



### FUTURE-PROOFING NONSTOP

#### MODERNIZATION THROUGH INTEGRATION

Phil Ly





Innovation



#### WHERE WERE YOU IN 2019?























NonStop Innovation



**FUTURE-PROOFING NONSTOP** 

MODERNIZATION THROUGH INTEGRATION

#### Continued to help customers modernize NonStop



Completed more modernization Use Cases

Identified new solution and software tools



### Modernization through Integration











## Modernization through Integration A Cost-Effective Approach

- Simplify architecture
  - Integrate services, microservices, data and system
- Add more functions via connectivity
  - Open-source solutions
  - Cloud services
- Leverage API and API-led connectivity
  - Connect with internal and partner applications (Mobile. Cloud. Big Data.)



## Modernization through Integration TIC















































#### **API Integration**





#### API Integration facilitates Modernization

API-led connectivity is a methodical way to connect apps to data

Use API-led connectivity to add functionality while hiding the complexity

APIs eliminate any tight coupling between applications and systems





## NuVave



LightWave

Server-side middleware (NonStop as server)

Client-side middleware (NonStop as client)

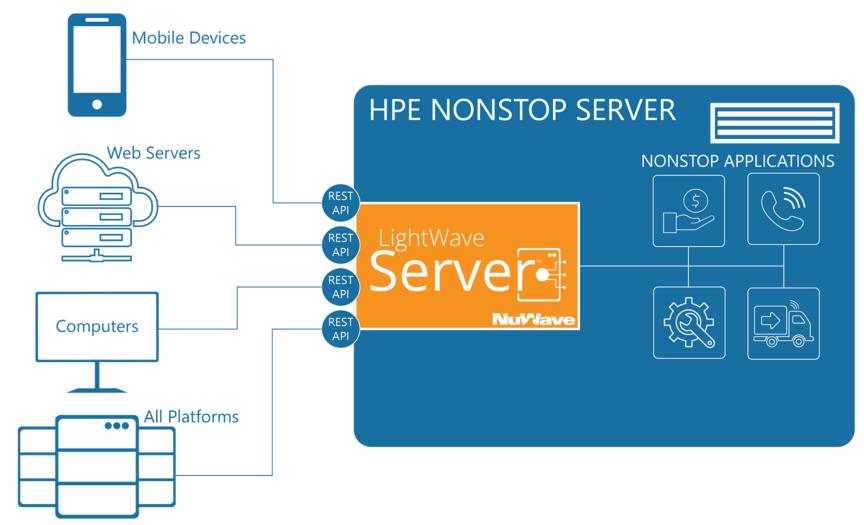
Expose NonStop applications as REST services

