# Module 3 Worksheet - Designing Integration Solutions using Mule Applications

# Exercise 3-1: Design an integration application that consumes and combines two external APIs

## Confirm Integration requirements

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| **Question** | **Current solution** | **Ways to improve** |
| How does the data from each REST API need to be transformed, if at all? |  |  |
| What are options for combining the flights data together, and what are the tradeoffs of these options? |  |  |
| What Mule components or custom code are needed for these options? |  |  |
| Pick the most idiomatic (used for its intended purposes) options for this use case |  |  |
| What are the best options to transform the XML responses to JSON |  |  |

**Identify scopes to use in the integration solution**

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| **Related components** | **Independent components** | **Ways to improve the design** | **Impact of the design change** |
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# Exercise 3-2: Design an integration application that one-time-loads data into a database from files

**Identify scopes to use in the integration solution**

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| **Related components** | **Independent components** | **Ways to improve the design** | **Impact of the design change** |
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## Confirm Integration requirements

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| **Question** | **Current solution** | **Ways to improve** |
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| What Mule components or custom code are needed for these options? |  |  |
| Pick the most idiomatic (used for its intended purposes) options for this use case |  |  |
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# (Optional) Exercise 3-3: Design an integration application that synchronizes a database and SaaS system

**Identify scopes to use in the integration solution**

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| **Related components** | **Independent components** | **Ways to improve the design** | **Impact of the design change** |
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## Confirm Integration requirements

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| **Question** | **Current solution** | **Ways to improve** |
| How does the data from each file need to be transformed, if at all? |  |  |
| What are options for batching together records, and the tradeoffs of these options? |  |  |
| What Mule components or custom code are needed for these options? |  |  |
| Pick the most idiomatic (used for its intended purposes) options for this use case |  |  |
| What are the best options to transform input records to JDBC calls? |  |  |