



Working with event streaming platforms

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Agenda & Benefits



Agenda

- What are event streaming platforms?
- Why use them?
- Use-case and demo
- The Messaging API in InterSystems IRIS



Benefits you'll receive

- Understand the basic concepts of event-streaming platforms
- Kafka, AWS SQS/SNS

Key Takeaway

Understand how to interact with event streaming platforms in the cloud or on-premise



What Are Event Streaming Platforms?



Kafka, AWS SQS/SNS, RabbitMQ, JMS, ...



CAPABLE TO
CONSUME AN
UNBOUND
STREAM OF
EVENTS IN A
VERY HIGH
FREQUENCY



CAN REACT TO
THE EVENTS
(ALERTS, ETC.)



CONSUMERS
READ DATA
FROM STREAMS
FOR FURTHER
PROCESSING

What Are Event Streaming Platforms?



Common Terms



Topic/Queue, name of a channel or a place where data is stored



Producer, creates and sends data (events, messages) to a topic or a queue



Consumer, reads events/messages from one or more topics or queues



Publish/Subscribe vs. Polling

Why are they used?



**DECOUPLING OF
PRODUCERS AND
CONSUMERS**



**HIGHLY SCALABLE
FOR REAL-TIME DATA**

Do I really need them?

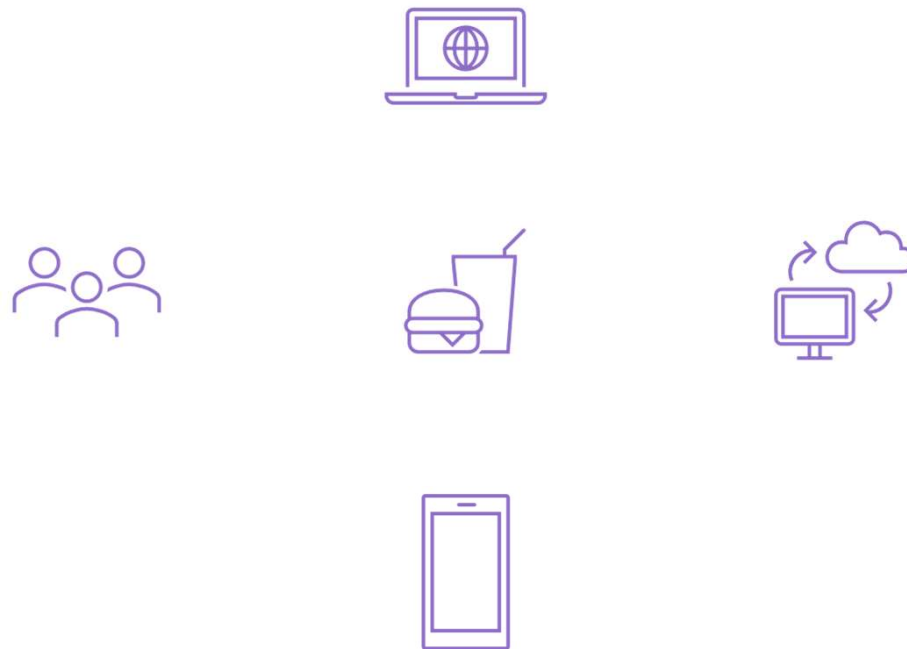


As an InterSystems IRIS developer
probably not, but...

you are not alone...


you have to interact with other applications
or services (cloud/on-premise) as a
consumer or producer

Use Case




Great Burger & More



[Description](#) [Ingredients](#) 

Cheese Burger

 £4.49



Description

Our signature burger


quantity:

[add to cart](#)

[Description](#) [Ingredients](#)

Strawberries & Cream

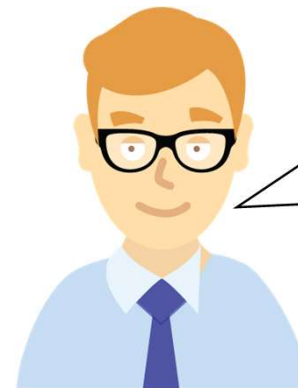
 £2.99





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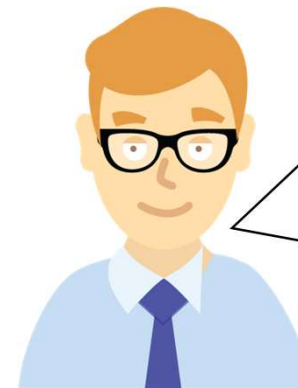
Integration with Kafka and AWS SQS/SNS



We need to
integrate
with more
restaurants.
Many of
them are
already in
the cloud.

