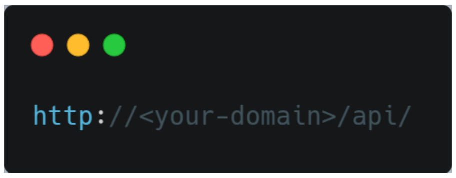
WhatsApp Integration API Documentation

This documentation outlines the available API endpoints for sending and receiving WhatsApp messages using the Django application. The API follows RESTful principles and includes basic async message processing.

Base URL



```
http://<your-domain>/api/
```

Replace <your-domain> with your actual domain or localhost URL.

Authentication

No authentication is required for these API endpoints in the current version.

Endpoints

1. Send Message

- **URL**: /send-message/
- **Method**: POST
- **Description**: This endpoint allows you to send a WhatsApp message to a specified receiver.

Request Body

The request body must be a JSON object containing the following fields:

Field	Type	Description	Example
sender	string	The sender's phone number or ID.	+1234567890

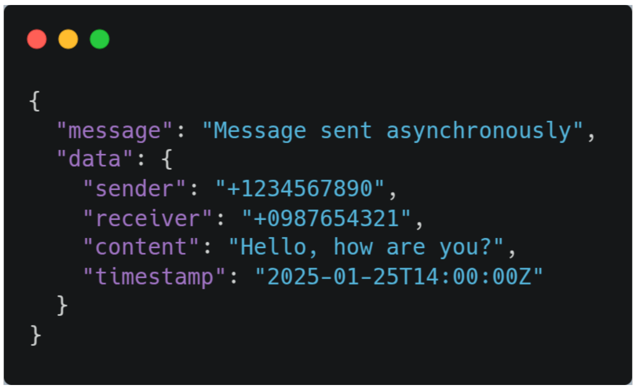
receiver	string	The receiver's phone number or ID.	+0987654321
content	string	The content of the message.	Hello, how are you?

Response

On success, the server will respond with the following JSON object:

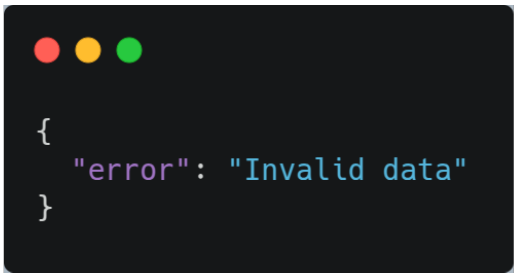
Field	Type	Description
message	string	A success message.
data	object	The details of the created message.
sender	string	The sender's phone number or ID.
receiver	string	The receiver's phone number or ID.
content	string	The content of the message.
timestamp	string	Timestamp of when the message was created.

Example Response (Success)



```
{
  "message": "Message sent asynchronously",
  "data": {
    "sender": "+1234567890",
    "receiver": "+0987654321",
    "content": "Hello, how are you?",
    "timestamp": "2025-01-25T14:00:00Z"
  }
}
```

Example Response (Error)



```
{
  "error": "Invalid data"
}
```

2. Webhook - Receive Message

- **URL**: /webhook/
- **Method**: POST
- **Description**: This endpoint receives incoming WhatsApp messages from a third-party service (like WhatsApp Business API or a simulation) and stores them in the database.

Request Body

The request body must be a JSON object containing the following fields:

Field	Type	Description	Example
sender	string	The sender's phone number or ID.	+1234567890
content	string	The content of the received message.	Hi, I need help.

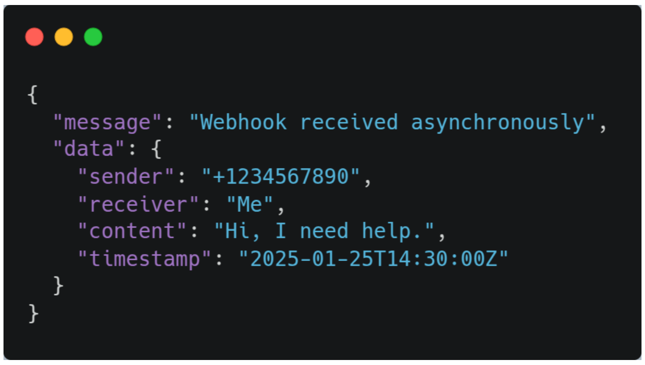
Response

On success, the server will respond with a JSON object confirming receipt and storing the message:

Field	Type	Description
message	string	A success message.
data	object	The details of the received message.

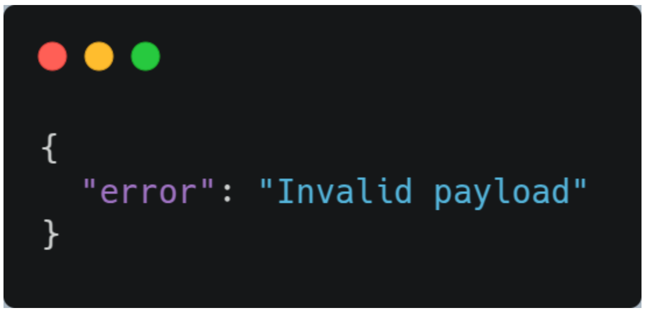
sender	string	The sender's phone number or ID.
receiver	string	The receiver's phone number or ID.
content	string	The content of the received message.
timestamp	string	Timestamp of when the message was created.

Example Response (Success)



```
{
  "message": "Webhook received asynchronously",
  "data": {
    "sender": "+1234567890",
    "receiver": "Me",
    "content": "Hi, I need help.",
    "timestamp": "2025-01-25T14:30:00Z"
  }
}
```

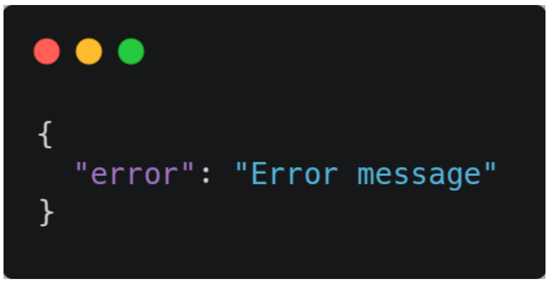
Example Response (Error)



```
{
  "error": "Invalid payload"
}
```

Error Handling

All error responses will follow the standard format:



```
{
  "error": "Error message"
}
```

The error message will provide details about the issue, such as missing required fields or invalid input.

Async Message Processing

- The API uses async processing for both sending and receiving messages. This ensures that the message creation and processing are non-blocking, improving performance.
- When sending a message, the process is handled asynchronously to prevent blocking the request-response cycle.
- Incoming messages via the webhook are also processed asynchronously to handle multiple requests efficiently.

Future Improvements

- **Authentication**: Implement token-based authentication (e.g., JWT) for better security.
- **Message Status Updates**: Implement endpoints to update message status (e.g., delivered, read).
- **Third-Party Integration**: Integrate with the WhatsApp Business API or another third-party messaging service for sending and receiving messages.

- **Error Handling**: Improve error handling with detailed error codes and custom exceptions.

Conclusion

This API enables basic WhatsApp message sending and receiving functionality within a customer support system. It uses Django and Django REST Framework with asynchronous processing for better scalability. Future improvements can include advanced features like authentication, message status tracking, and third-party integration.