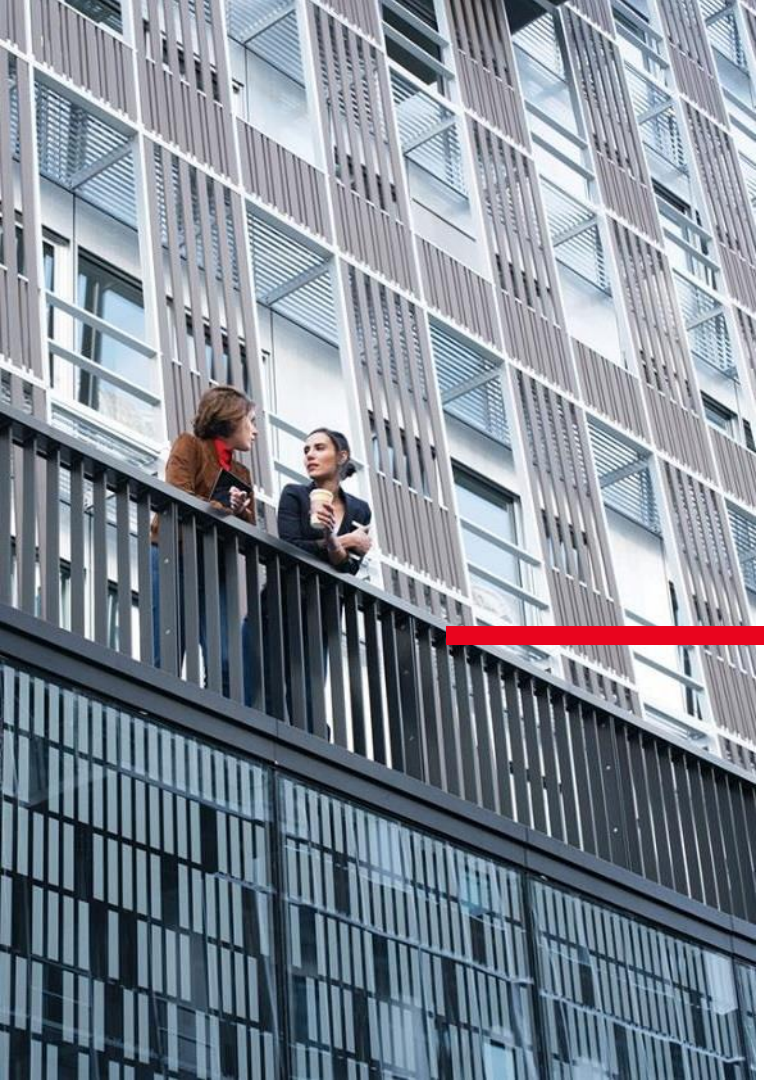

BRIDGE AMQP / MQ

Guide MQ – 12/10/2021

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BRIDGE MQ / AMQP

How to interface IBM MQ to RabbitMQ

NEED

HISTORICAL MODEL WIDELY USED AT SG : IBM MQ

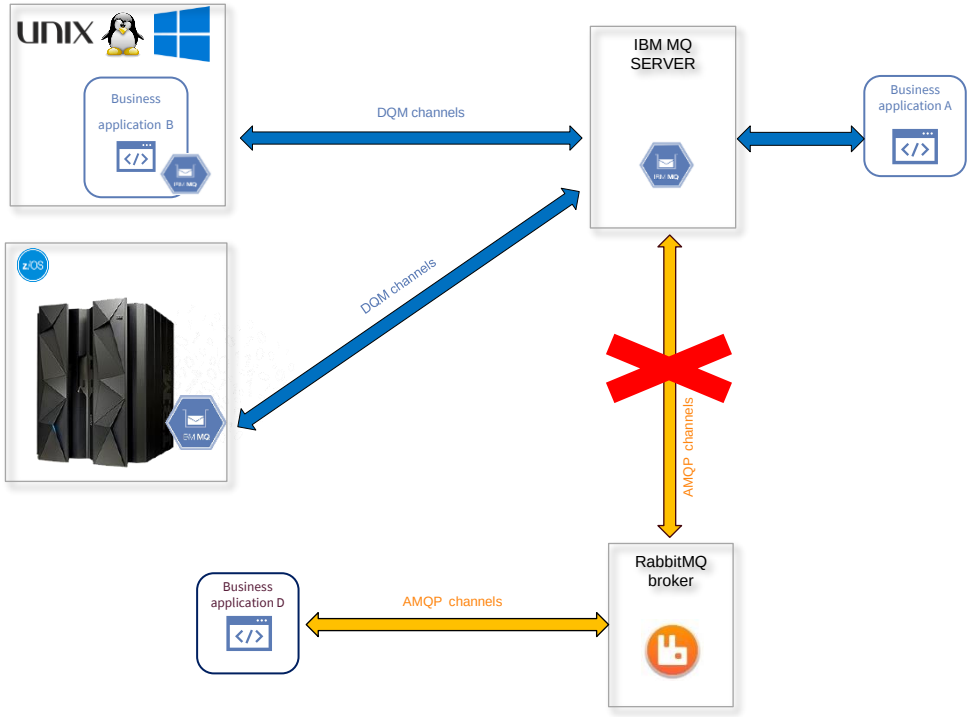
IBM MQ is a licensed product, available on many systems (various unix, AS400, VMS, Z/os, Windows …)
Protocols are : MQ, AMQP (1.0), MQTT, HTTP.

NEW STANDARD : RABBITMQ

RabbitMQ is an open source solution, based on a open source protocol (AMQP)