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Integration with Kafka and AWS SQS/SNS



Some of them told us that Kafka is their preferred method to integrate with them. Others prefer AWS SQS.

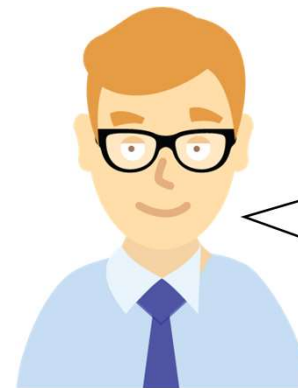
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 Simple Queue Service ☆
SQS Managed Message Queues

Integration with Kafka and AWS SQS/SNS



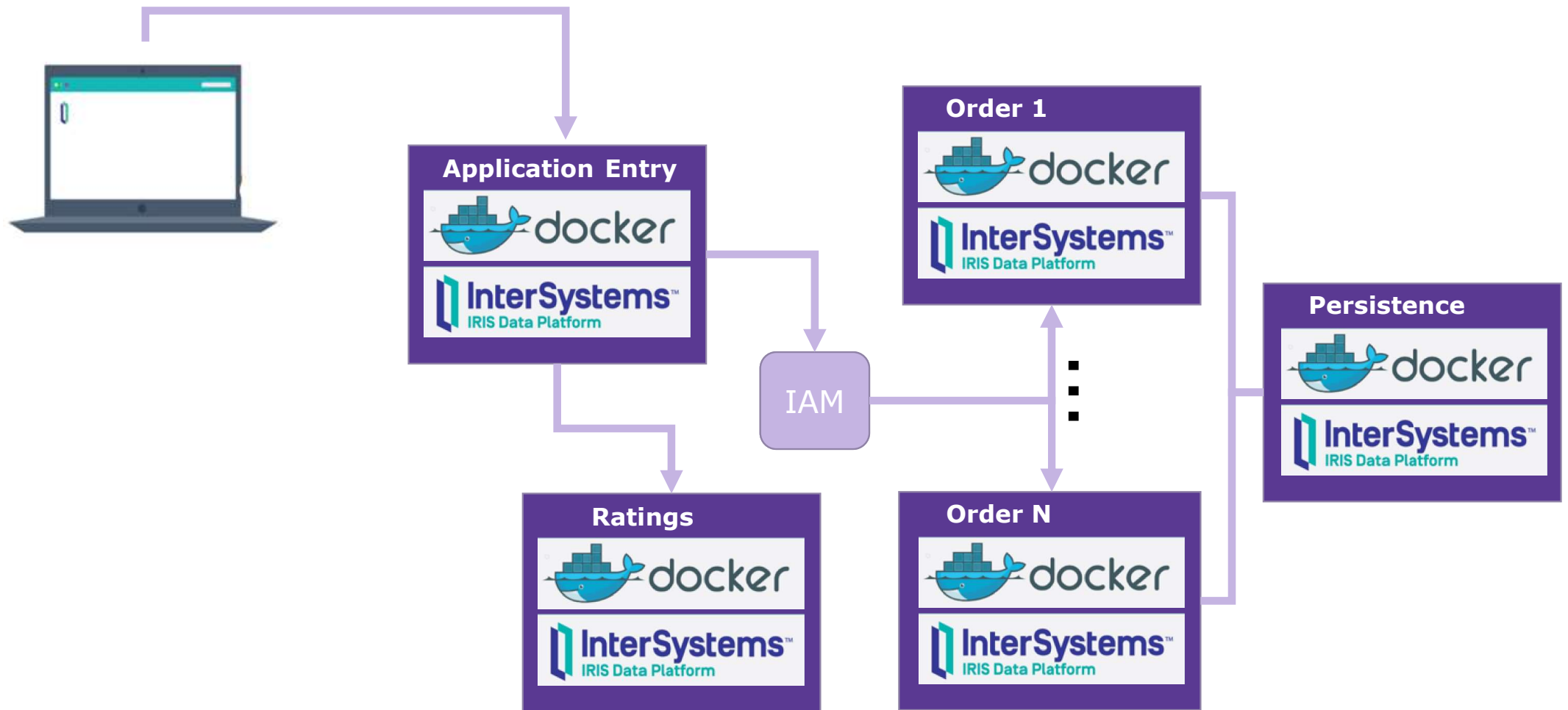
 Simple Notification Service ☆
SNS managed message topics for Pub/Sub



