



# agrirouter

*API Developer Tutorial*

## Concepts of communication

presented by

**dev4**  
**AGRICULTURE**

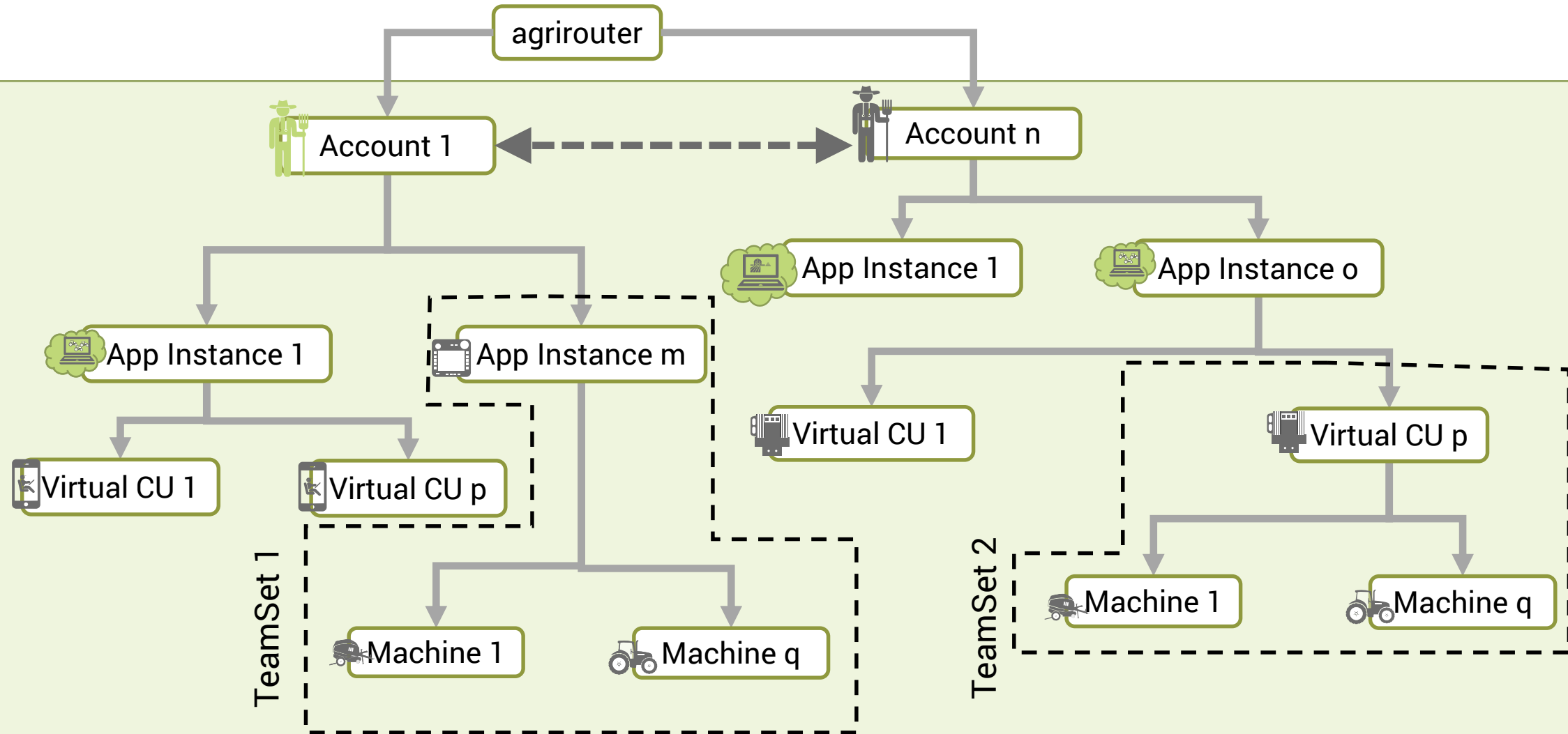
# What is this video about?

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- Decisions before onboarding
- Elements of an Endpoint
- General Workflow of communication
- Building, sending, receiving & analyzing commands
- Wordings

# agrirouter – Hierarchy

Have Endpoints



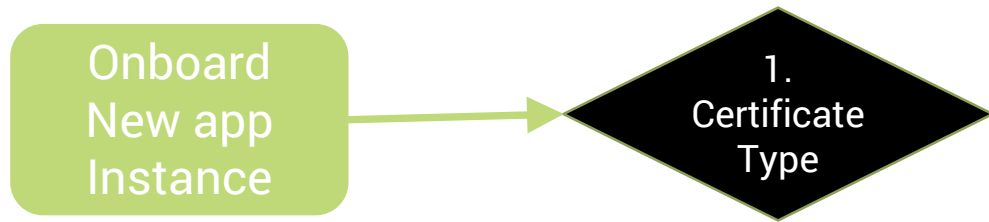
# Decisions on Protocols and Formats

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Onboard  
New app  
Instance

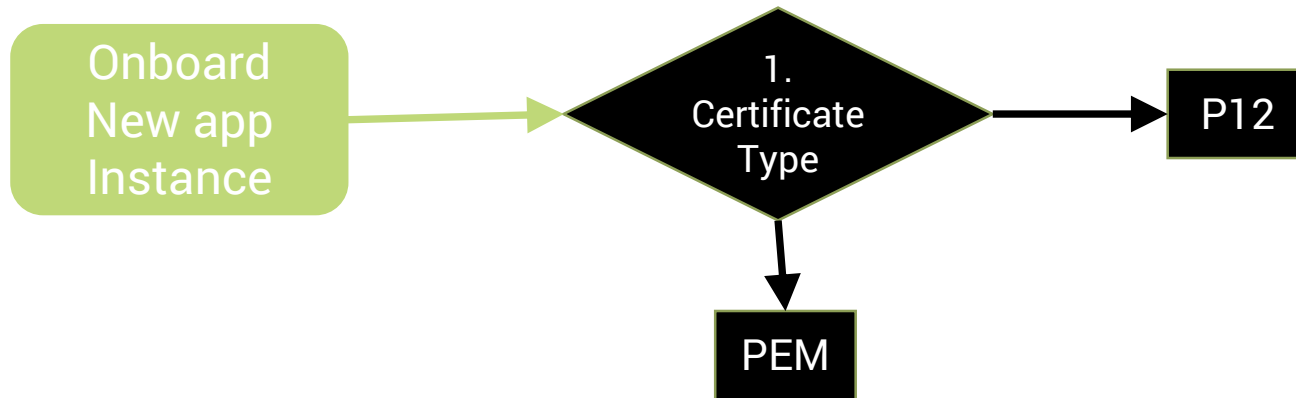
# Decisions on Protocols and Formats

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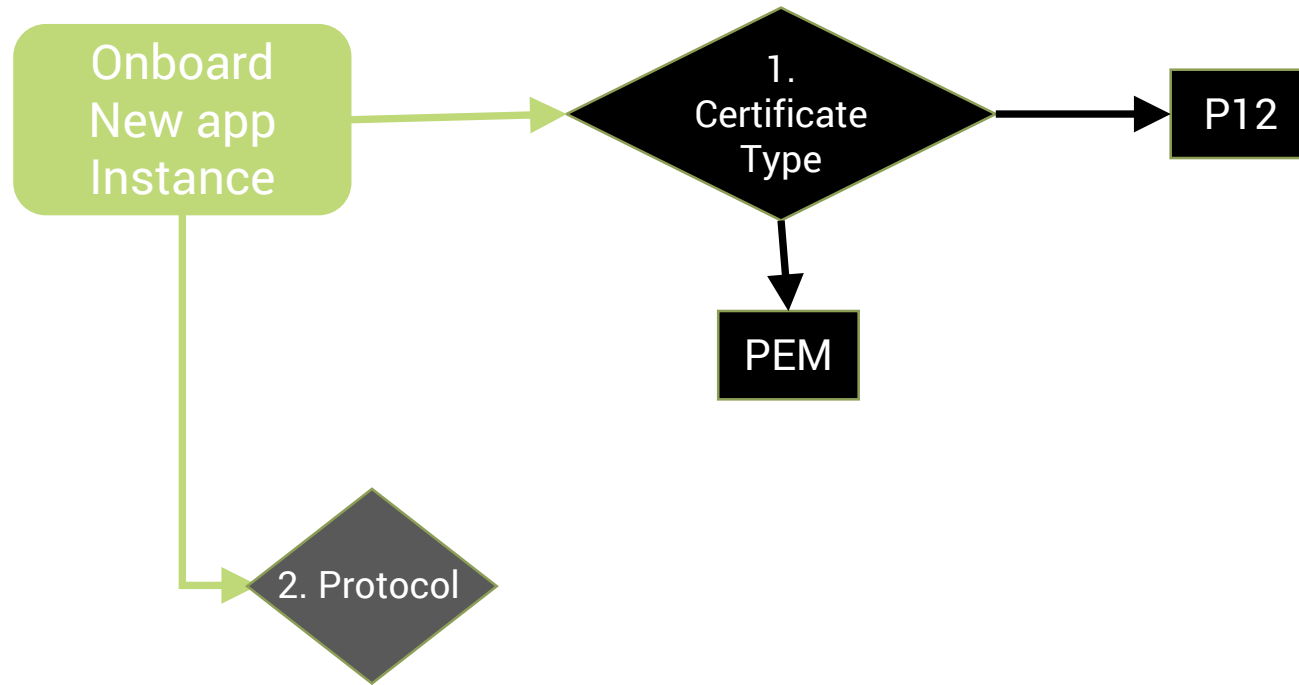
# Decisions on Protocols and Formats

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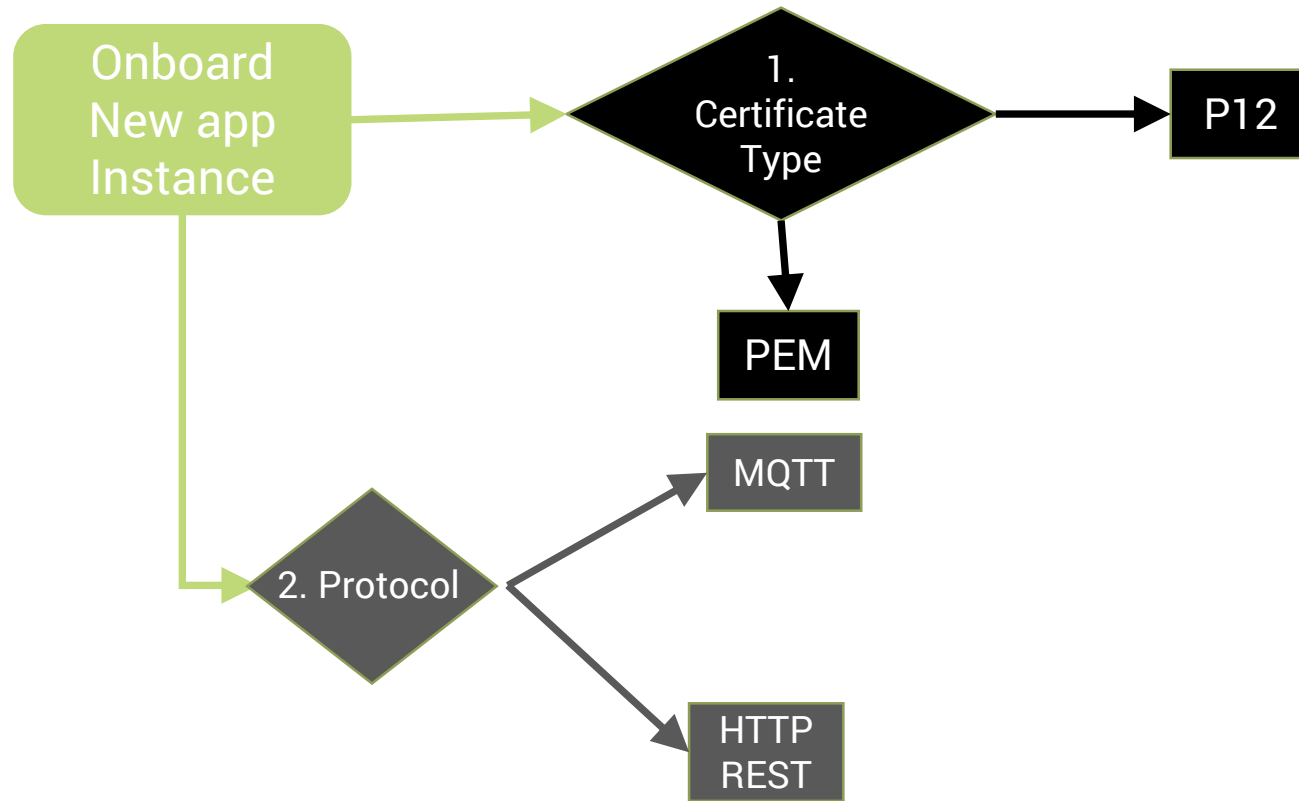
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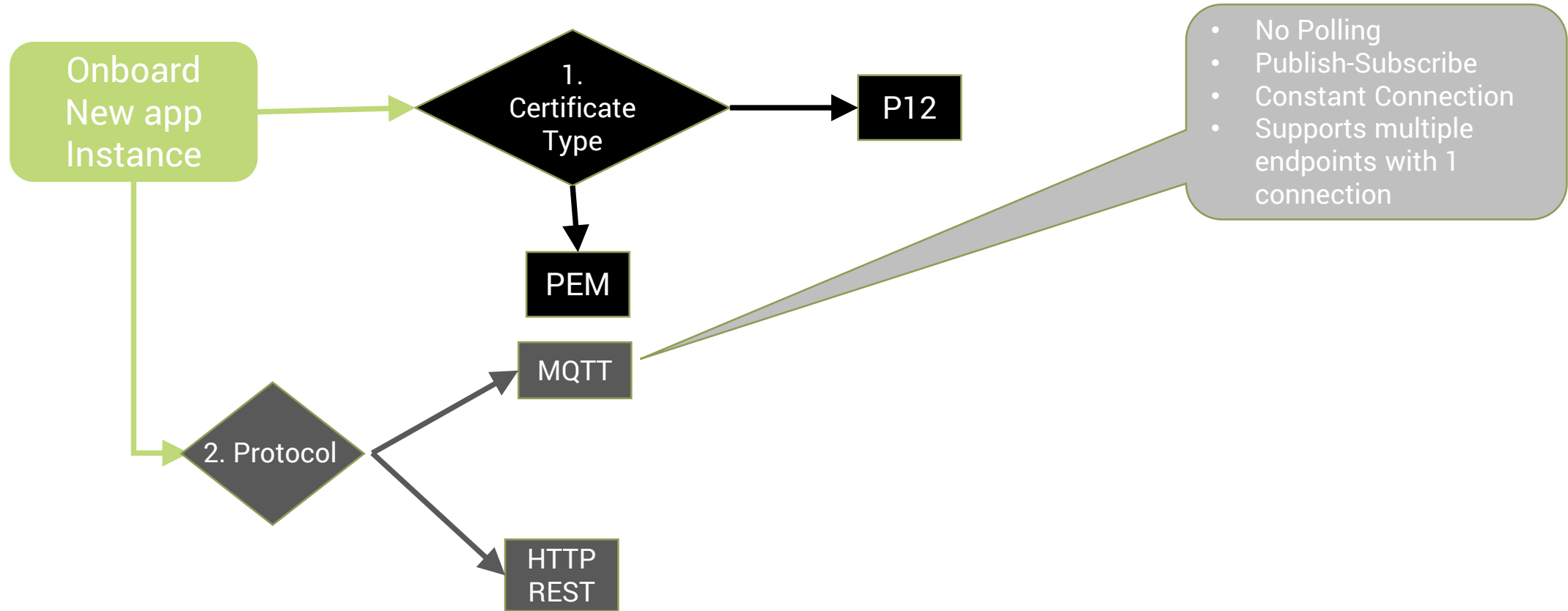
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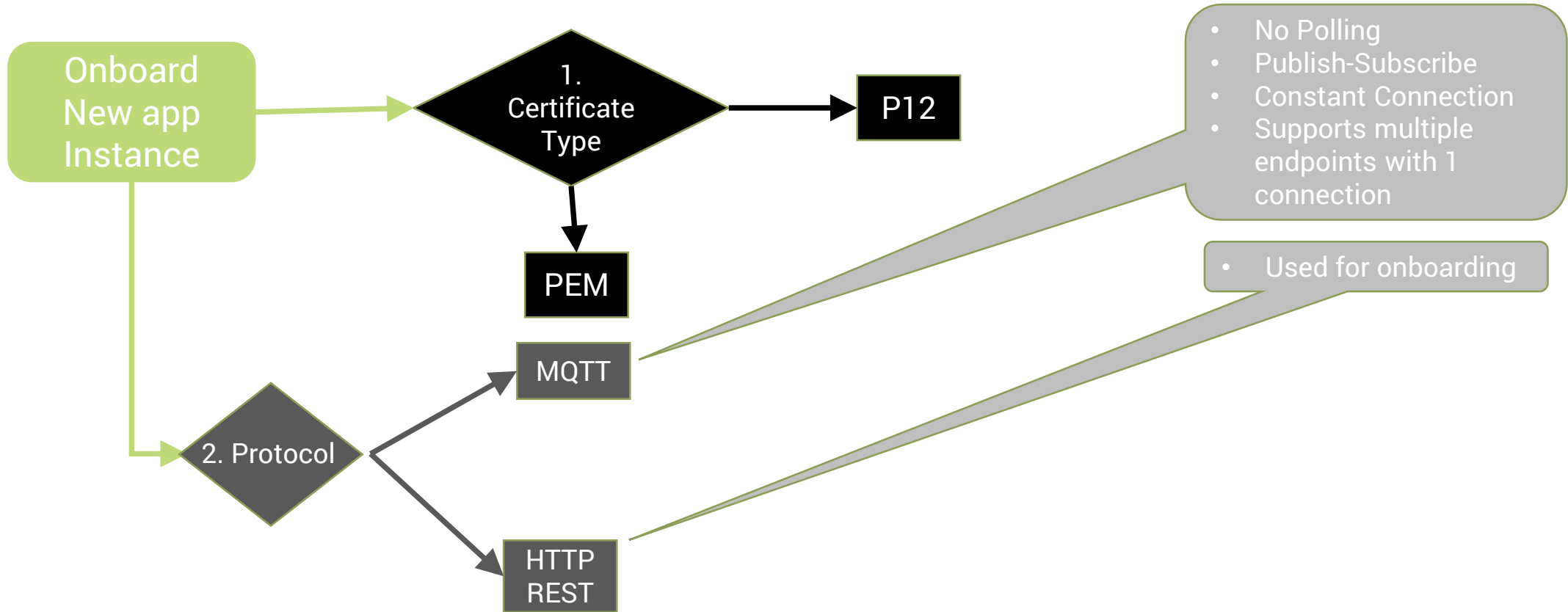




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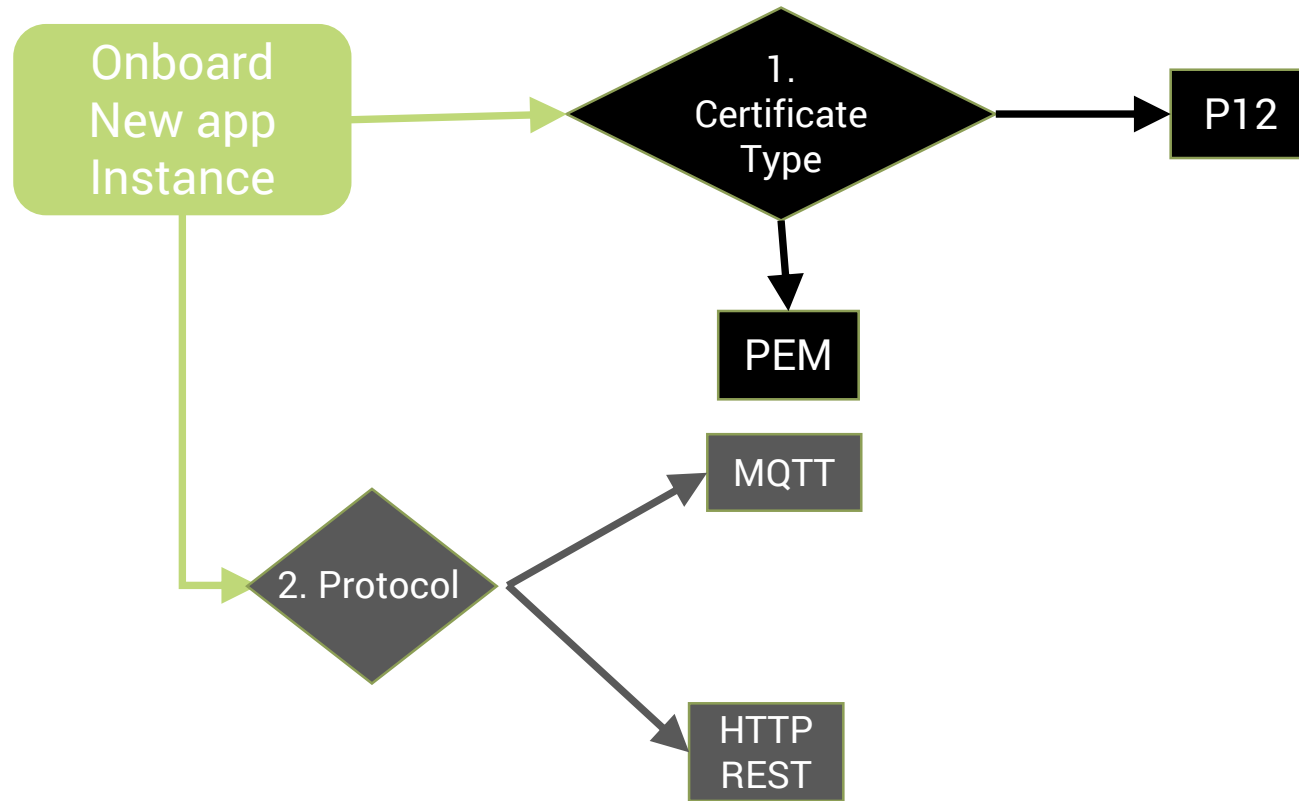


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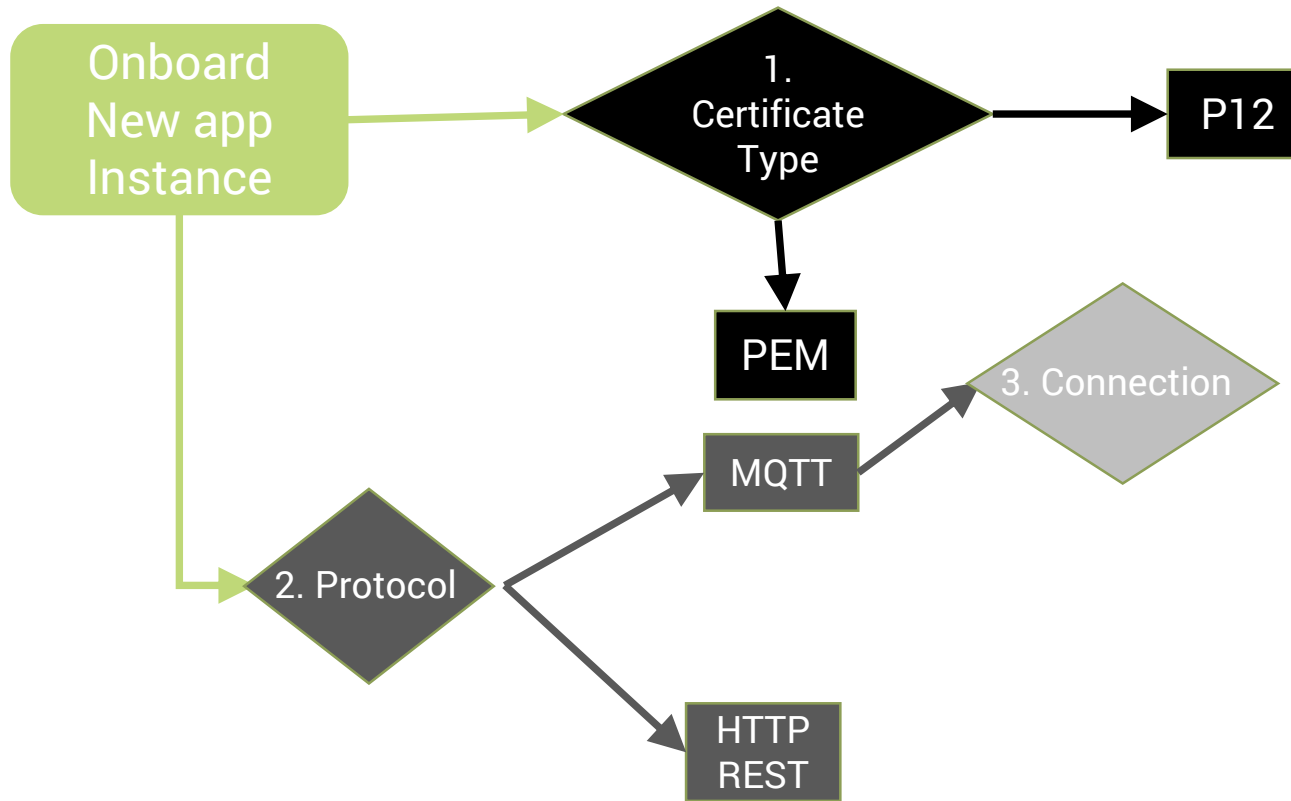


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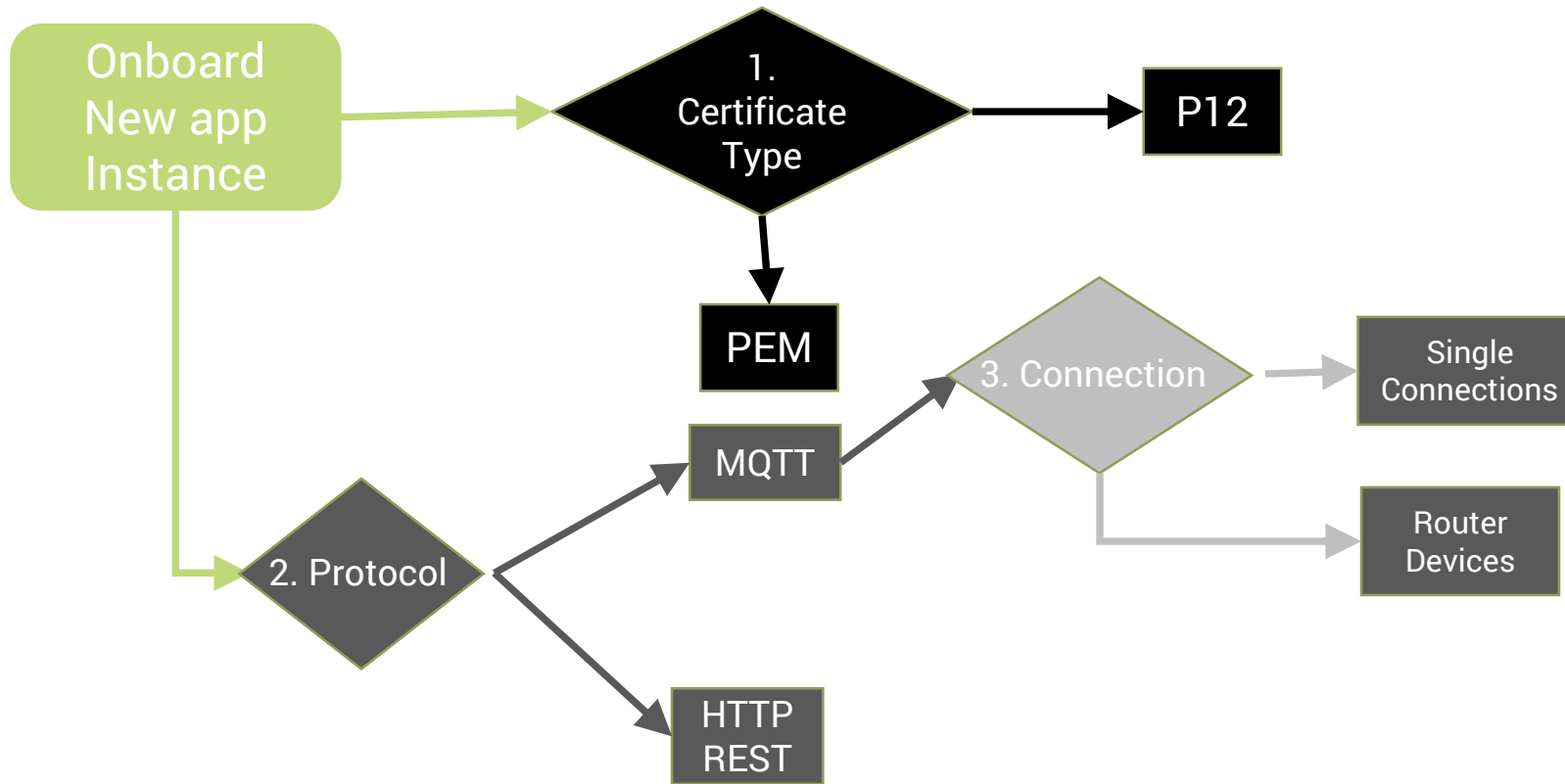
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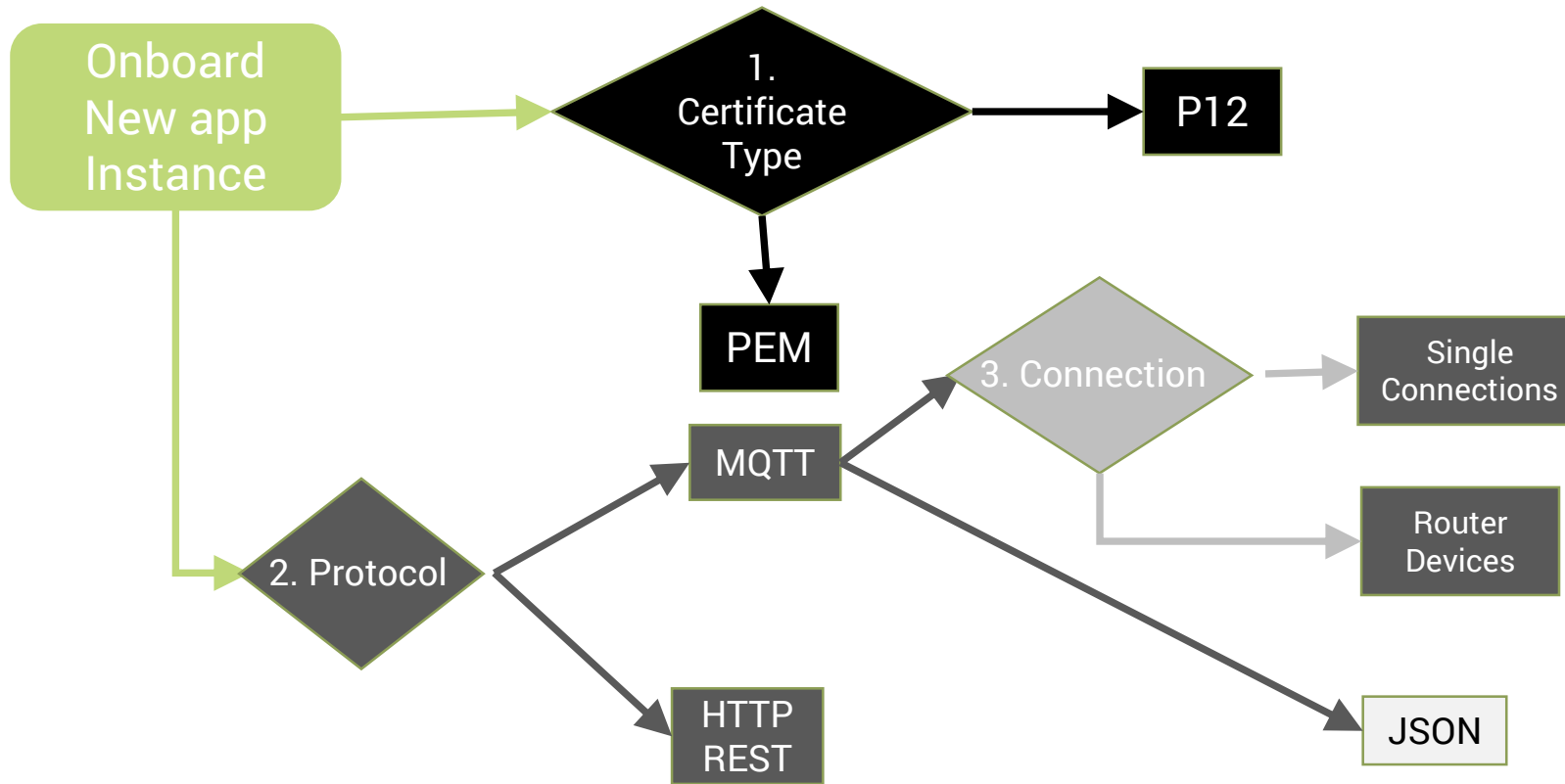
# Decisions on Protocols and Formats



