DevOps Integration Workflow Documentation

Project: WebEx Bot → spaCy NLP → ServiceNow

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Overview

This project implements an automation pipeline that listens to messages in a WebEx space, performs NLP classification using spaCy to determine the incident category and extract entities, creates incidents in ServiceNow via the REST API, and replies in the WebEx room with the ServiceNow ticket number.

Architecture

1. WebEx bot receives messages (mentions) in a room. 2. Bot polls WebEx API to fetch the latest message. 3. Text is passed to spaCy module to classify and extract entities. 4. Bot builds an incident payload and calls ServiceNow API to create an incident. 5. Bot posts a reply to WebEx with the created ticket number. 6. The whole application runs inside a Docker container for portability.

Deployment & Setup

1. Install Python 3.10+. 2. Install dependencies from requirements.txt. 3. Download spaCy model: python -m spacy download en_core_web_sm. 4. Set environment variables (WEBEX_TOKEN, ROOM_ID, SERVICENOW_INSTANCE, SERVICENOW_USER, SERVICENOW_PASSWORD). 5. Run python bot_code.py or build and run the Docker image.

ServiceNow Integration

The bot uses the ServiceNow Table API to create incidents. Use a scoped integration user and restrict permissions to incident creation only.

Security Considerations

- Never store credentials in source control. - Use environment variables or secret stores in container orchestration platforms. - Log minimally to avoid secrets in logs.

Testing and Demo

Include a demo video showing the bot receiving a message, creating a ServiceNow ticket, and replying with the ticket number. Also include screenshots.

Appendix: Environment variables and example curl commands

See README.md for full examples.