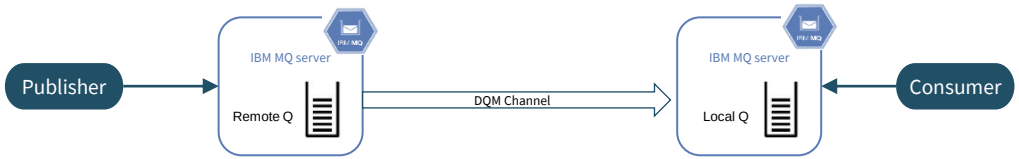
NEED TO EXCHANGE BETWEEN THEM

Because it's necessary to be able to exchange messages with other applications that not using RabbitMQ, we need to provide a solution.

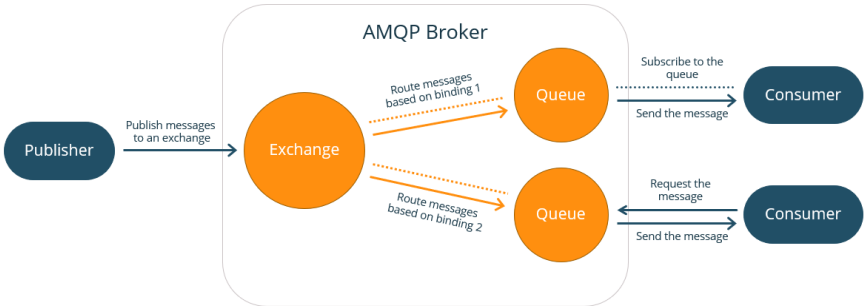


ROUTING MODELS

IBM MQ ROUTING MODEL



AMQP ROUTING MODEL



DETAIL OF BRIDGE SOLUTION

WHAT BRIDGE IS IT :

- This connector is an intermediate brick between two messaging technologies : IBM MQ & RabbitMQ