Access REST services from NonStop

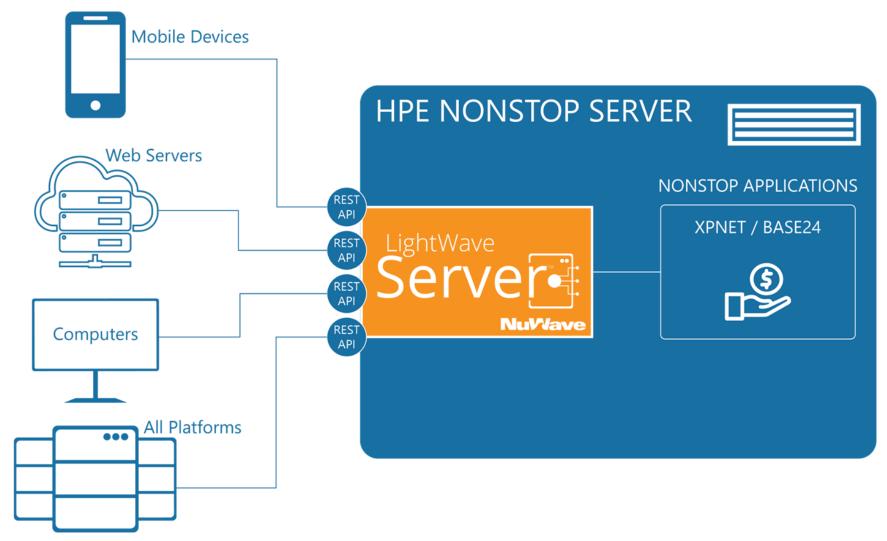
Run entirely on Guardian

#### LIGHTWAVE SERVER<sup>TM</sup>



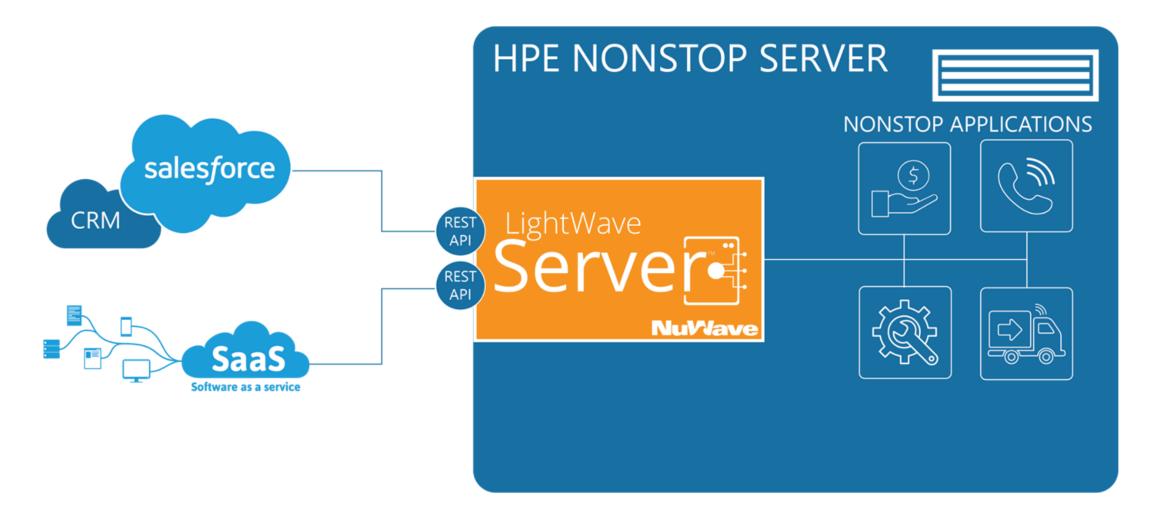


### INTEGRATE LIGHTWAVE SERVER<sup>TM</sup> WITH BASE241C//////



#### CONNECT TO CRM OR SAAS





## Modernize UI via RESTful API Integration Customer Use Case









Next Generation of PACCAR Parts eCommerce program, Online Parts Counter (OPC)

