



CS544 EA

Integration

Integration: Endpoints

Endpoints are the “filter” part
of pipes-and-filter
Endpoint is a better name than ‘filter’

Endpoints

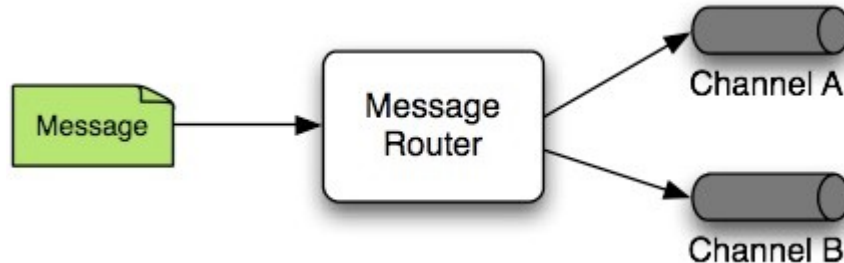
- There are **many types** of endpoints:
 - Message Transformer
 - Message Filter (actual)
 - Message Bridge
 - Message Router
 - Splitter
 - Aggregator
 - Service Activator
 - Channel Adapter

Transformer and Filter

- A Message Transformer transforms the message from **one format to another**
 - Example: from JSON to a Java Object
- Message Filters only let **certain messages** through. This can be based on the message payload or headers.
 - Example: email spam blocking uses a filter

Bridges and Routers

- Bridges **connect two channels** (without transformation).
 - Can be to connect P2P to PubSub
 - Or pollableChannel to a PubSub
- A router **decides** which channels (if any) a message goes to. Based on payload or headers



Splitter and Aggregator

- A splitter **splits** an incoming message into multiple outgoing messages
- Aggregators are the opposite, **collecting** multiple incoming to make one outgoing
 - Aggregators are more complex because they have to maintain state to collect.
 - When is the collection complete? When timeout?

Service Activators and Channel Adapters

The beginning and end points
of the 'pipe' in our system

- Service Activators do just what they say
 - Take an incoming message and based on that **make a call to a @Service** method
- Channel Adapters **connect to** some other system or transport
 - can be inbound or outbound