NOVEMBER 5TH, 2022

Event-driven architecture with Dataverse & Azure

Raphael Pothin

experlogix

resco.net
technology on the move

RSM

mscrm-addons.com
Your company for MS-CRM ADD-ONS!

THANKS TO OUR SPONSORS!

Who am I?

- Microsoft Bizapps MVP
- Power Platform & DevOps Enthusiast

Raphaël Pothin

@RaphaelPothin

Raphael POTHIN

Raphaël Pothin

Raphael Pothin

Agenda

Discovery

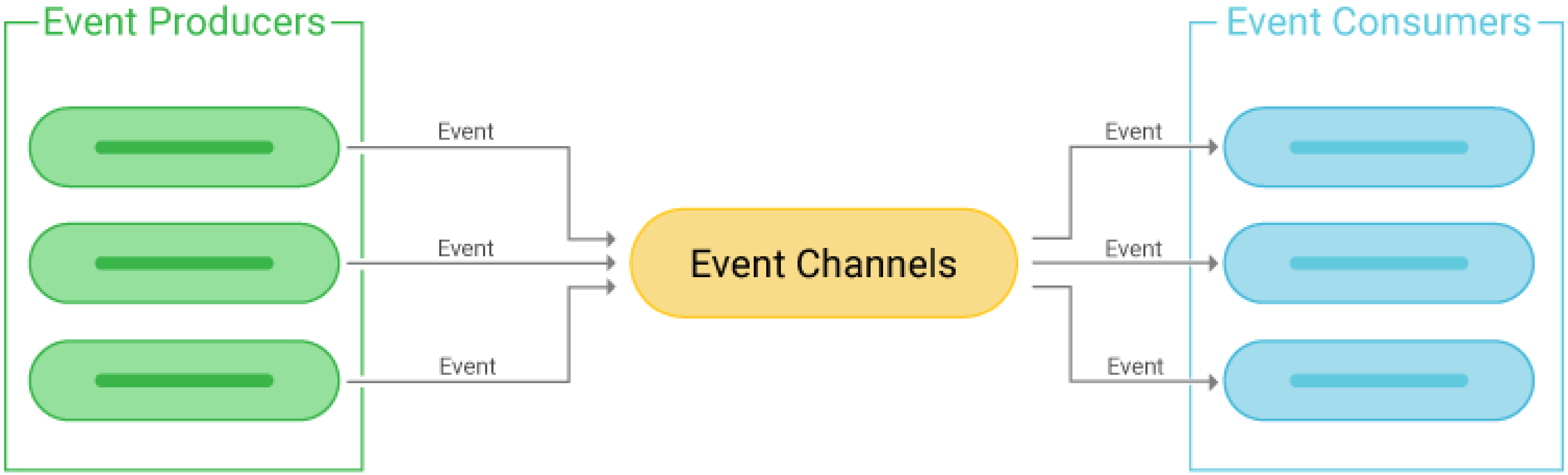
Exploration

Going further

Discovery

What is event-driven architecture?

Overview


Event Producers
Event
Event
Event
Event Channels
Event
Event
Event
Event Consumers

Benefits & Challenges

Benefits

- Producers and consumers are decoupled.
- No point-to-point integrations. It's easy to add new consumers to the system.
- Consumers can respond to events immediately as they arrive.
- Highly scalable and distributed.
- Subsystems have independent views of the event stream.

Challenges

- Guaranteed delivery. In some systems, especially in IoT scenarios, it's crucial to guarantee that events are delivered.
- Processing events in order or exactly once. Each consumer type typically runs in multiple instances, for resiliency and scalability. This can create a challenge if the events must be processed in order (within a consumer type), or if the processing logic is not idempotent.

