MULESOFT ARCHITECTURE:

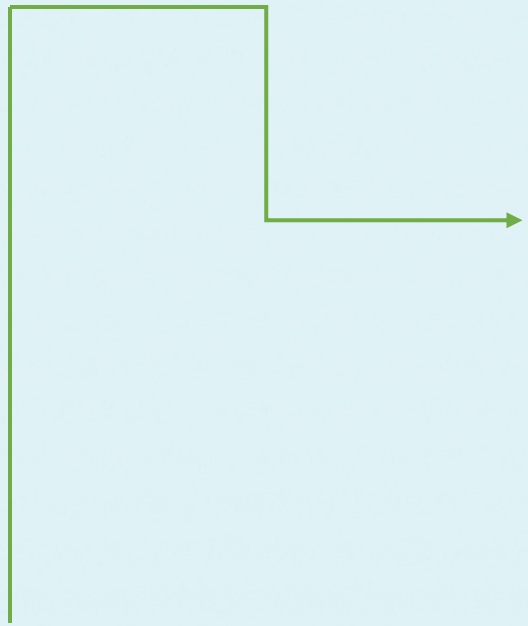
API-LED CONNECTIVITY

PRACTIC LEARNING

API-Led Connectivity Introduction

1. API-led connectivity
2. 3 layers of API-led connectivity
3. Experience API
4. Process API
5. System API
6. API-led connectivity design scenario

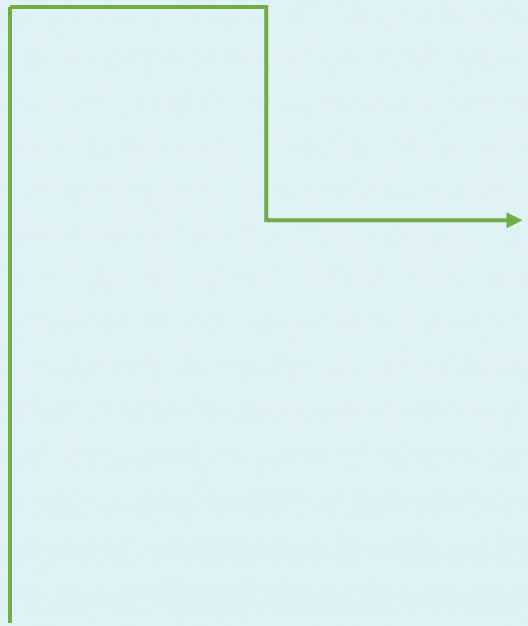
API-Led Connectivity



What is API-Led Connectivity?

- API-led connectivity enables system to system connection
- Eliminates point to point connections and manual connectivity
- Builds a network of APIs
- Allows for reuse of APIs across an organization

3 Layers of API-Led Connectivity



3 Layers of API-Led Connectivity

1. Experience API
2. Process API
3. System API

Experience API

DESCRIPTION	Top level API that customizes responses to a particular business context. Low to medium complexity
MAKES REQUESTS TO	Process APIs and Systems APIs
SECURITY	• Experience API typically utilizes the tightest security out of all the API layers • Common security policies: OAuth 2.0, Client ID enforcement, OIDC, SAML, etc • Optional security policies: Rate Limiting, Throttling, IP Whitelisting, etc
EXAMPLE	Mobile application API and web application API

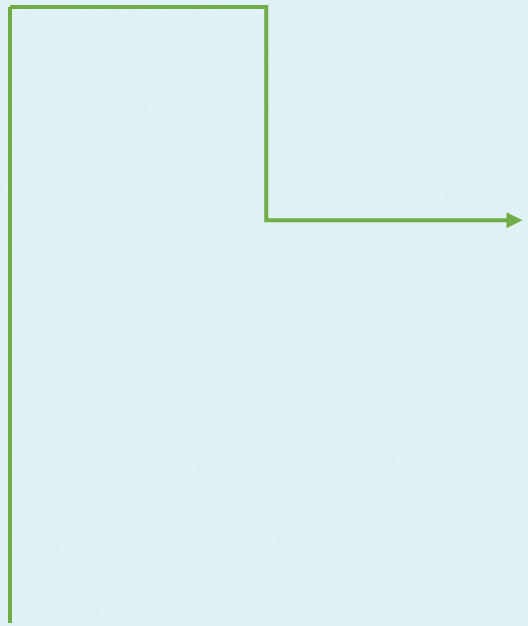
Process API

DESCRIPTION	Handles any transformations, business logic, or enrichment. Process APIs perform “heavy lifting”. Medium to high complexity
MAKES REQUESTS TO	One or more System API(s)
SECURITY	• Often behind a firewall or only allowing requests from an Experience API • Common security policies: IP whitelisting, Client ID enforcement
EXAMPLE	Orders API that gets order information from multiple systems