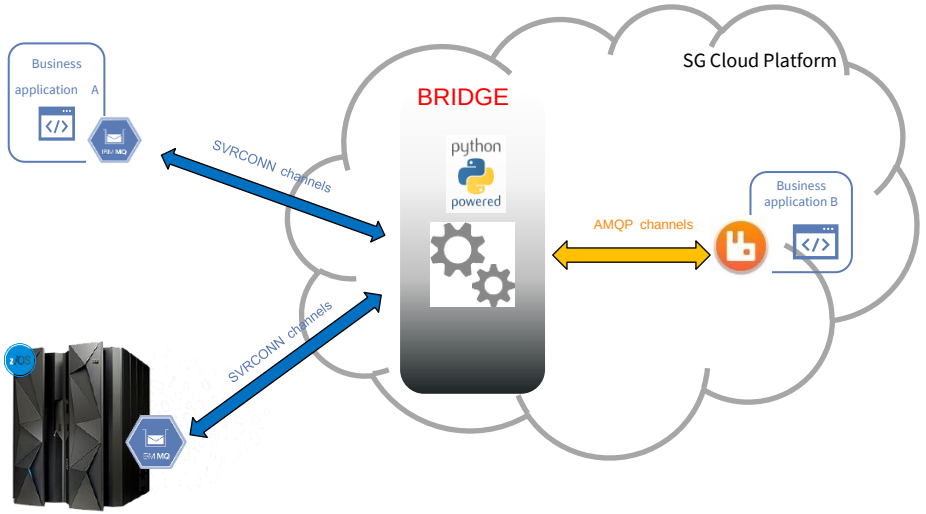
BENEFIT :

- Allow applications that do not use the same technologies / protocols to communicate with each other
- Allows to interconnect heterogeneous systems (ex : Z/os with distributed systems)
- Allows an application to migrate to rabbitmq without forcing its partners to migrate at the same time

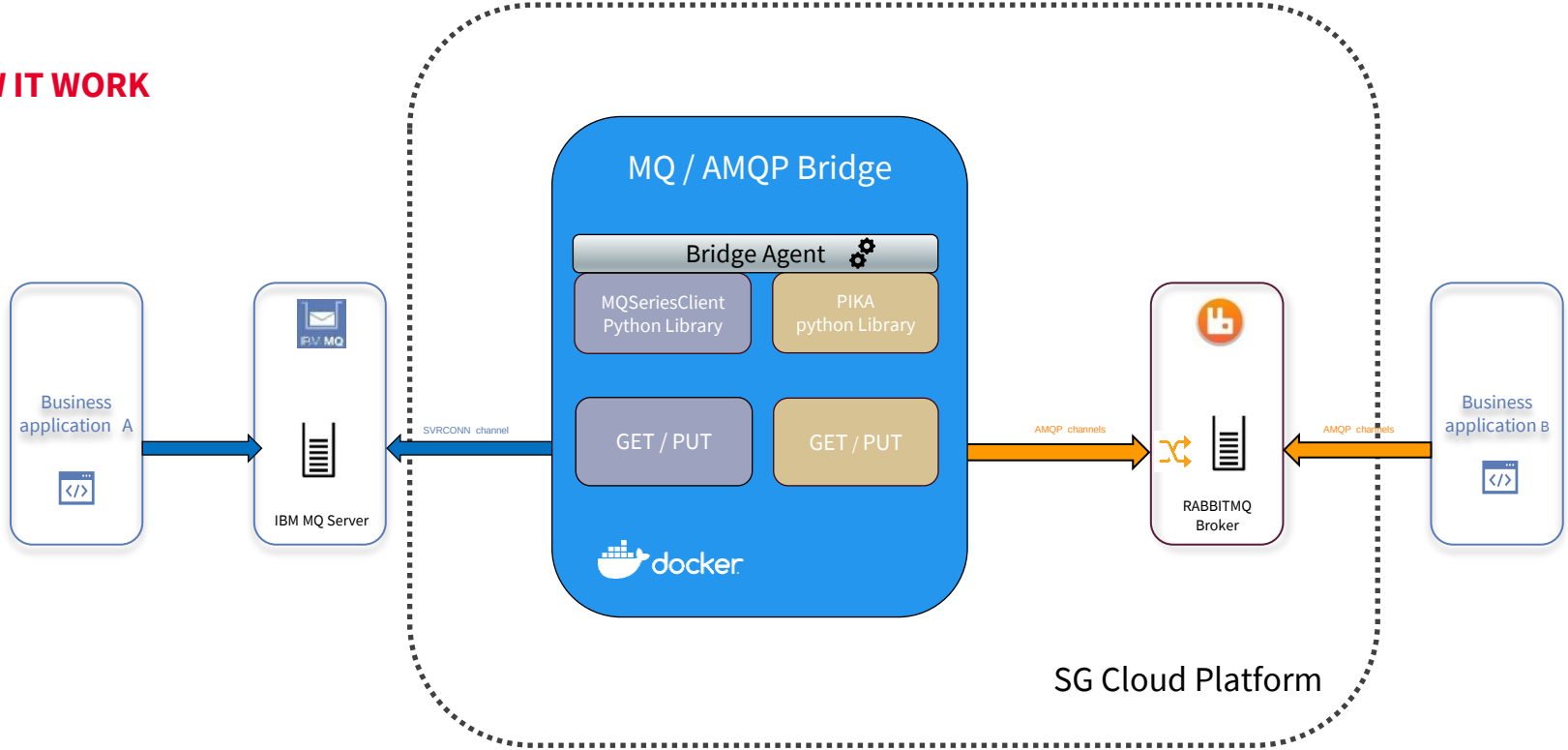
→ This bridge should be an accelerator to service platform adoption