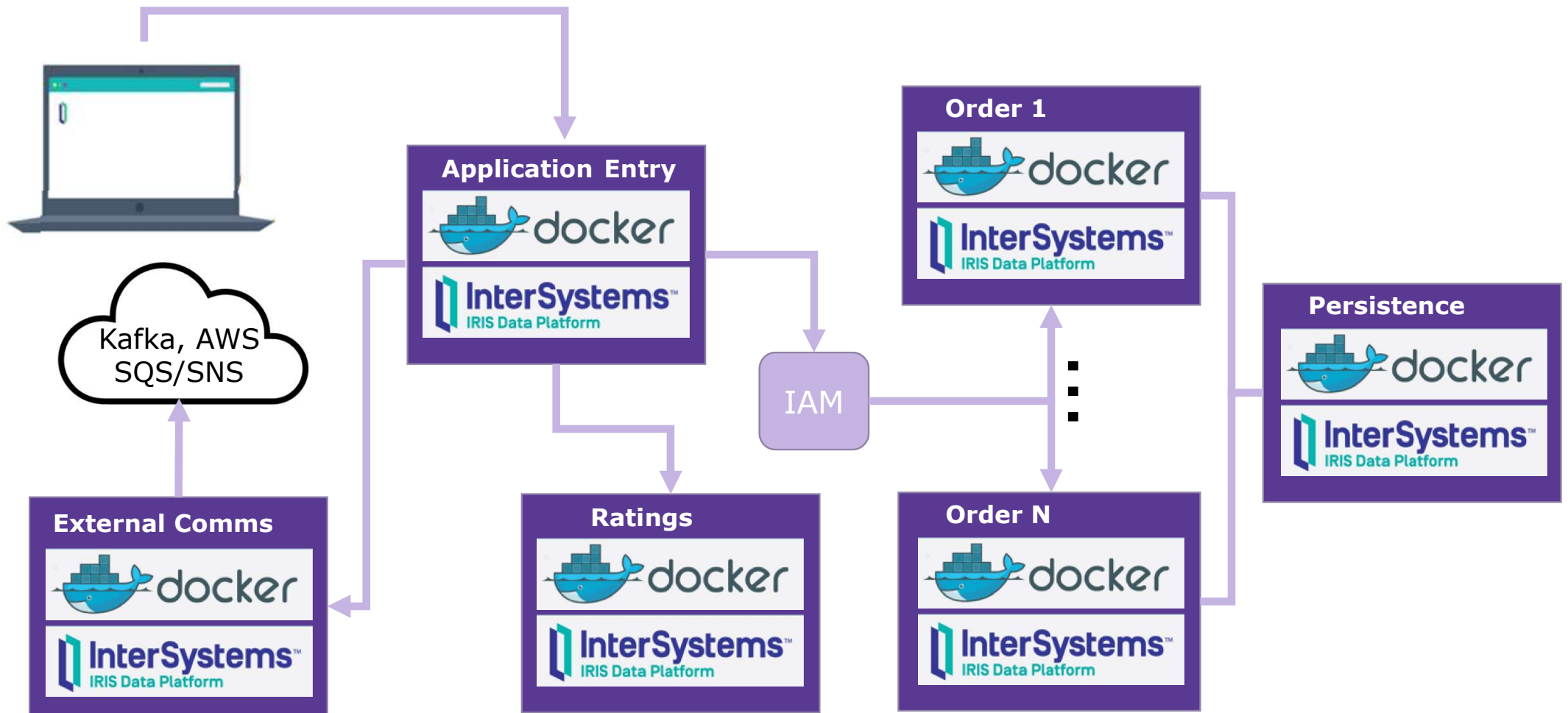
And they expect us to send an order confirmation or status updates via text messages. What can we do?

