InfinyOn Cloud Use Cases for Enterprises

And Fluvio Use Cases for Developers

InfinyOn accelerates the adoption of real-time services that drive business value by increasing revenue, decreasing costs or mitigating risk with the following use cases. For each of the use cases we recommend using InfinyOn cloud for enterprise deployments.

Developers can use Fluvio open-source software that offers built-in packaging for multiple operating systems, from Raspberry PI to various Linux distributions. Built-in support for most common programming languages makes it easy to build custom connectors to virtually any server or data store for change data capture.

Change Data Capture (CDC)

Change Data Capture (CDC) is a proven method for tracking when and what changes are taking place in a database. Maintain consistency and functionality across all systems with CDC to ensure your decisions are data-driven with real-time information. Keeping data current without compromising security is difficult:

- Data is generated from multiple sources
- Data sources have different formats
- Data stores have notification mechanisms
- Preventing unauthorized access at the edges (consumers and producers) leads to exponential complexity.
- Lack of mechanisms to define multiple levels of trust to prevent data leakage (PII and other sensitive information).

How do we solve this?

InfinyOn Cloud facilitates change data capture by collecting data from endpoints in any geo-location with fast and efficient single digit millisecond latency. Spin up a cluster, select source and sink connectors from our catalog, configure producers and consumers, then create a topic for streaming data. SmartModules can be set up in order to aggregate, filter or map streaming data. InfinyOn Cloud makes it simple to set up, deploy and manage your cluster.

Data Cleansing

Data Cleansing is the process of correcting and standardizing data to ensure datasets are accurate, complete, and formatted correctly. If data is inaccurate or corrupt, then workflows and algorithms become unreliable. Companies who are innovating with machine learning and artificial intelligence rely on clean data. According to current analyst projections, the volume of data is increasing from 79 zettabytes in 2021 to 181 zettabytes in 2025. Common challenges to ensure the data is clean and ready for use as soon as it enters the organization include:

- Corrupt data
- Inaccurate data
- Invalid data
- Data is in an inconvenient format
- Data is duplicated

How do we solve this?

InfinyOn Cloud facilitates data cleansing with a premiere feature called SmartModules that allows users to have full control over their streaming data by providing a programmable API for inline data manipulation. Filters, Maps, FilterMaps, ArrayMaps and Aggregate SmartModules are user-defined functions and offer flexibility for building and cleansing your data pipelines for any use-case.

- SmartModule filters are used to examine each record in a stream and decide whether to accept or reject it.
- SmartModule Maps are used to transform or edit each record in a stream.
- SmartModule FilterMaps are used to both transform and potentially filter records from a stream at the same time.
- SmartModule ArrayMaps are used to break apart Records into smaller pieces.
- SmartModule Aggregates are functions that define how to combine each record in a stream with some accumulated value.

Data Connectors

Data Connectors allows for enterprises to connect a variety of data sources to applications for real-time analysis. InfinyOn offers data connectors that are fully managed to simplify instant connection to data sources and sinks. Commonly used connectors offered by InfinyOn:

- HTTP
- MQTT
- Postgres

InfinyOn has an engineering team that is dedicated building data connectors. Our connector catalog will be rapidly growing and we welcome requests to build fully managed data connectors. Developers can use Fluvio open-source software that has built-in support for the most common programming languages that make it easy to build custom connectors to virtually any server or data store.

Data Protection

Data Protection is the process of safeguarding information from compromise, corruption or loss. Sharing data in real-time between users and services while ensuring authorization and privacy is a complex undertaking for many companies. Common challenges with data protection include the ability to:

- Classify sensitive data for authorized access
- Protect sensitive data from unauthorized access
- Prevent data from leaking externally
- Apply consistent policy across data sources
- Isolate data based on Geo-location

How do we solve this?

InfinyOn Cloud has built-in primitives such as encryption and role-based authorization to ensure data protection and security. Built on Rust, a programming language with no runtime or garbage collector, InfinyOn Cloud is completely memory safe which separates it from Java-based event streaming solutions.

(ETL) Extract, Transform and Load

ETL is the process of extracting, transforming and loading data between different databases and applications. Common use cases for ETL include:

- Data Extraction
- Data Quality Control
- Match and Merge

Data extraction gives companies the ability to automatically extract information from documents or websites and input the formatted data into a database. Data quality control establishes guidelines about how much and what kind of data can be stored. Match and merge compares data from different sources and identifies possible duplicates or identical matches.