BRIDGE'S FUNCTIONALITIES :

- Interfacing with IBM MQ through MQI libraries (put and get)
- Interfacing with RabbitMQ through PIKA python library (put and get)
- Transcoding (ex : EBCDIC-> UTF-8)
- SSL encryption
- Certificate authentication



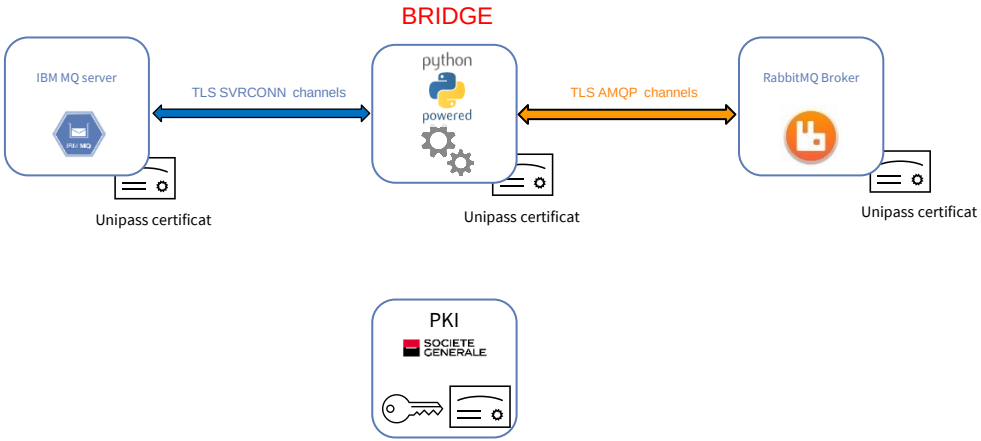
HOW IT WORK


MQ / AMQP Bridge
Bridge Agent
MQSeriesClient Python Library
PIKA python Library
GET / PUT
GET / PUT
docker
Business application A
IBM MQ Server
SVRCONN channel
AMQP channels
RABBITMQ Broker
AMQP channels
Business application B
SG Cloud Platform

SECURITY

TLS ENCRYPTION USED :

- RabbitMQ: AMQP over TLS is used for transport layer
- IBM MQ : Certificate is user for mutual authentication, and TLS encryption for transport layer



