MuleSoft™
connecting the new enterprise

Welcome to MuleSoft

Welcome

- Welcome to MuleSoft Developer Course
  - An Online course platform
  - Will cover the fundamentals of Anypoint Platform

Introducing the course

Course Objective

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- In this course, you will:
  - Learn what Anypoint Platform is, how it works, and how you can use it to build real-world integrations
  - **Use Anypoint Studio to build integration applications to connect to SaaS and on-premise applications and data**
  - Use Anypoint Platform for APIs to design an API with RAML and then connect it to backend services with Anypoint Studio and APIkit
  - Deploy an application to CloudHub and/or Mule ESB

Audience

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- **Intended audience**
  - The target audience for the developer courses and the exam are people that have:
  - Experience with Java (preferred) or another object-oriented language.
  - A basic understanding of data formats such as XML, CSV, and JSON.
  - A basic understanding of typical integration technologies such as HTTP, JMS, JDBC, REST, and SOAP.

Course Outline

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- **Module 1: Introducing Anypoint Platform**
  - Learning what Anypoint Platform is and the problems it can help you solve
  - Getting familiar with the components of Anypoint Platform
- **Module 2: Building Integration Applications with Anypoint Studio**
  - Understanding Mule applications, flows, messages, and message processors
  - Creating flows graphically using connectors, transformers, components, scopes, and flow control elements

Course Outline

- Building, running, testing, and debugging Mule applications
- Reading and writing message properties
- Writing expressions with Mule Expression Language (MEL)
- Creating variables

- **Module 3: Consuming Web Services**
  - Understanding RESTful and SOAP web services
  - Learning about what RAML is and how it can be used
  - Consuming RESTful web services with and without RAML definitions
  - Consuming SOAP web services

Course Outline

- **Module 4: Connecting to Additional Resources**
  - Connecting to files, databases, and JMS queues
  - Connecting to SaaS applications
  - Discovering and installing connectors not bundled with Anypoint Studio
- **Module 5: Transforming Data**
  - Getting familiar with the different types of transformers
  - Using the DataWeave Transform Message component
  - Writing DataWeave expressions for basic and complex XML, JSON, and Java
  - Using DataWeave with data sources that have associated metadata
  - Adding custom metadata to data sources

Course Outline

- **Module 6: Refactoring Mule Applications**
  - Separating applications into multiple configuration files
  - Encapsulating global elements in a separate configuration file
  - Creating and running multiple applications
  - Creating and referencing flows and subflows
  - Understanding variable persistence through subflows and flows and across transport barriers
- **Module 7: Handling Errors**
  - Handling messaging exceptions in flows
  - Creating and using global exception handlers
  - Specifying a global default exception strategy

Course Outline

- **Module 8: Controlling Message Flow**
  - Multicasting a message
  - Routing message based on conditions
  - Filtering messages
  - Understanding and creating synchronous and asynchronous flows

- **Module 9: Processing Records**
  - Processing items in a collection individually
  - Understanding what batch jobs are and when to use them
  - Creating batch jobs to process items in a CSV file or a database
  - Restricting record processing to new records

Course Outline

- **Module 10: Building RESTful Interfaces with RAML and APIkit**
  - Understanding the benefits of RESTful APIs and web services
  - Using the API Designer to define APIs with RAML
  - Implementing a RAML file as a RESTful web service with Anypoint Studio and APIkit

- **Module 11: Deploying Applications**
  - Understanding the options for deploying applications
  - Adding application properties
  - Deploying and running applications in the cloud
  - Deploying and running applications on-prem

Course Outline

- **Module 12: Transforming Data with DataWeave**
  - Transforming Data with DataWeave with Mule 3.7
  - Introduction DataWeave
  - DataWeave data transforming use cases
  - DataWeave integration with Anypoint Studio
  - DWL (DataWeave Expression Language)

Why Mule ?