How do we solve this?
InfinyOn Cloud makes **ETL** effortless by collecting data from endpoints in any geo-location with fast and efficient single digit millisecond latency. Spin up a cluster, select source and sink connectors from our catalog, configure producers and consumers, then create a topic for streaming data. SmartModules can be set up in order to aggregate, filter or map streaming data. InfinyOn Cloud makes it simple to set up, deploy and manage your cluster.

Event Steam Processing

Event Stream Processing is a method for performing real-time calculations for data in motion. InfinyOn Cloud offers one of the highest performing event stream processing engines on the market. High volume processing for input data can be used to clean, transform, correlate and derive insights from data in real-time. Common inputs for event stream processing are:

- Bank deposits and withdrawals
- Customer transactions
- Insurance claims
- Sensor data from machines or mobile devices

How do we solve this?
InfinyOn Cloud is a fully managed **event stream processing** SAAS product used for real-time streaming and continuous intelligence. The solution is built on top of Fluvio an open-source software that is similar to Apache Kafka. Fluvio was built from the ground up and was written in Rust which gives enterprises a strategic advantage when considering scale and security. See our Java vs. Rust comparison for details.

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Fraud Detection

Fraud detection is a method for analyzing transactions to detect patterns that indicate behavior that can result in a loss of money, property, or paid services. Detecting anomalies that signal fraud in real-time and stop fraudulent transactions can be done by streaming transaction data. By inspecting, correlating, and analyzing the data, fraudulent transactions can be stopped as they occur by:

- Creating and InfinyOn Cloud topic with transaction data
- Using a connector to stream account data
- Join transaction data with account data to surface fraudulent transactions

How do we solve this?

InfinyOn Cloud facilitates fraud detection by collecting data from endpoints in any geo-location with fast and efficient single digit millisecond latency. Spin up a cluster, select source and sink connectors from our catalog, configure producers and consumers, then create a topic for streaming data. SmartModules can be set up in order to aggregate, filter or map streaming data. InfinyOn Cloud makes it simple to set up, deploy and manage your cluster.

Integrations Management

Integrations Management is the process of identifying which applications need to exchange data and enable these data connections. Common use cases for integrations management are to connect the following applications:

- **Analytics and Business Intelligence tools**: Amazon QuickSight, Databricks, Elasticsearch, Looker, Tableau
- **Databases**: Amazon DynamoDB, Azure Cosmos DB, Microsoft SQL server, MongoDB, Oracle, Postgres, Snowflake
- **Other tools**: GitHub, PagerDuty, Salesforce, ServiceNow, Splunk, Zendesk

Integrations management gives companies the ability to eliminate data silos and integrate data across an organization to provide real-time analytics and continuous intelligence.

How do we solve this?
InfinyOn Cloud makes **integrations management** painless by collecting data from endpoints in any geo-location with fast and efficient single digit millisecond latency. Spin up a cluster, select source and sink connectors from our catalog, configure producers and consumers, then create a topic for streaming data. SmartModules can be set up in order to aggregate, filter or map streaming data. InfinyOn Cloud makes it simple to set up, deploy and manage your cluster.

Log Analytics

Log Analytics is the process of collecting, analyzing, and visualizing log data generated by IT systems or machines. Log analytic pipelines with InfinyOn Cloud allows users to collect and index logs from applications, cloud infrastructures, DevOps, IoT devices and servers. Improve performance, build better customer experiences and increase observability throughout the enterprise with the following logs:

- Customer behavior
- Machine behavior
- Security threats
- Sensor activity
- User transactions

How do we solve this?

InfinyOn Cloud makes log collection from endpoints in any geo-location fast and efficient with single digit millisecond latency. Spin up a cluster, select source and sink connectors from our catalog, configure producers and consumers, then create a topic for streaming data. SmartModules can be set up in order to aggregate, filter or map streaming data. InfinyOn Cloud makes it simple to set up, deploy and manage your cluster for log analytics.

Predictive Maintenance

Predictive maintenance is the process of using sensor data to detect the condition of equipment to determine when replacements are needed or when maintenance should be performed. Use real-time data for predictive maintenance and a proactive strategy to monitor the performance and condition of equipment by:

- Streaming real-time data from sensors
- Leverage inline computations to make predictions
- Stream prediction data to a BI tool to visualize results

How do we solve this?

InfinyOn Cloud makes predictive maintenance simple by collecting data from endpoints in any geo-location with fast and efficient single digit millisecond latency. Spin up a cluster, select source and sink connectors from our catalog, configure producers and consumers, then create a topic for streaming data. SmartModules can be set up in order to aggregate, filter or map streaming data. InfinyOn Cloud makes it simple to set up, deploy and manage your cluster.