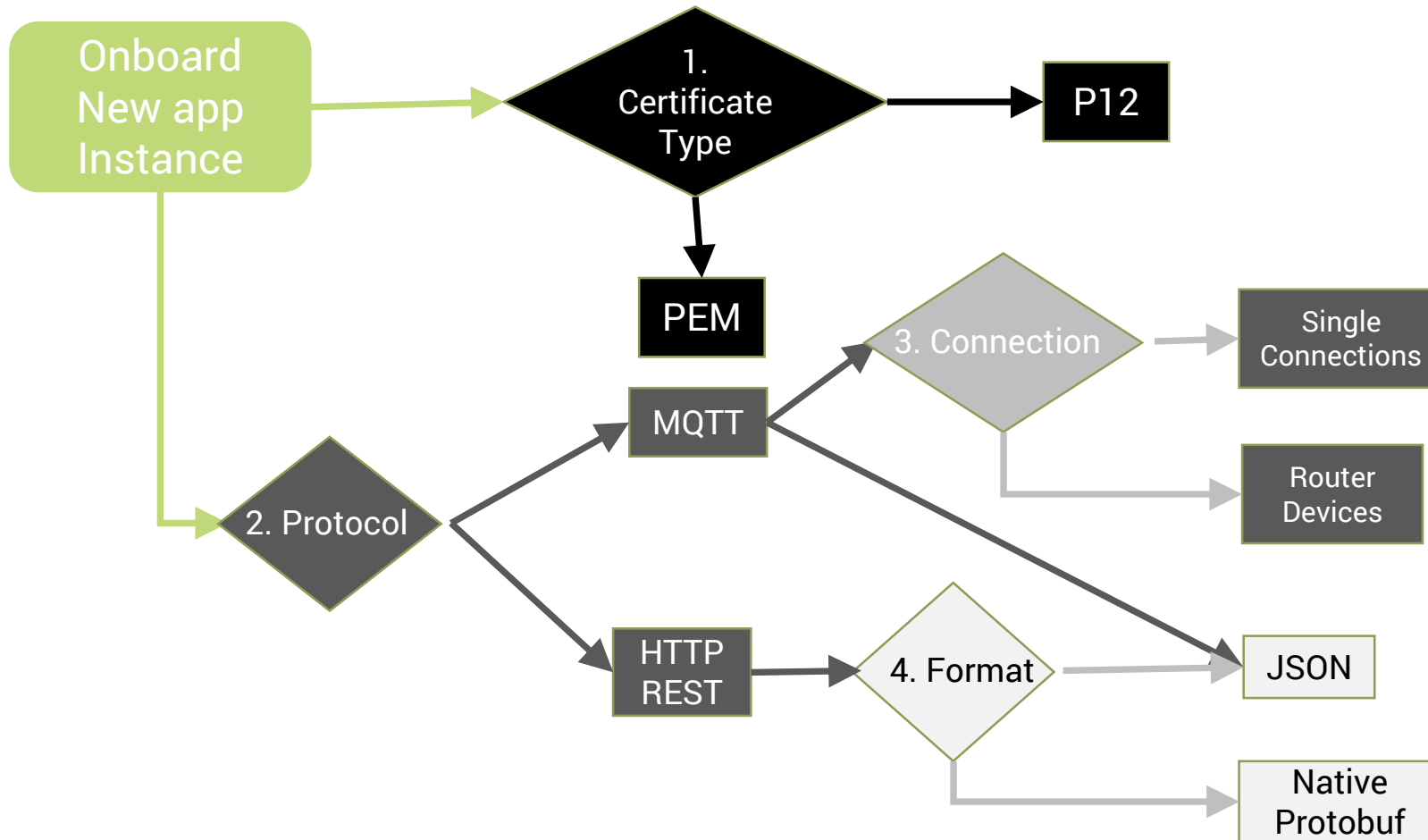
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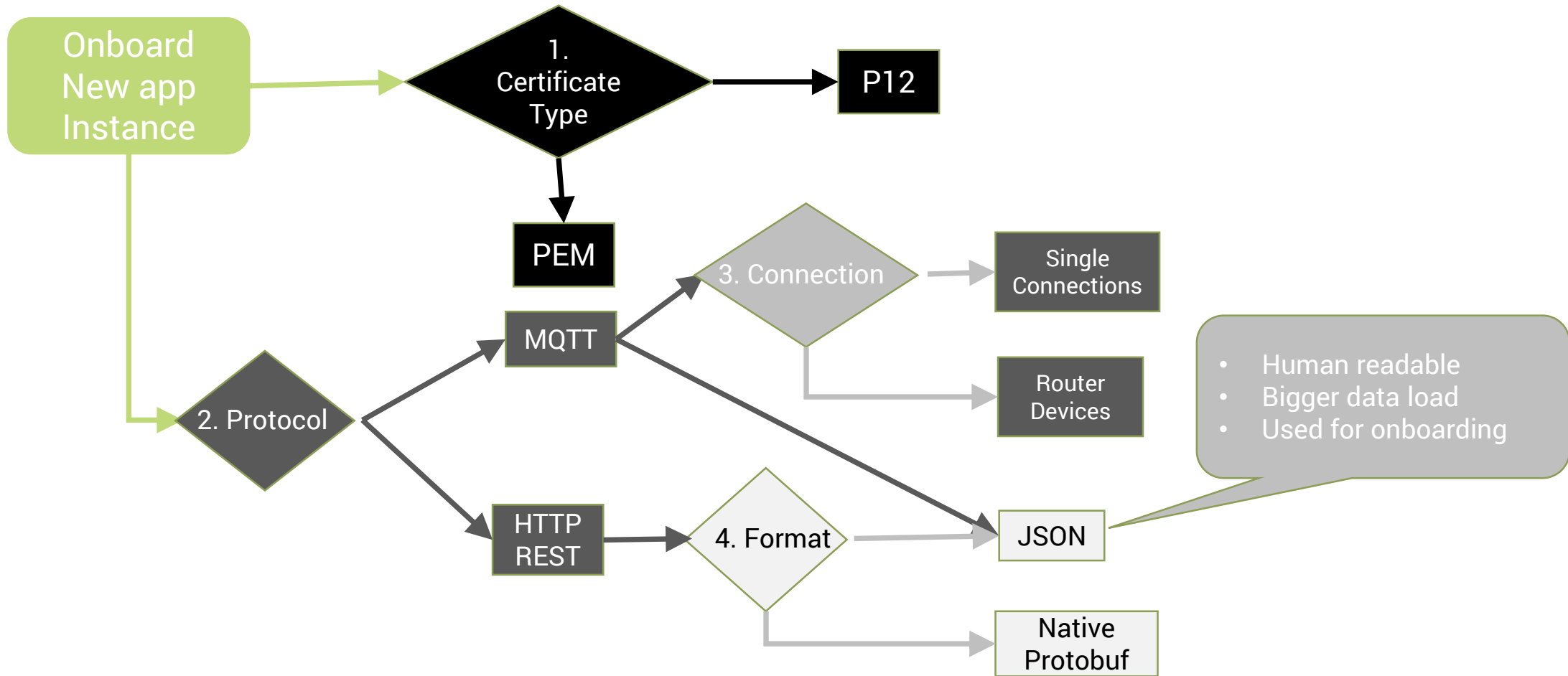
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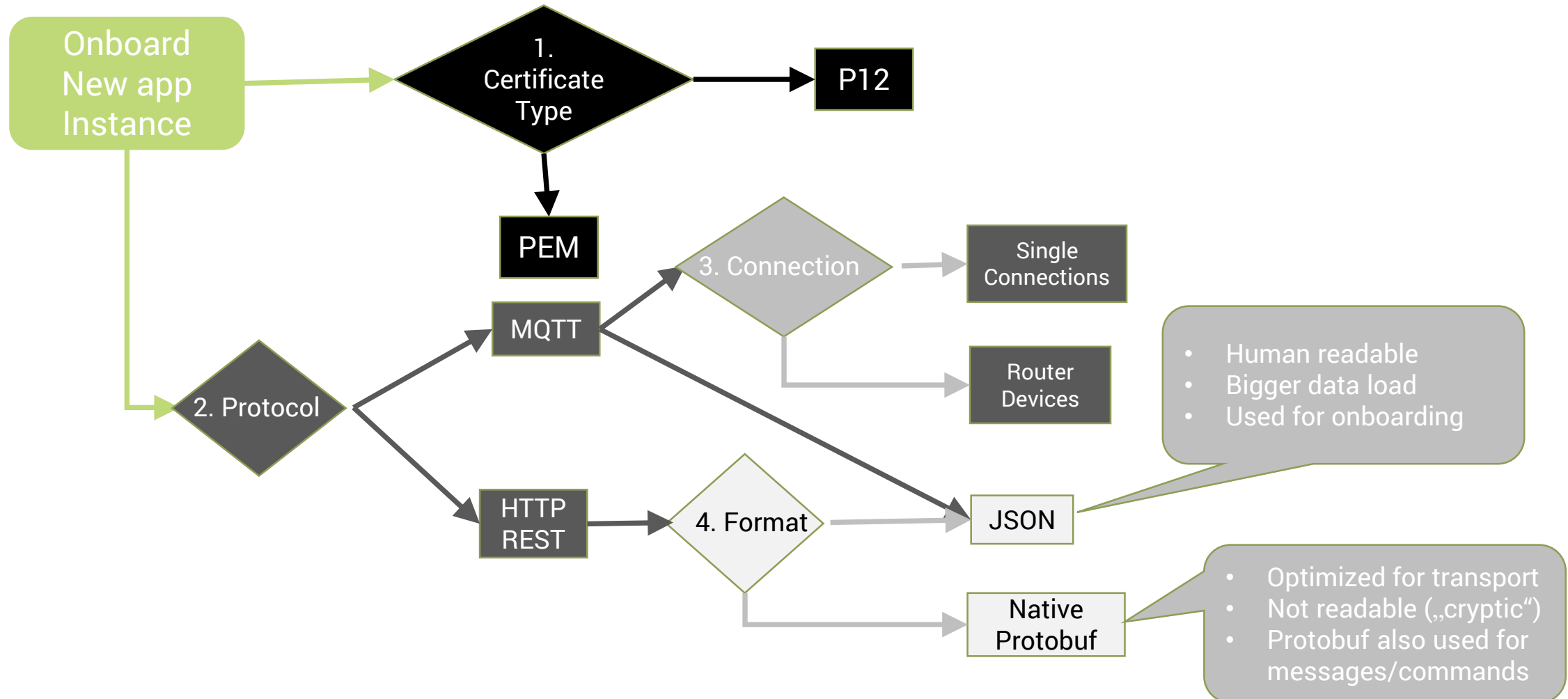


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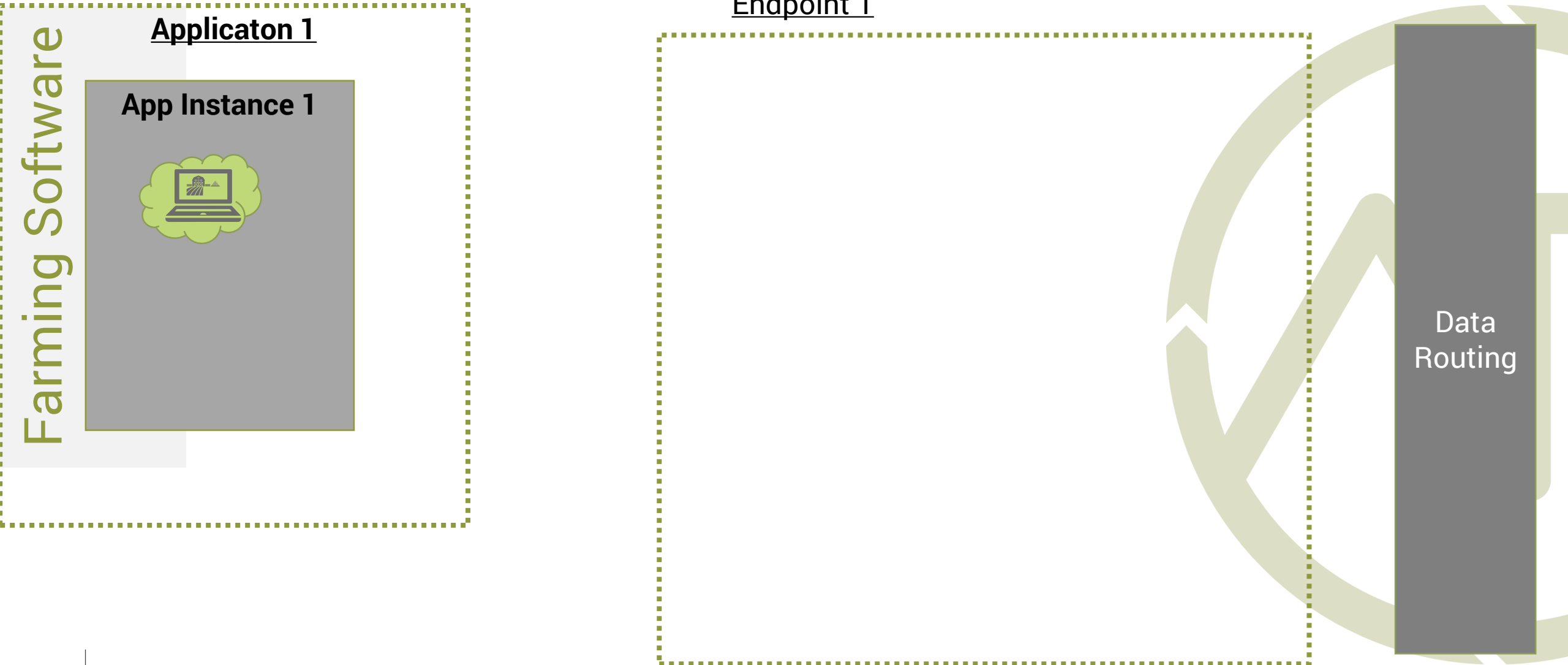




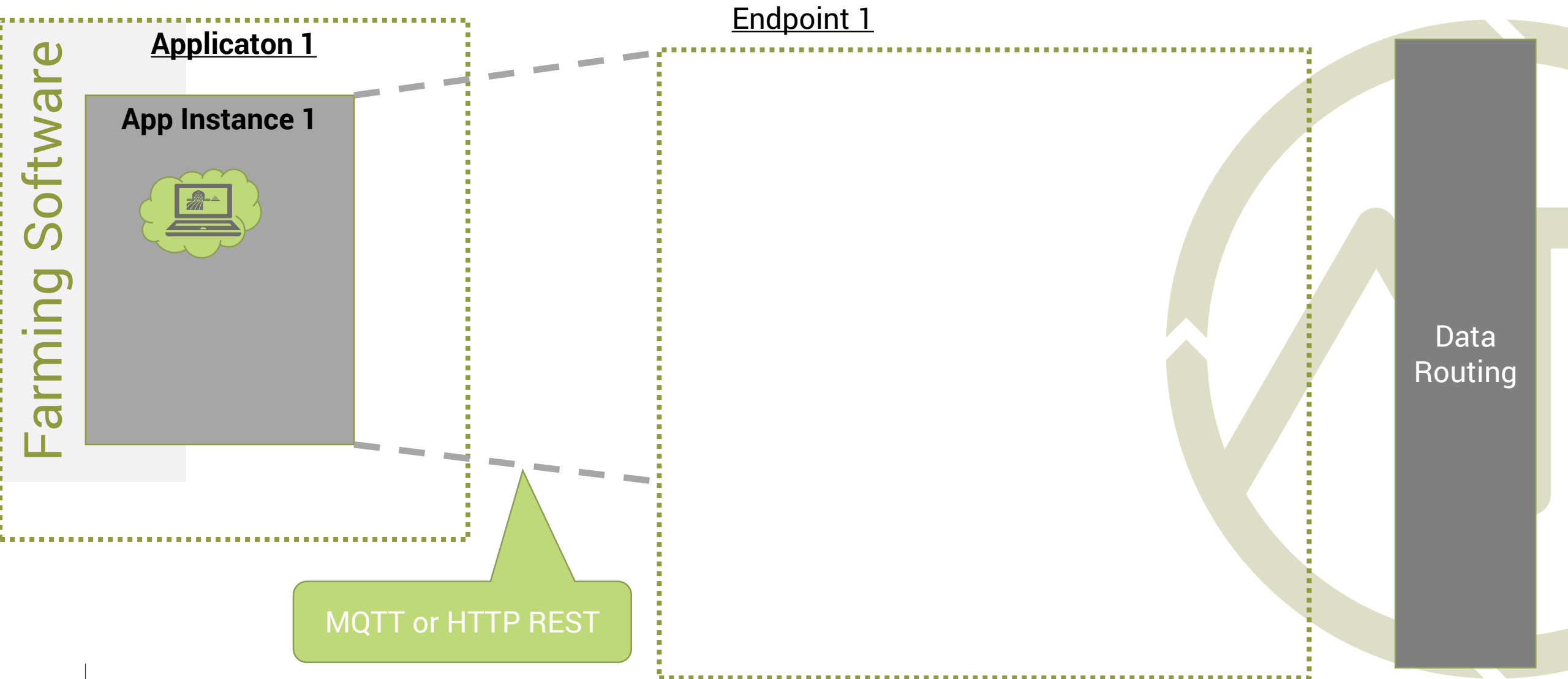
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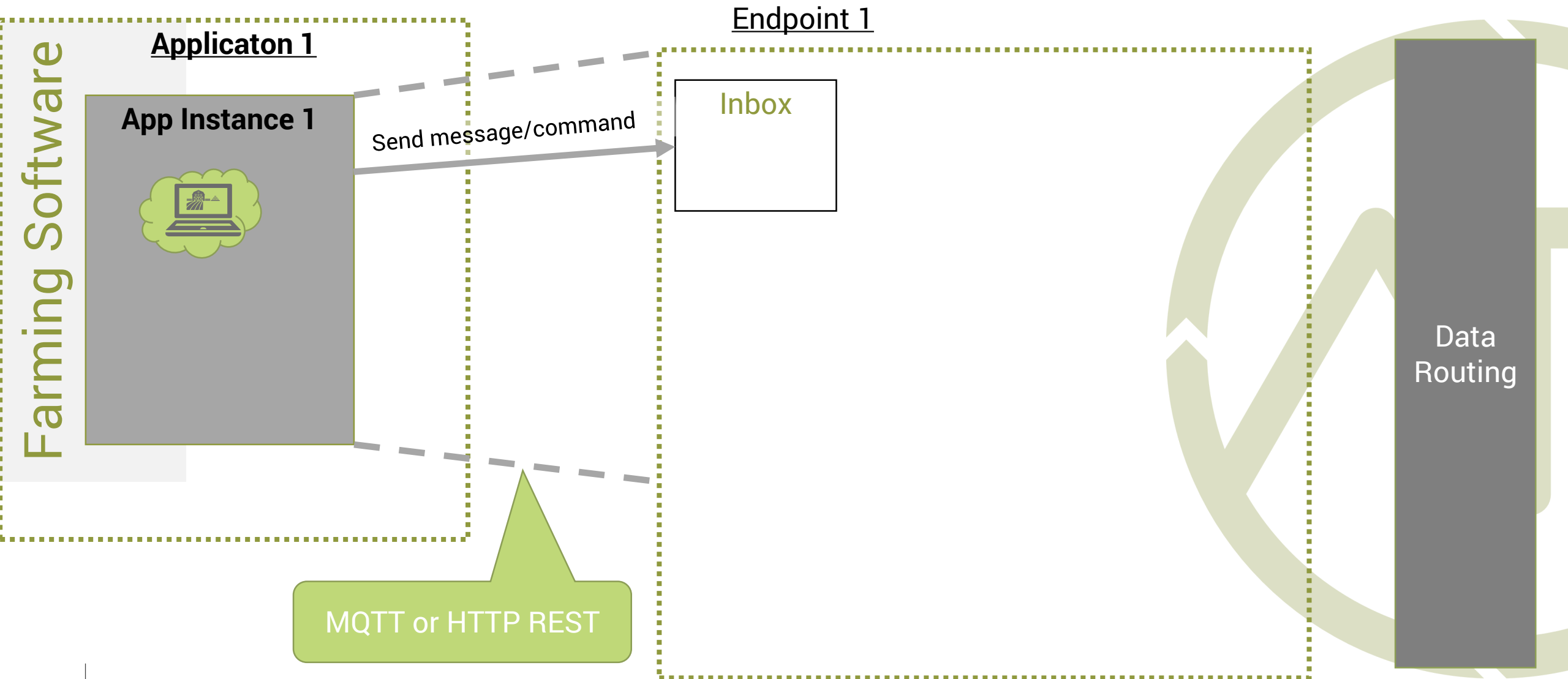
# Communication of Endpoint and App Instance



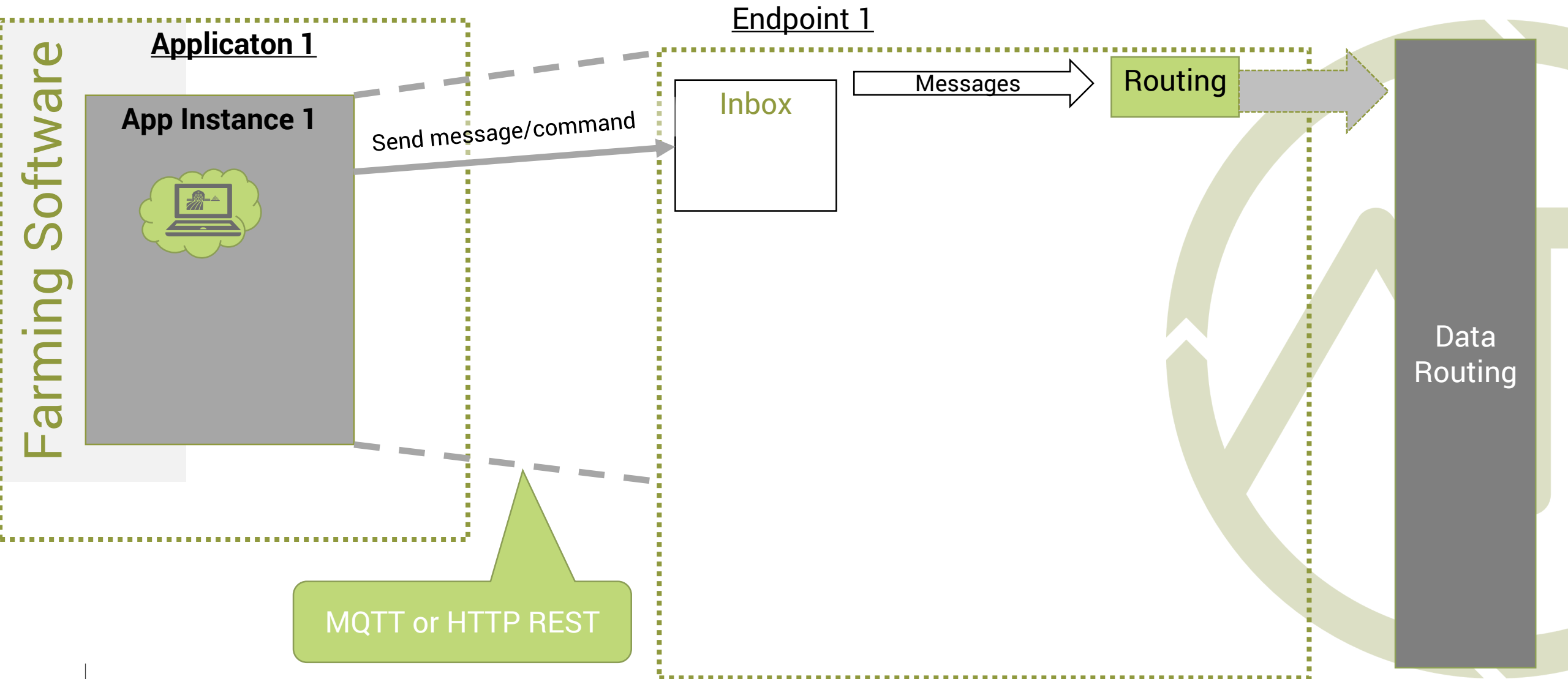
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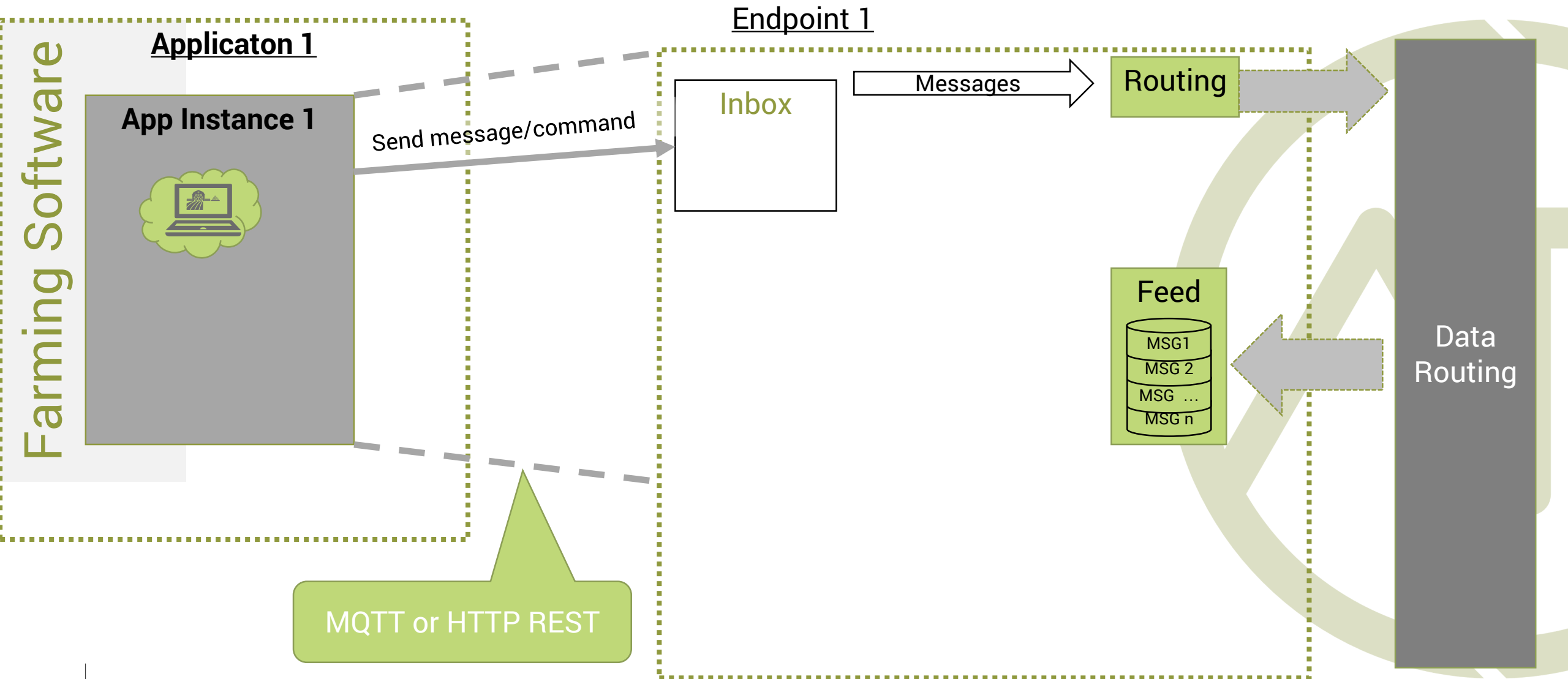
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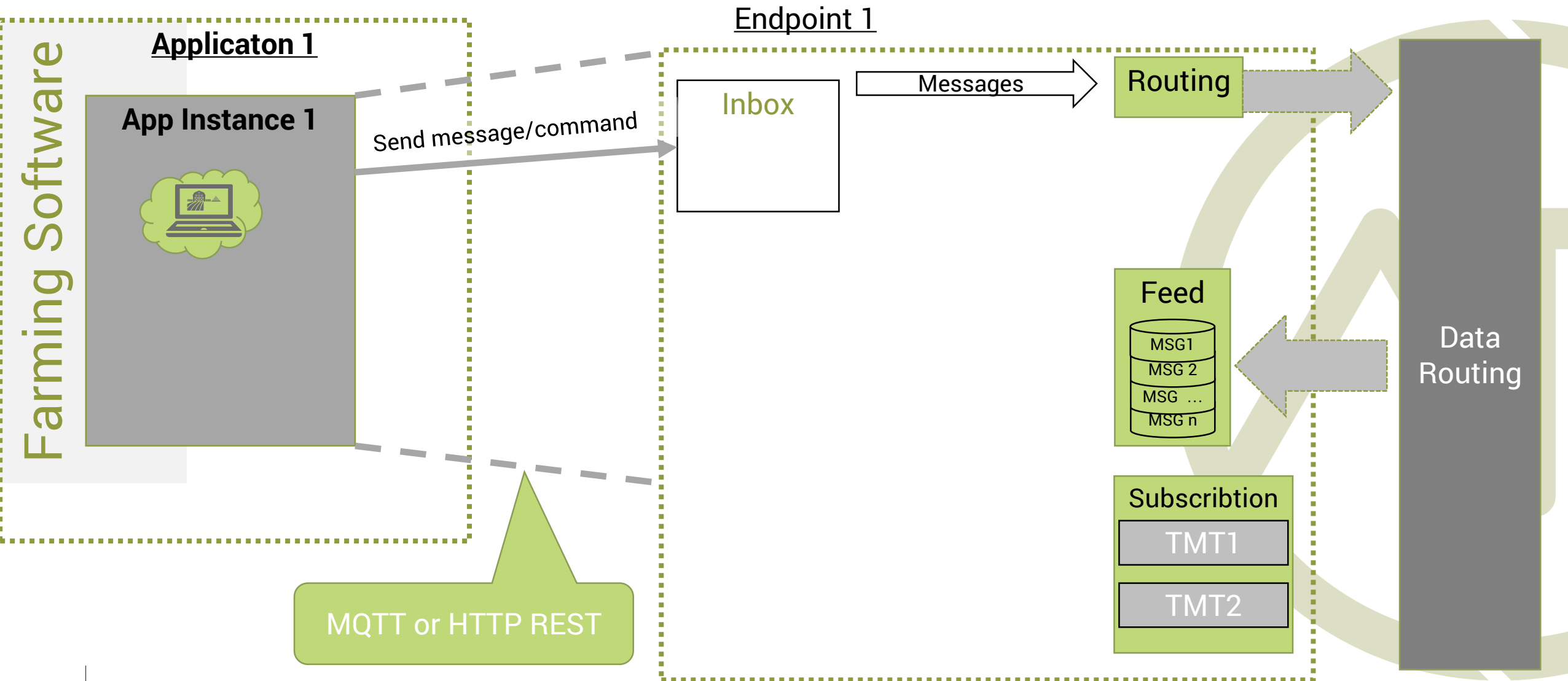
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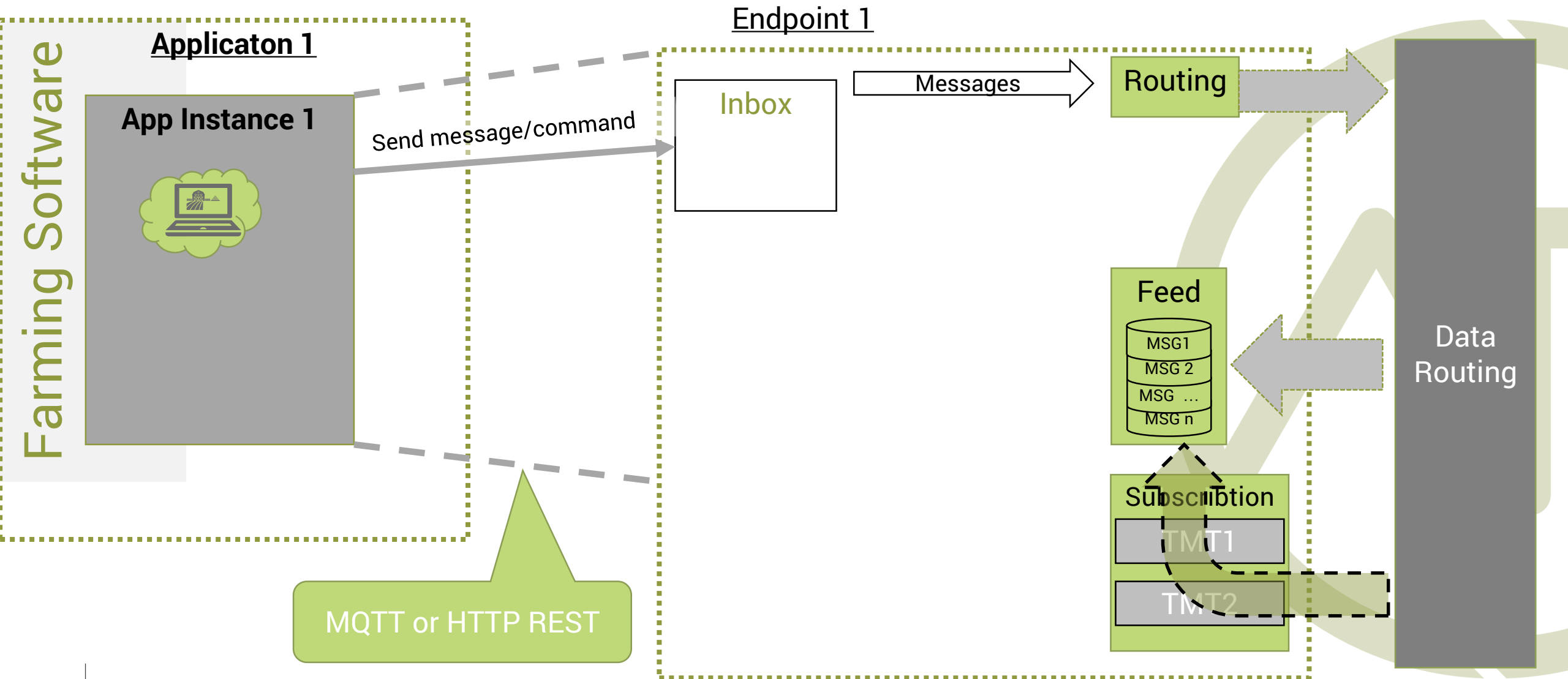
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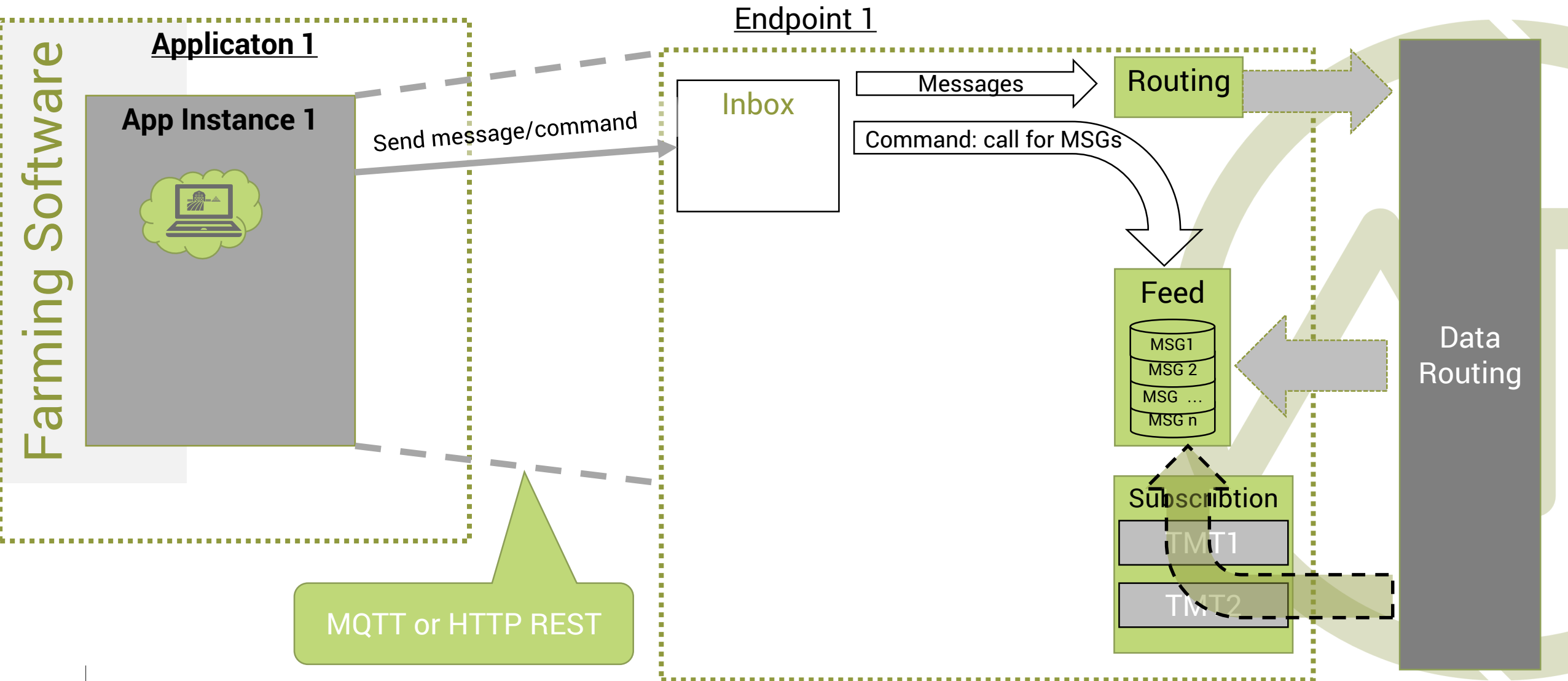


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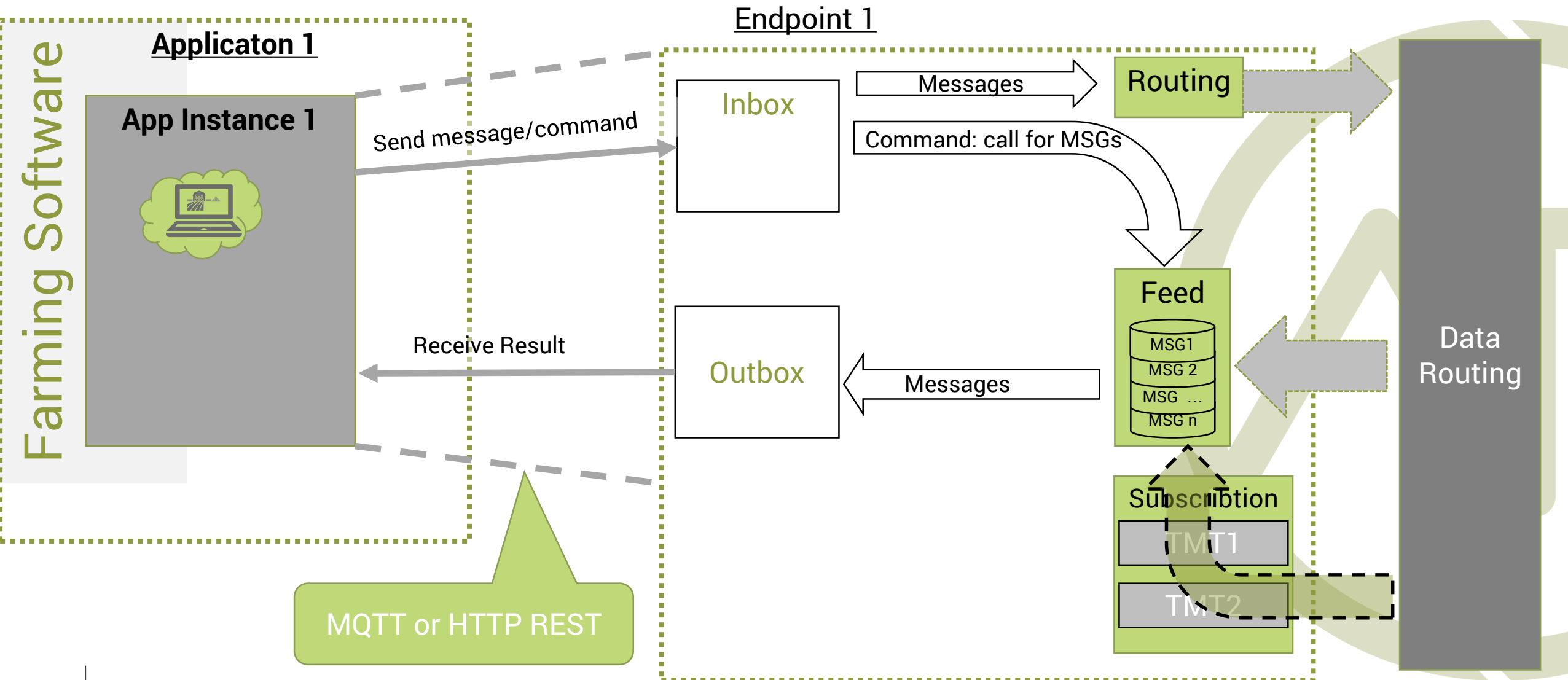