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DEMO

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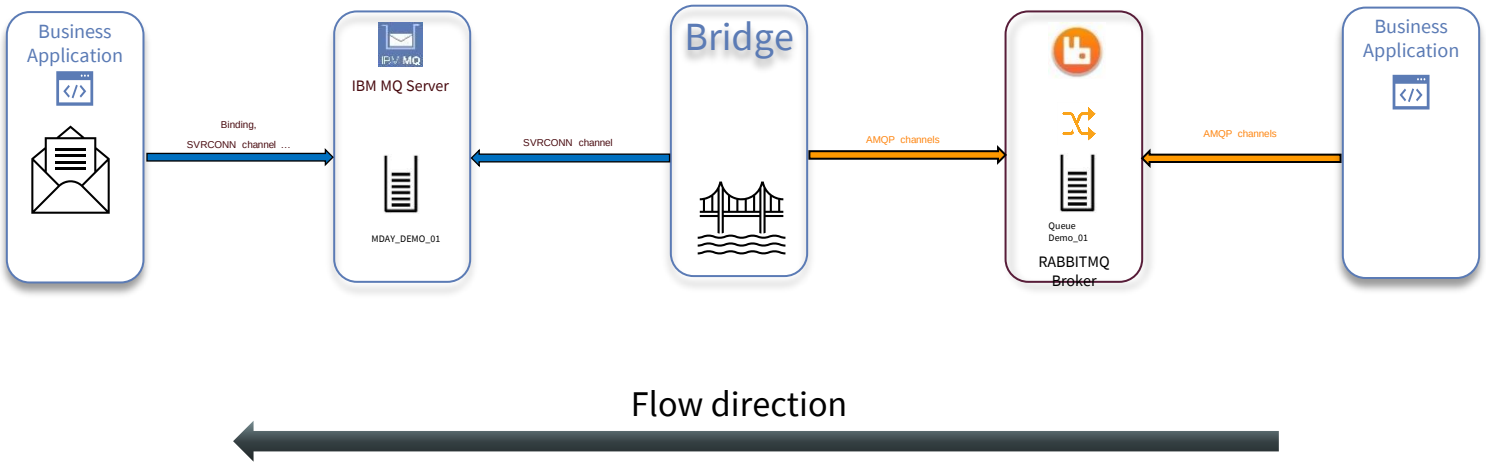
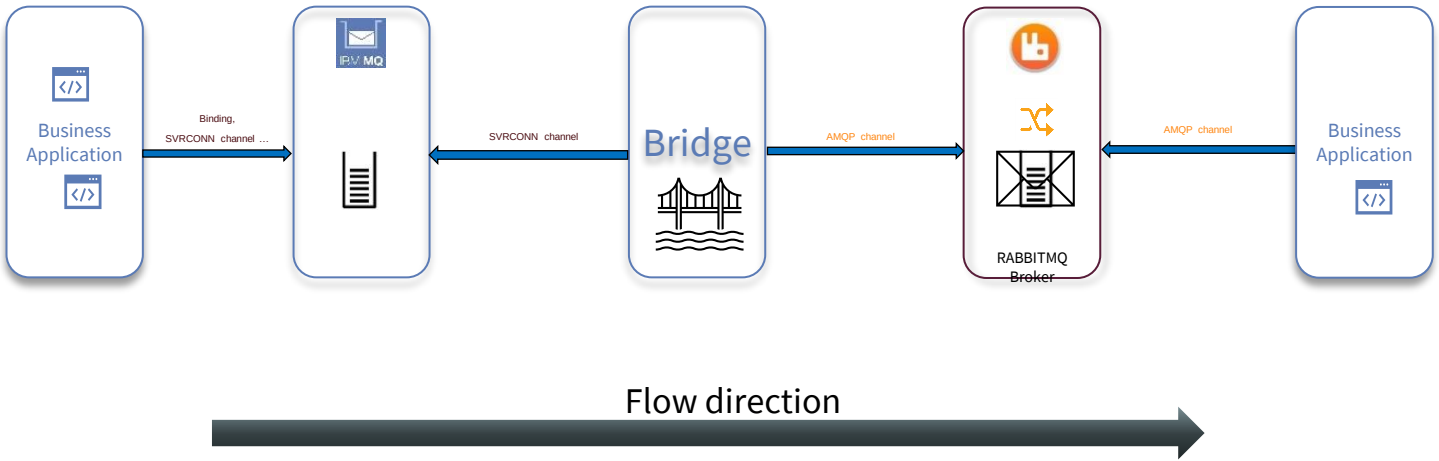
Demo 1 – From Rabbit to MQ



Demo 2 – From MQ to Rabbit



Q & A

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