System API

DESCRIPTION	API that sits in front of a system to centralize and control access. Low complexity
MAKES REQUESTS TO	Source or target system
SECURITY	• Often behind a firewall or only allowing requests from an Experience API or Process API • Common security policies: IP whitelisting, Client ID enforcement
EXAMPLE	Salesforce API and database API

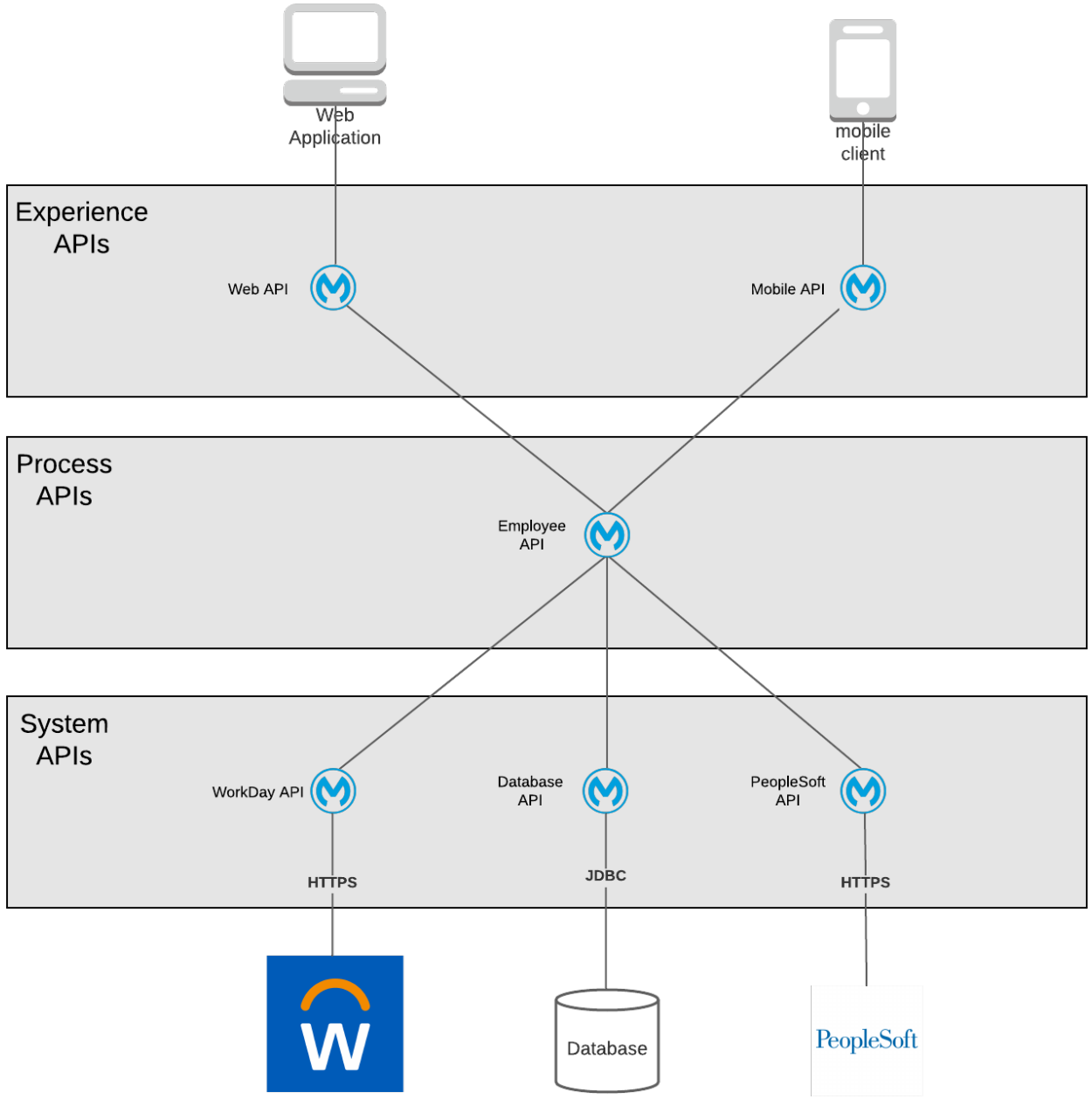
Design Scenario



API-Led Connectivity Scenario #1

Design a 3-layer API approach where a web application and a mobile application need to get employee information from 3 different HR systems: WorkDay, a custom database, and PeopleSoft. The web application expects a different response from the API than the mobile application's response, and each application expects to make one request to an API to gather all of the information it requires.

API-Led Connectivity Scenario #1 Architecture



API-Led Connectivity Summary

- API-led connectivity
- 3 layers of API-led connectivity
  - Experience API
  - Process API
  - System API

Additional Reading

1. https:/blogs.mulesoft.com/learn-apis/api-led-connectivity/what-is-api-led-connectivity