#### **RESTful API**









#### **Third Party Partner Portal**

Sales and Inventory System

## NuVave



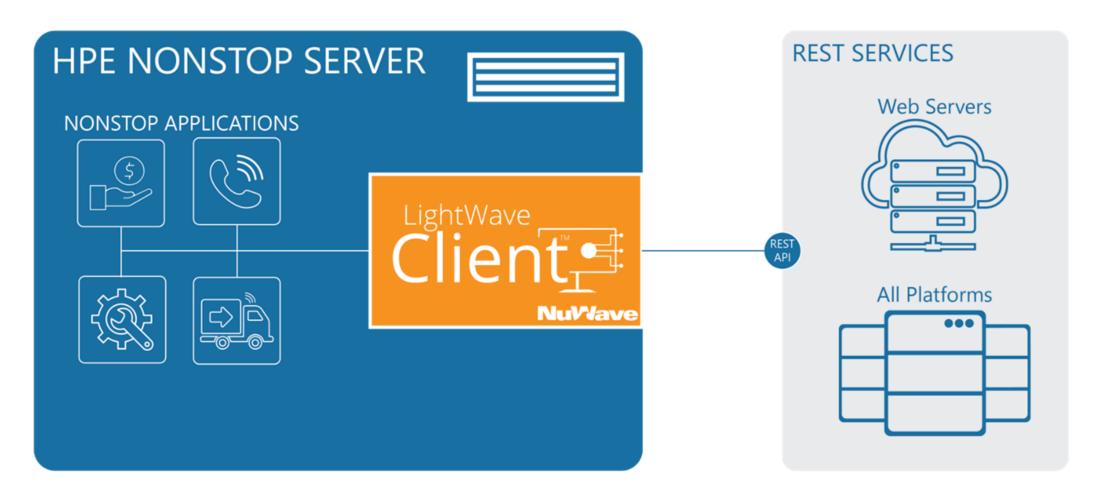


Securely access REST services from your HPE Nonstop

FOR HPE PARTNERS AND HPE CUSTOMERS O

#### LIGHTWAVE CLIENT<sup>TM</sup>

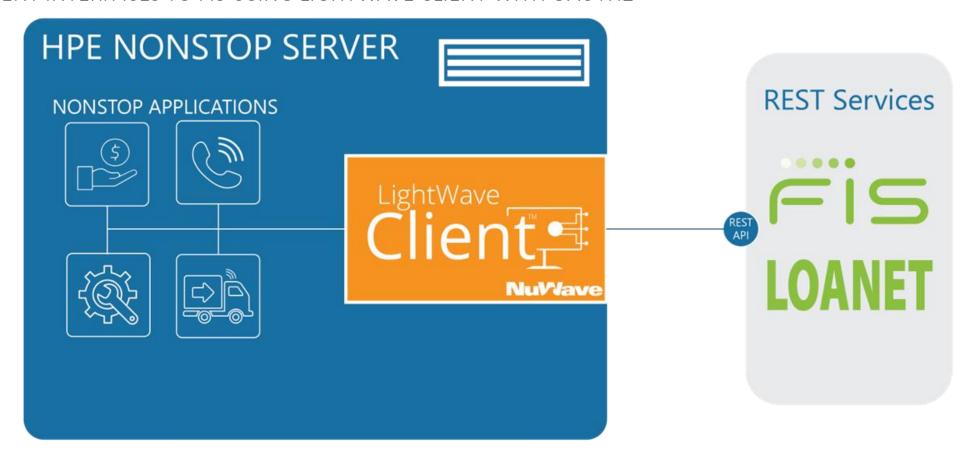




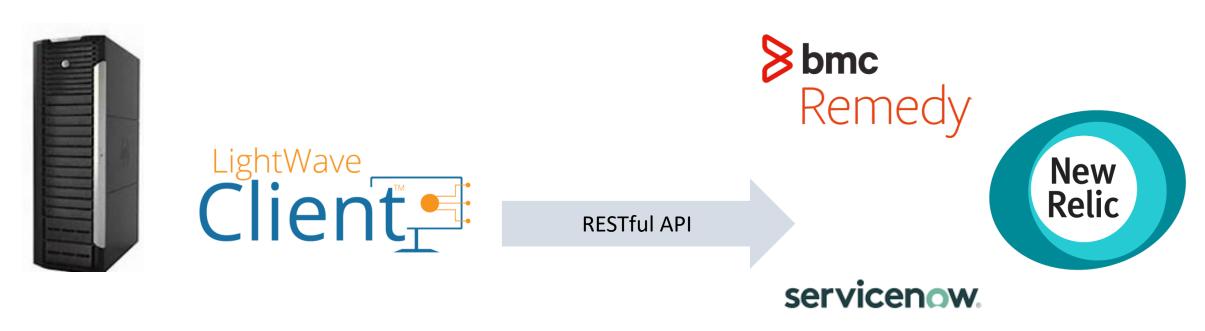
#### LIGHTWAVE CLIENT<sup>TM</sup> CONNECTS NONSTOP TO FINANCIAL SERVICES