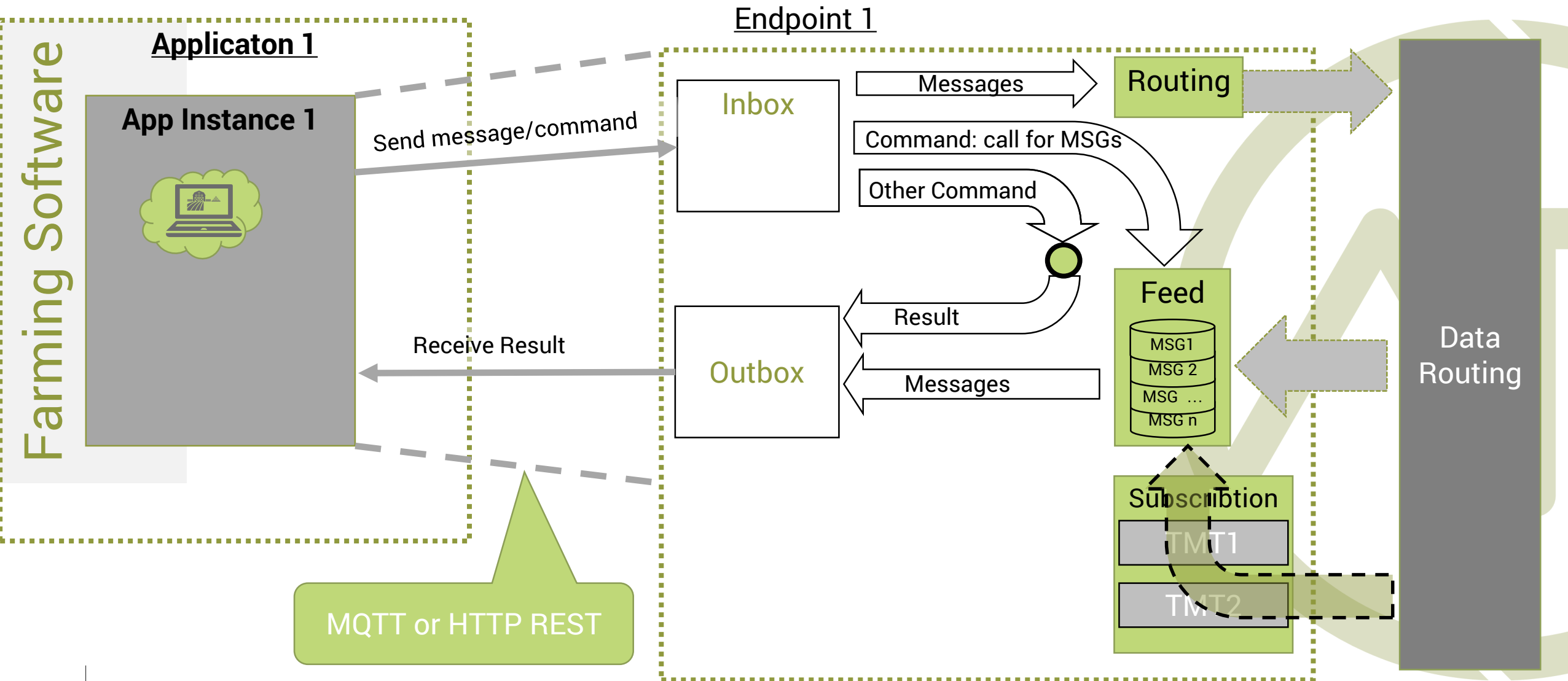
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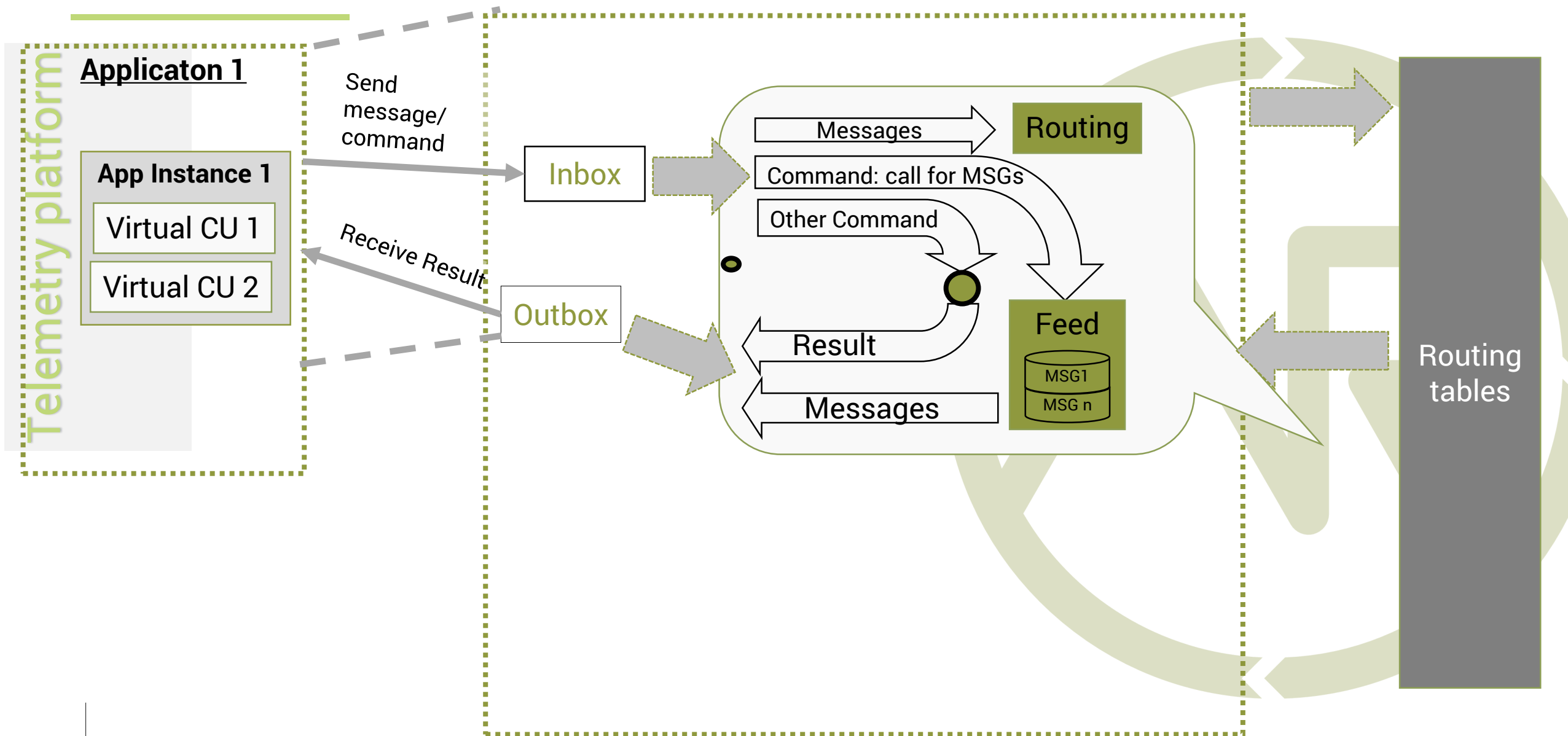
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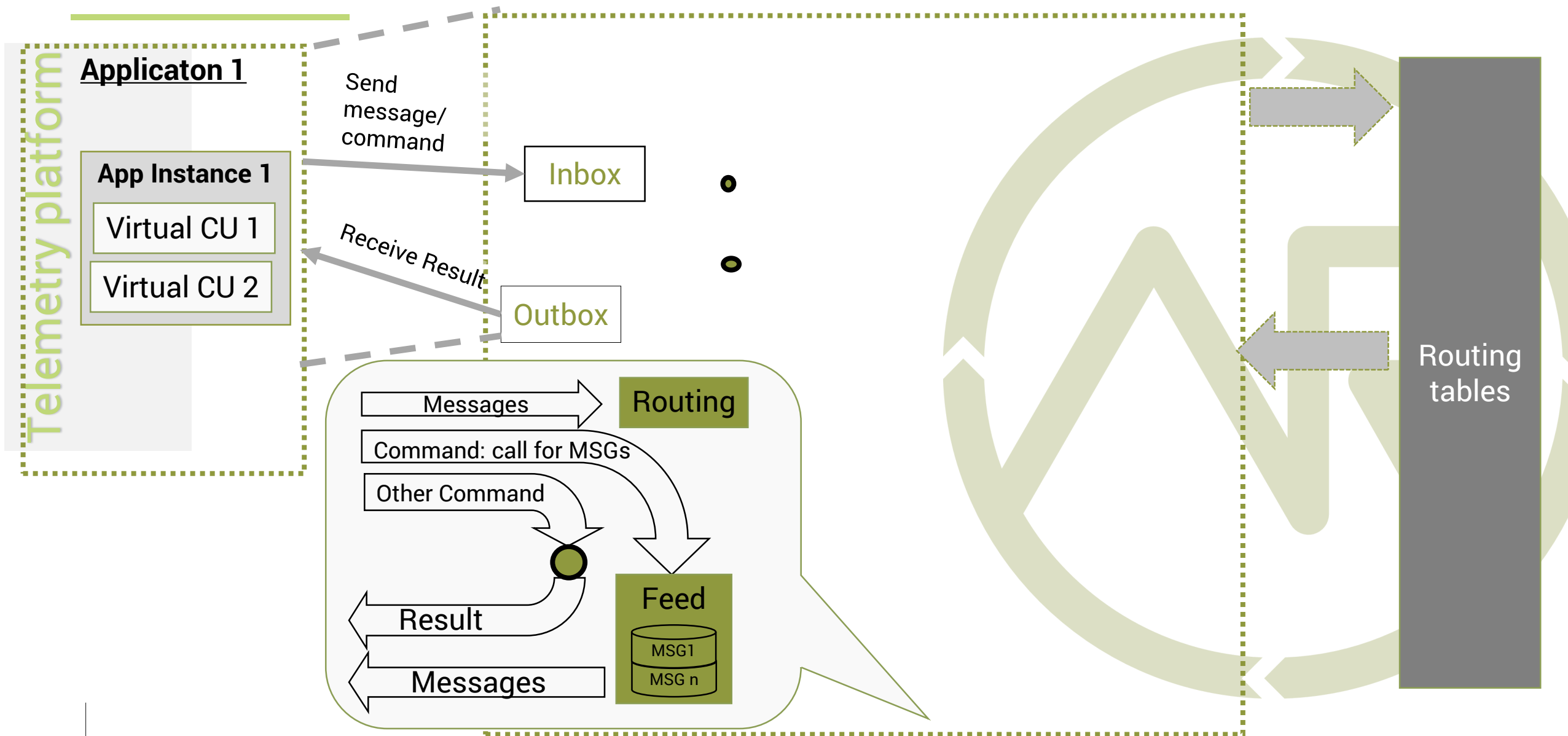
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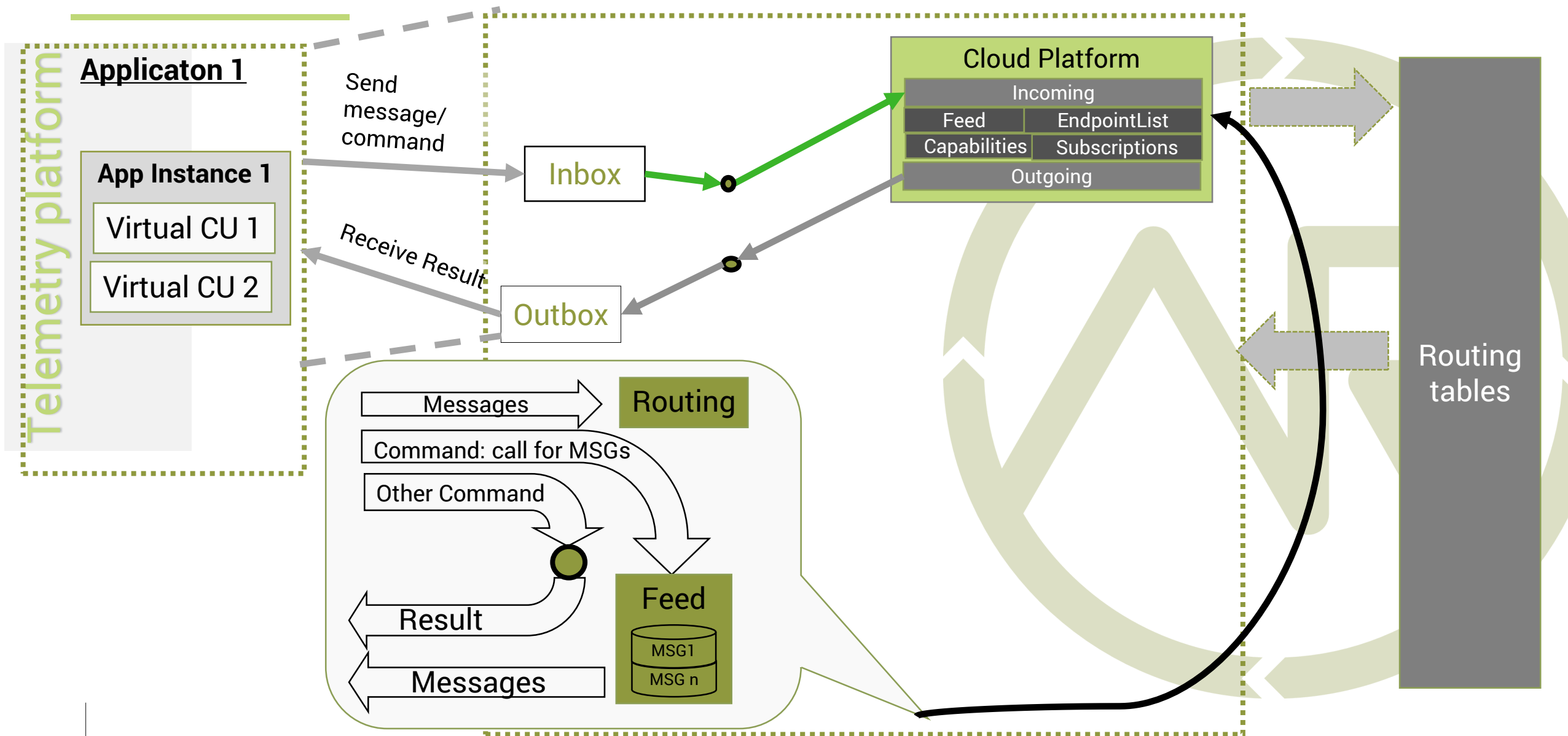
# Endpoint of a Telemetry Platform



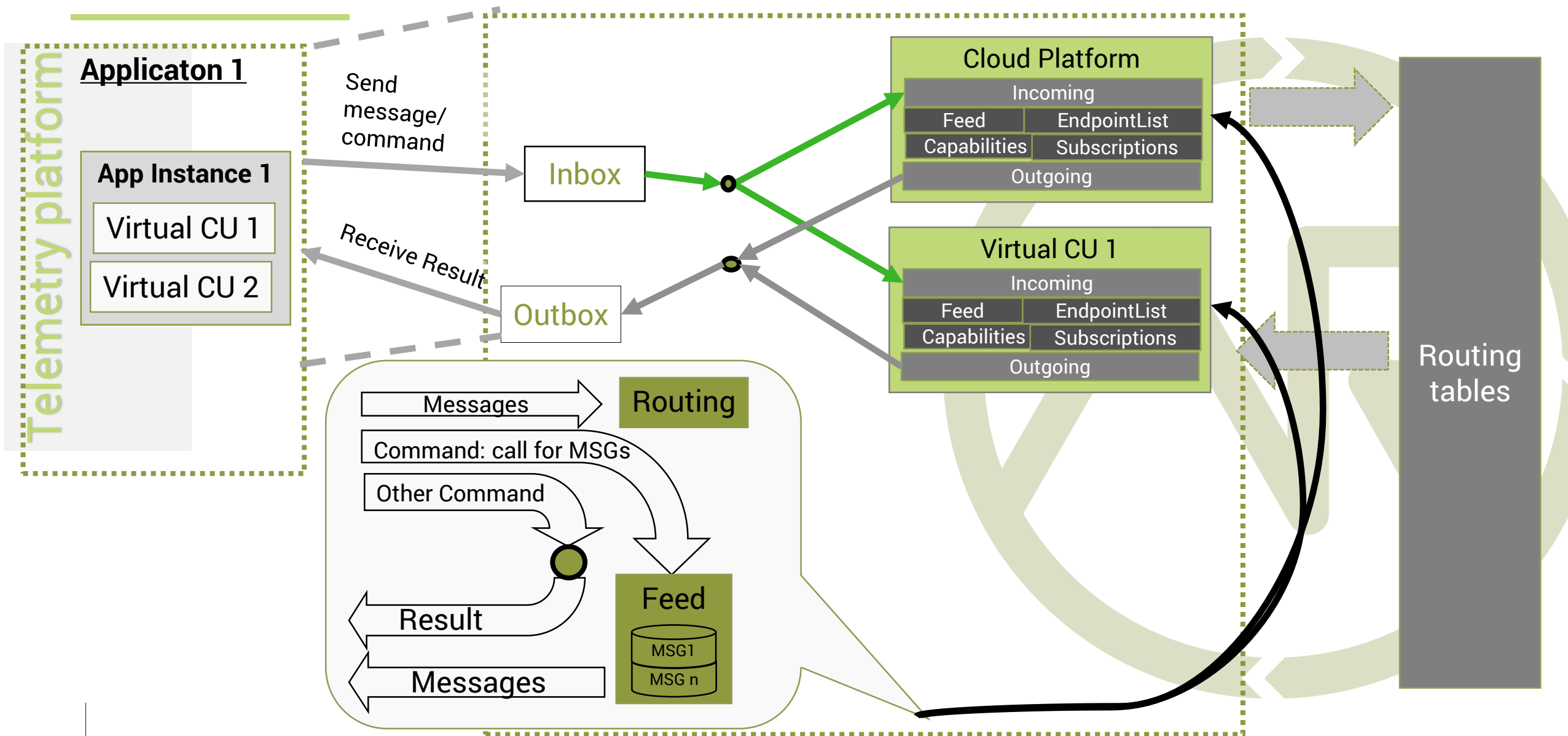
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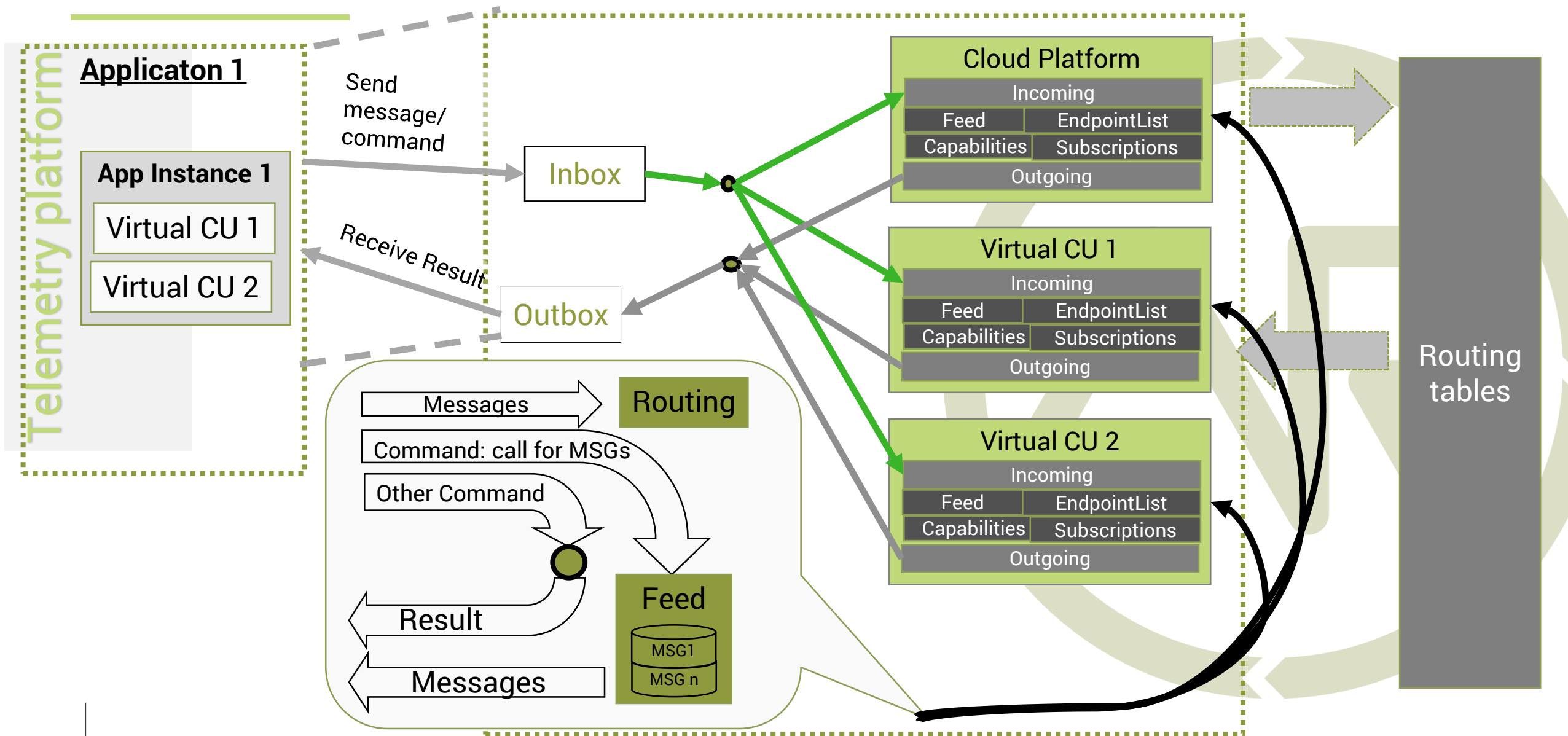
# Endpoint of a Telemetry Platform



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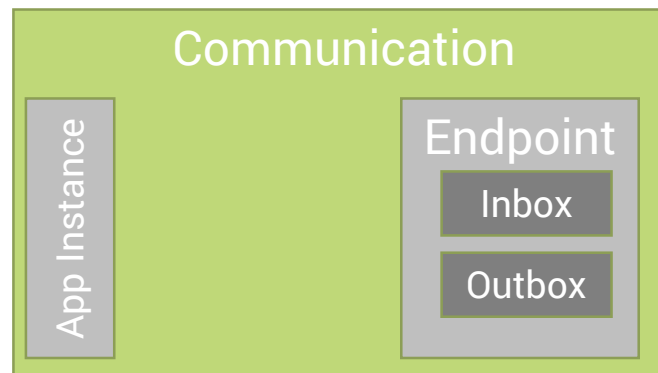
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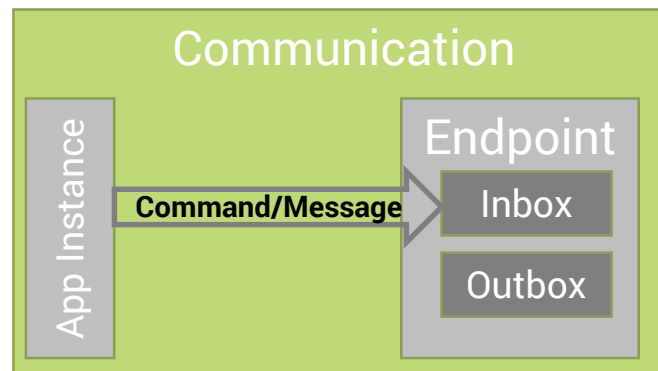
# General workflow of communication

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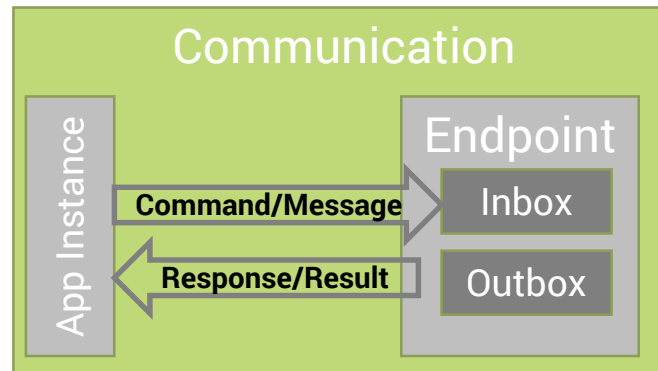
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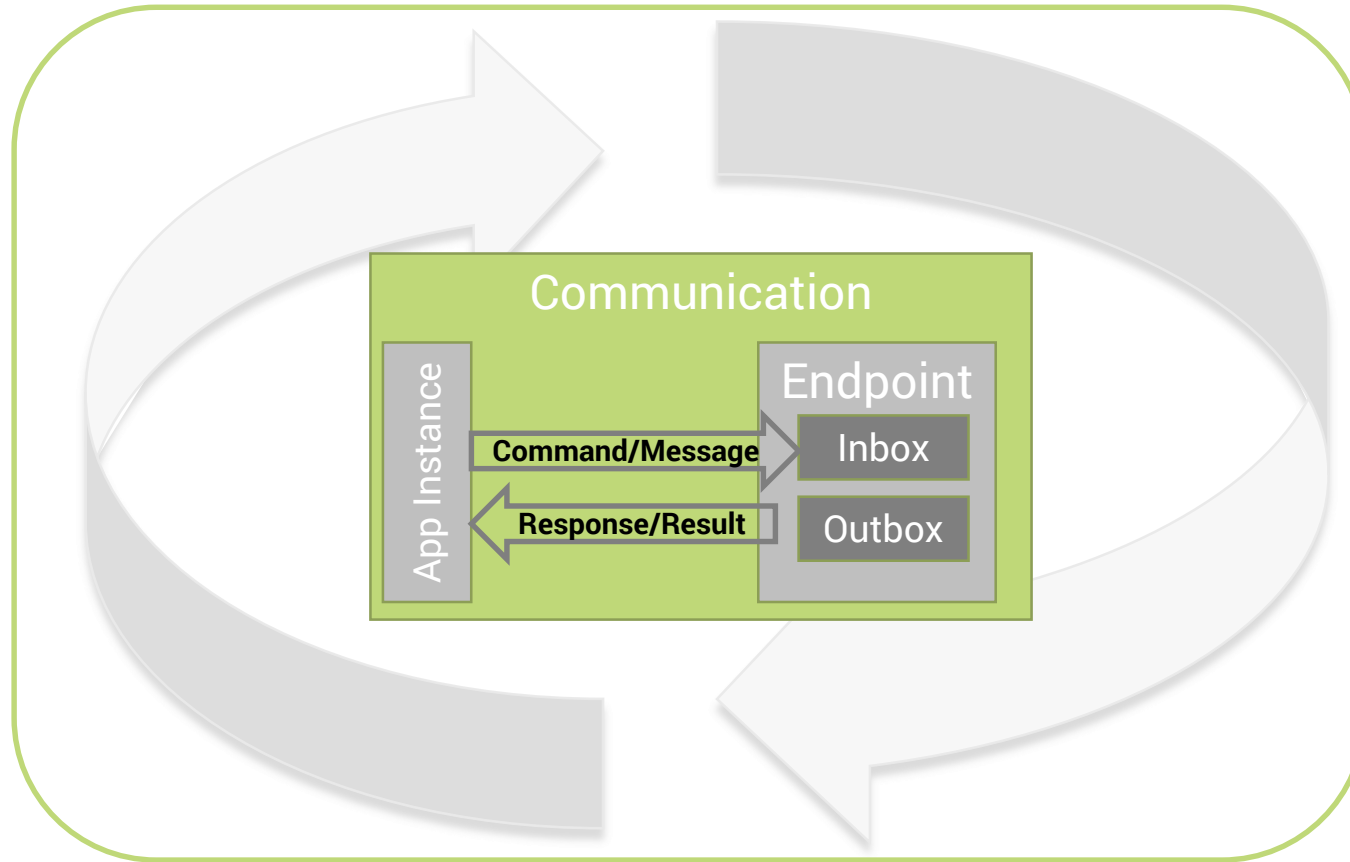
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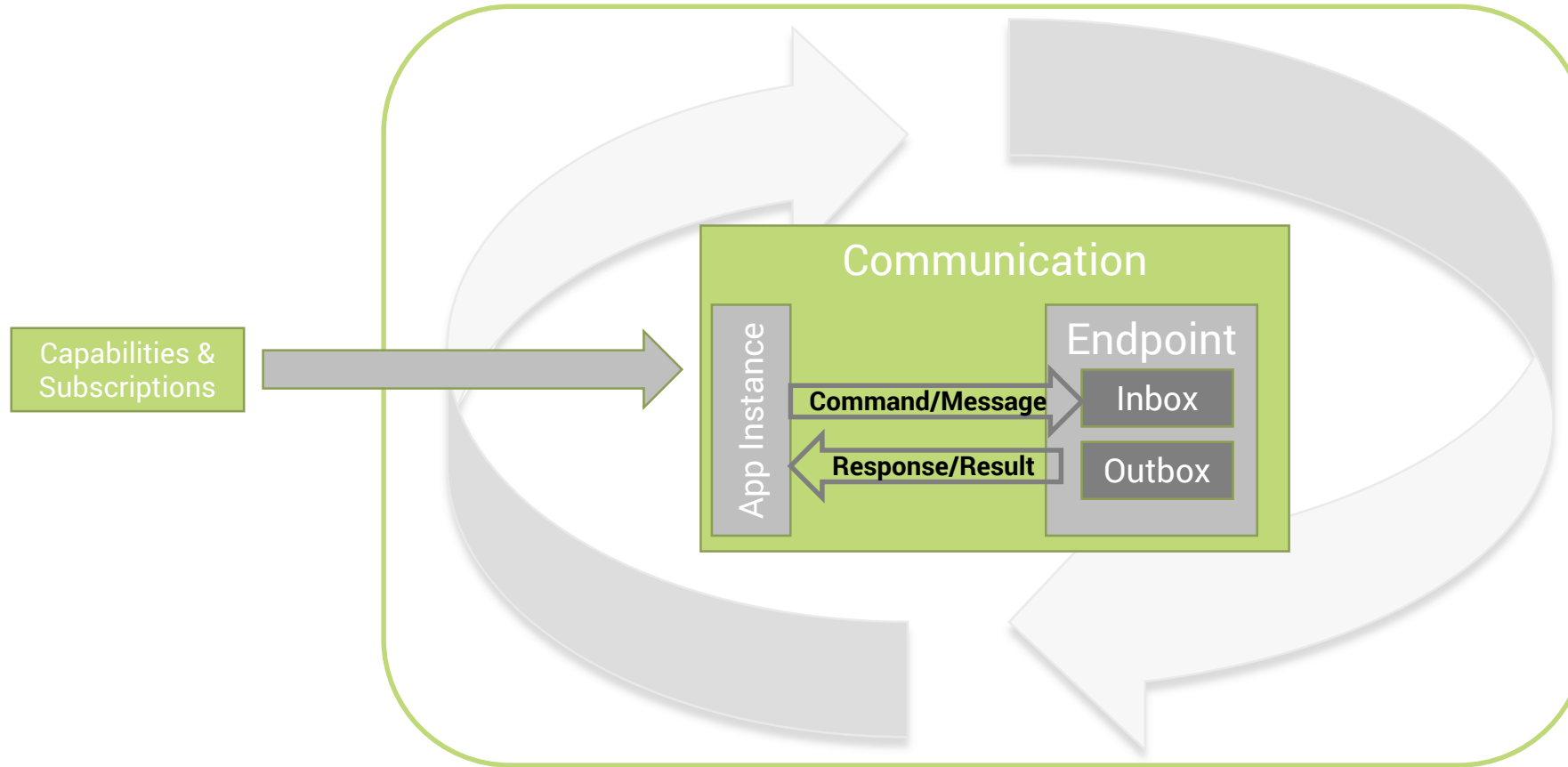
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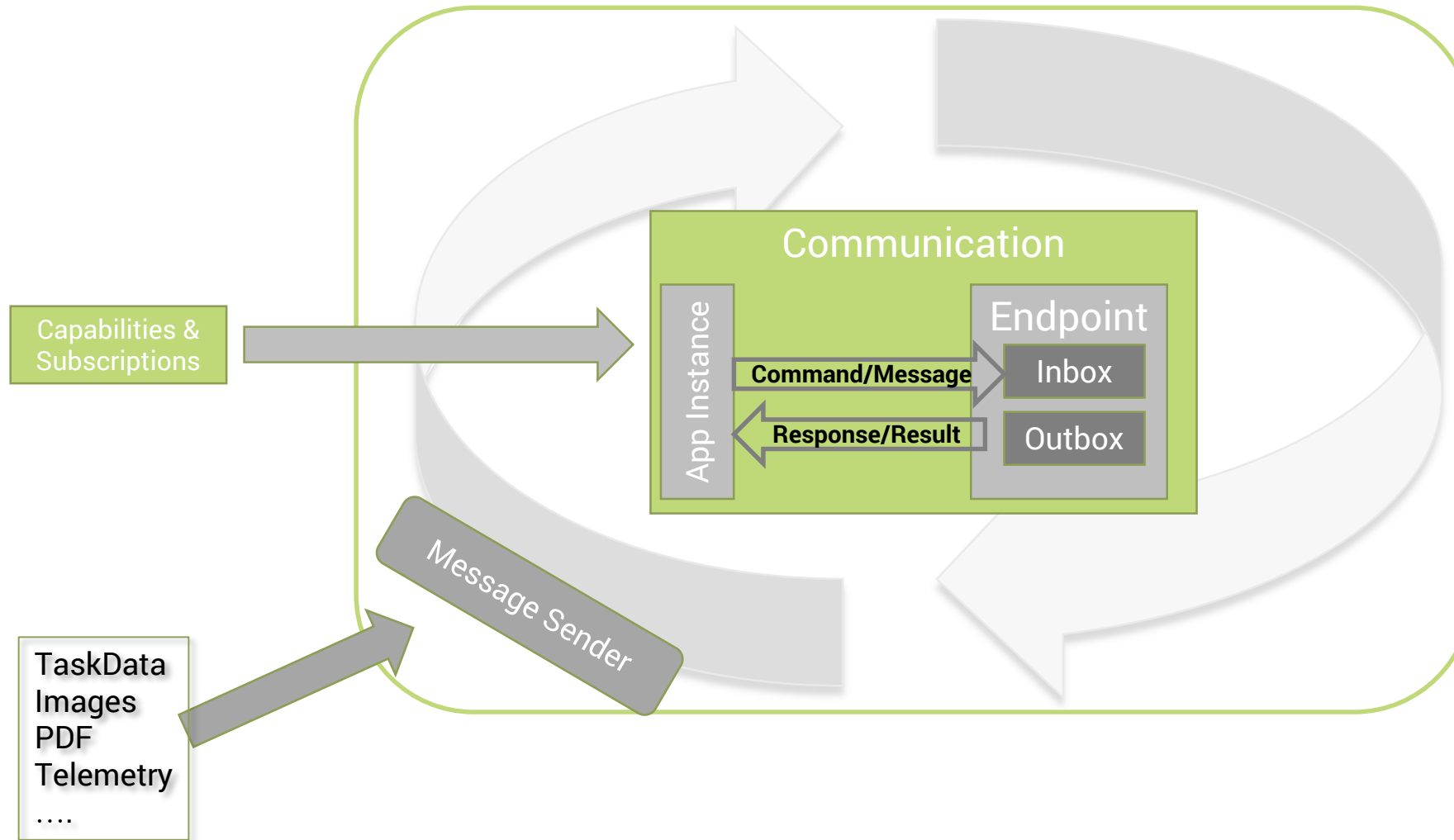