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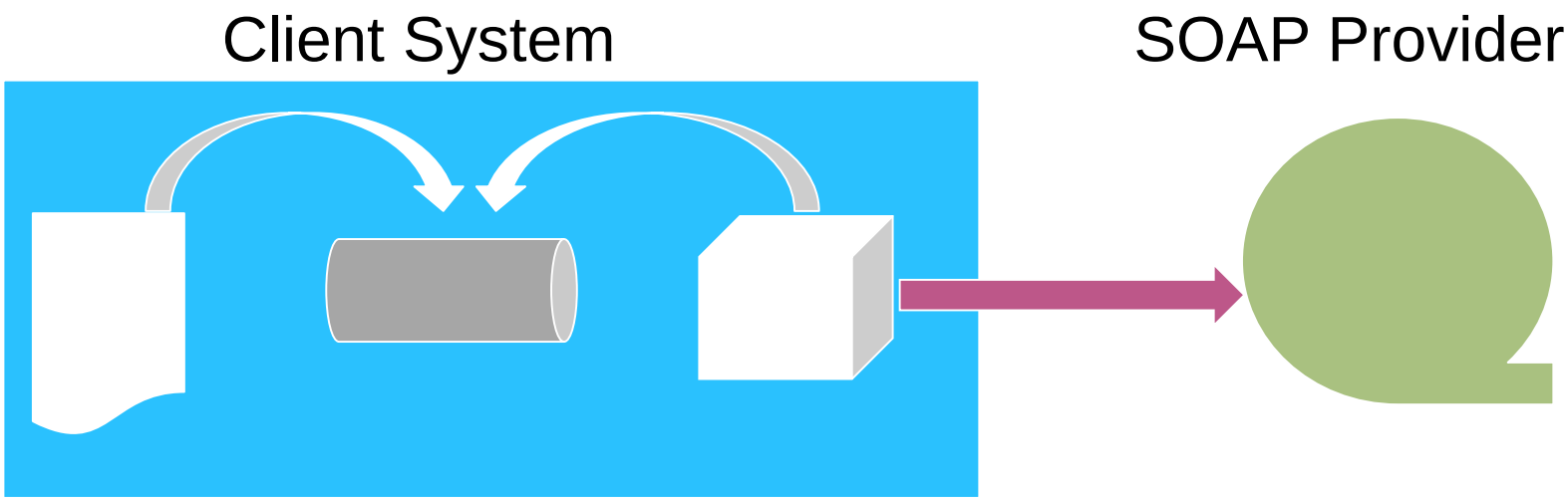
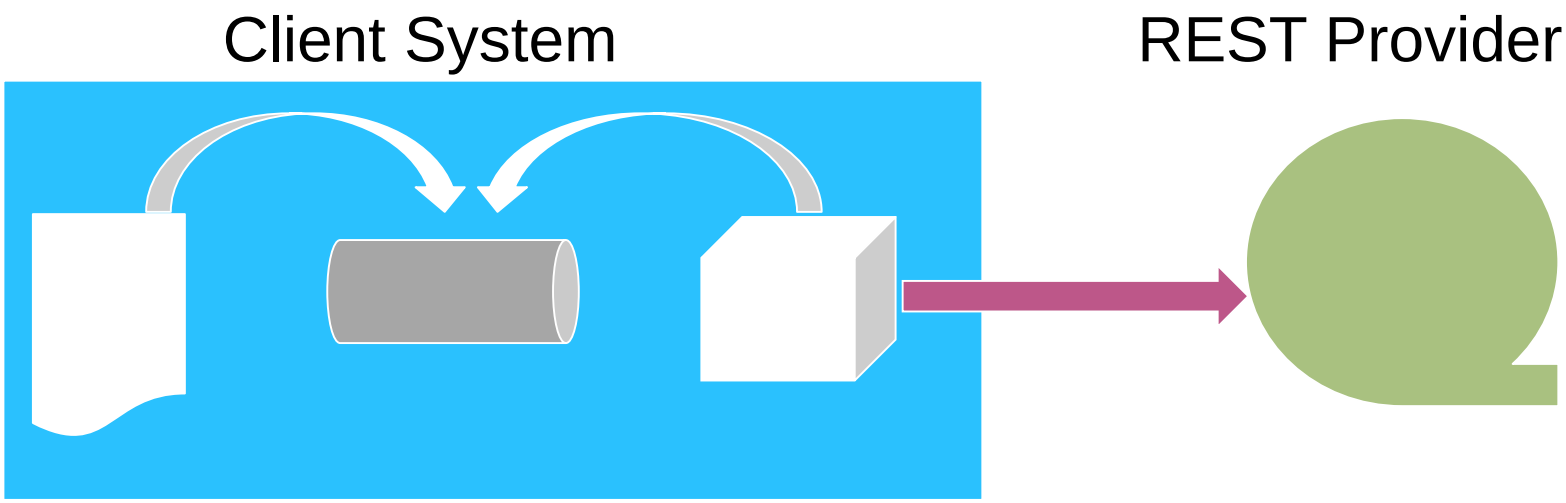
- What is ESB ?
- Point to Point Connection
- Loose Coupling ? (SOAP Service Provider and Client Consumer)
- Logical Coupling ? (If we use SOAP over JMS, but its overhead of Messaging broker)
- In Memory Queue / Channel (we have achieved Logical Coupling without overhead)