#### FINANCIAL CLIENT INTERFACES TO FIS USING LIGHTWAVE CLIENT WITH OAUTH2

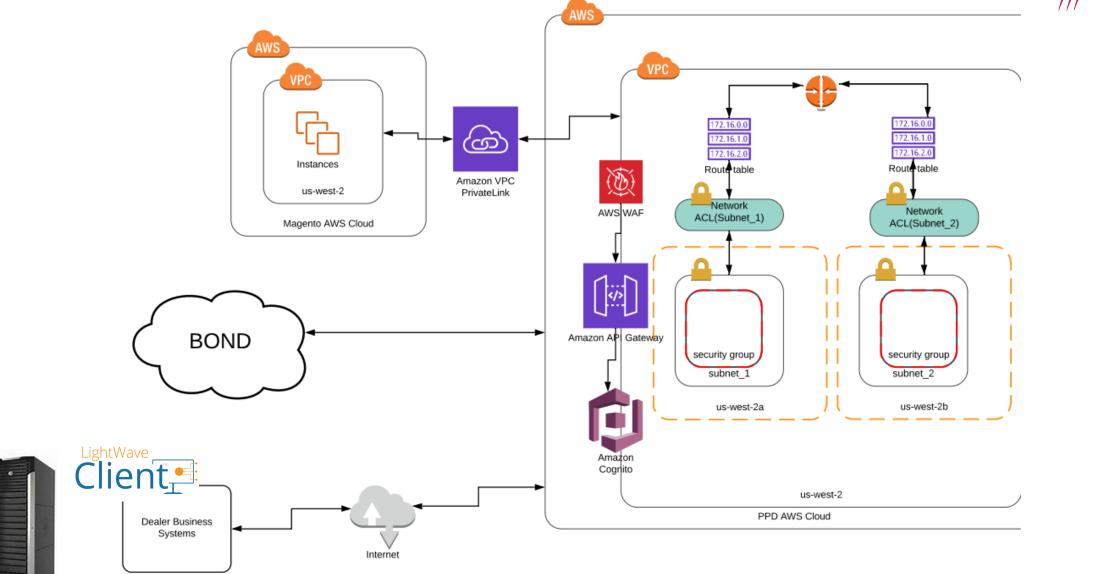


## Modernize IT Management via Integration

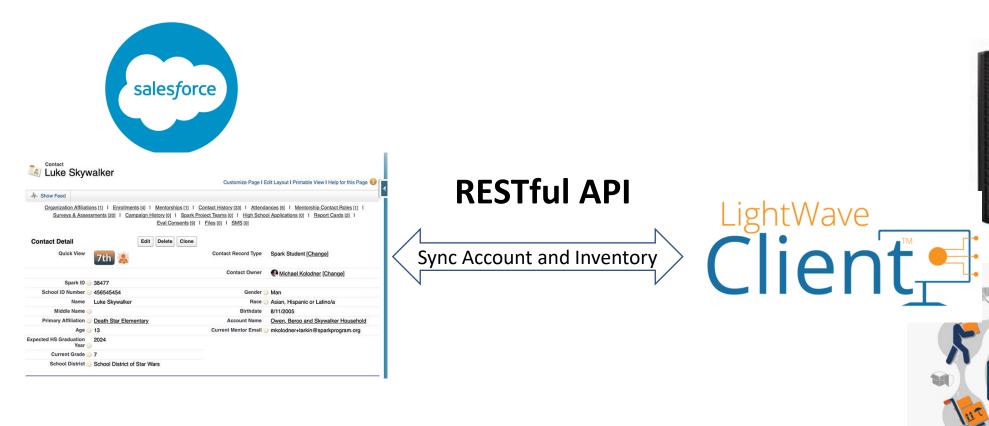


Generate events to update IT Management Workflows and Monitoring systems





## Modernize UI via RESTful API Integration Customer Use Case



Sales and Inventory System



#### **Data Integration**







#### Modernize with JSON

JSON is the preferred data format for all web and application interfaces