# General workflow of communication

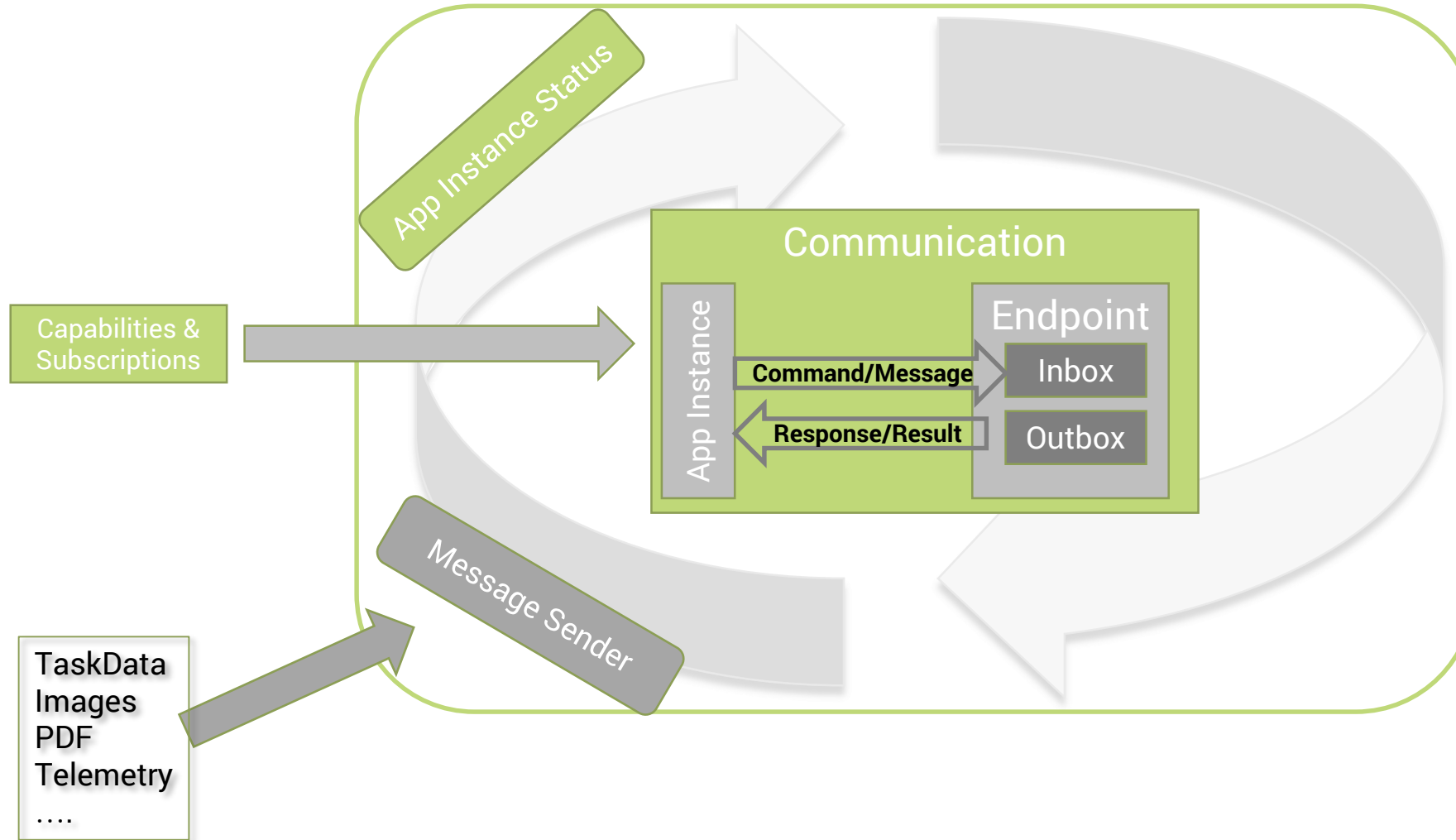
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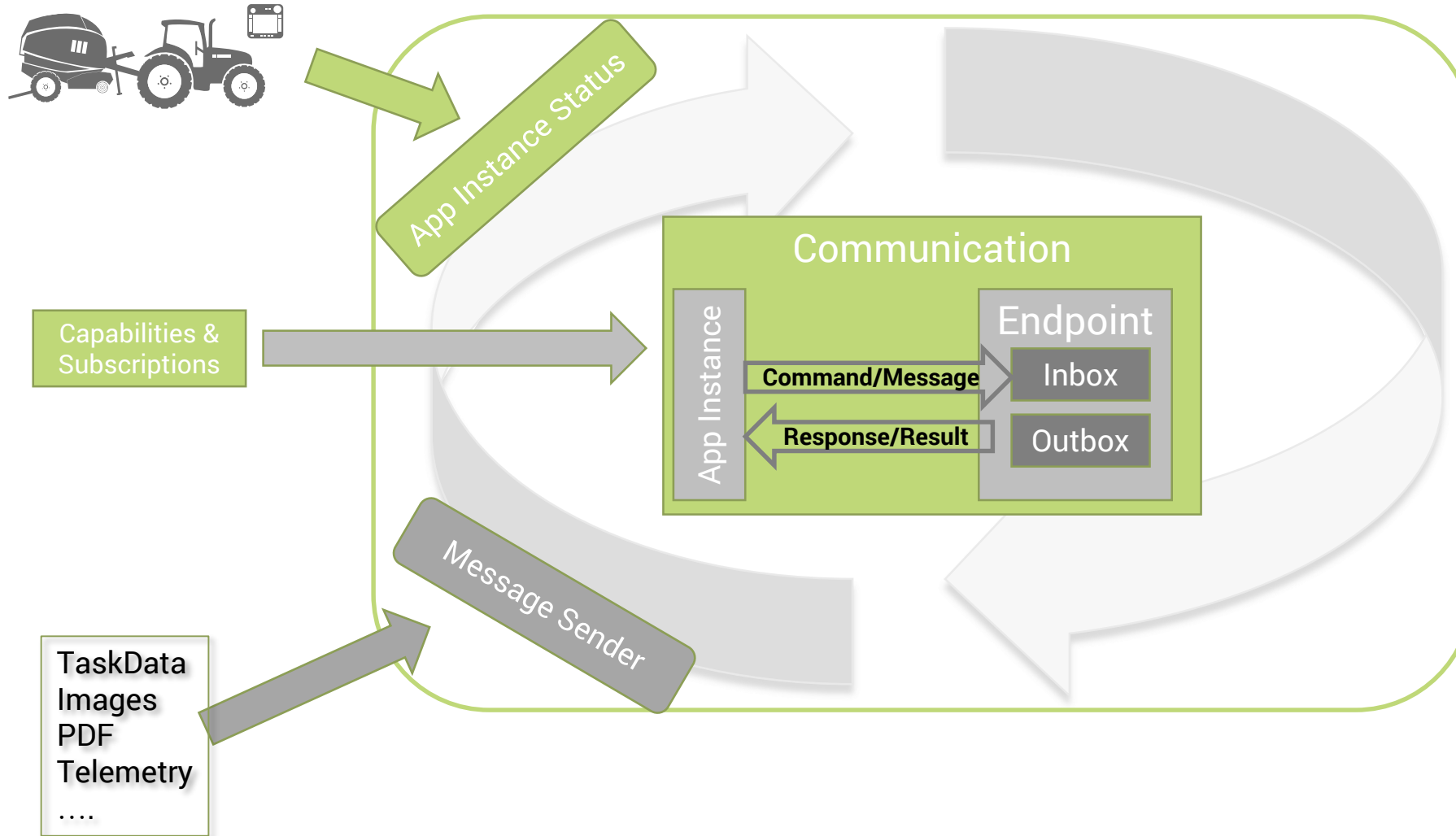
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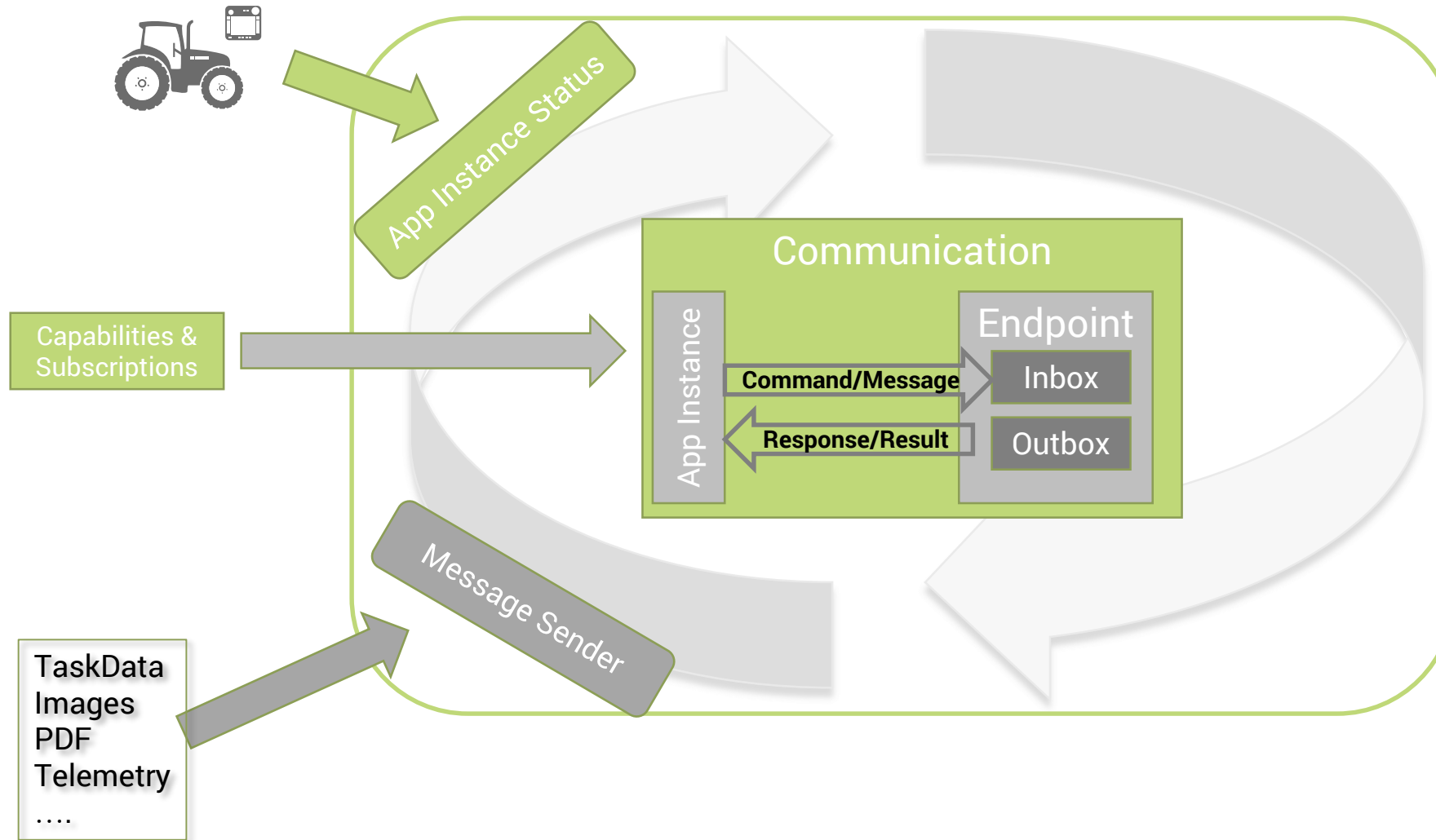


# General workflow of communication

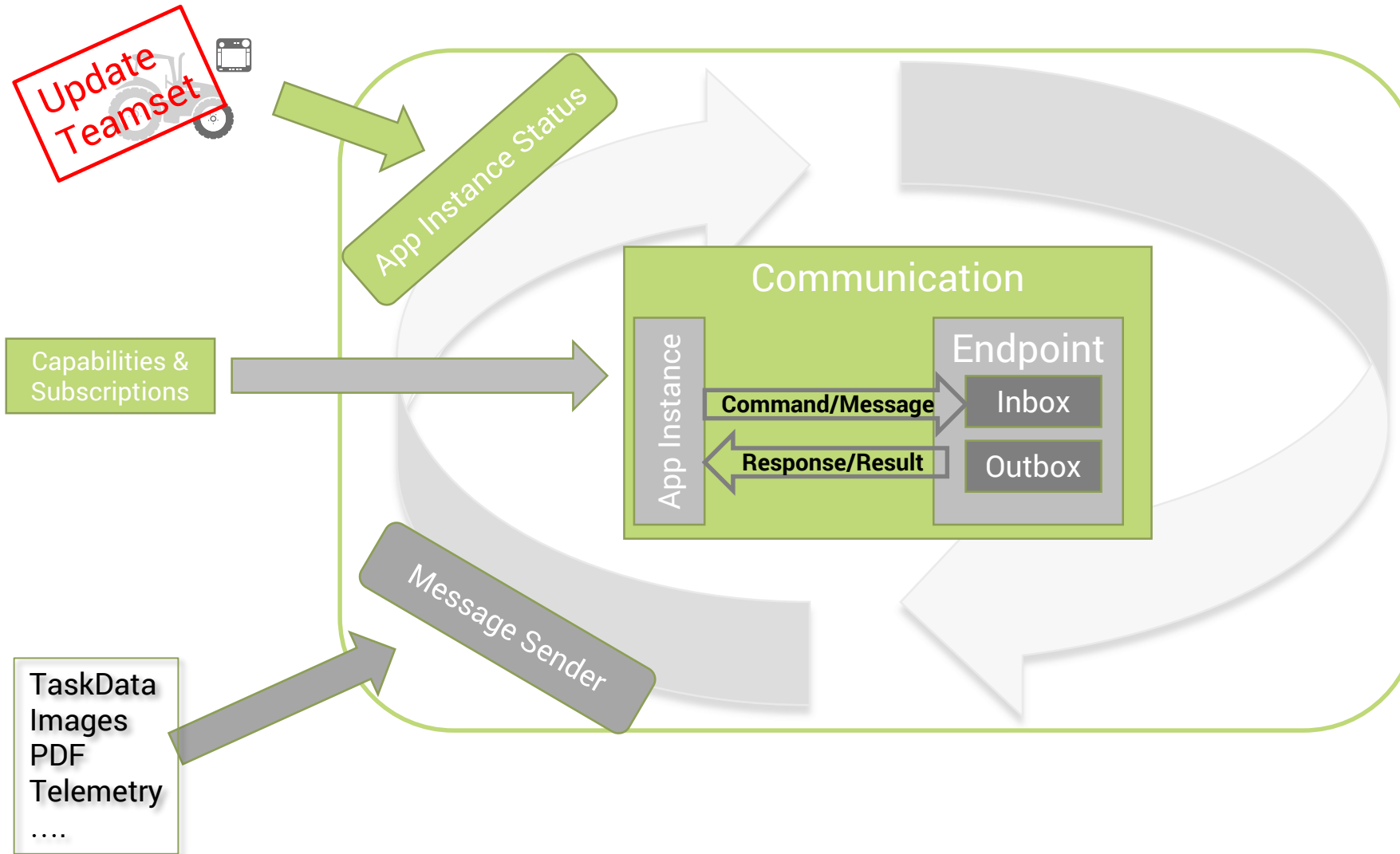




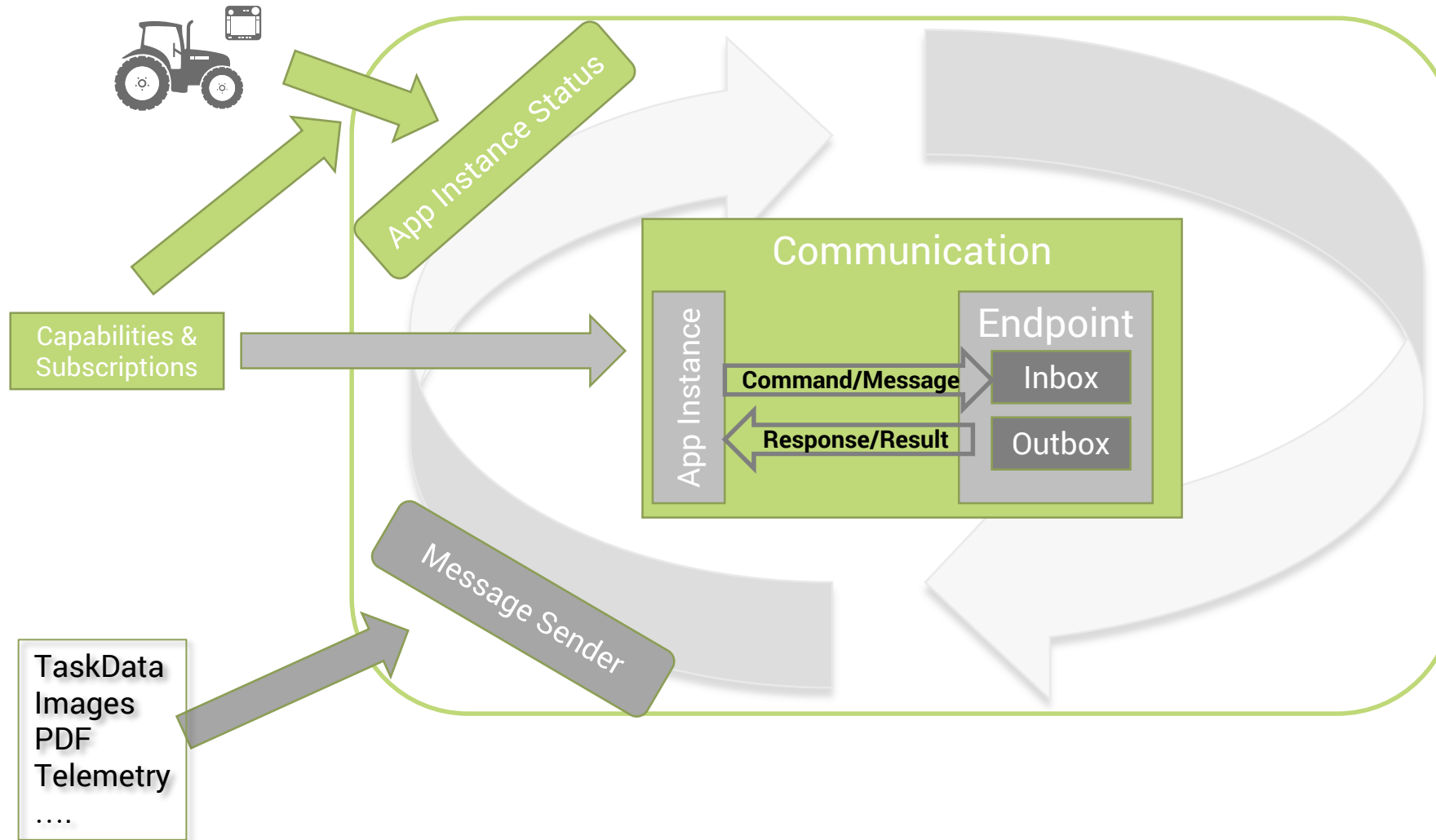
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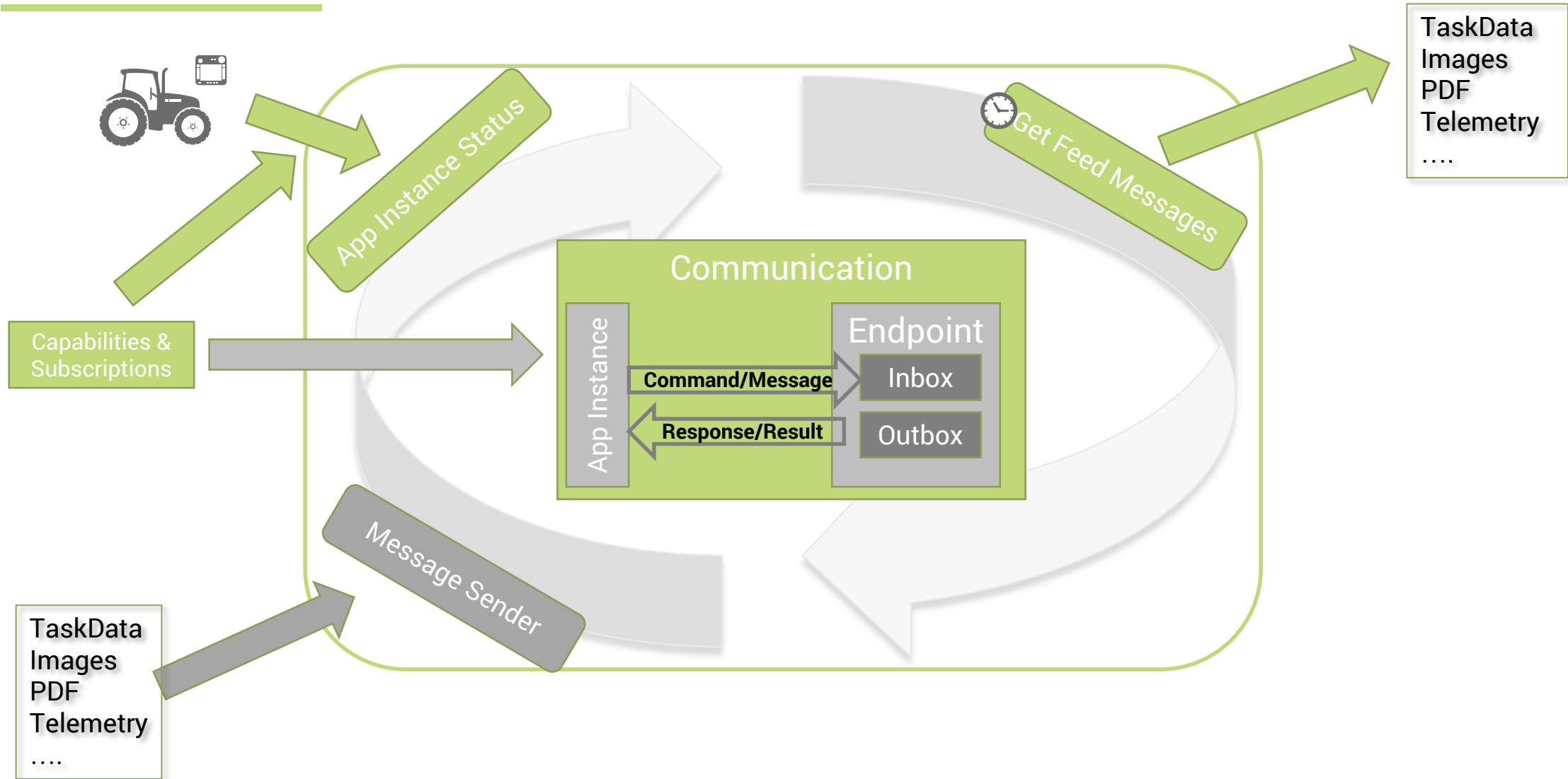
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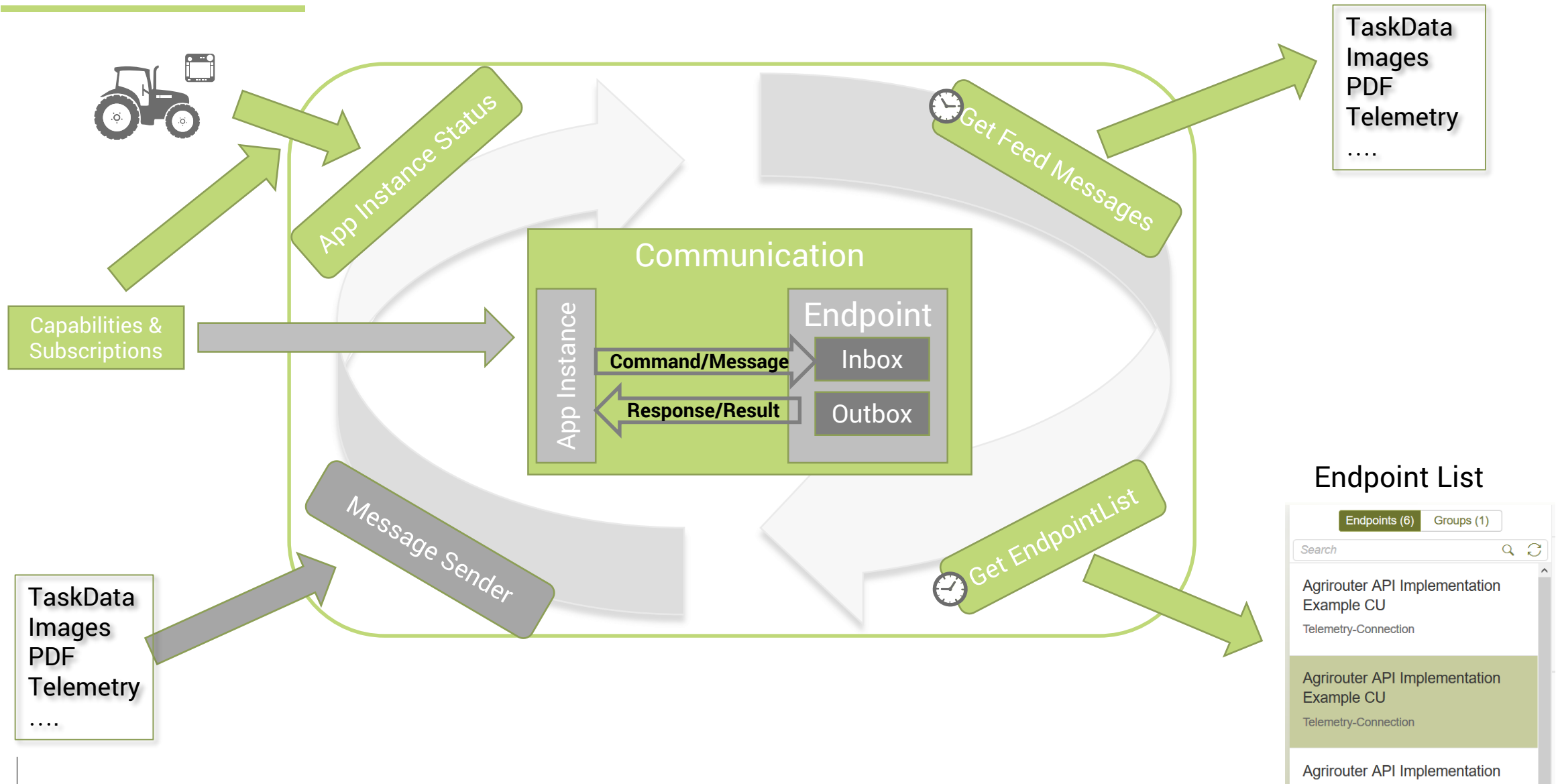
# General workflow of communication



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# General workflow of communication



# Building a message (1)

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# Building a message (1)

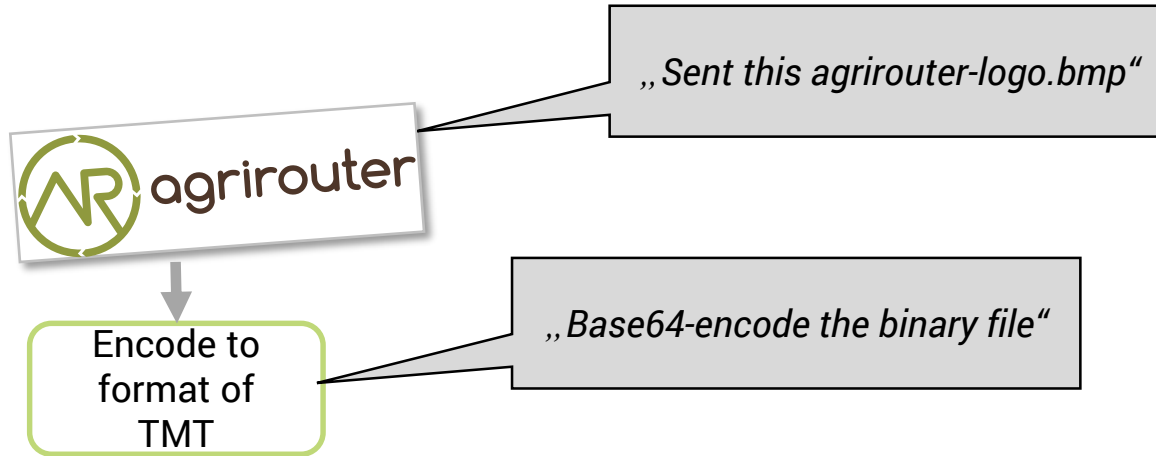
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*„Sent this agrirouter-logo.bmp“*

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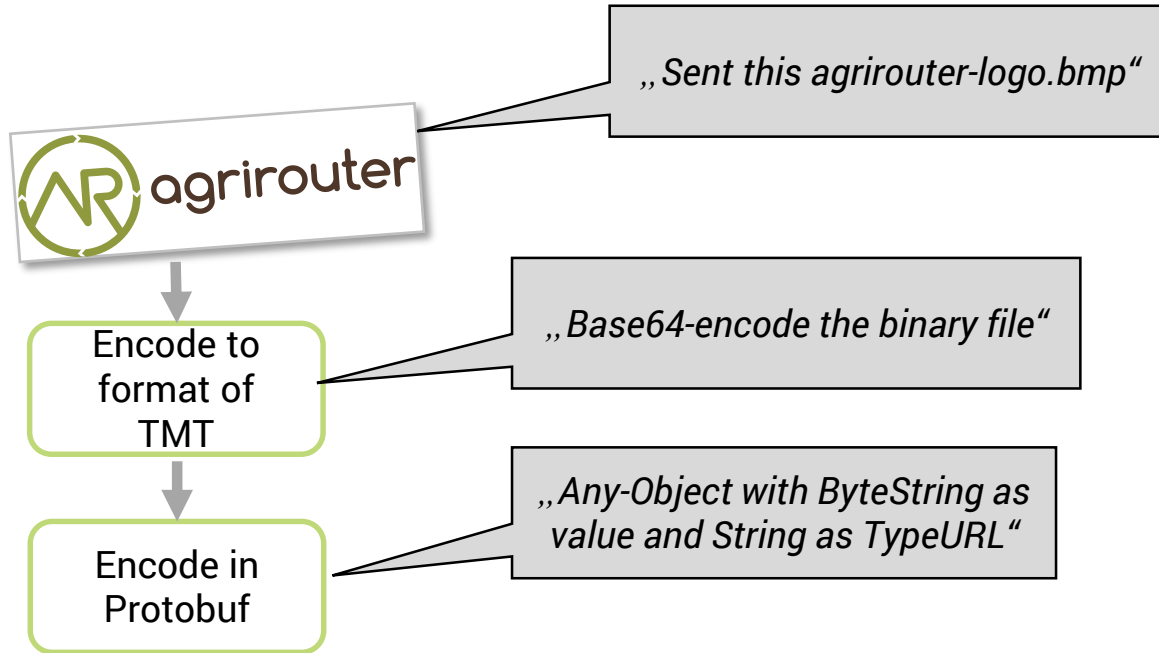
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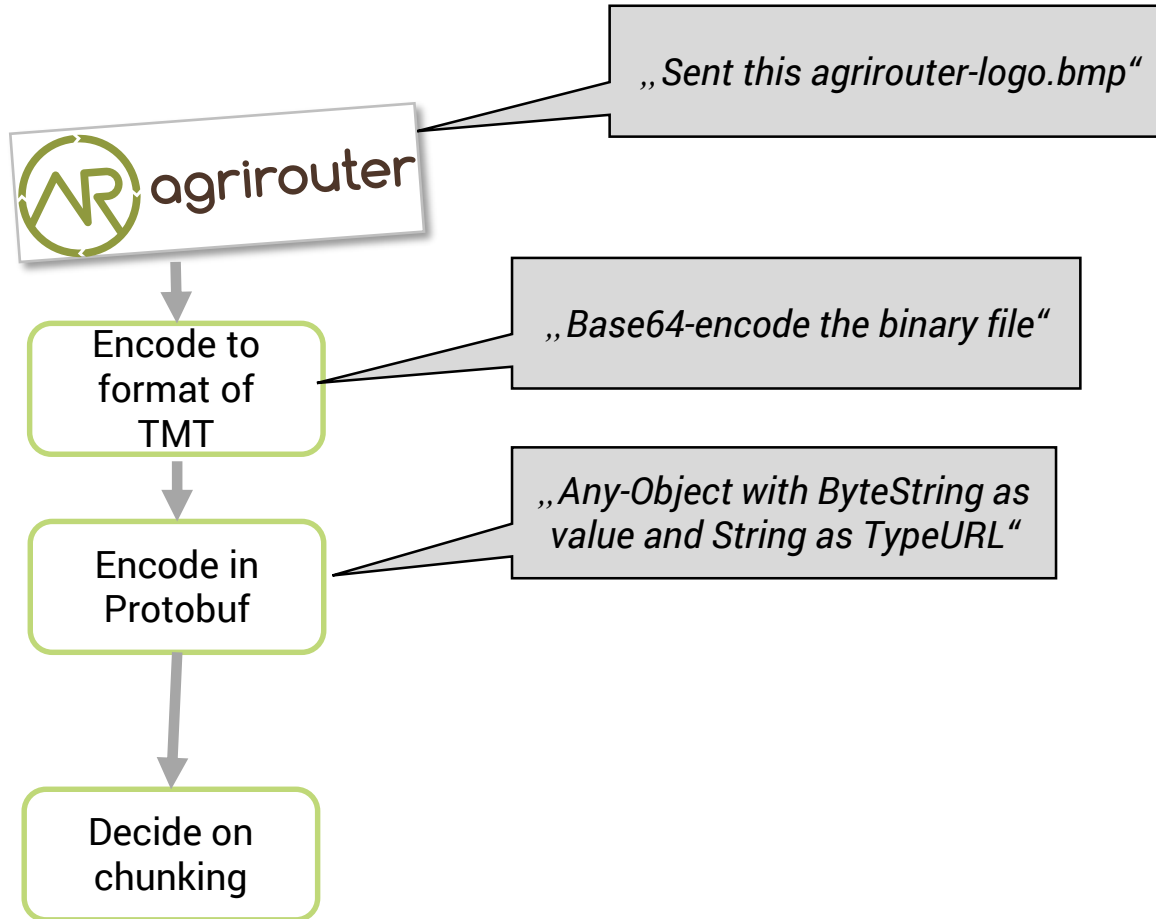
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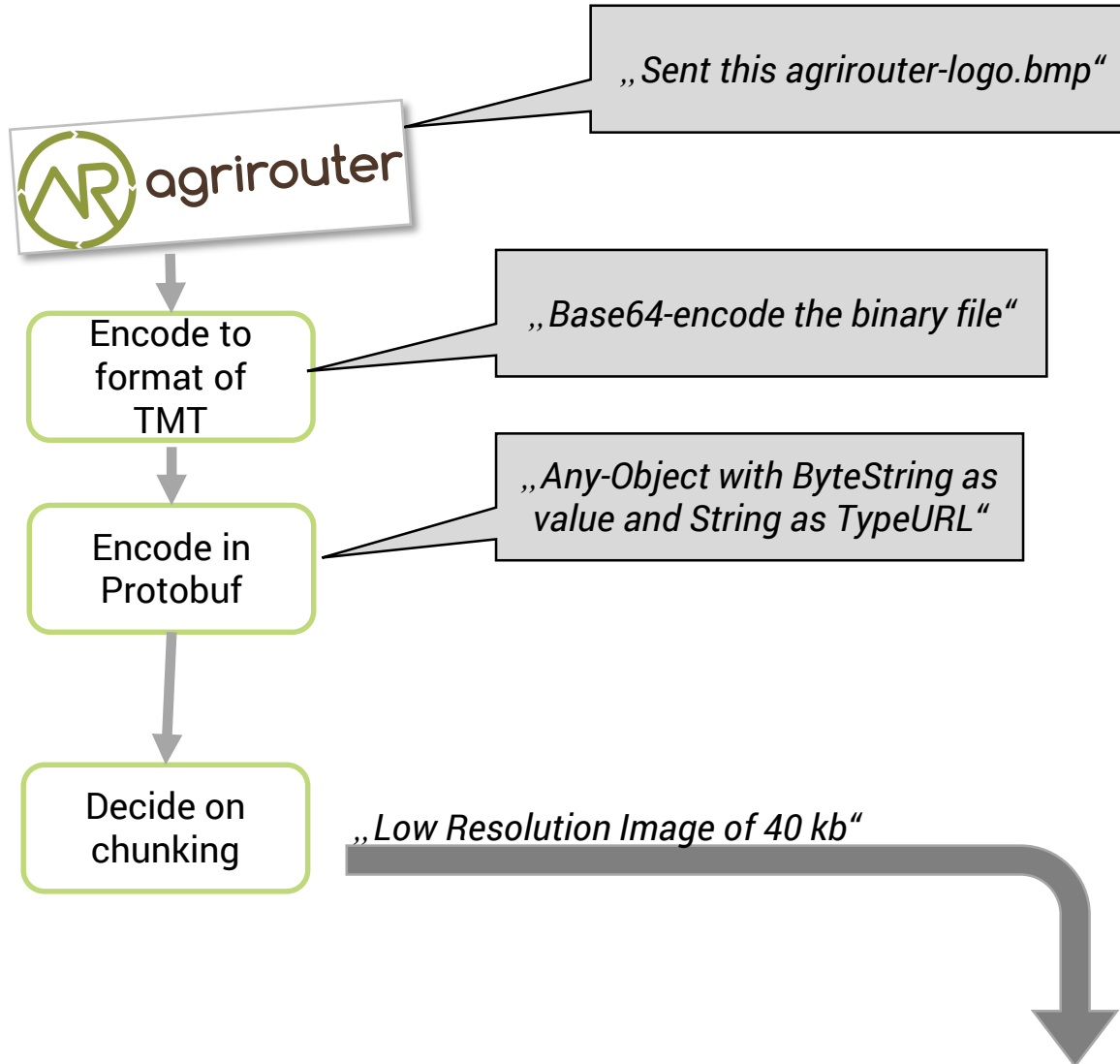
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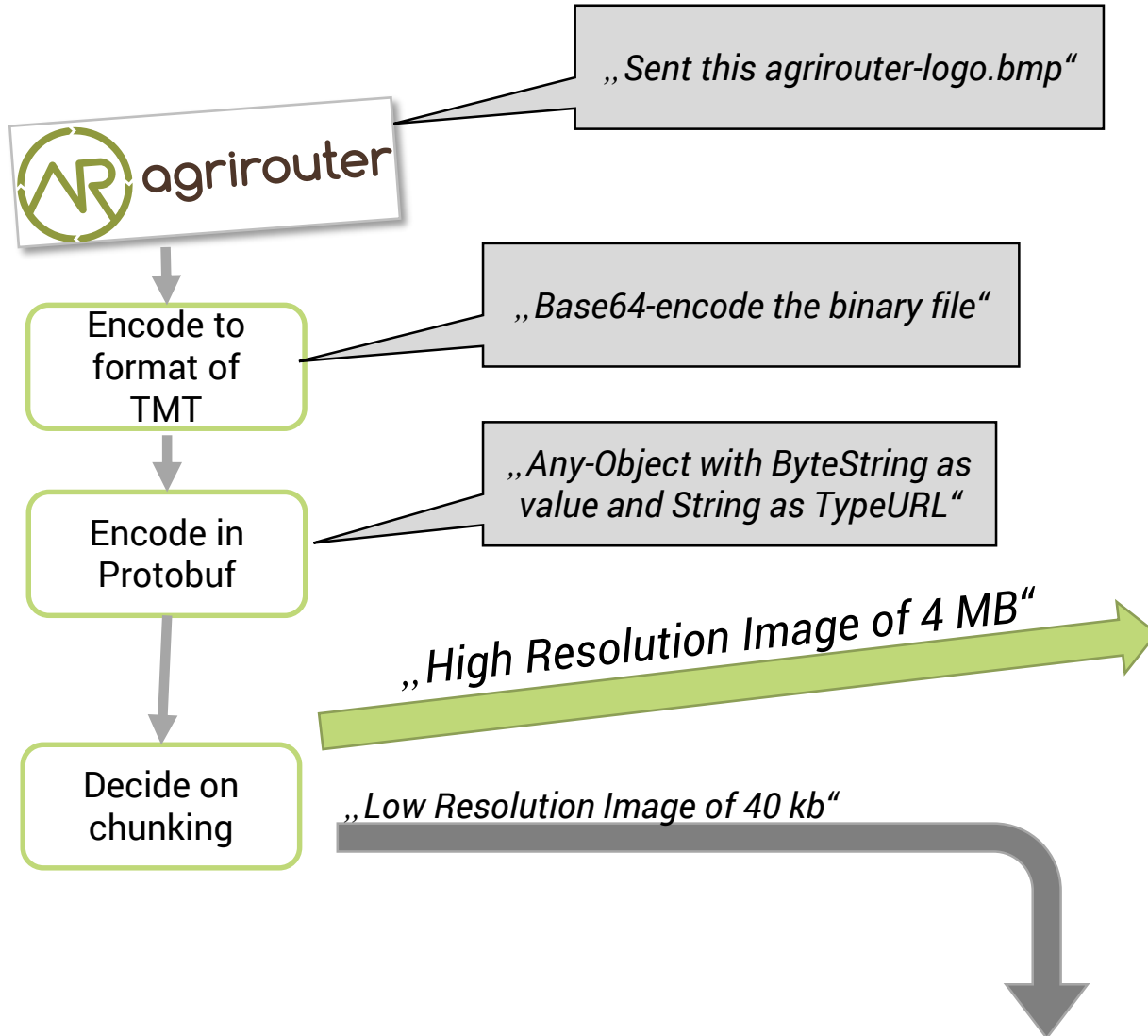