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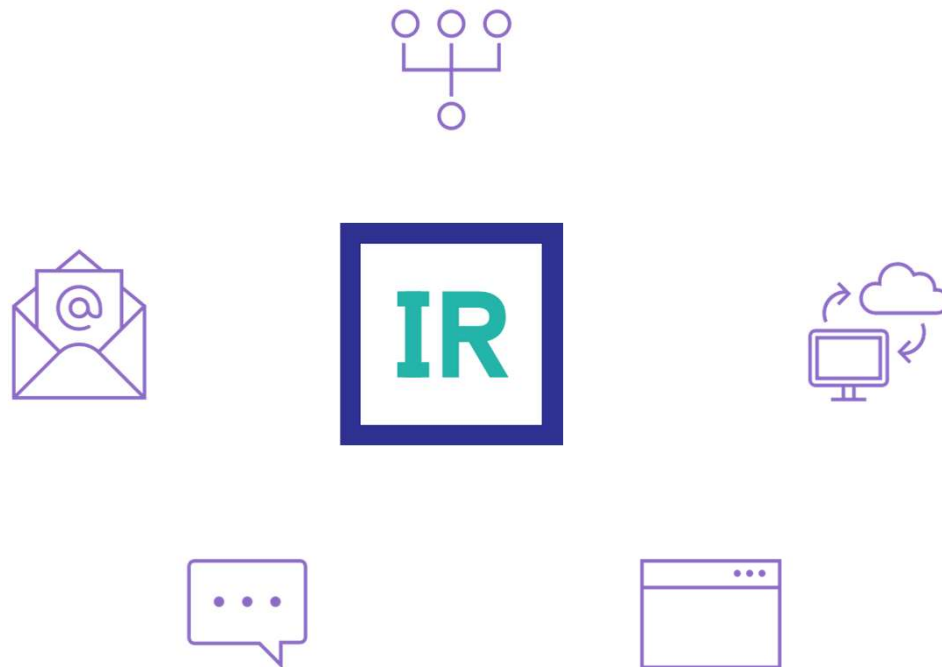
Existing Architecture



Enhanced Architecture



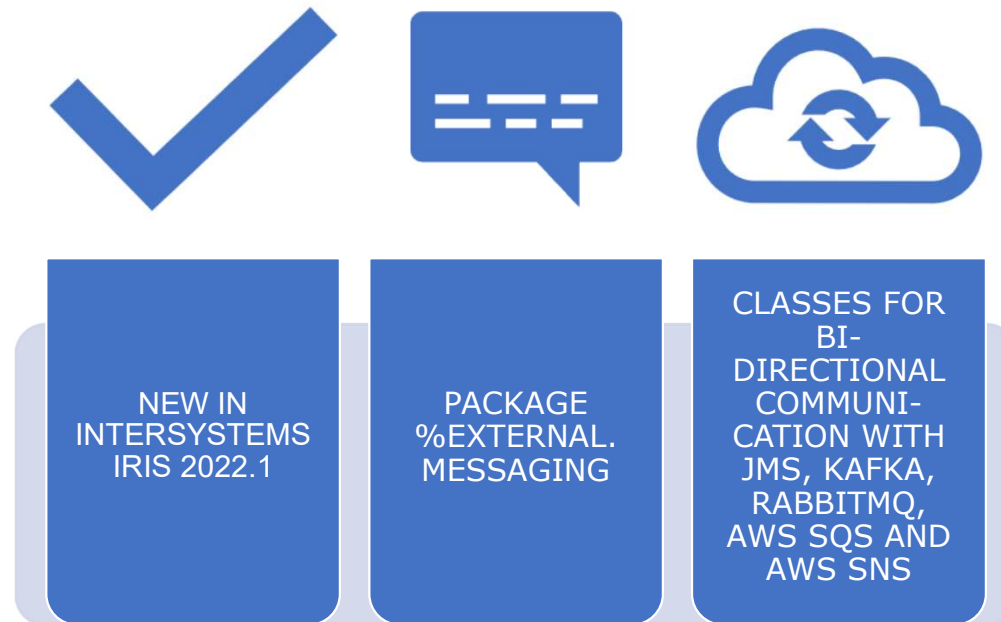
The InterSystems IRIS Messaging API



The External Messaging API in InterSystems IRIS



- ✓ %External
 - ✓ Messaging
 - Client
 - JMSClient
 - JMSMessage
 - JMSMessageProperty
 - JMSSettings
 - KafkaClient
 - KafkaMessage
 - KafkaSettings
 - KafkaTopicSettings
 - Message
 - RabbitMQClient
 - RabbitMQMessage
 - RabbitMQQueueSettings
 - RabbitMQSettings
 - SNSClient
 - SNSMessage
 - SNSSettings
 - SQSClient
 - SQSMessage
 - SQSMessageAttribute
 - SQSQueueSettings
 - SQSSettings
 - Settings



Predefined Components for Interoperability Productions



Key Takeaway

Concept of Event Streaming
Platforms

Common Terms like
Topic/Queue,
Producer, Consumer, etc.

New Messaging-API
`%External.Messaging.*`



Thank you