Available natively or through libraries for all major programming languages

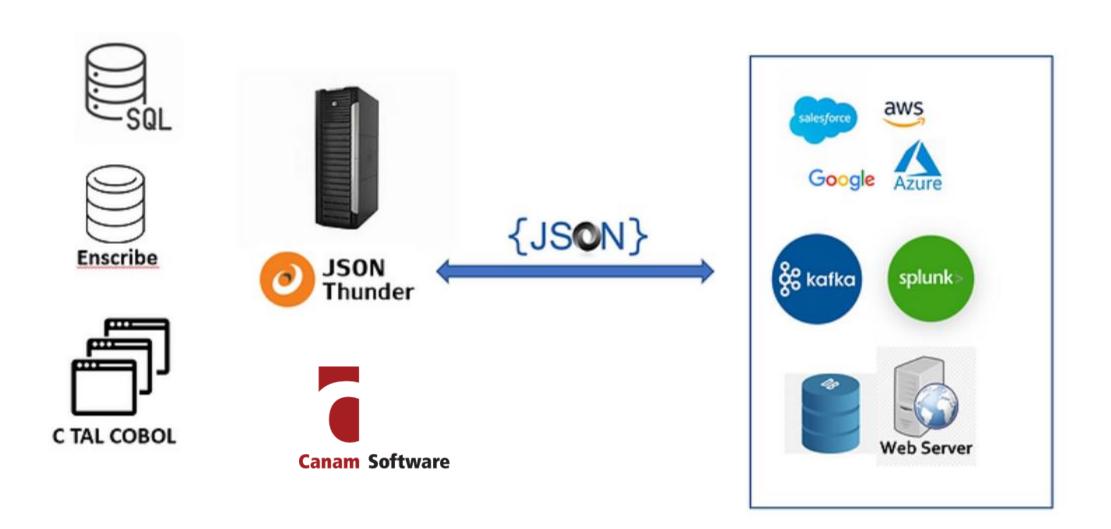


Supported natively by many popular databases: SQL Server, Oracle, MYSQL, etc.

Embraced by Cloud services like AWS and Azure



### JSON Thunder on NonStop

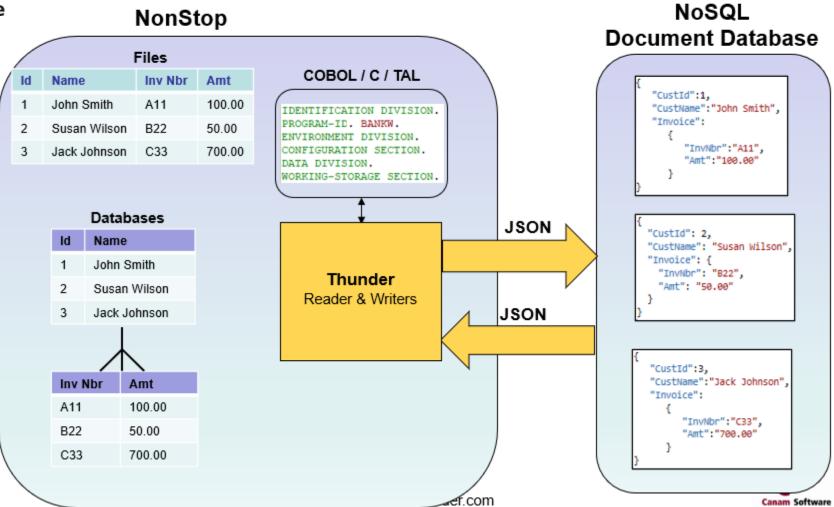




#### NonStop to NoSQL

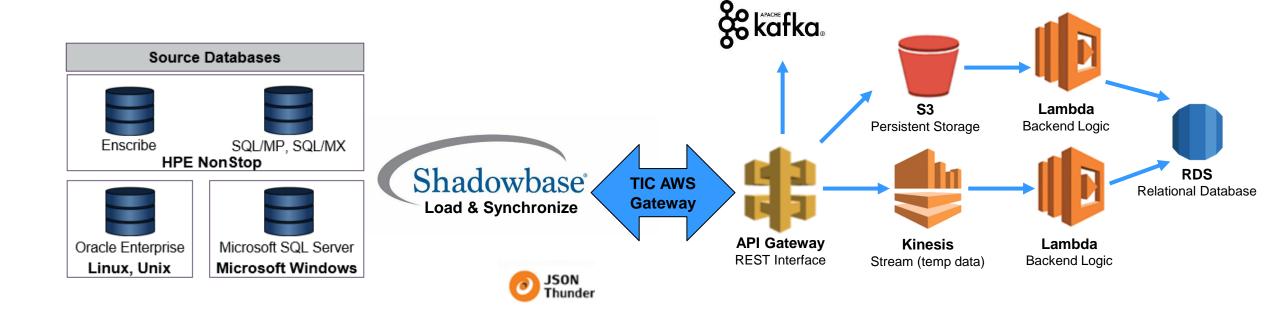








### TIC AWS Gateway (TAG)



amazon

webservices



#### **Integration with Enterprise Tools**





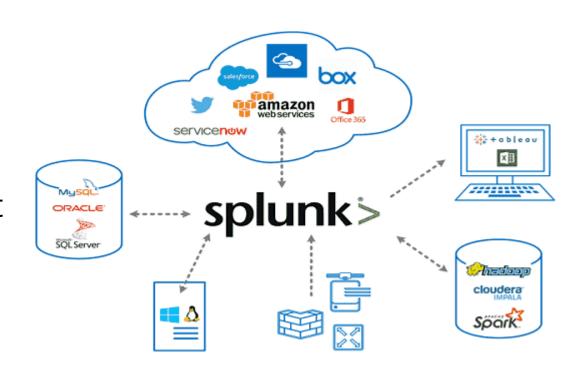
### What is Splunk?