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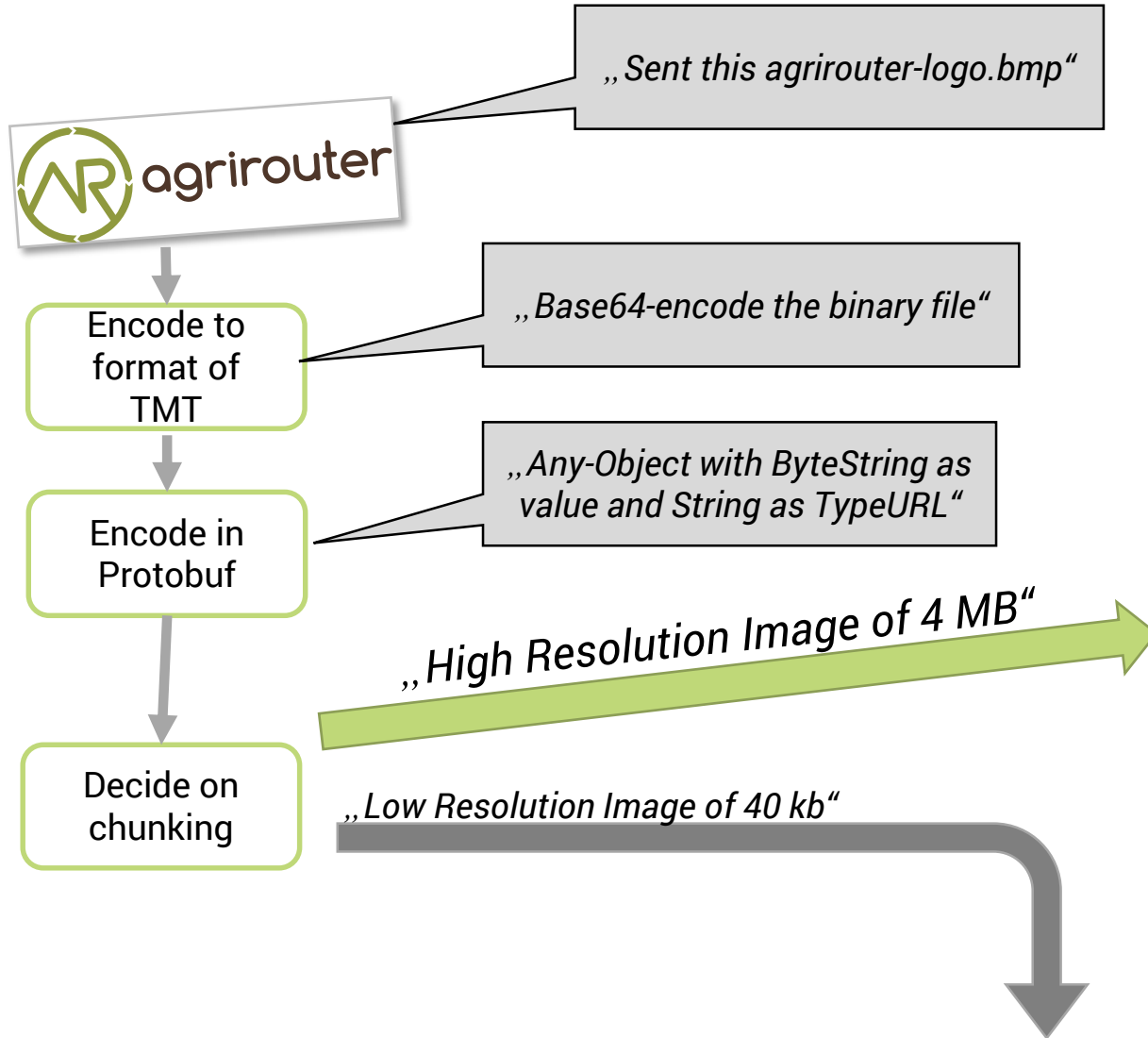


# Building a message (1)



About chunking

# Building a message (1)



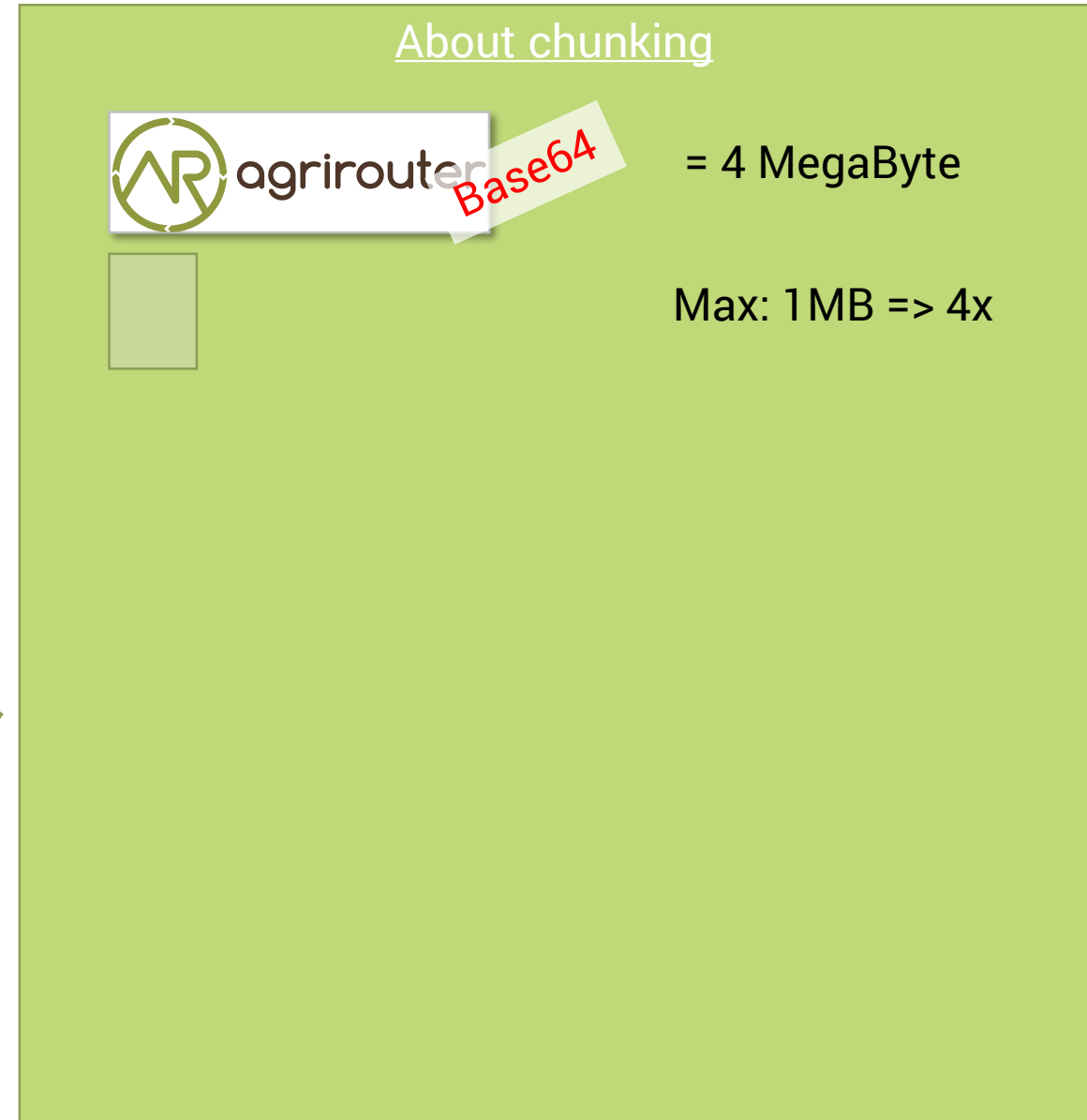
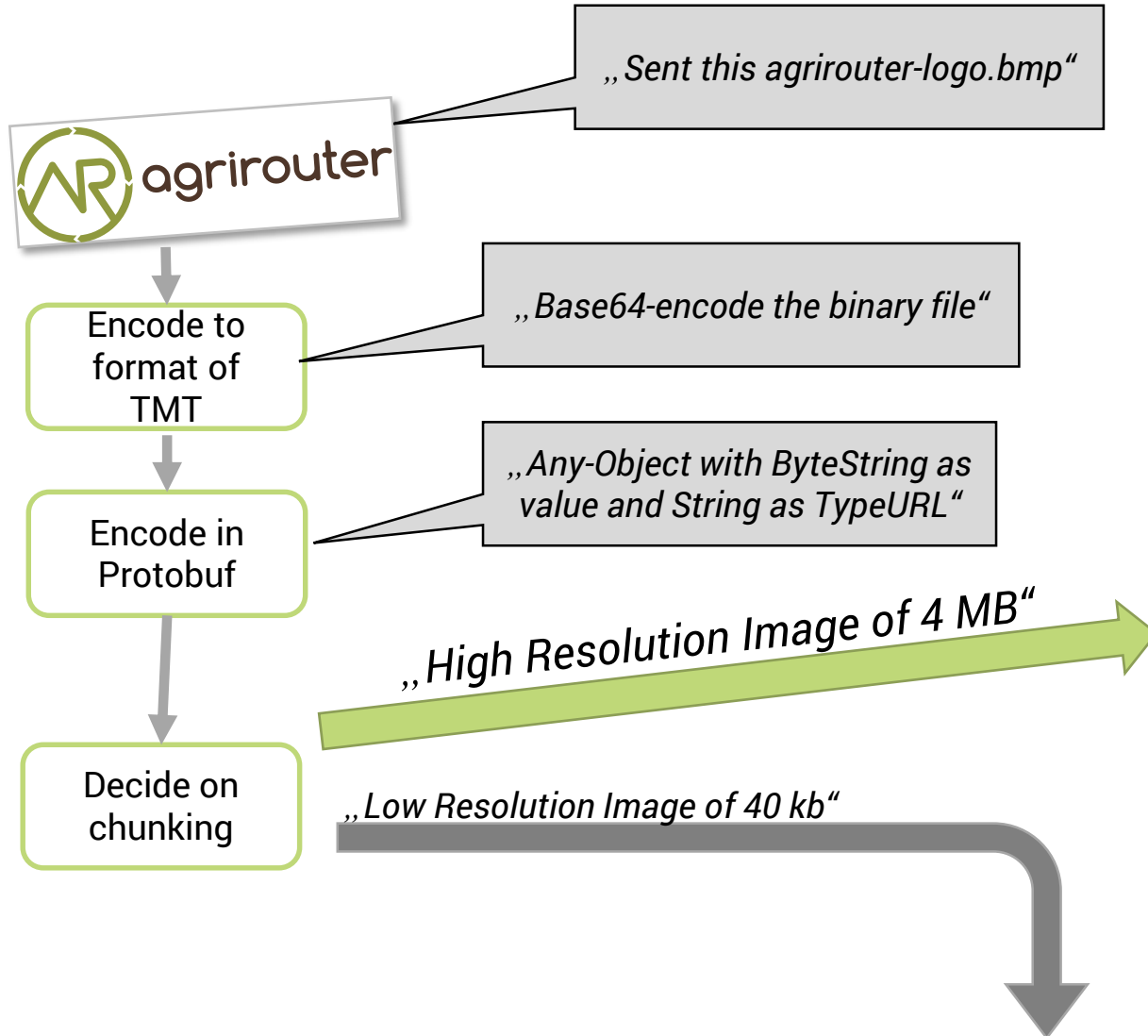
About chunking



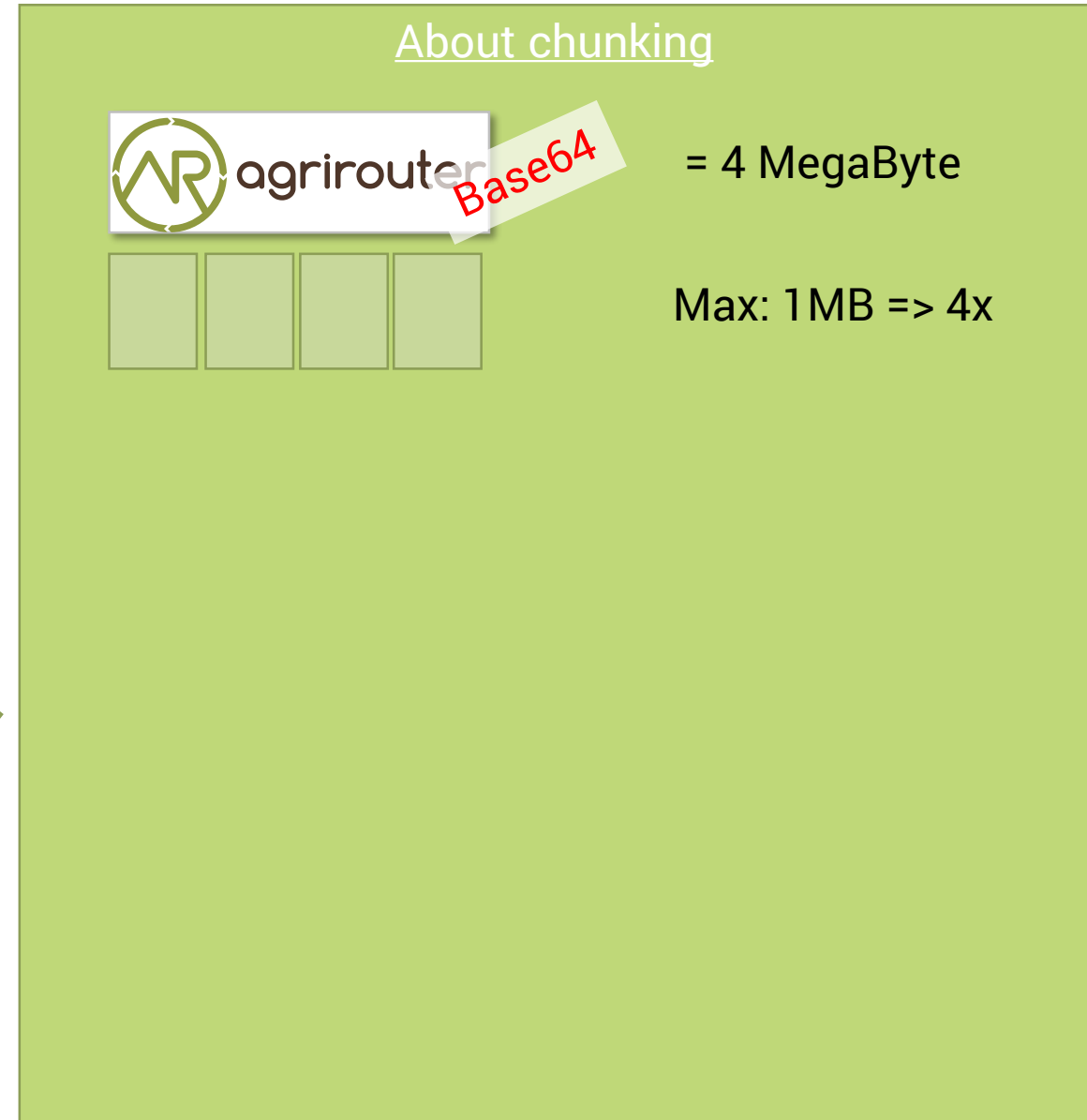
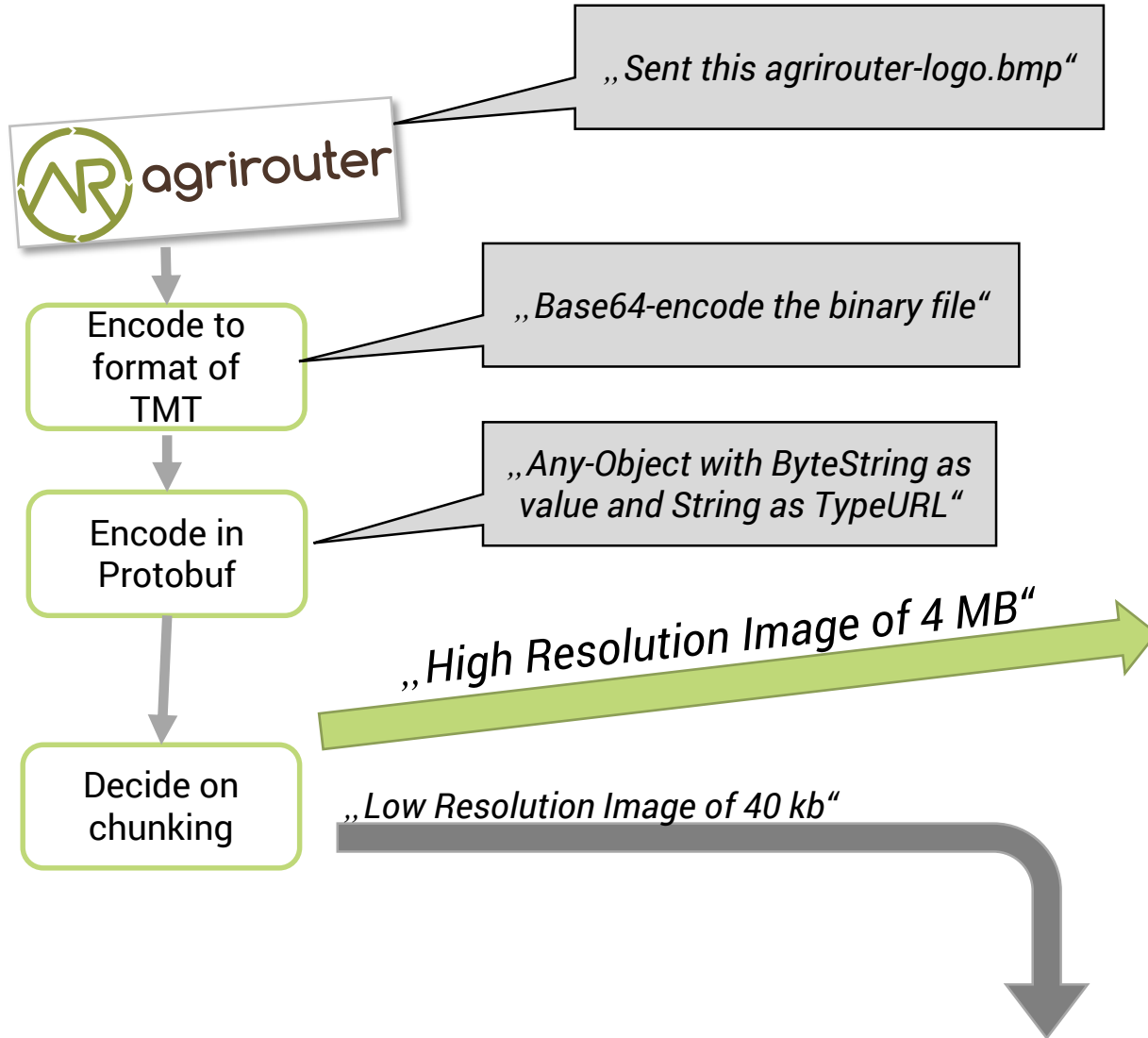
Base64

= 4 MegaByte

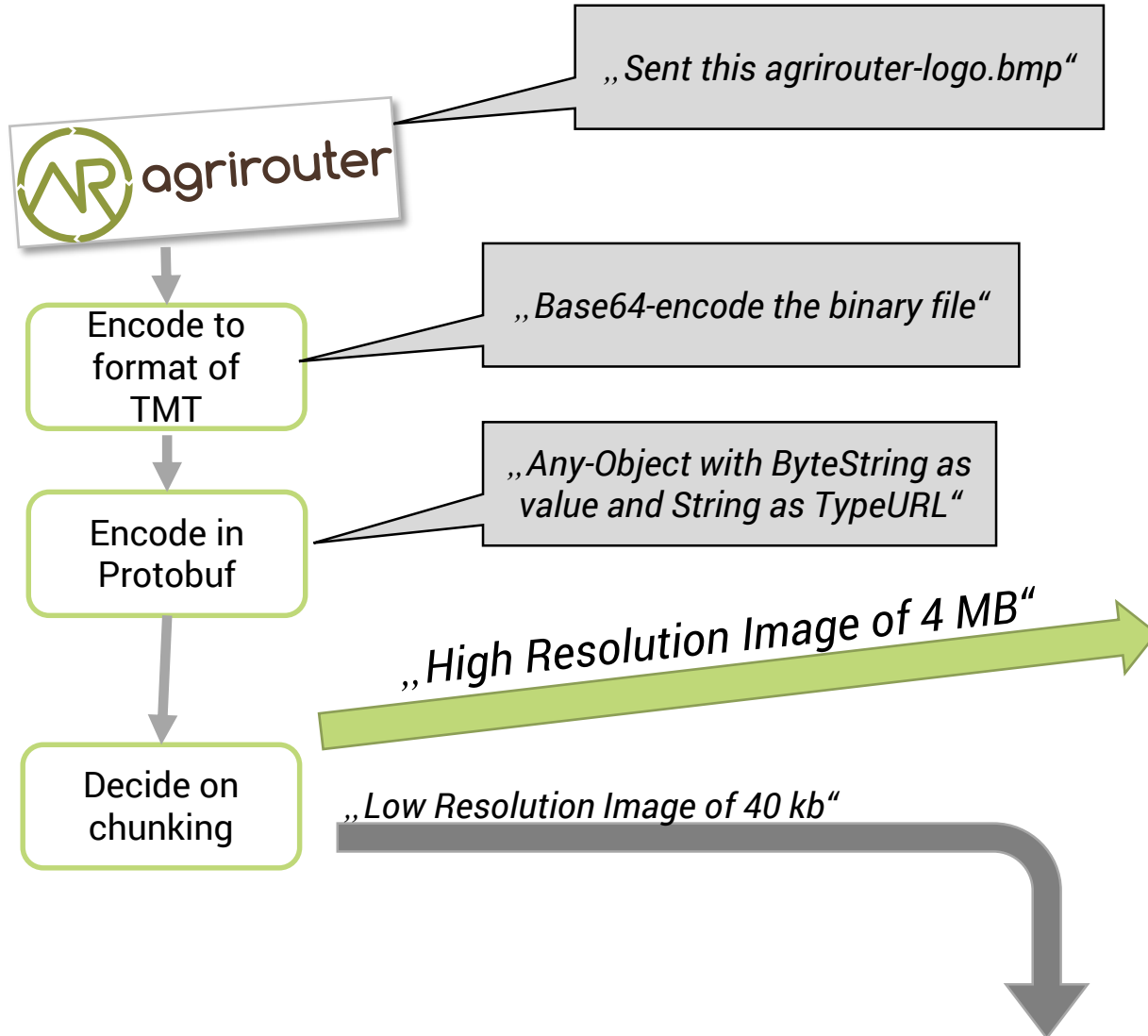
# Building a message (1)



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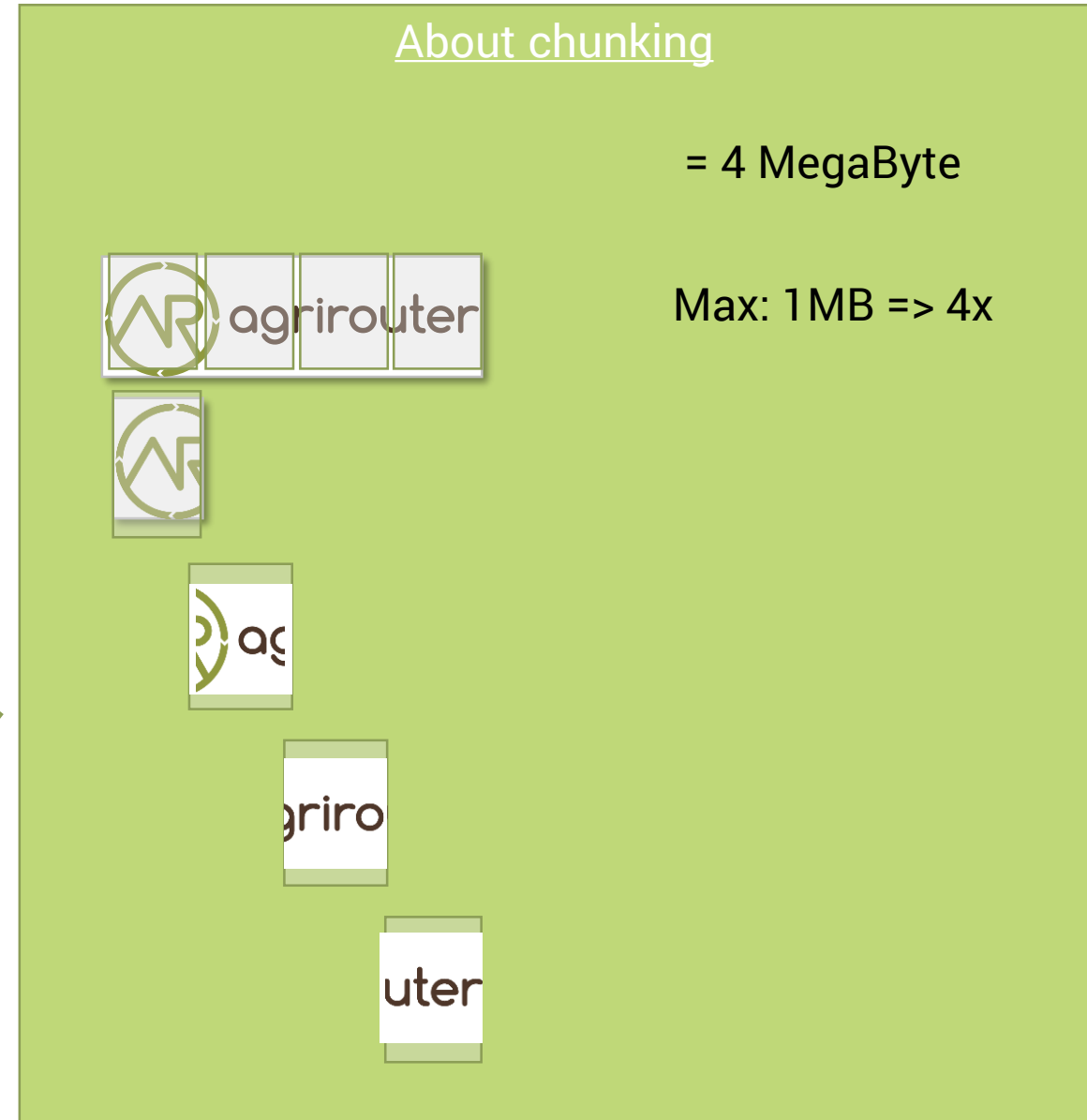
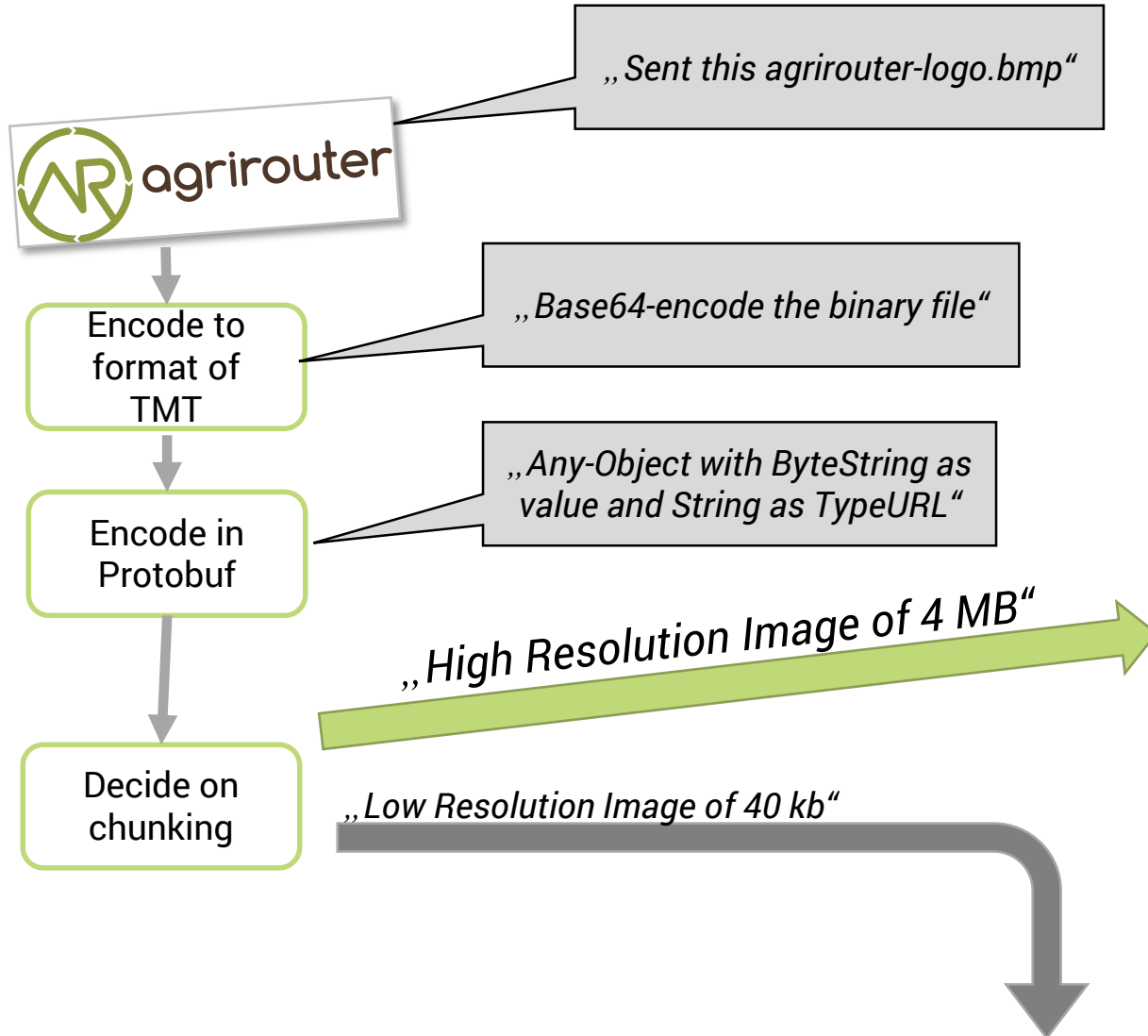


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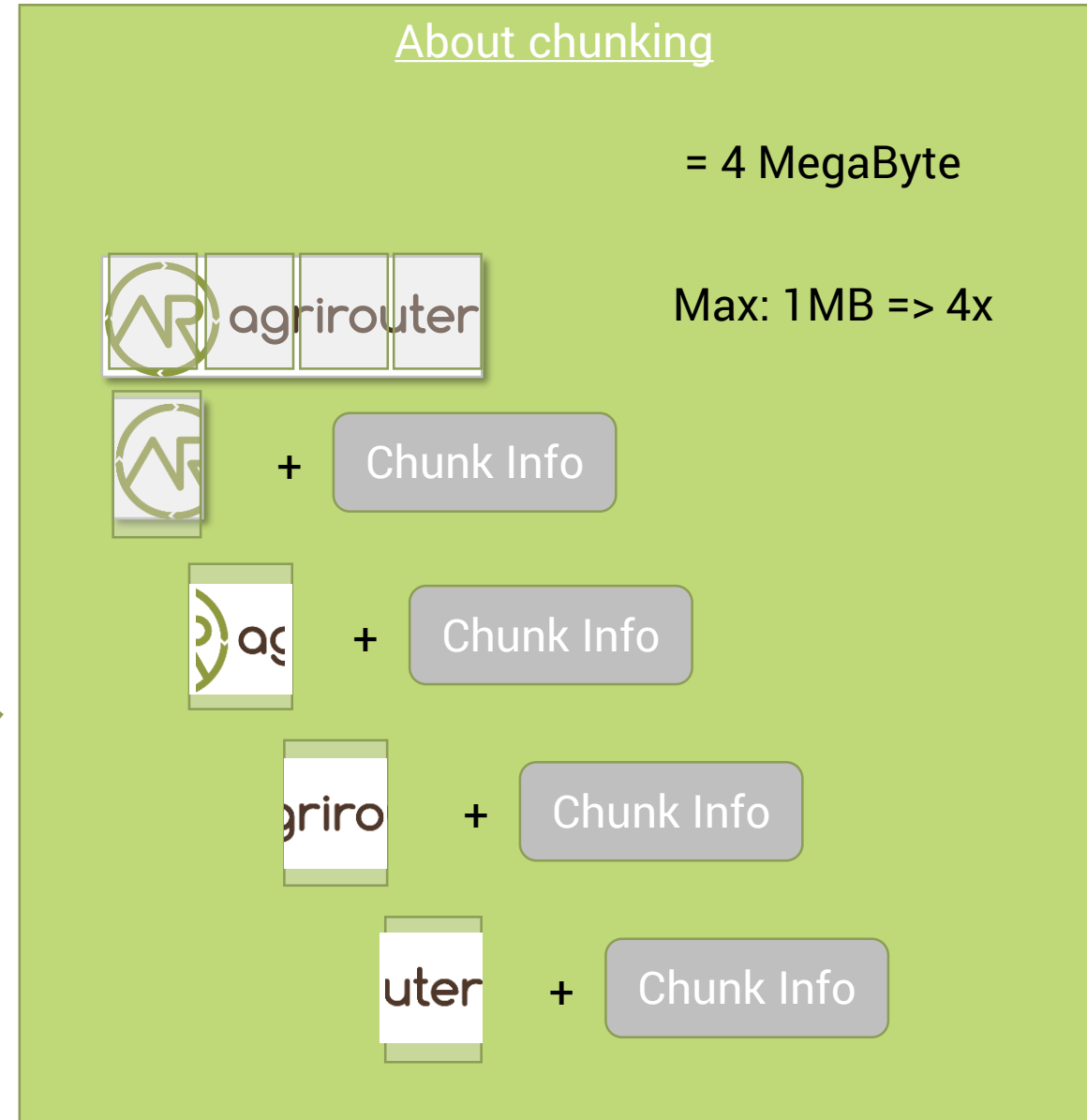
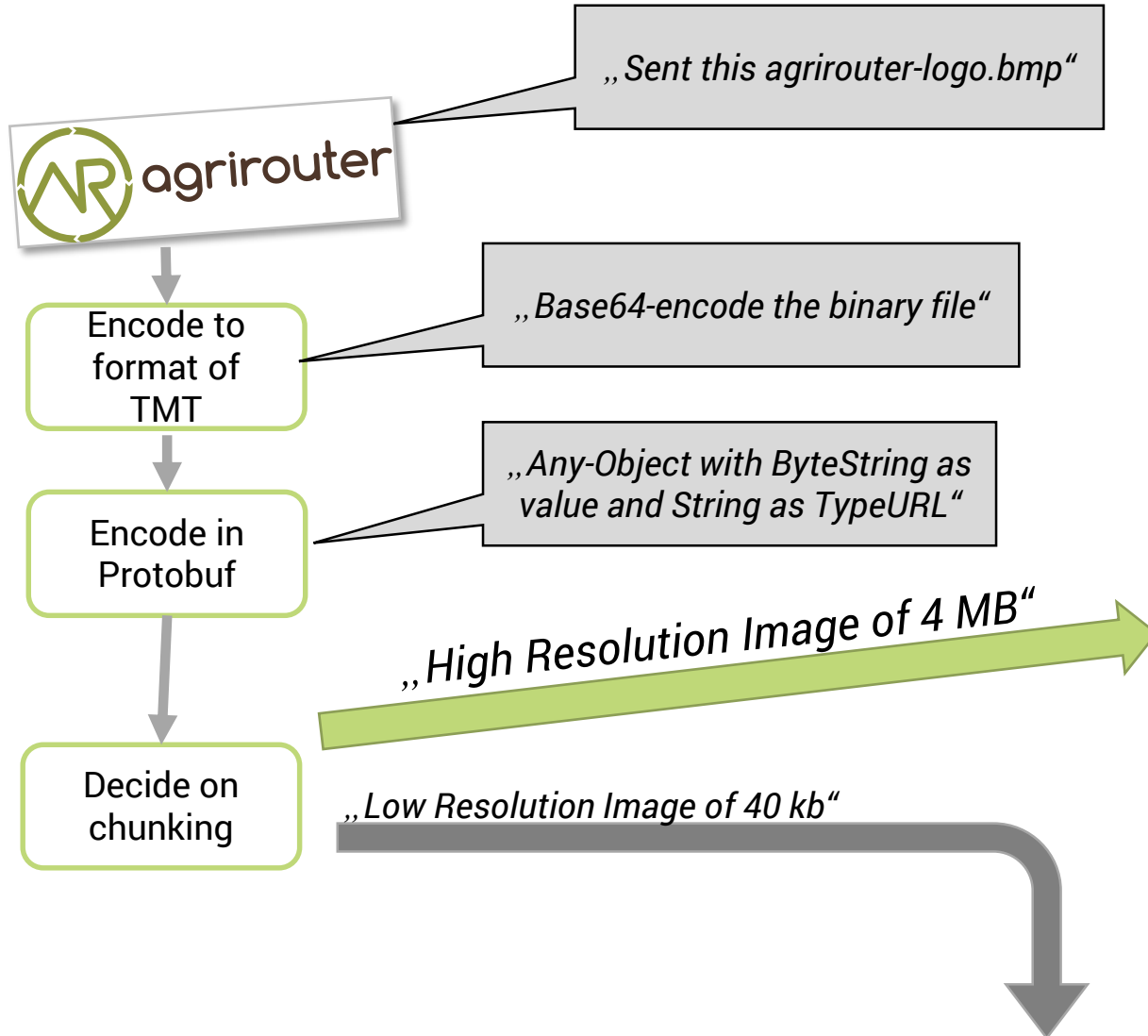




