

Project Message Flow Framework

1. Purpose

Define and document the flow of messages among system components for improved communication, clarity, and reliability.

2. Message Flow Overview

Step	Source	Message/Event	Destination	Action
1	User Interface	Submit Request	API Gateway	Validates and routes request
2	API Gateway	Forward Request	Service A	Processes business logic
3	Service A	Update	Database	Stores data
4	Service A	Response	API Gateway	Returns response
5	API Gateway	Result	User Interface	Displays status

3. Message Types

- Request
- Response
- Notification
- Error

4. Components

- User Interface
- API Gateway
- Service A
- Database

5. Error Handling

1. Component detects error
2. Sends standardized error message to source
3. Logs error for reference

6. Logging & Monitoring

- All messages logged with timestamp and status
- Monitoring tracks message flow health and performance

7. Example Sequence

1. User submits form via User Interface
2. API Gateway checks authentication
3. API Gateway forwards valid request to Service A
4. Service A updates Database and sends response
5. API Gateway returns final status to User Interface