Splunk creates analytical reports with interactive charts, graphs, and tables

Splunk is scalable and easy to implement

Splunk can automatically find useful information enclosed in your data

Splunk helps in saving your searches and tags so that it can make your system smarter



## Modernize Dashboard via Integration









ITP Web Logs





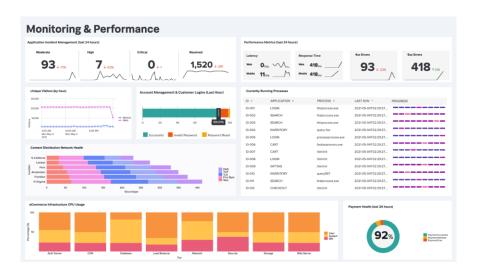
**NonStop Events** 







**TIC LogWatch** 





#### What is Kafka?

Publish-subscribe system

Guaranteed In-order

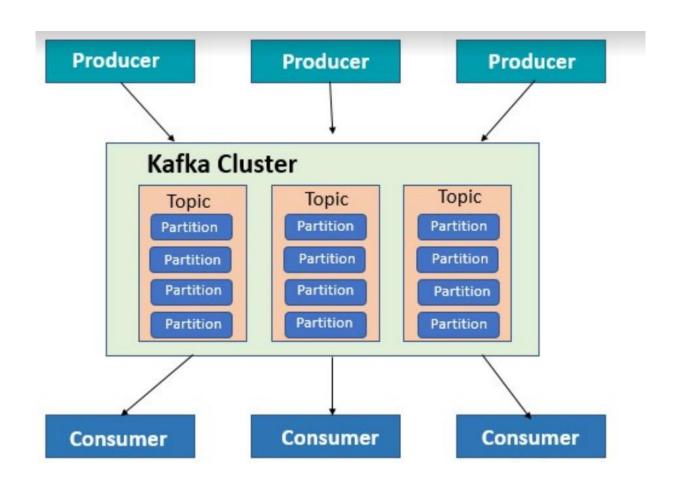
Persistent

Scalable

**Fault Tolerant** 

**High Performance** 





#### Why use Kafka?

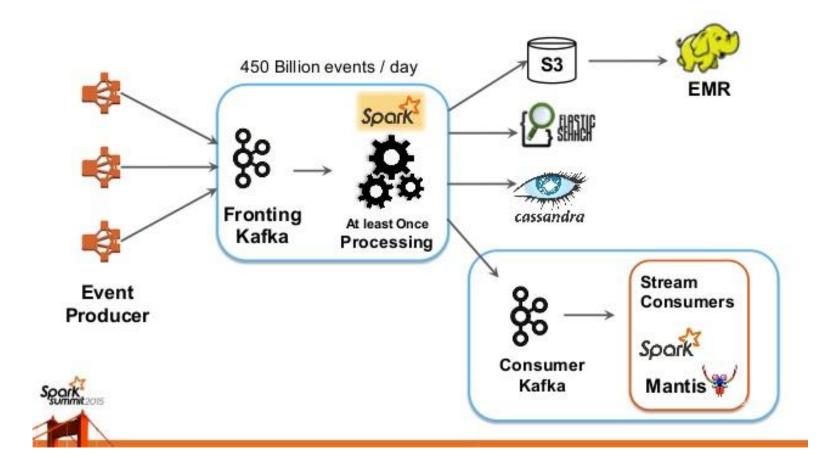


It is fast

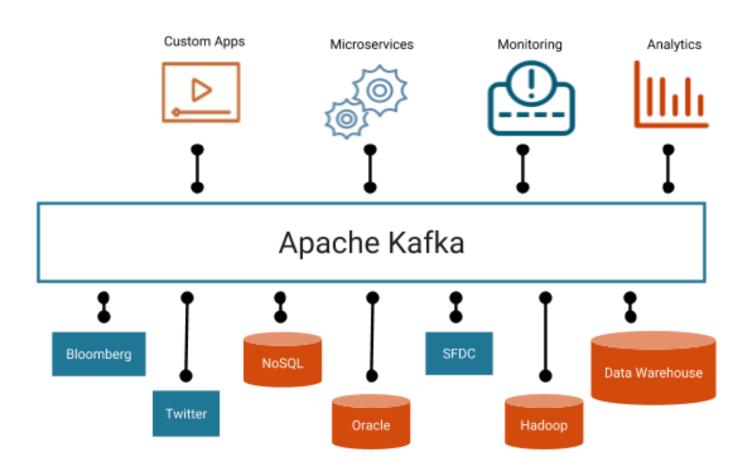