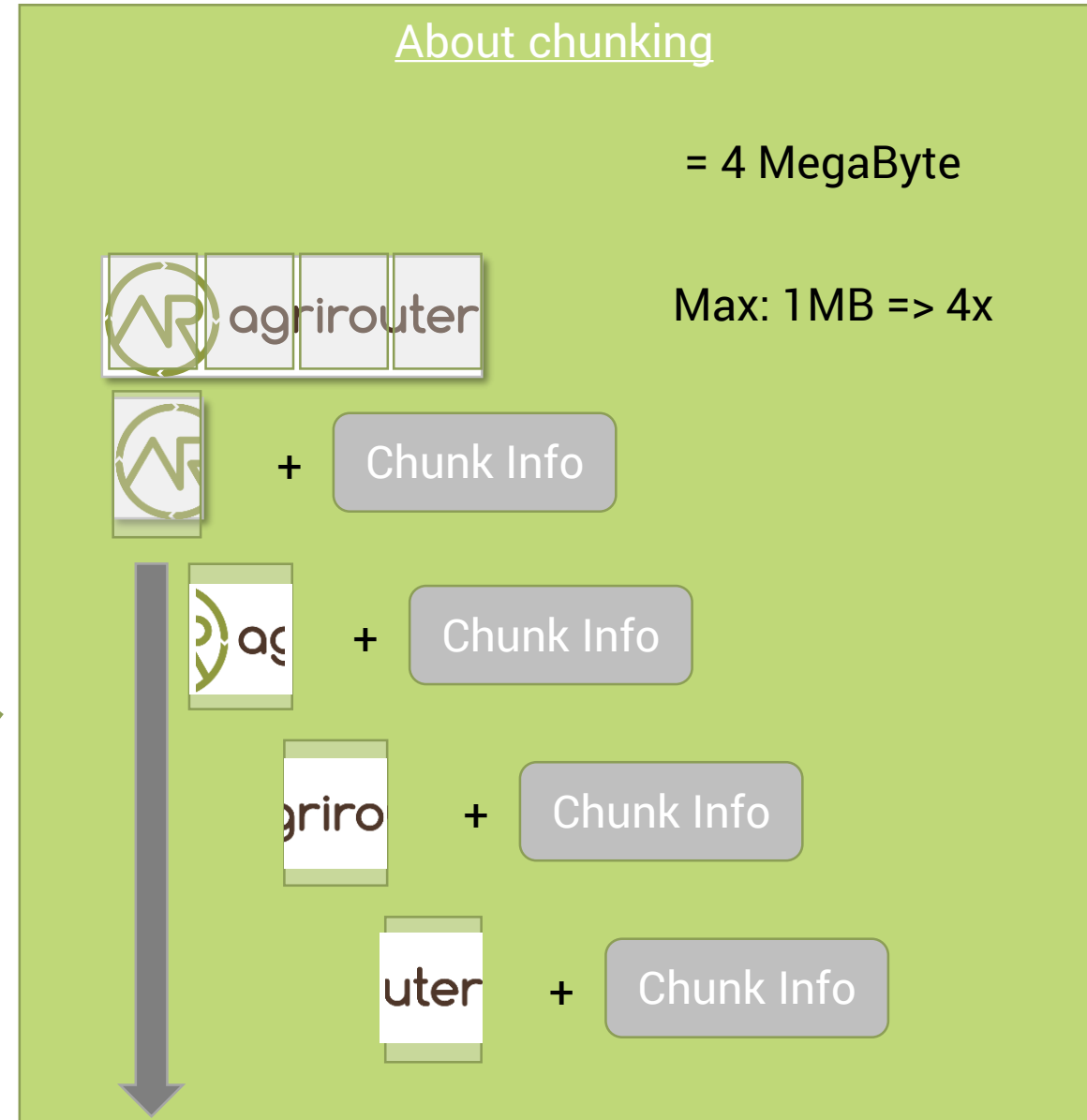
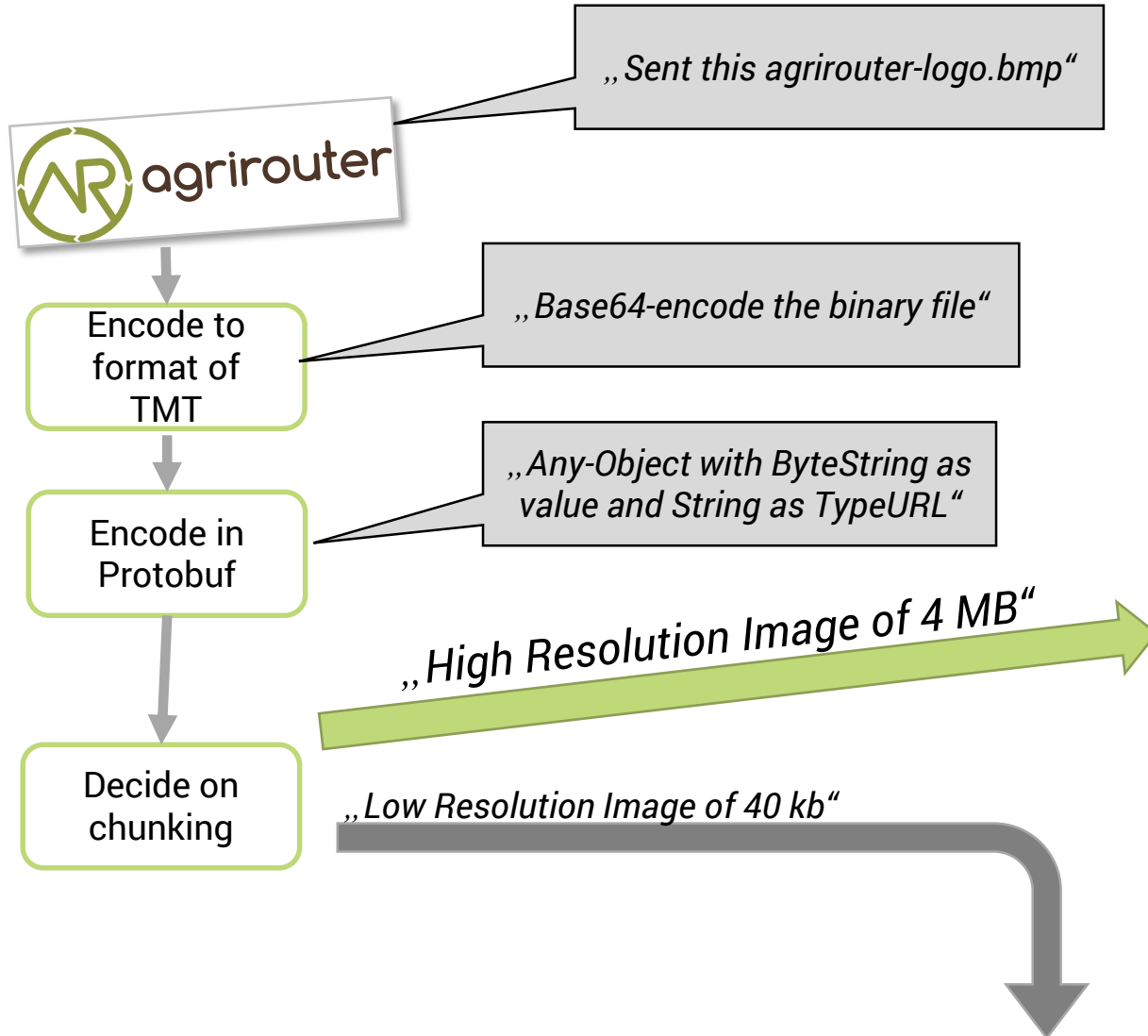
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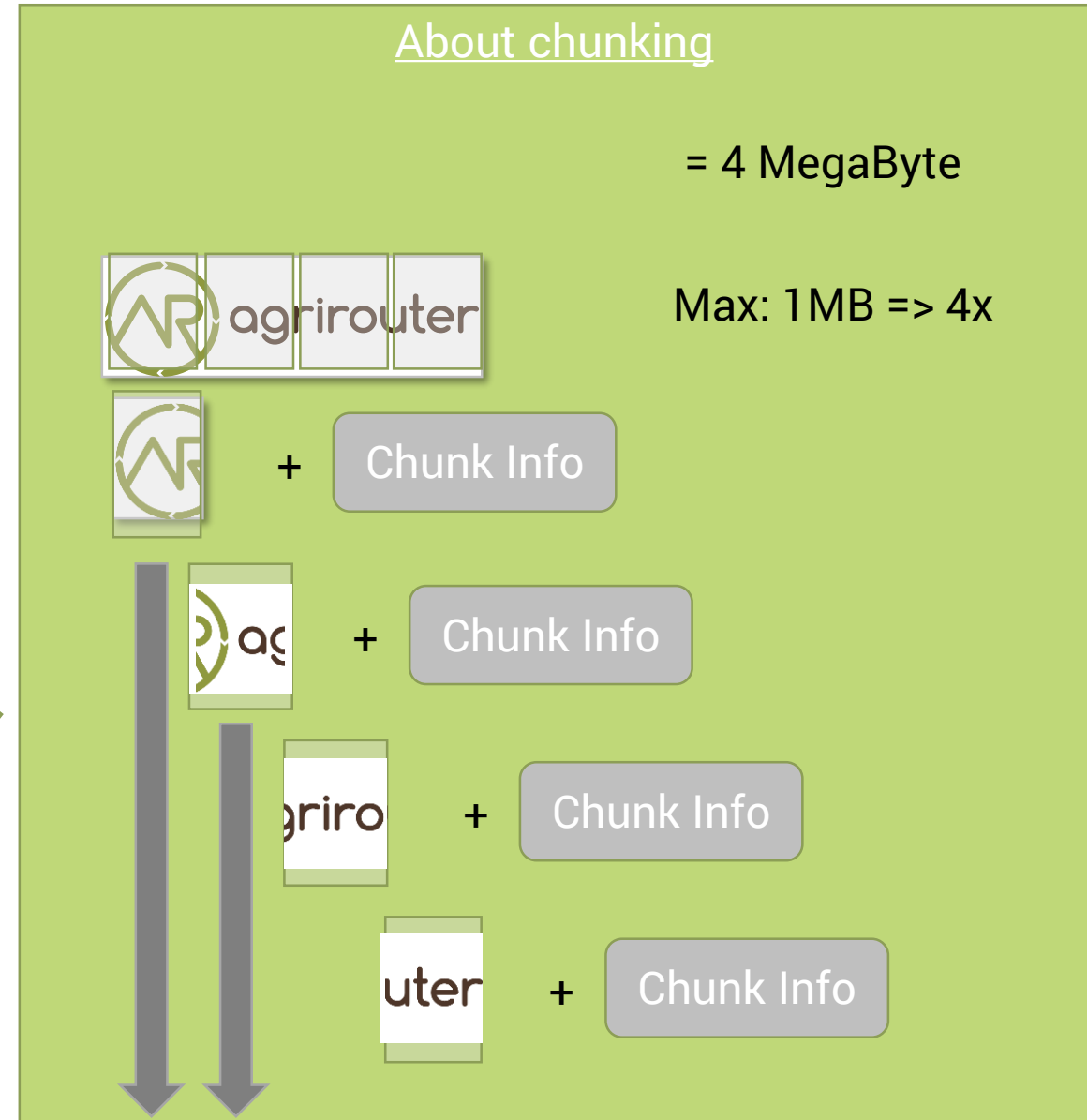
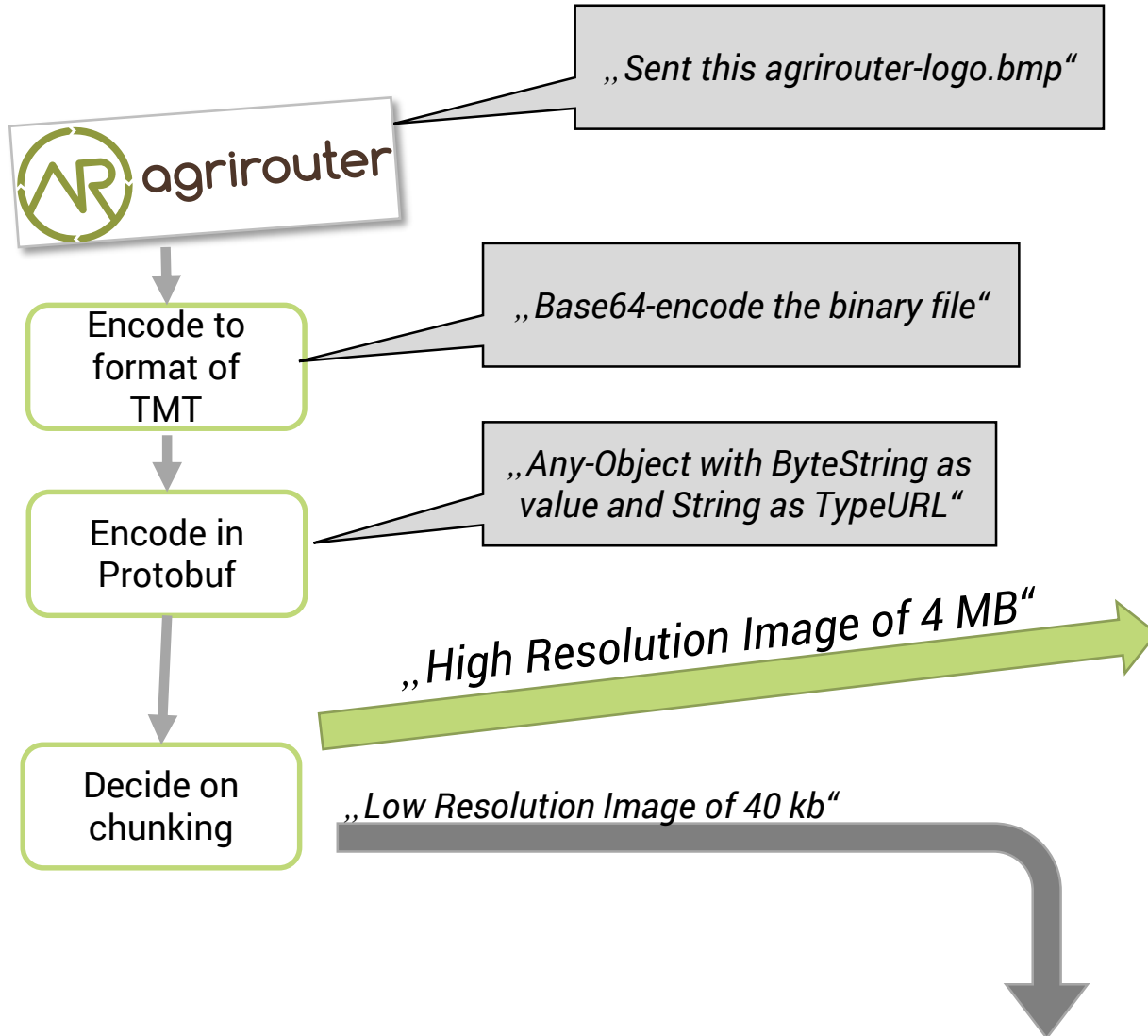
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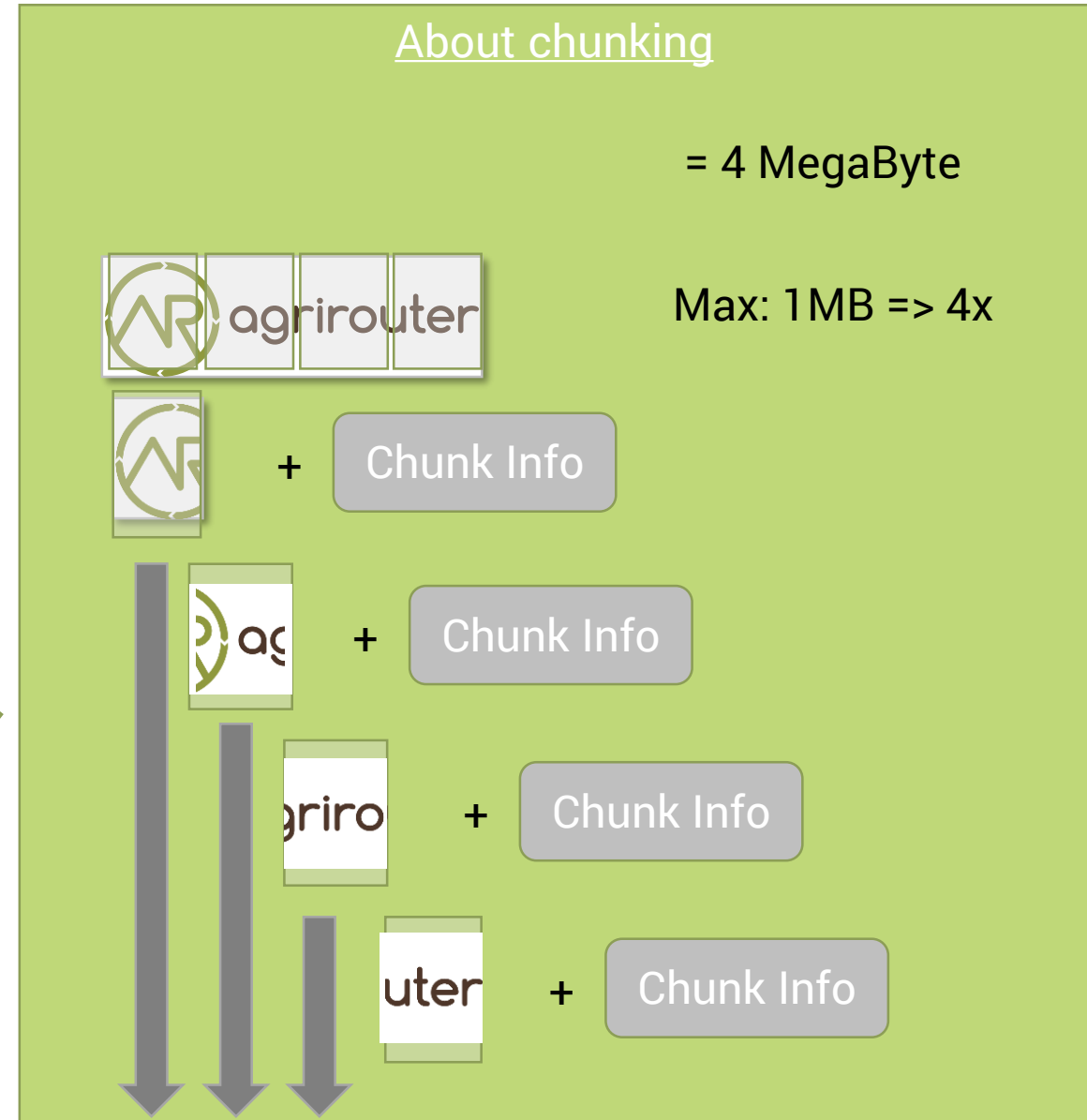
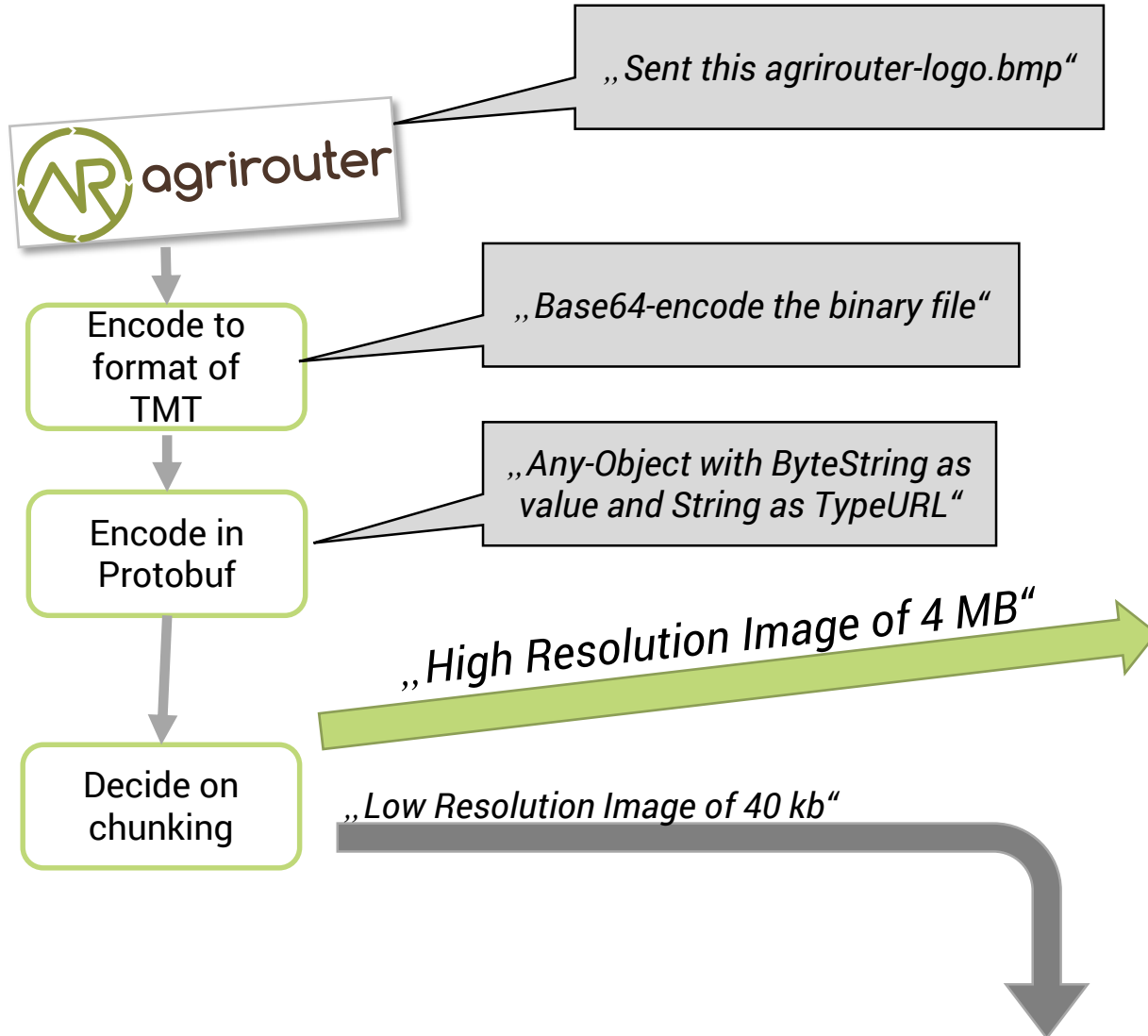
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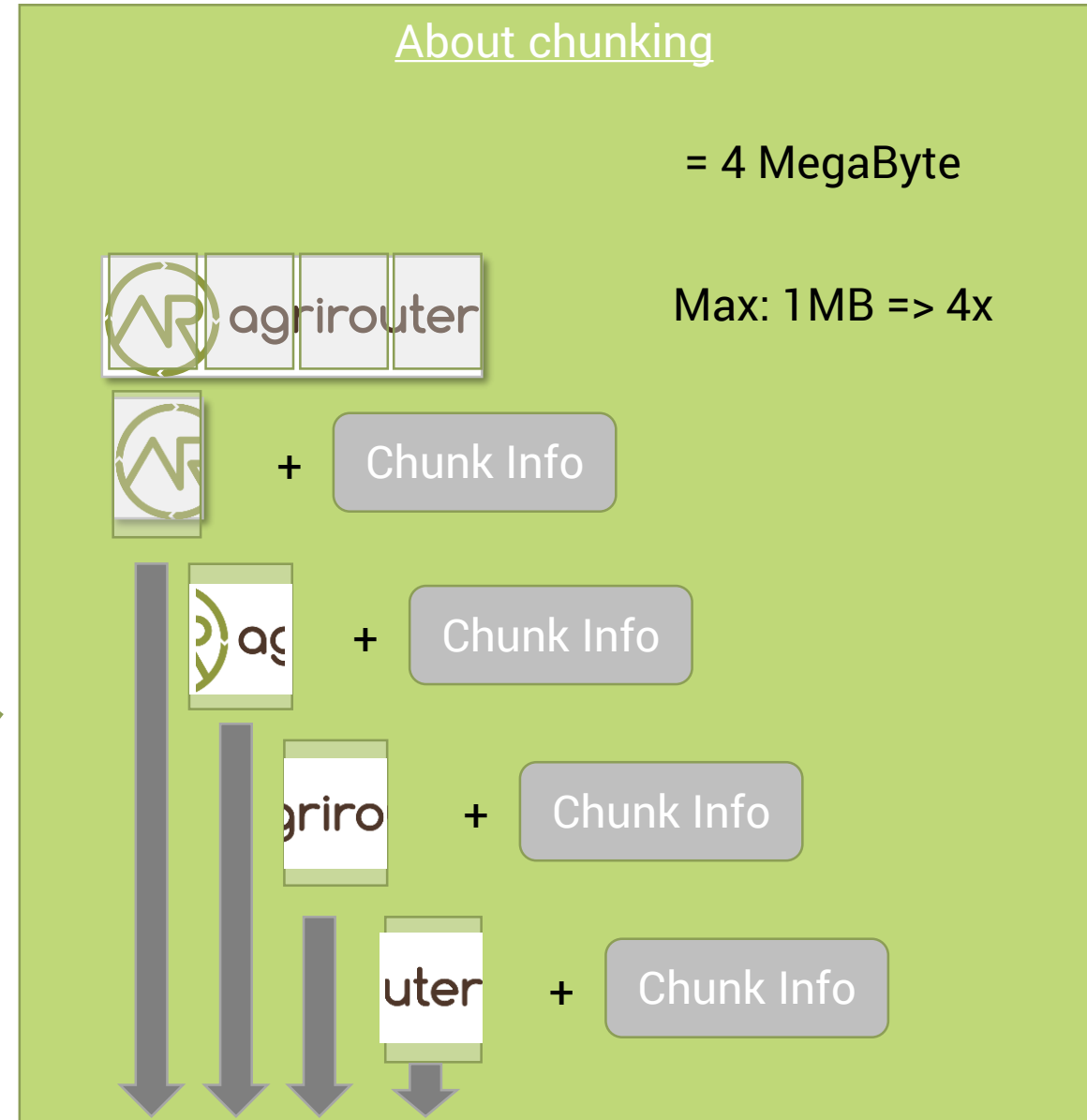
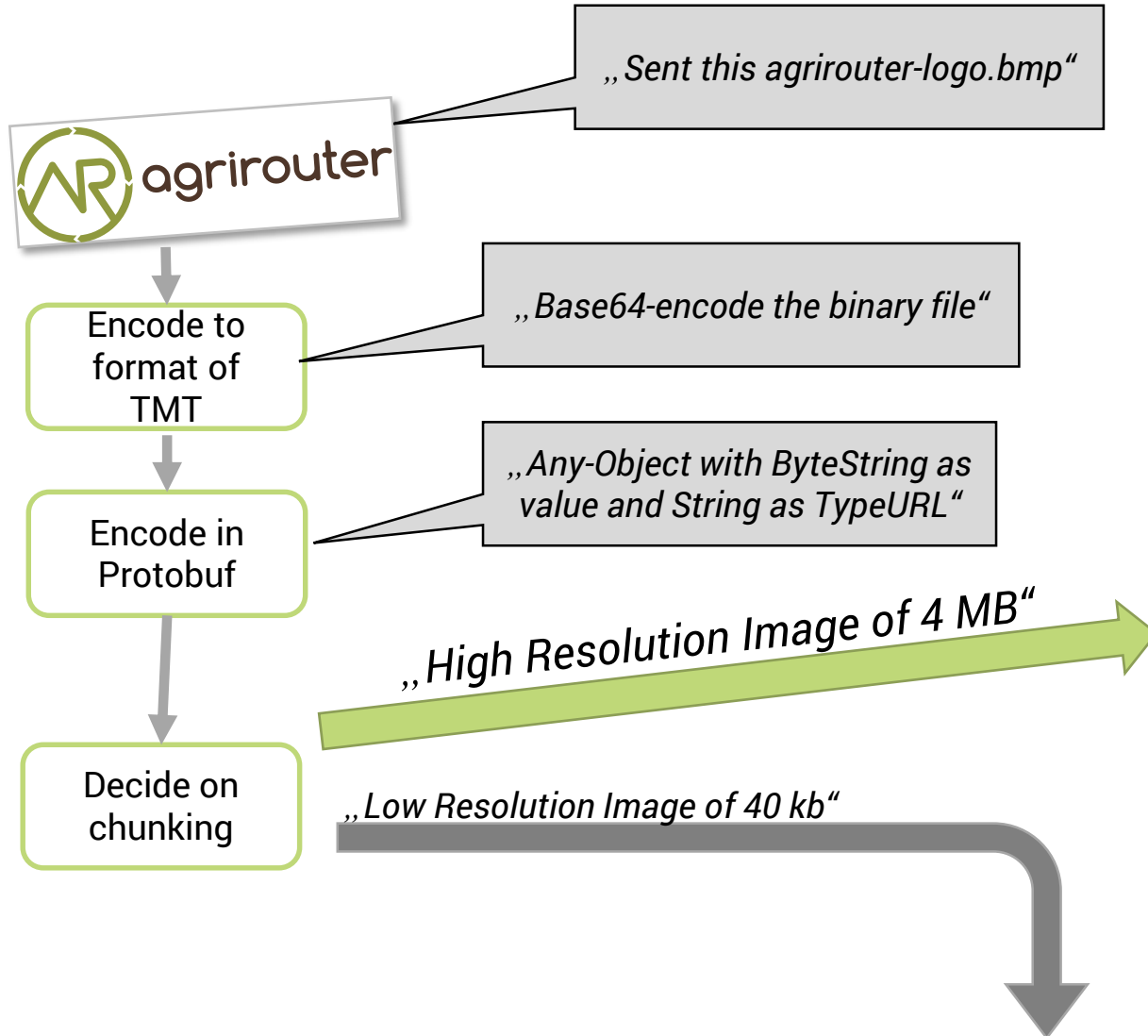
# Building a message (1)



# Building a message (1)



# Building a message (1)



# Building a message (2)

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Message



# Building a message (2)

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Message

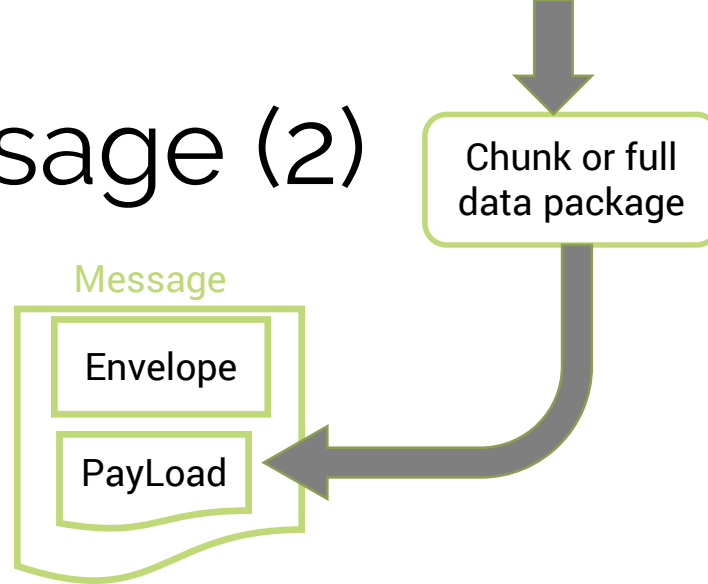


Chunk or full  
data package

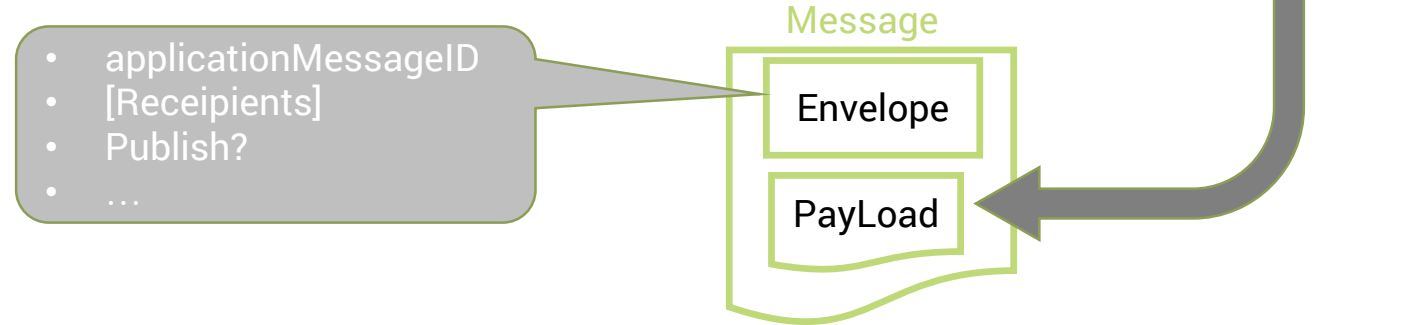


# Building a message (2)

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# Building a message (2)



# Building a message (2)

- applicationMessageID
- [Receipients]
- Publish?
- ...

Message

Envelope

PayLoad

Chunk or full  
data package

**Exception:**

Native Protobuf Communication

Base64

# Building a message (2)

- applicationMessageID
- [Receipients]
- Publish?
- ...

Message

Envelope

PayLoad

Base64

Message/  
Command

Chunk or full  
data package

**Exception:**  
Native Protobuf Communication

# Building a message (2)

- applicationMessageID
- [Receipients]
- Publish?
- ...