In Memory Queue Architecture



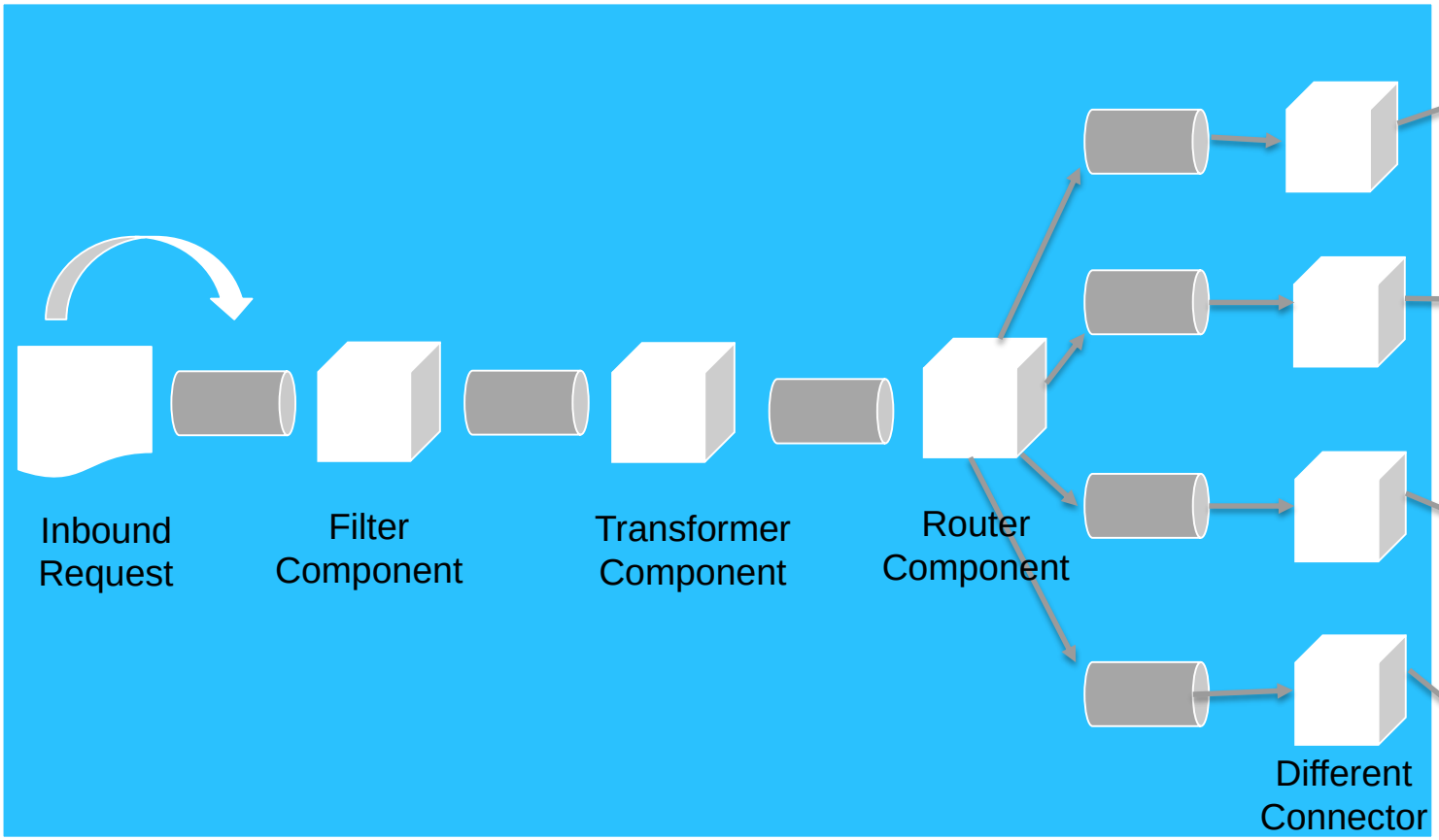
Business Logic/Data Channel SOAP Adapter

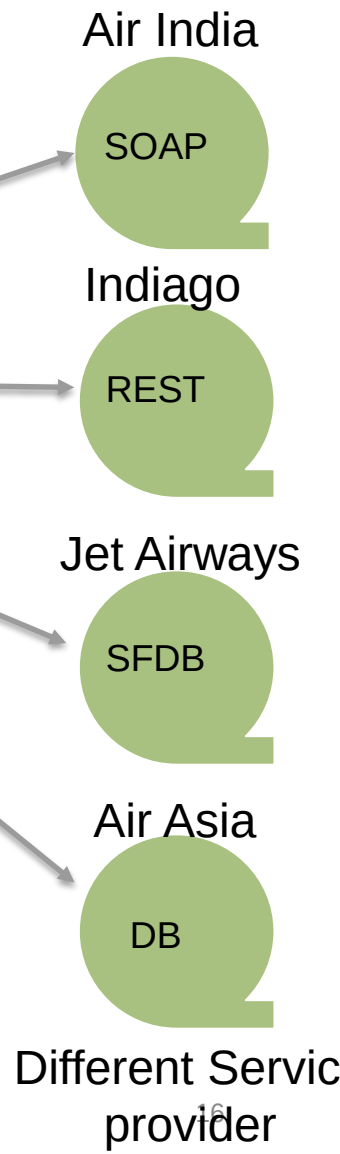
In Memory Queue Architecture



Business Logic / Data Channel REST Adapter

Framework as BUS





- So the message travelling from one place from other location through set of Channel called **BUS**

ESB

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- Enterprise Service BUS
  - Its provide all the enterprise functionality as a declarative approach means we need not to write any logic or services its already available to use.
  - Ready to use Enterprise Services like:
    - Transaction management
    - Thread Poll management
    - Database Poll
    - Session management
    - Security

MULE - ESB

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- MULE BUS
  - Mule is an ESB which develop on based on JAVA framework called Spring.
  - All the ESB follow the Enterprise Design Pattern, even Mule is also follow the same.