Publish once and reach many Consumers

Widely adopted

Many connectors available



#### Leverage Kafka Connectors



#### 111

#### uLinga for Kafka

NonStop application Kafka Producer
Publishes events to Kafka Cluster

Supports Kafka communication over TCP/IP

Natively compiled Guardian process pair

No OSS, Java or intermediate databases needed

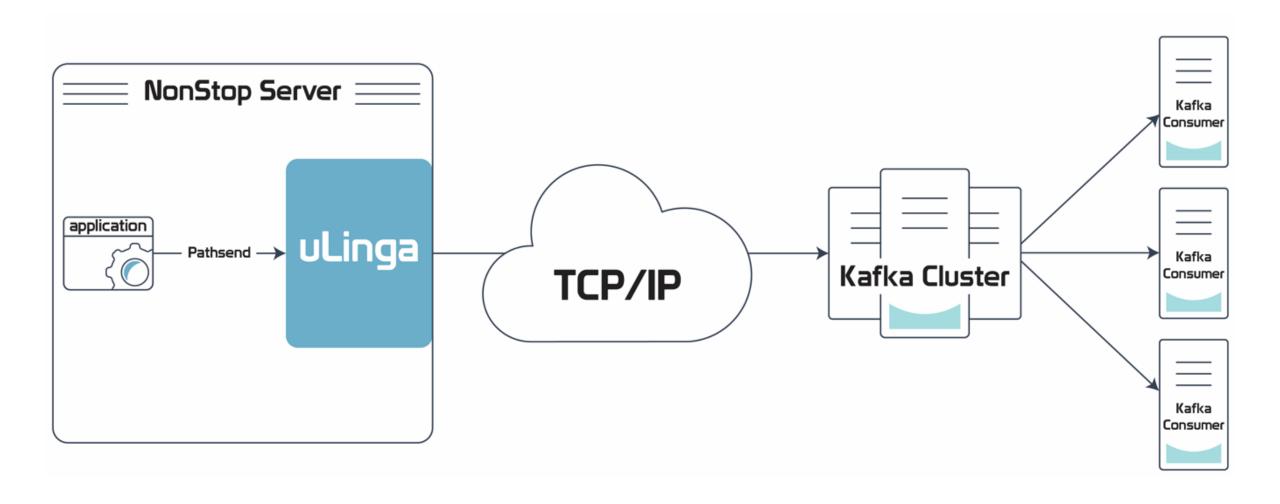
No additional external hardware needed



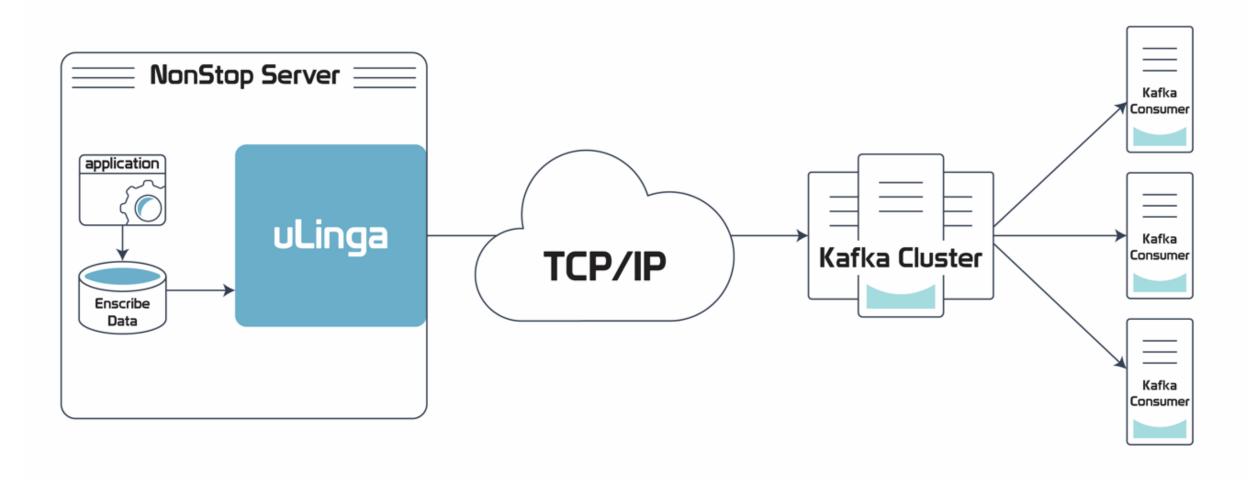




#### Publish to Kafka via a simple Pathsend



#### Push data records to Kafka Cluster



#### NonStop Use Cases



Publish NonStop application logs or system events to Kafka for real time analysis



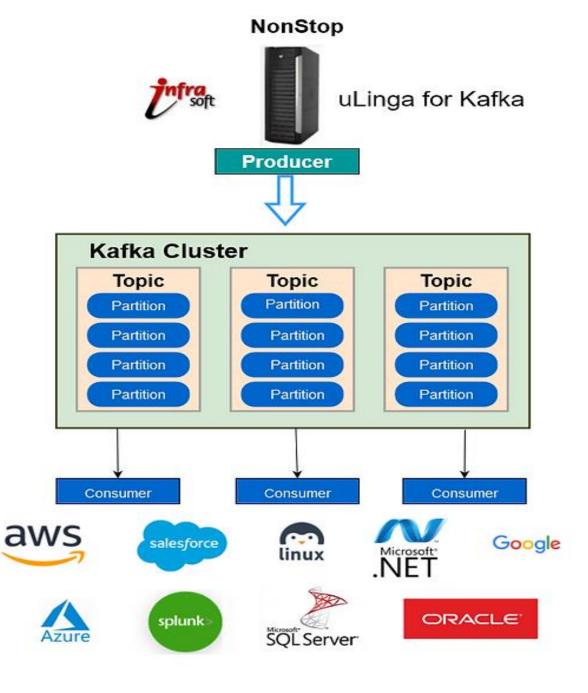