Timestamp

Message

Envelope

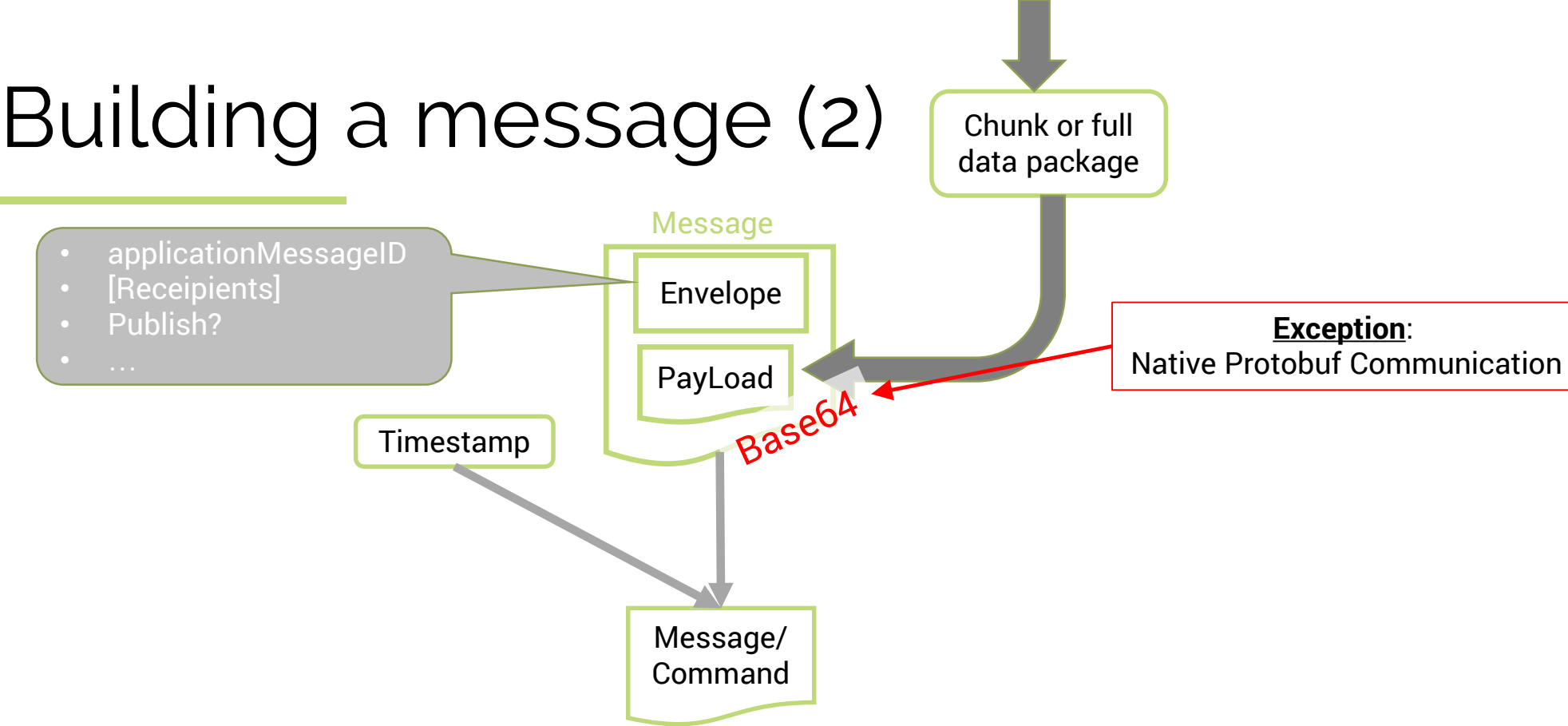
PayLoad

Base64

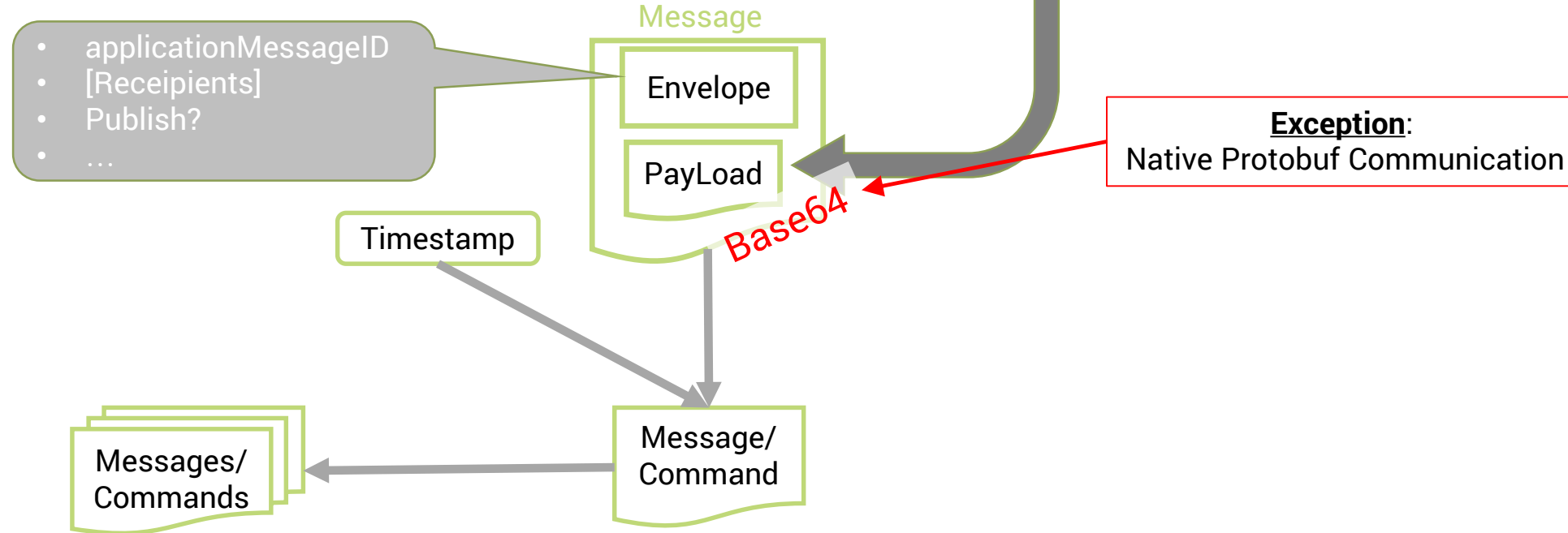
Message/  
Command

Chunk or full  
data package

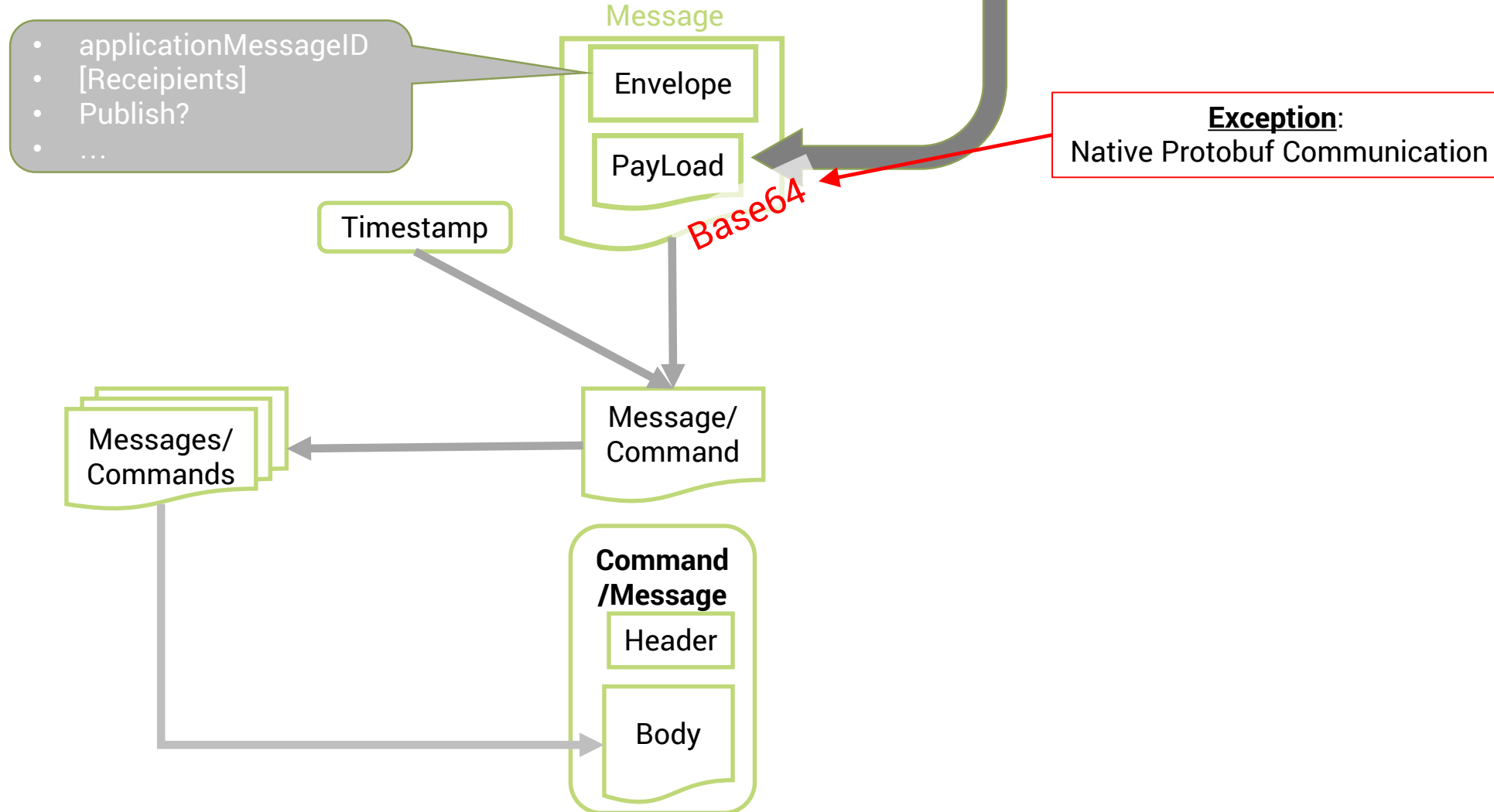
**Exception:**  
Native Protobuf Communication



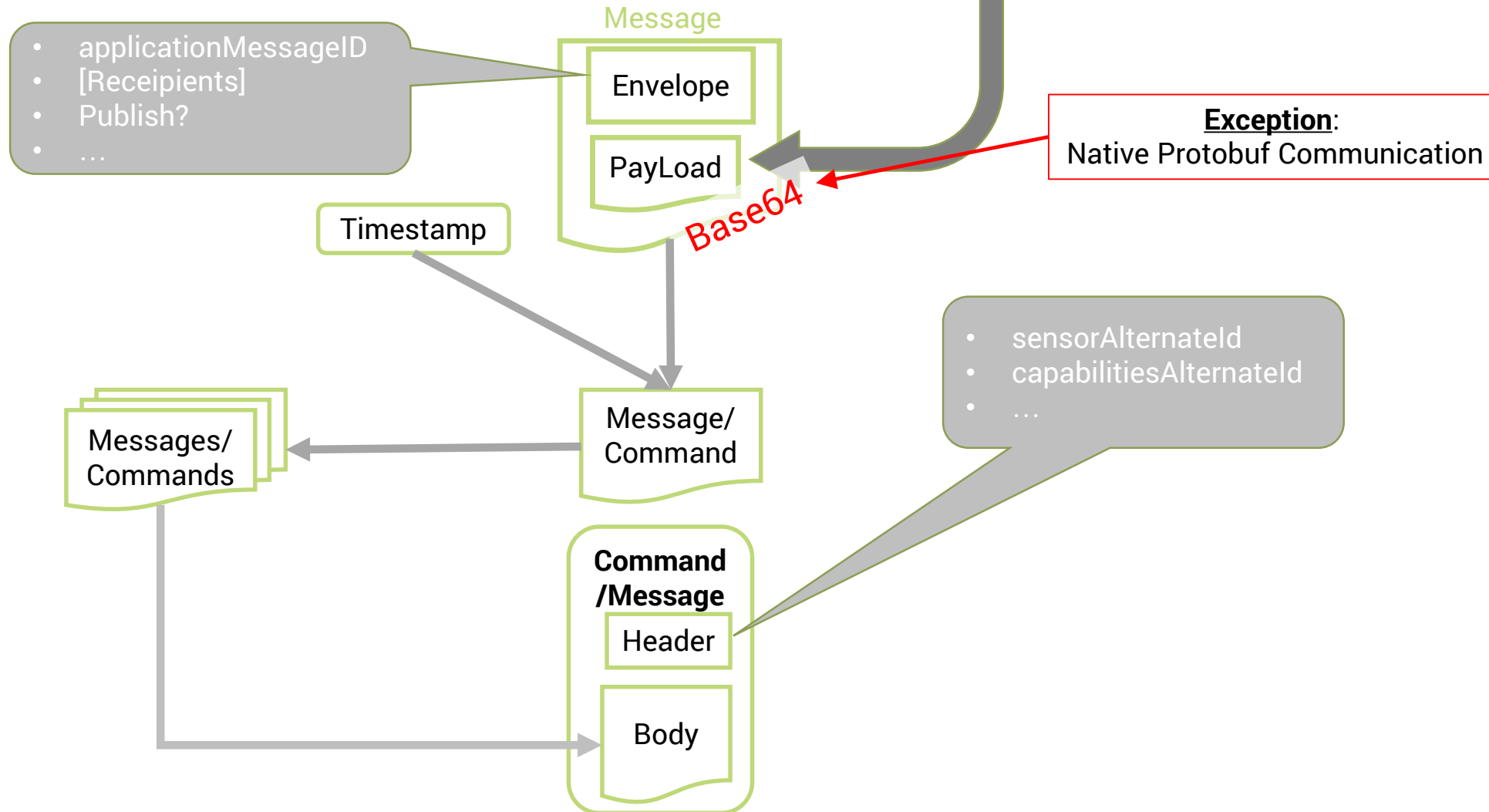
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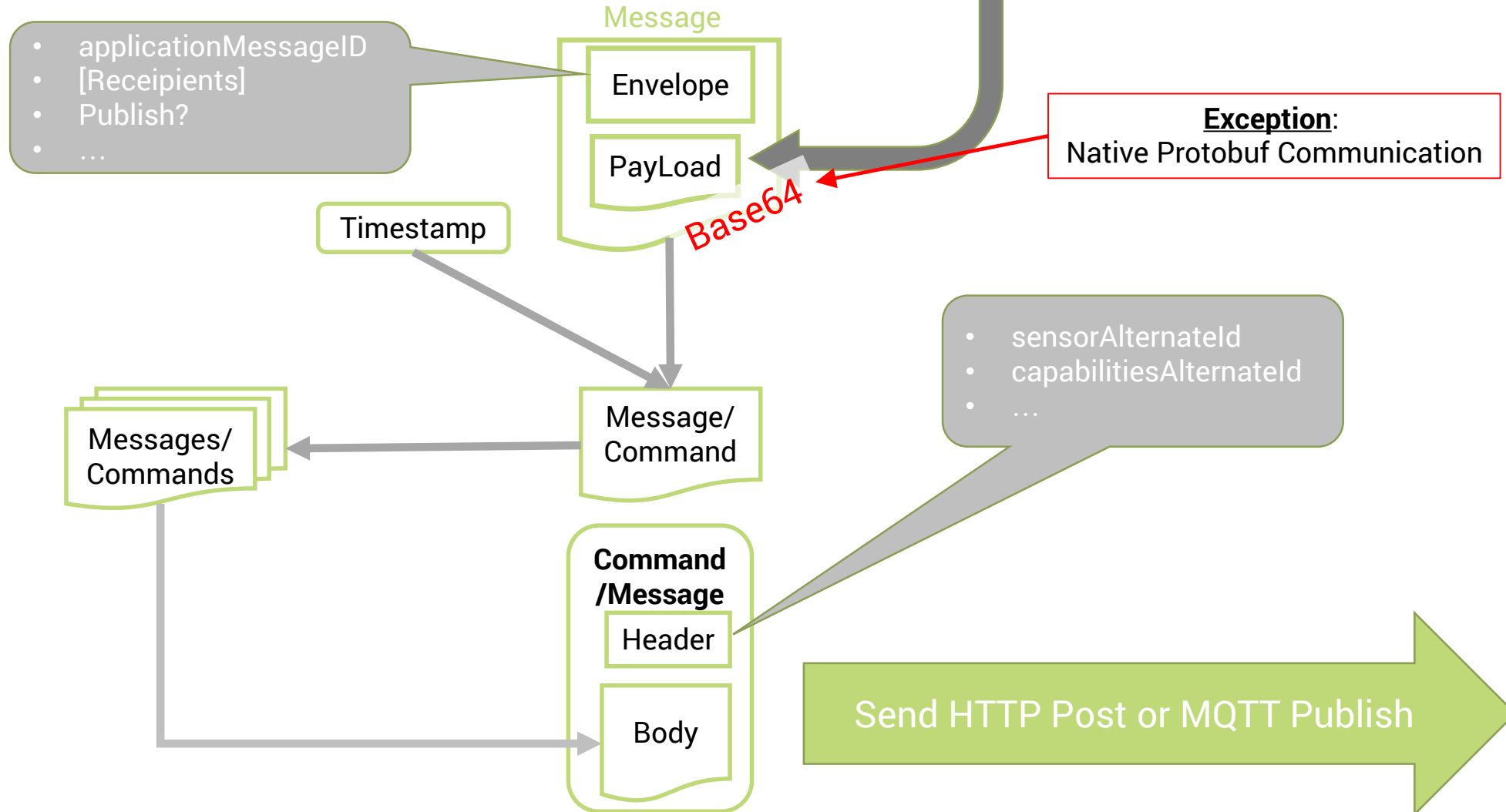


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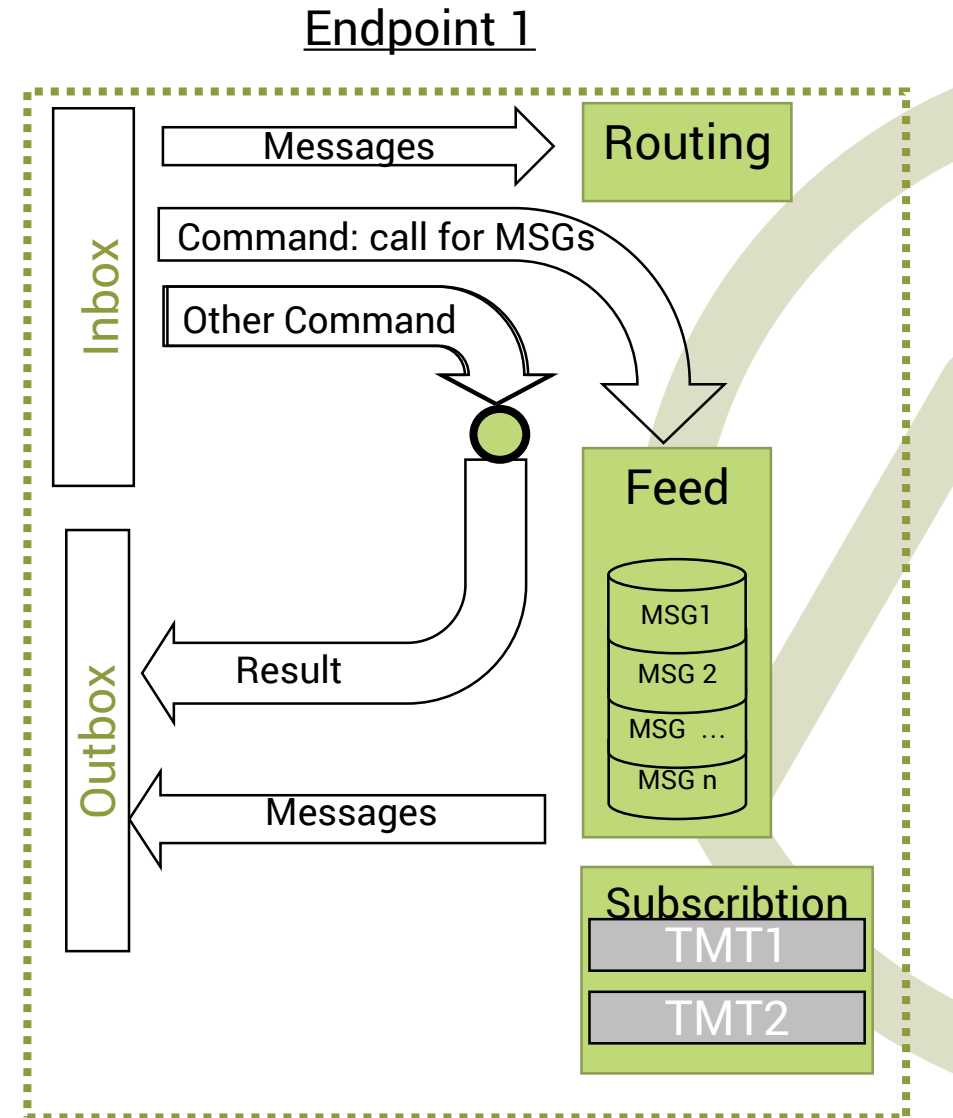
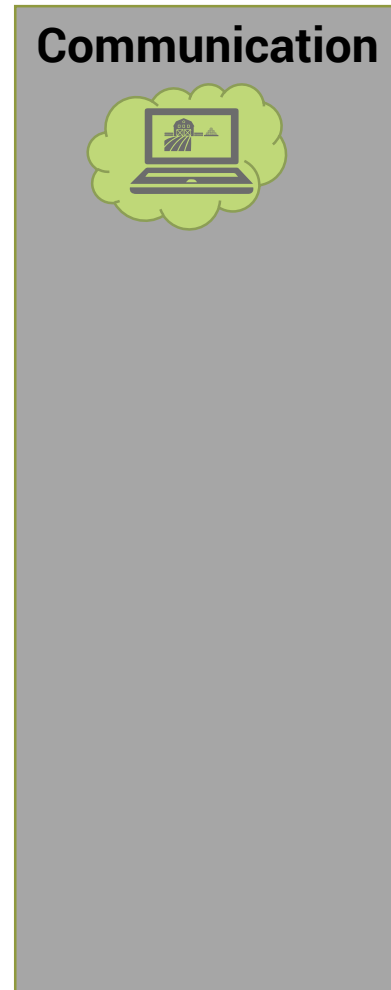




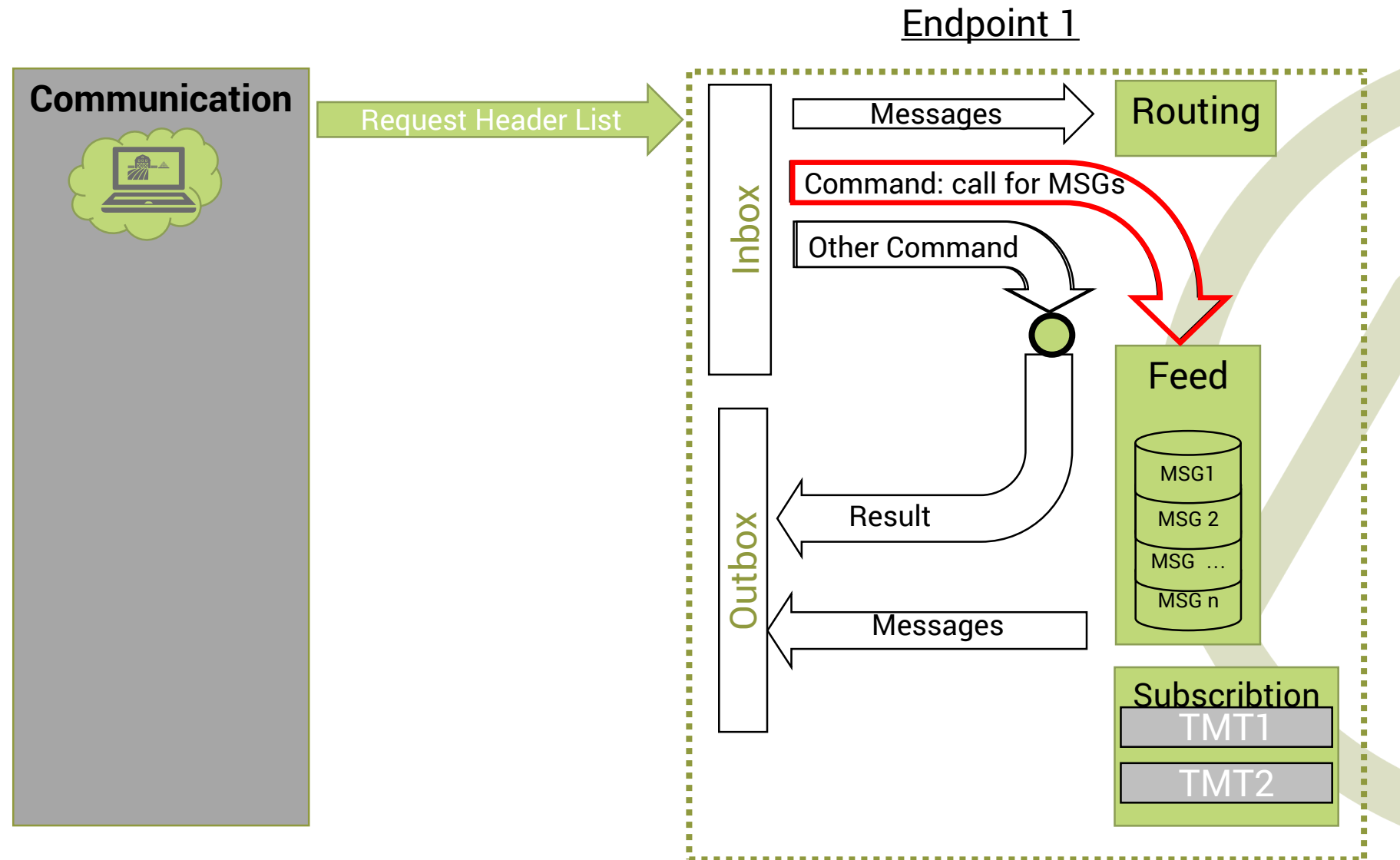
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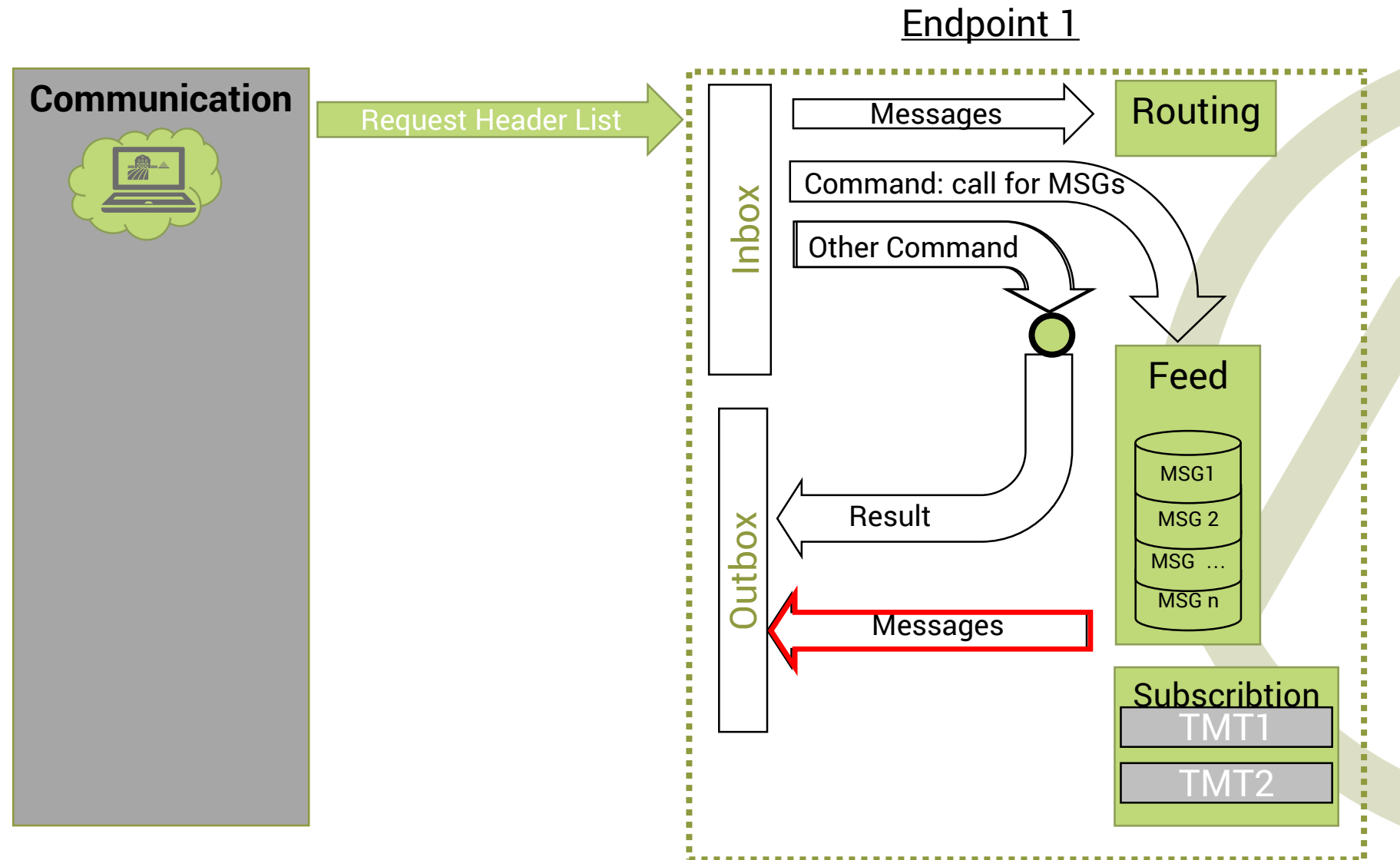
# Receive and analyse messages