Real-time Content Management

Real-time content management is the ability to deliver dynamic customer experiences based on historical behavior. Create digital experiences at scale with real-time content management and personalized recommendations by:

- Creating data pipelines for real-time user behavior
- Joining real-time user behavior with historical data
- Making predictions based on all content consumption data

How do we solve this?

InfinyOn Cloud makes real-time content management simple by collecting data from endpoints in any geo-location with fast and efficient single digit millisecond latency. Spin up a cluster, select source and sink connectors from our catalog, configure producers and consumers, then create a topic for streaming data. SmartModules can be set up in order to aggregate, filter or map streaming data. InfinyOn Cloud makes it simple to set up, deploy and manage your cluster.

Real-time Inventory Management

Real-time inventory management is the ability to automate the process of collecting transactional data on sales, shipments and movement of goods in order to optimize and proactively restock inventory. Control Inventory and fulfillment with a real-time inventory management system by using:

- InfinyOn Cloud to stream item, store, quantity and event type data
- FilterMaps to convert data into a common inventory
- Inline computation to predict inventory stocking

How do we solve this?

InfinyOn Cloud simplifies real-time inventory management by collecting data from endpoints in any geo-location with fast and efficient single digit millisecond latency. Spin up a cluster, select source and sink connectors from our catalog, configure producers and consumers, then create a topic for streaming data. SmartModules can be set up in order to aggregate, filter or map streaming data. InfinyOn Cloud makes it simple to set up, deploy and manage your cluster.

Real-time Logistics Management

Real-time logistics management is the ability to deliver end-to-end supply chain visibility. Enhance decision making and improve service levels with real-time logistics management by:

- Identifying and tracking the location of assets or people in real-time
- Leveraging enhanced metadata such as speed, direction, or spatial orientation.
- Predicting arrival and delivery times

How do we solve this?

InfinyOn Cloud streamlines real-time logistics management by collecting data from endpoints in any geo-location with fast and efficient single digit millisecond latency. Spin up a cluster, select source and sink connectors from our catalog, configure producers and consumers, then create a topic for streaming data. SmartModules can be set up in order to aggregate, filter or map streaming data. InfinyOn Cloud makes it simple to set up, deploy and manage your cluster.

Click here to see a YouTube demo.

Real-time Payments

Real-time payments (RTP) are the ability to process payments and immediately transfer money for online transactions. Transform to real-time payment processing and banking services with InfinyOn Cloud by:

- Streamlining the messaging infrastructure to support real-time processing
- Using real-time fraud detection and secure transactions
- Adopting the ISO 20022 universal financial industry messaging scheme

How do we solve this?

InfinyOn Cloud empowers real-time payment processing by collecting data from endpoints in any geo-location with fast and efficient single digit millisecond latency. Spin up a cluster, select source and sink connectors from our catalog, configure producers and consumers, then create a topic for streaming data. SmartModules can be set up in order to aggregate, filter or map streaming data. InfinyOn Cloud makes it simple to set up, deploy and manage your cluster.

Secure Transactions

Secure transactions are the ability to produce immediate fraud indicators with low false positive rates and a real-time transaction validation process. Secure transactions with real-time payments and fraud detection by:

- Designing stream schema and data policy checks
- Ensuring data pipelines are secure
- Sending alerts and notifications in real-time for fraudulent transactions

How do we solve this?

InfinyOn Cloud makes secure transactions easy by collecting data from endpoints in any geo-location with fast and efficient single digit millisecond latency. Spin up a cluster, select source and sink connectors from our catalog, configure producers and consumers, then create a topic for streaming data. SmartModules can be set up in order to aggregate, filter or map streaming data. InfinyOn Cloud makes it simple to set up, deploy and manage your cluster.

Supply Chain Automation

Supply chain automation is the use of modern technologies to connect applications, improve efficiencies and streamline processes within supply chain operations. Manage, track, and optimize your supply chain with end-to-end orchestration of real-time data for supply chain automation by:

- Streaming analytics of IoT data
- Matching actual production figures against planned schedules
- Predicting the calculation of yield efficiency

How do we solve this?

InfinyOn Cloud streamlines supply chain automation by collecting data from endpoints in any geo-location with fast and efficient single digit millisecond latency. Spin up a cluster, select source and sink connectors from our catalog, configure producers and consumers, then create a topic for streaming data. SmartModules can be set up in order to aggregate, filter or map streaming data. InfinyOn Cloud makes it simple to set up, deploy and manage your cluster.