Publish NonStop data to sync with Cloud Services



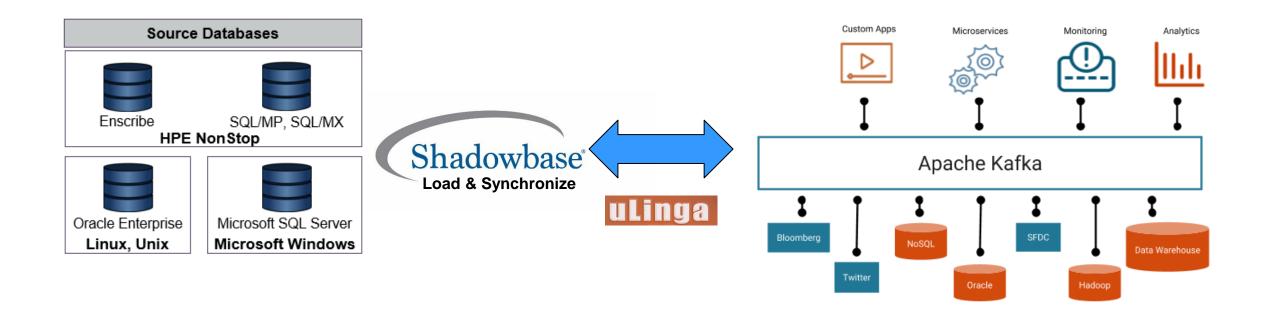
Push NonStop data changes to other database platforms such as SQL Server or Oracle



Asynchronous messaging interface to applications on other platforms such as Windows or Linux



#### Replicate NonStop Data to Kafka



#### Modernization through Integration **TIC**



One of the most cost-effective modernization approaches is to integrate applications with other software, platforms and cloud services

This can add value to NonStop applications and underscores the flexibility of the platform

Integration can provide better performance while lowering risks







# TOP Reasons to partner with us!









Other
TOP Reasons
to partner
with us!





