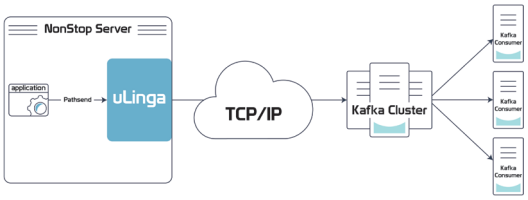
Pathsend and Guardian IPC Support
Applications can also explicitly send data via the Pathsend and IPC interfaces provided by uLinga for Kafka. This might be useful where specific data streams need to be generated and sent directly from the application. A Pathsend client, such as a Pathway Requestor or Pathway Server, simply sends the relevant data via a Pathsend request to uLinga. A NonStop process sends the data to uLinga for Kafka via IPC calls. uLinga for Kafka's support for the native Kafka protocols ensures that this data will be streamed with the lowest latency possible.

uLinga for Kafka can also Consume data from one or more Kafka topics, and present that data to an application over IPC or Pathsend interfaces. This feature can have a wide variety of uses, including regular database updates from a remote platform, or even receiving transaction responses following a transaction request sent to Kafka as a "Produce".

TMF Audit Trail Support
TMF-protected files have a TMF audit trail produced for all changes to that file. uLinga for Kafka can be configured to monitor a TMF audit trail for one or more files, and when those files are changed, uLinga will stream (produce) those changes to Kafka. This feature can be used for all TMF-protected Enscribe files and SQL tables.

Entry-Sequenced Enscribe File Support
Entry-sequenced files (such as a transaction log file from a payment application, or an access log for an in-house application), can be supported by uLinga for Kafka. uLinga for Kafka performs an "end-of-file chase" whereby new records are read from the entry-sequenced file as they are written by the application, and immediately streamed (produced) to the Kafka cluster. uLinga for Kafka monitors for the creation of new files and automatically picks them up and starts processing them.

uLinga for Kafka can also Consume one or more Kafka topics, and write consumed data to an Enscribe file.



Powerful Data Transformation
All uLinga products now include support for easily configurable data transformation, allowing data to be transformed to and from any combination of binary (DDL-formatted), ISO8583, JSON and AVRO schemas. With uLinga for Kafka, this capability means that data can be streamed to Kafka in JSON or AVRO formats, making it more usable by consumers elsewhere in the enterprise.

WebCon management and control
uLinga for Kafka is shipped with an embedded facility to allow management and control of the process through any web browser. This provides the user with an intuitive graphical interface to enable administration and management of the uLinga process. WebCon includes a new data transformation screen to facilitate easy configuration of data transformation functions. To secure WebCon, TLS 1.3 support has been inbuilt into the uLinga executable.