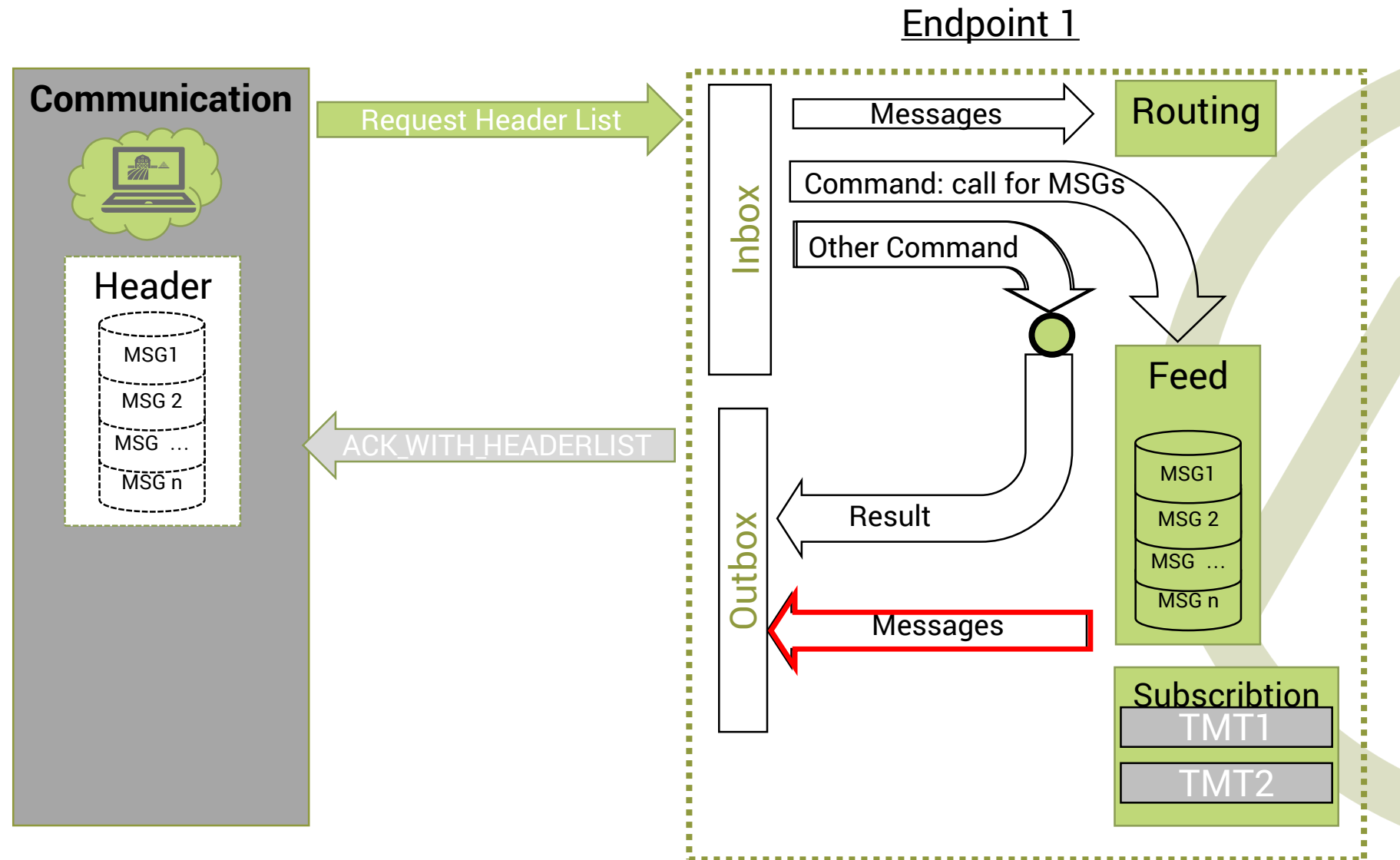
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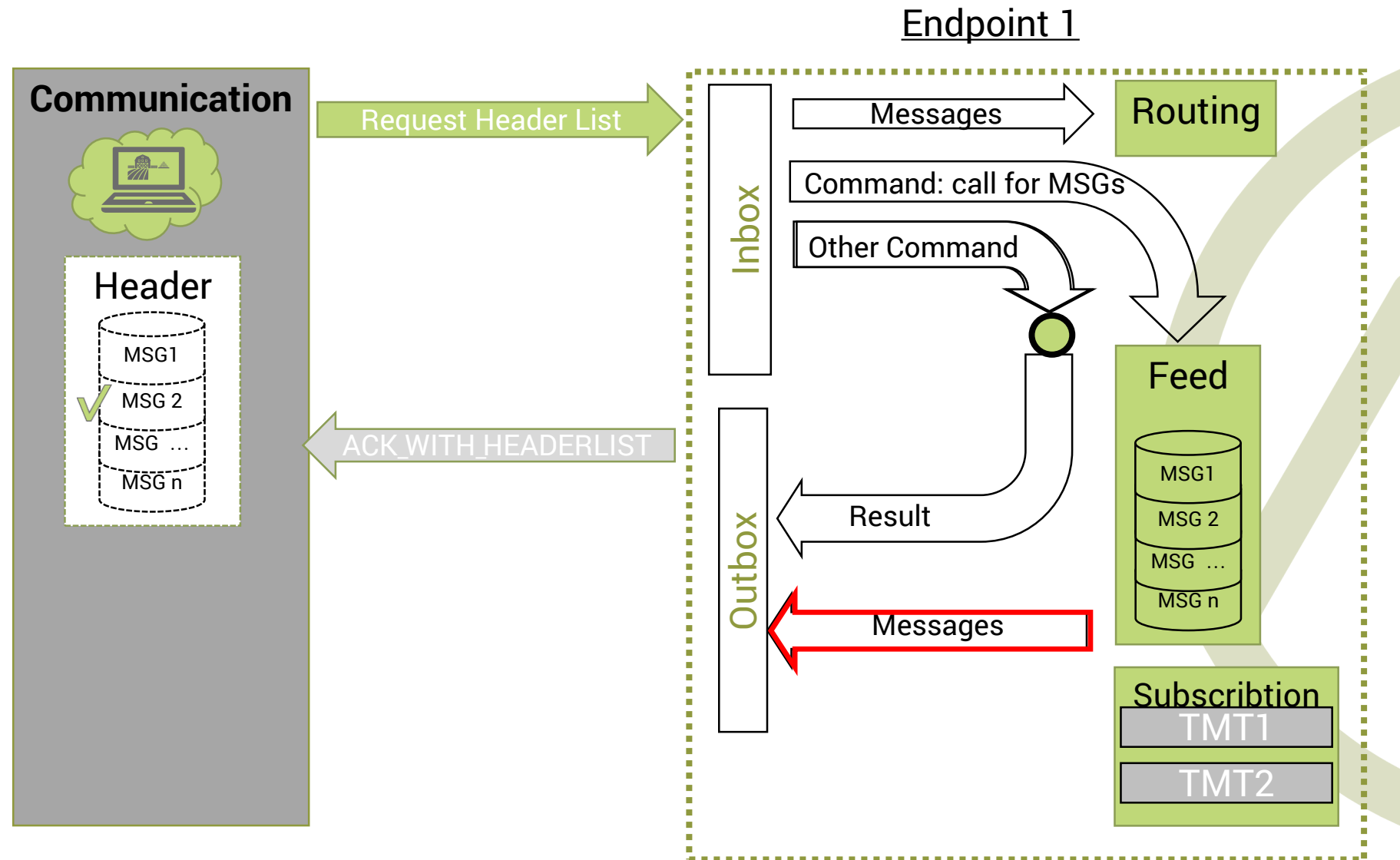
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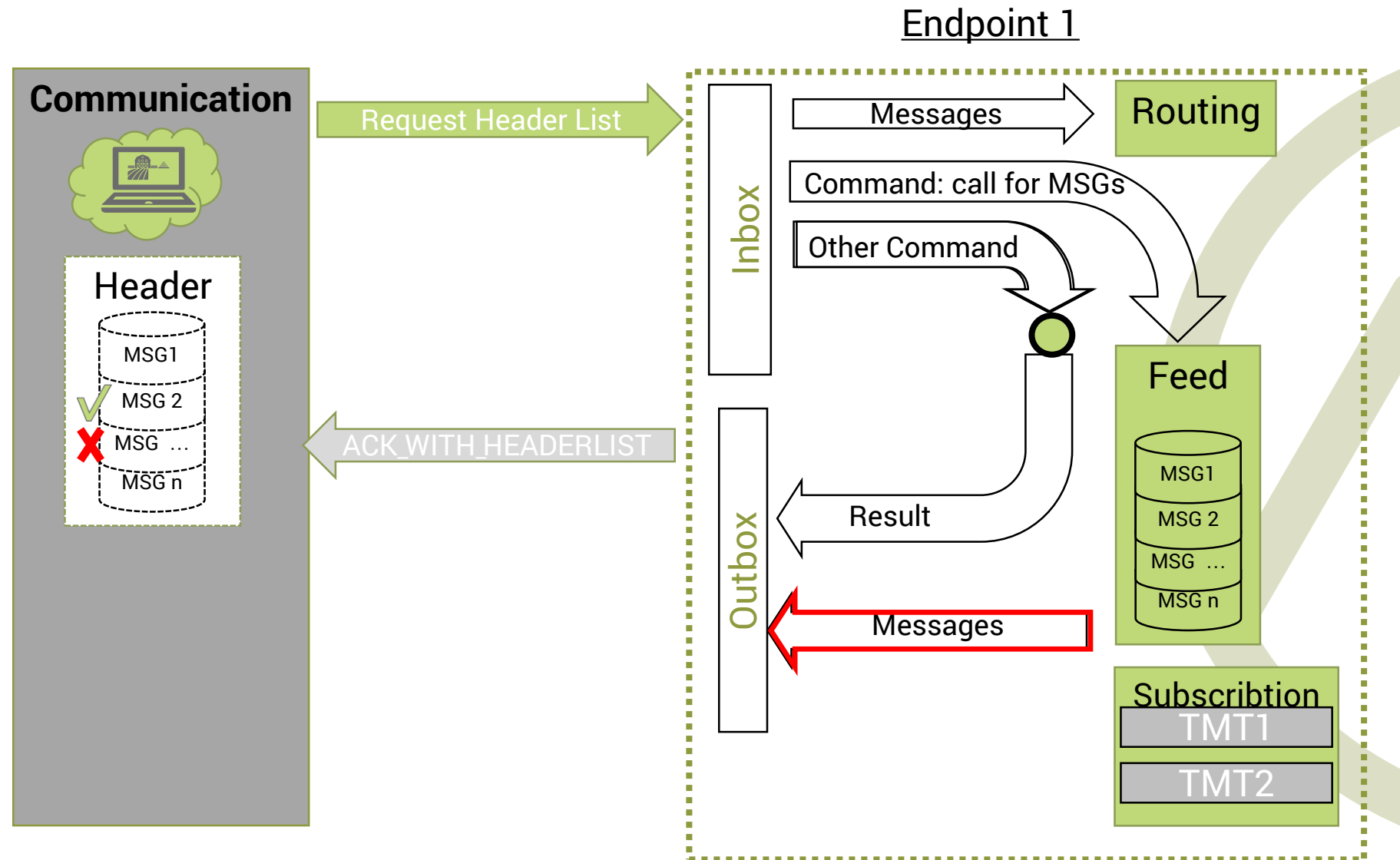
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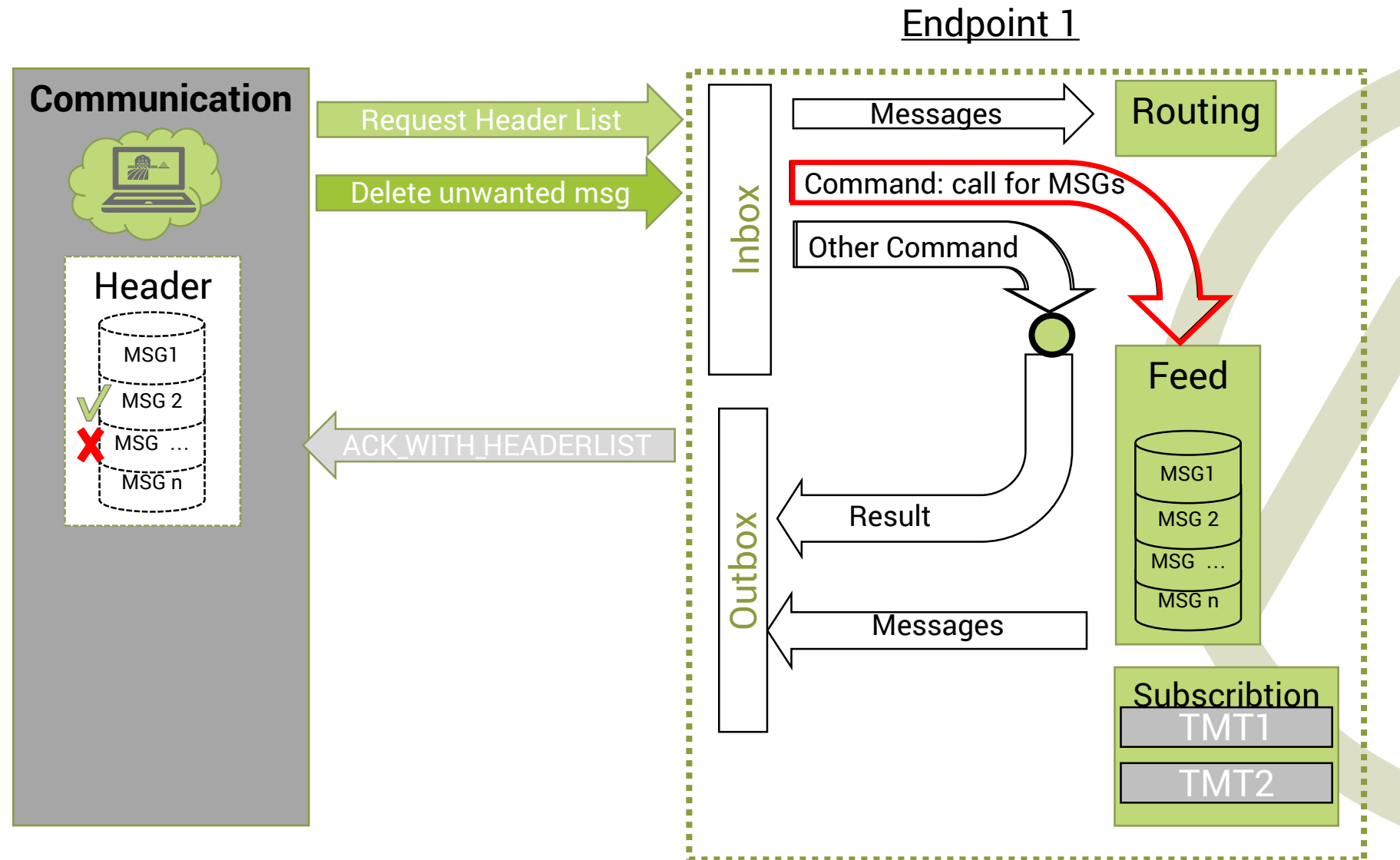
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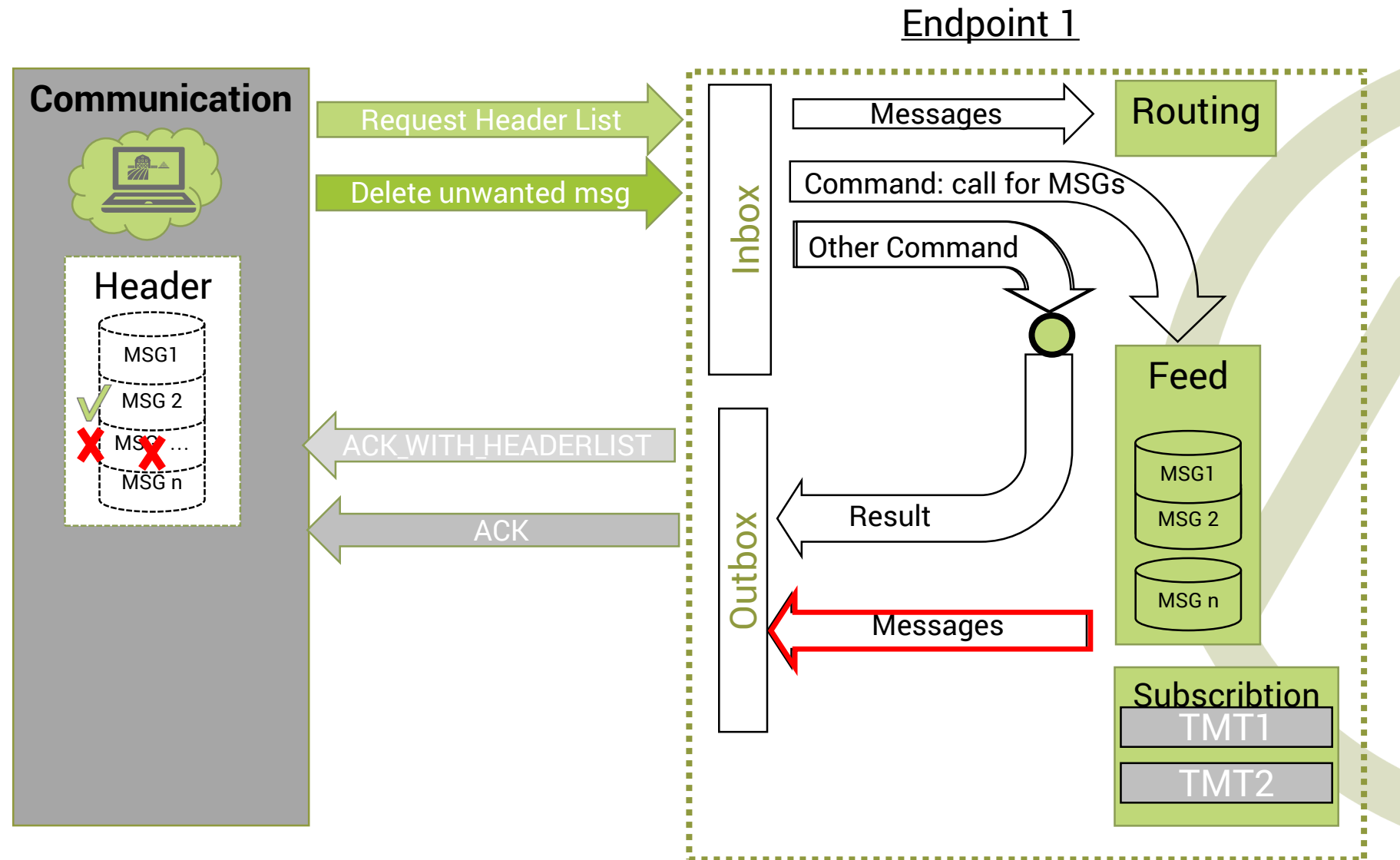


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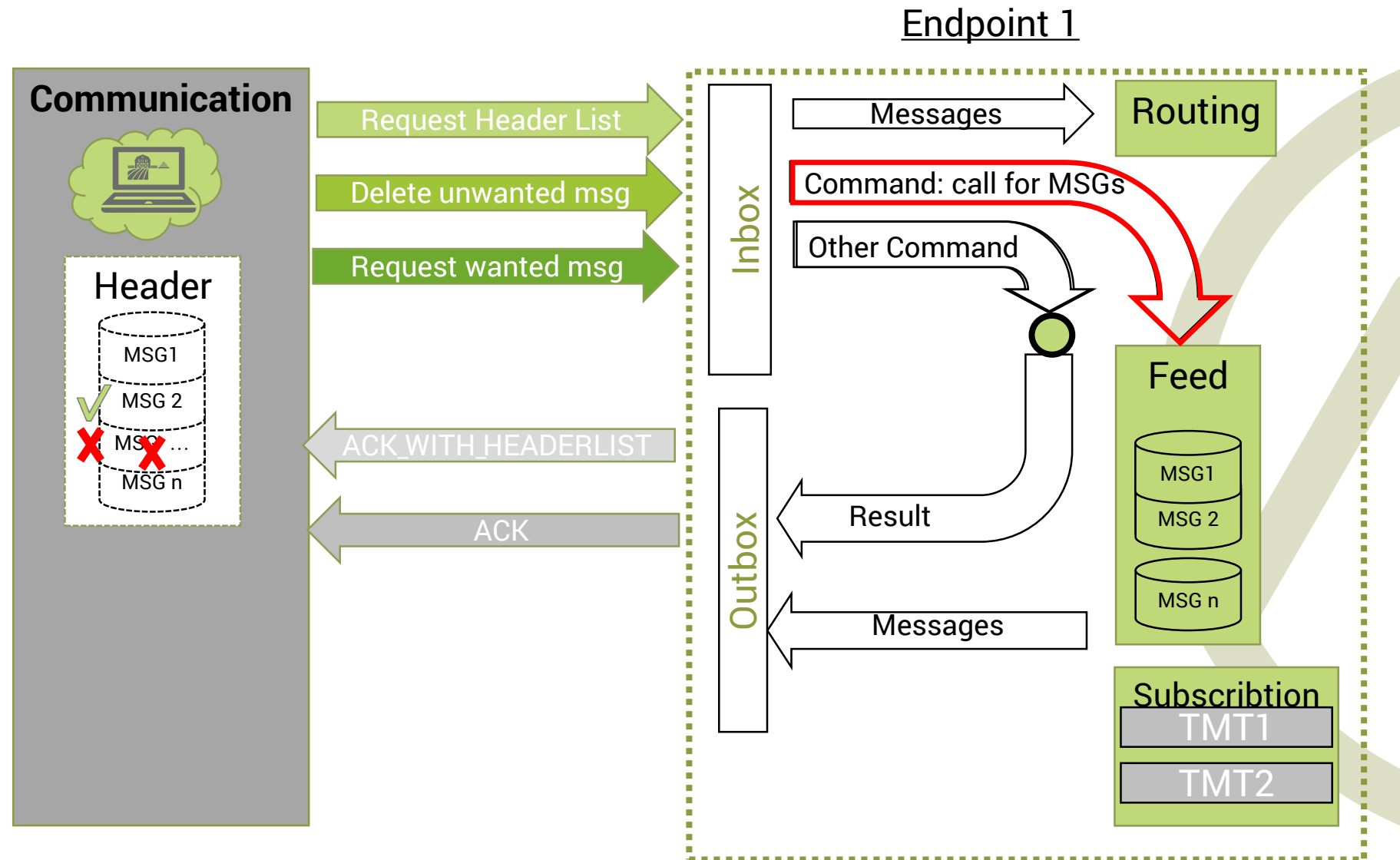




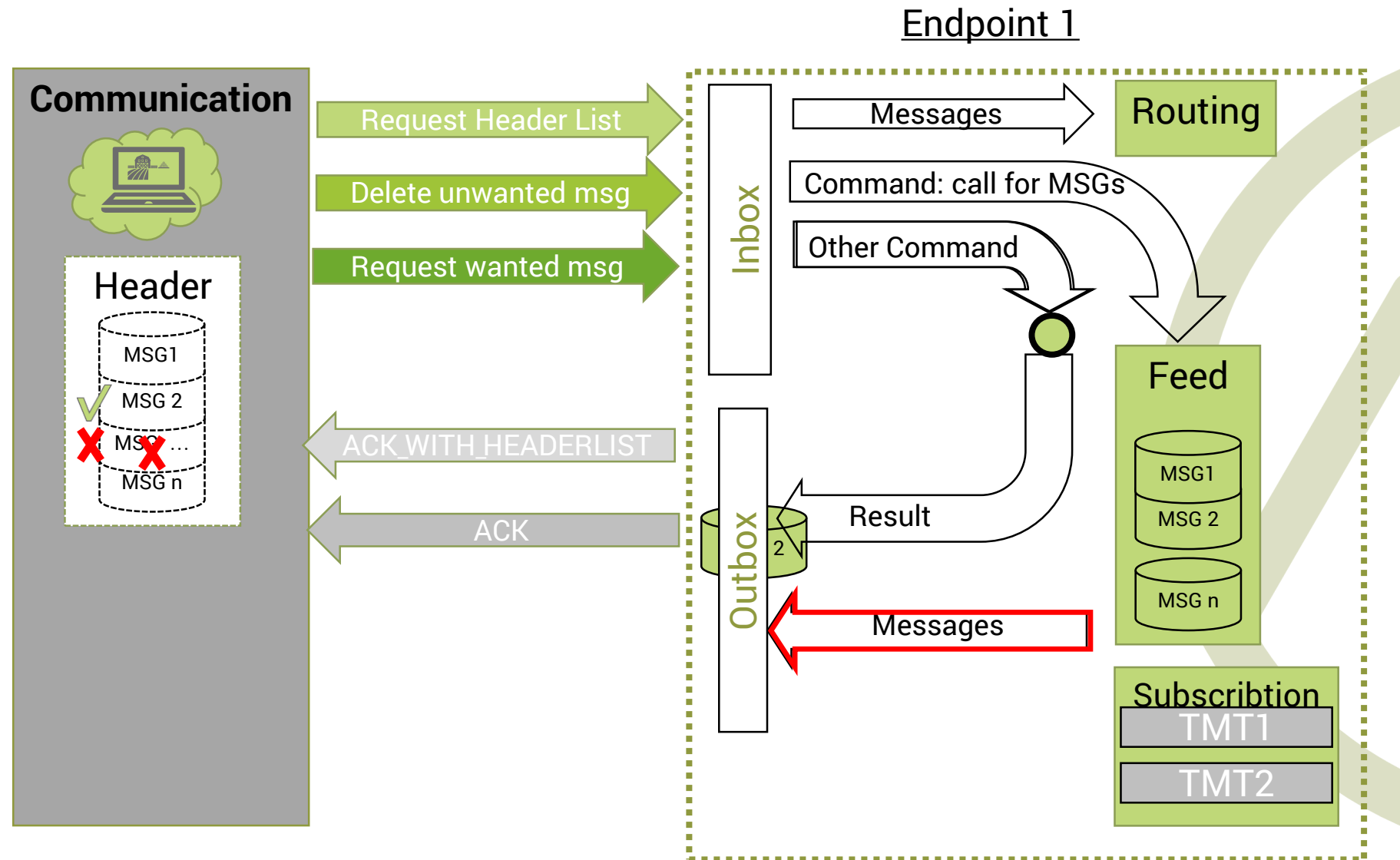
# Receive and analyse messages



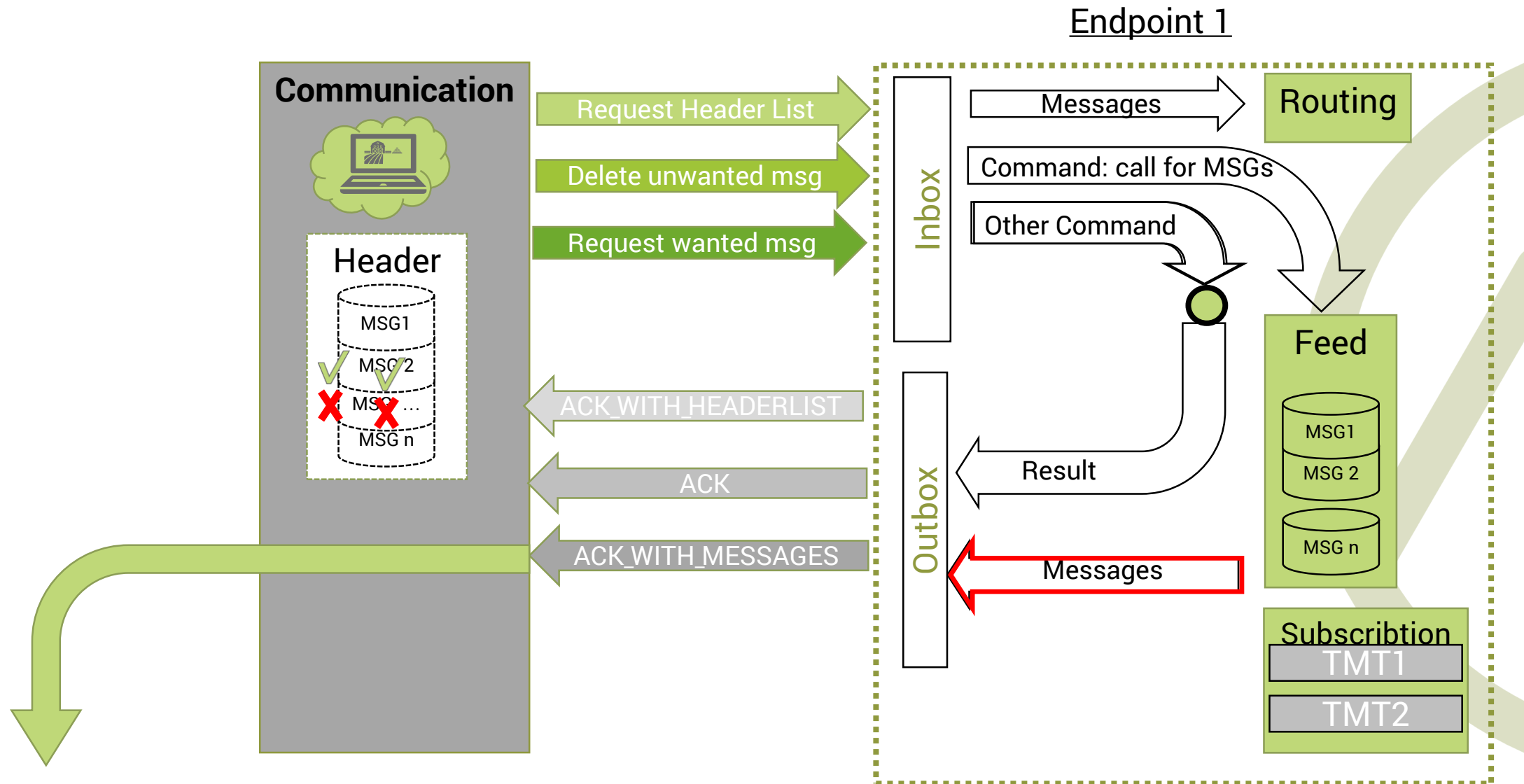
# Receive and analyse messages



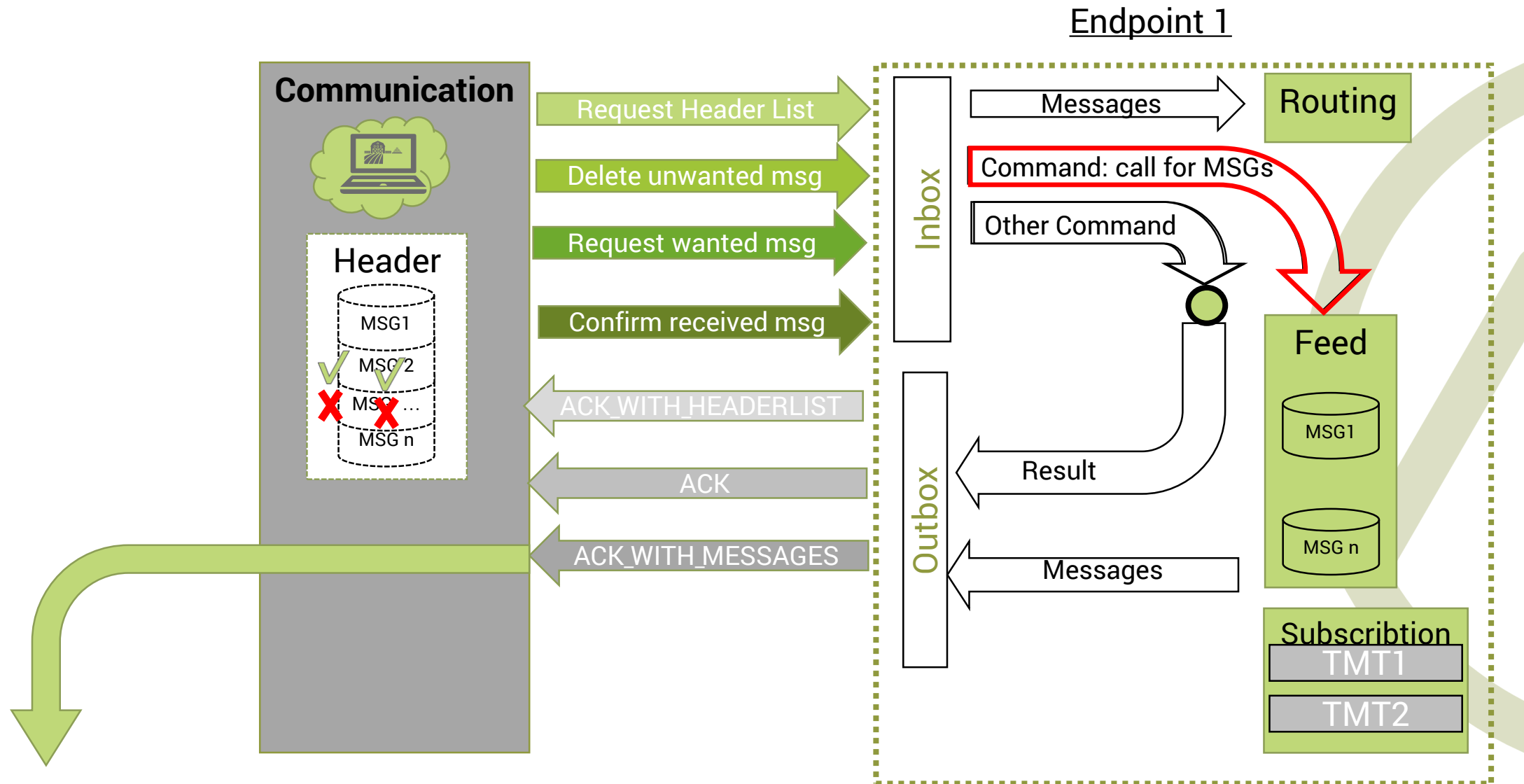
# Receive and analyse messages



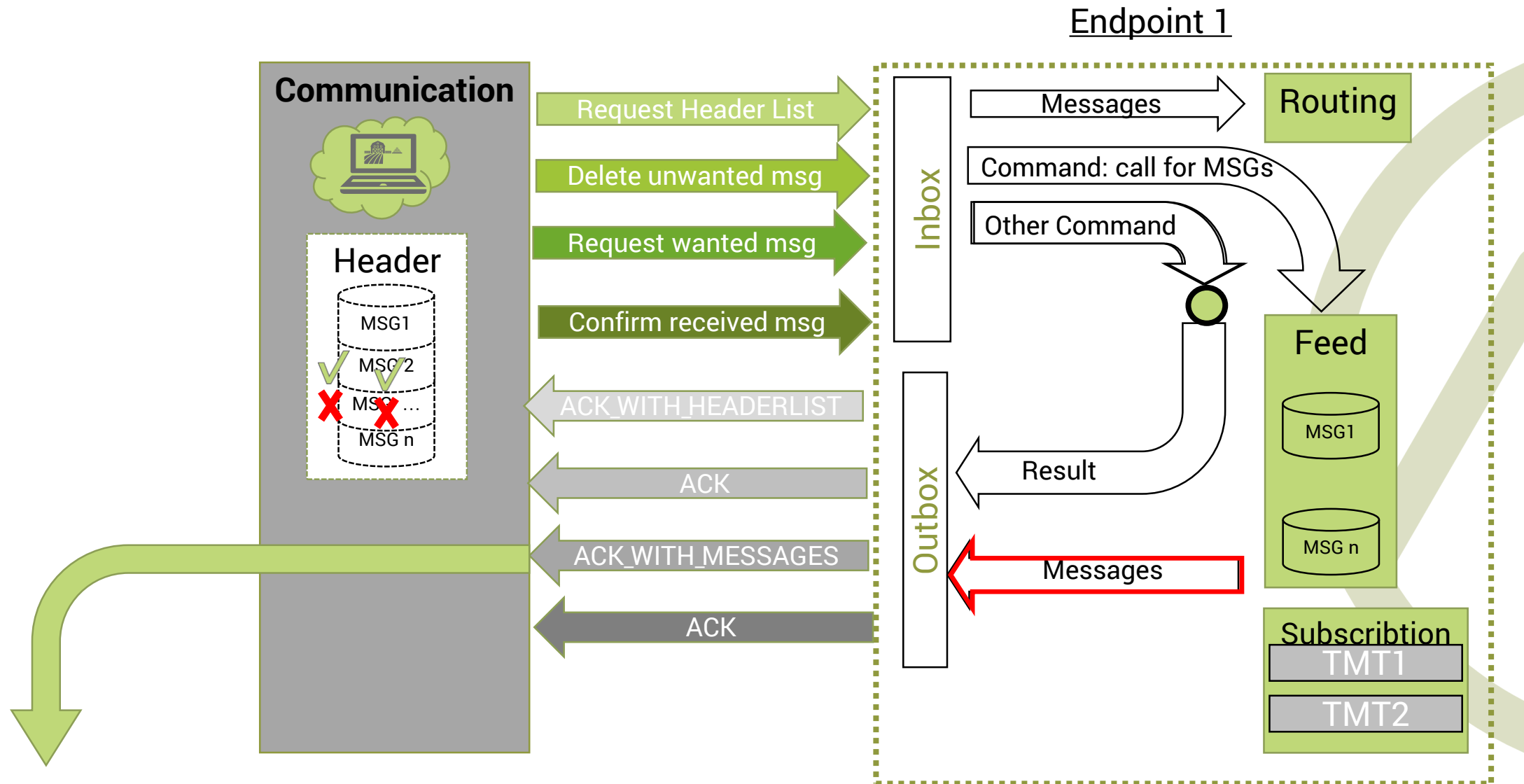
# Receive and analyse messages



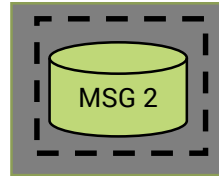
# Receive and analyse messages



# Receive and analyse messages

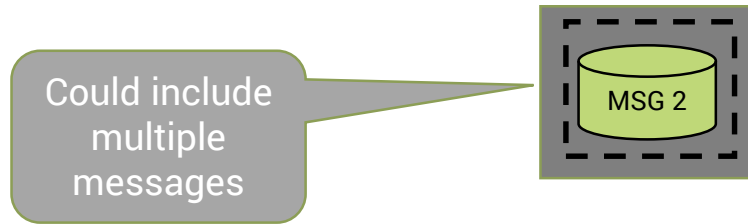


# Analyse Messages and Commands



# Analyse Messages and Commands

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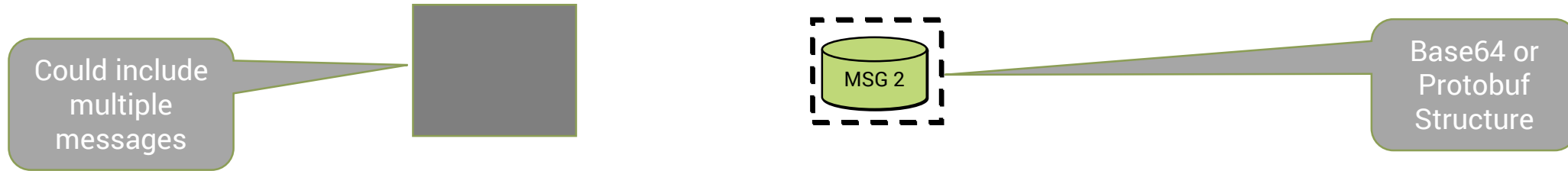
# Analyse Messages and Commands

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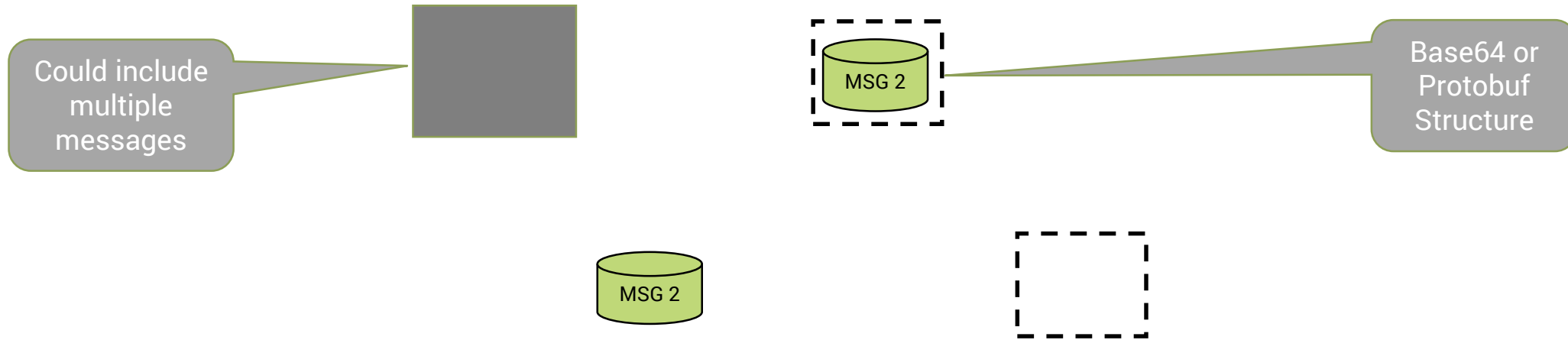
# Analyse Messages and Commands

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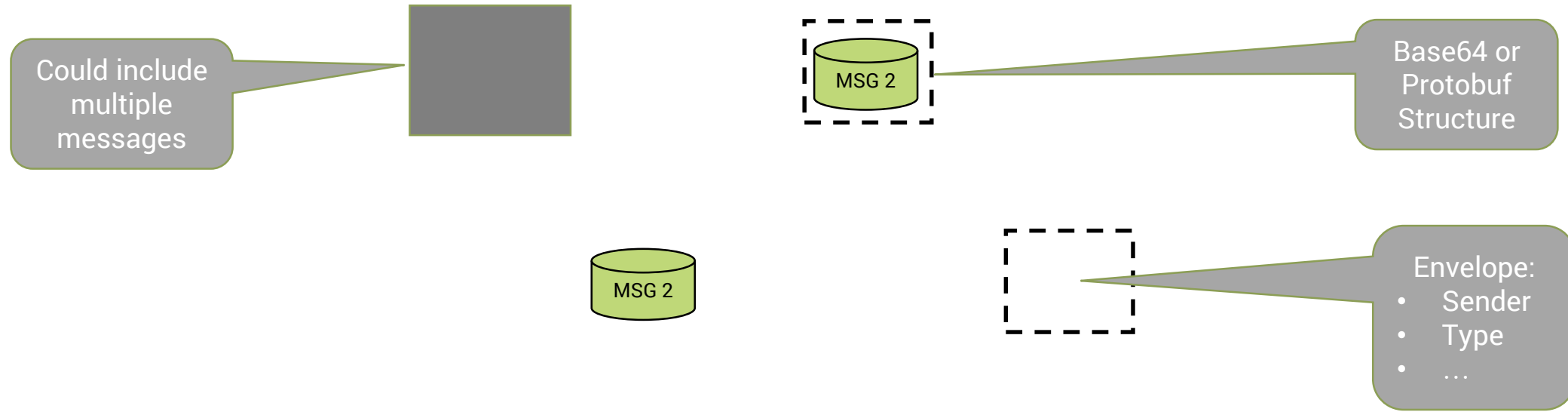
# Analyse Messages and Commands

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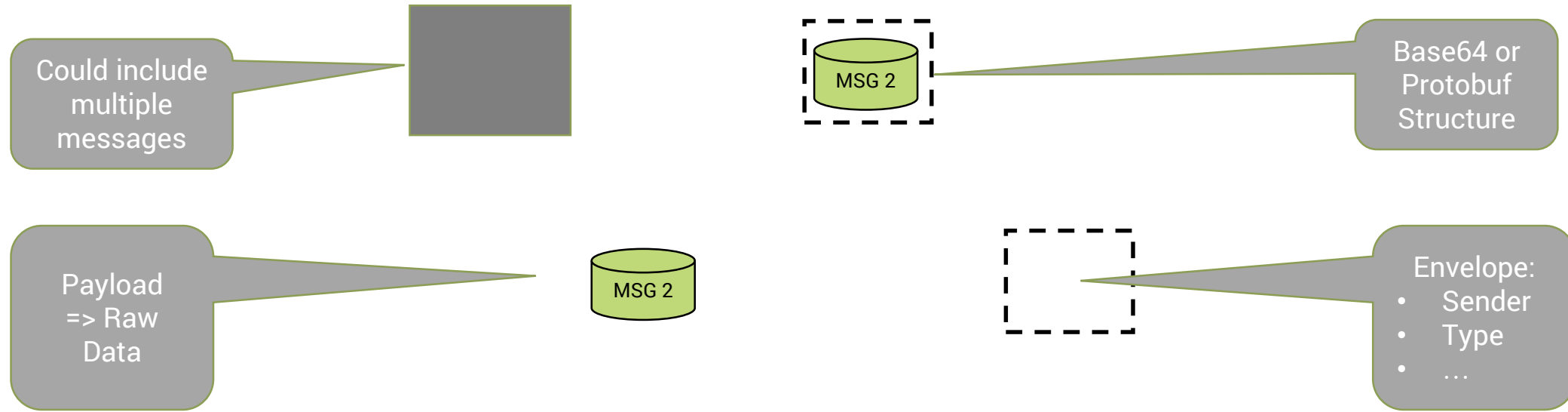
# Analyse Messages and Commands

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# Analyse Messages and Commands

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Thank you for the attention!

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