Some components involved

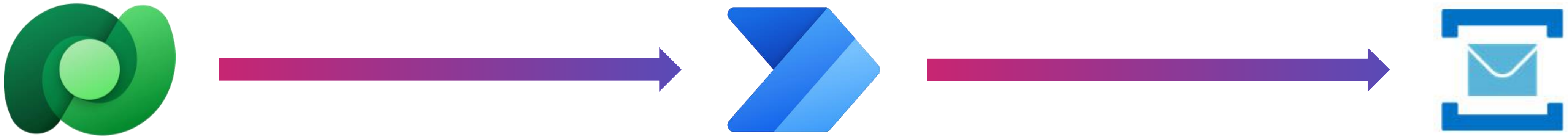
Events storage

Events production / consumption

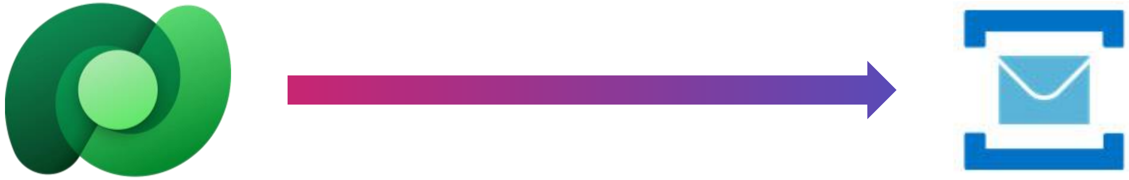
Exploration

Event-driven architecture with Dataverse and Azure

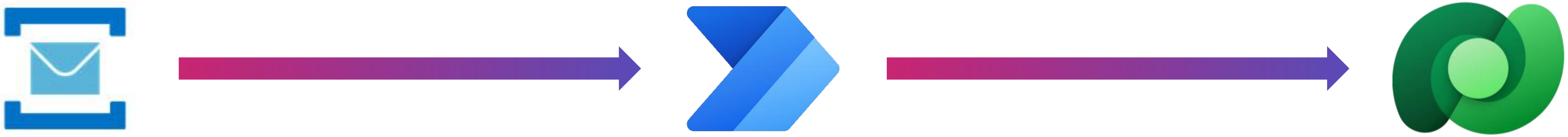
Publish message - Low-code approach



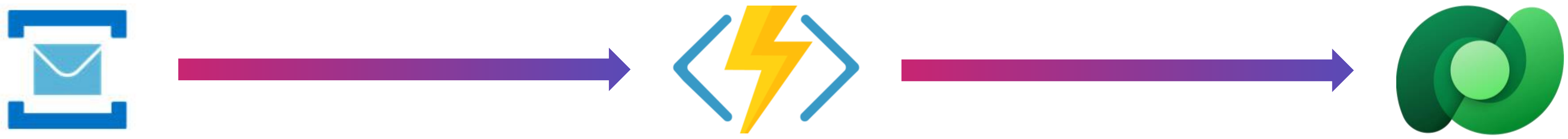
Publish message – Code first approach



Consume message - Low-code approach



Consume message – Code first approach



Going further

Other considerations to keep in mind

Security

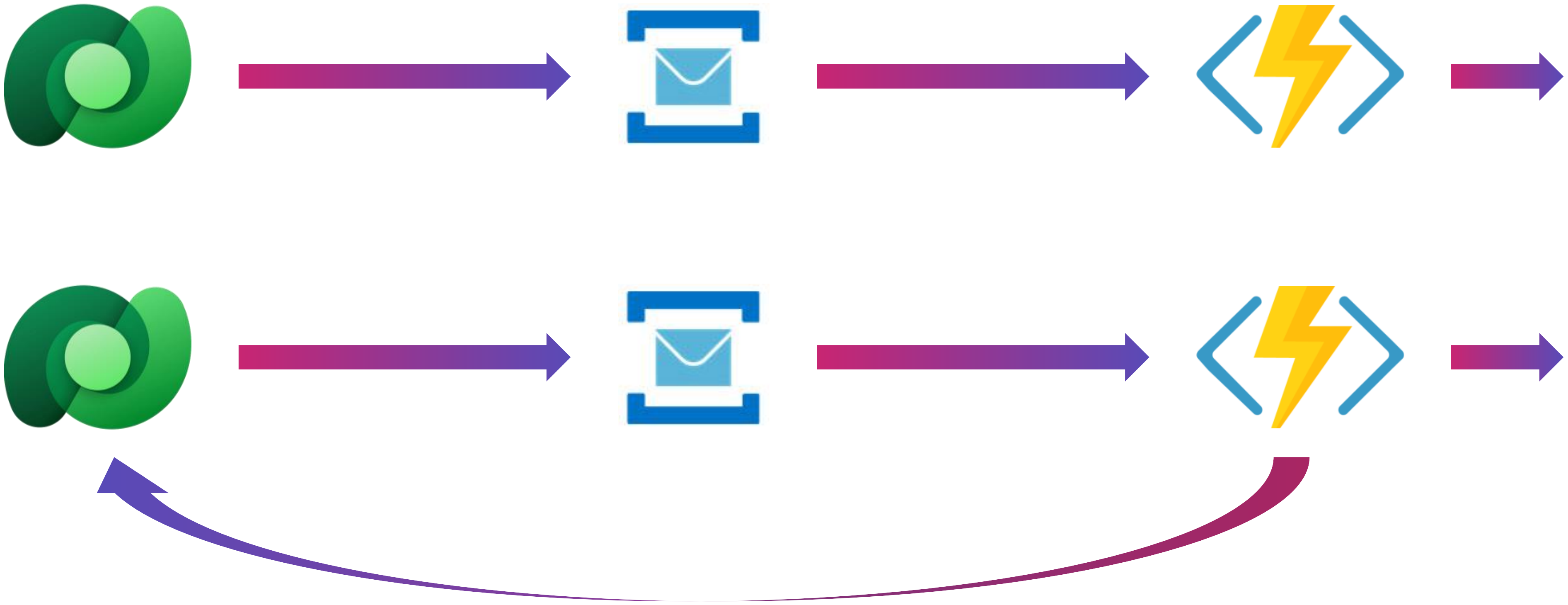
Connection / Identity

- Managed identities are a great way to avoid to manage and keep safe connection strings or client id and secret. Unfortunately, this feature is not currently available in all the services in the Microsoft cloud and the configuration of the access permissions on the Azure resources can bring some challenges.

Network

- To produce or consume event from Power Platform services (Power Automate, Power Apps or Dataverse) you need to publicly expose your events storage to, at least, a subset of Internet.
- And if you want to use Azure resources (like Azure Functions or Azure Data Factory) to consume events but still “monitor” the traffic from your internal network to Dataverse you will need additional configuration (ex: firewall)

Event structure



Reliability

What would happen if:

- The cloud flow in charge of sending events from Dataverse to an Azure Service Bus queue is turned off?
- The SAS key associated to a Dataverse service endpoint changes?
- The secret associated to the Azure AD app registration registered on as an application user in your Dataverse environment expired?

How could you keep your event-driven architecture implementation reliable?

Application lifecycle management

Examples of points to keep in mind:

- Management of connexions to Azure Service Bus or Azure Event Hub resources to be used from Power Automate or Power Apps
- Management of the configuration of Dataverse service endpoints to be able to communicate with Azure Service Bus or Azure Event Hub resources based on the considered environment

Questions?

experlogix

resco.net
technology on the move

mscrm-addons.com
Your company for MS-CRM ADD-ONS!

RSM

Thank you!