**DevOps Deployment Process Overview**

**1. Key Concepts**

**a) Playbook:** A playbook is a collection of automation scripts written in YAML that define the tasks needed to configure systems, deploy applications, and orchestrate complex workflows. In the DevOps world, playbooks are usually executed via Ansible to ensure repeatable and consistent deployments.

**b) Ansible:** Ansible is an open-source IT automation tool that automates cloud provisioning, configuration management, application deployment, and intra-service orchestration. It uses simple YAML syntax, which makes it both human-readable and powerful.

**c) YAML:** YAML (YAML Ain't Markup Language) is a human-friendly data serialization format used for configuration files. In DevOps, YAML is used for defining infrastructure-as-code, specifying playbook steps, writing deployment scripts, and managing environment configurations.

**2. Deployment Notes Summary**

**a) Staging:**

* Usually, the YAML files are not changed, but in some cases, they are updated before deploying.
* Deployment can be triggered via Jenkins or another CI/CD tool, using the YAML for parameters.

**b) Scripts:**

* Changing YAML is necessary in some cases, especially when there are multiple files for parallel deployment.
* The first step is to ensure a backup is taken.
* Ansible scripts rely on Python, so indentation and syntax must be correct to avoid errors.

**c) Flow:** When a developer pushes code to GitHub:

1. Code is checked out from GitHub.
2. Maven builds the code into .war or .ear files for deployment.
3. SonarQube runs a code quality check.
4. Nexus performs a database scan.
5. SAST (Static Application Security Testing) scans run for vulnerabilities.
6. Metadata is scanned and uploaded to Rocket.

All scans must pass for the build to proceed. If any scan fails, the process stops before deploying to servers.

**d) UAT Deployment:**

* Template is selected -> Search Workflow -> Change region.
* If deployment is only needed for a specific region (e.g. HK), the template is modified accordingly.
* If required for all regions, it can be adjusted from the template itself.

**e) Types of Deployments:**

1. UI Deployments.
2. Stages & Jars.
3. Scripts.

In staging, UI is deployed directly without modifying YAML.

Old services will be stopped and new services started during deployment. Logs, port issues, and secret tokens must be handled carefully during the switch.

For script-based deployment, developers must ensure they upload the correct environment scripts and verify updates before deploying.

**3. Deployment Flow Diagram**

[Developer Pushes Code]

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[GitHub Repo]

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[Code Checkout]

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[Maven Build (.war/.ear)]

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[Code Quality Scan (SonarQube)]

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[Nexus DB Scan]

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[SAST Scan -> Metadata Scan]

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[If all scans pass]

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[Deploy to Dev Servers / Staging / UAT]

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[Production Release]

This document organizes the points you’ve written and adds the core DevOps concepts for a clear explanation to your manager. If you want, I can export this into a polished Word document or PDF for you! Let me know!