

Cloud DevOps Engineer Nanodegree Program

Selling CI/CD Presentation

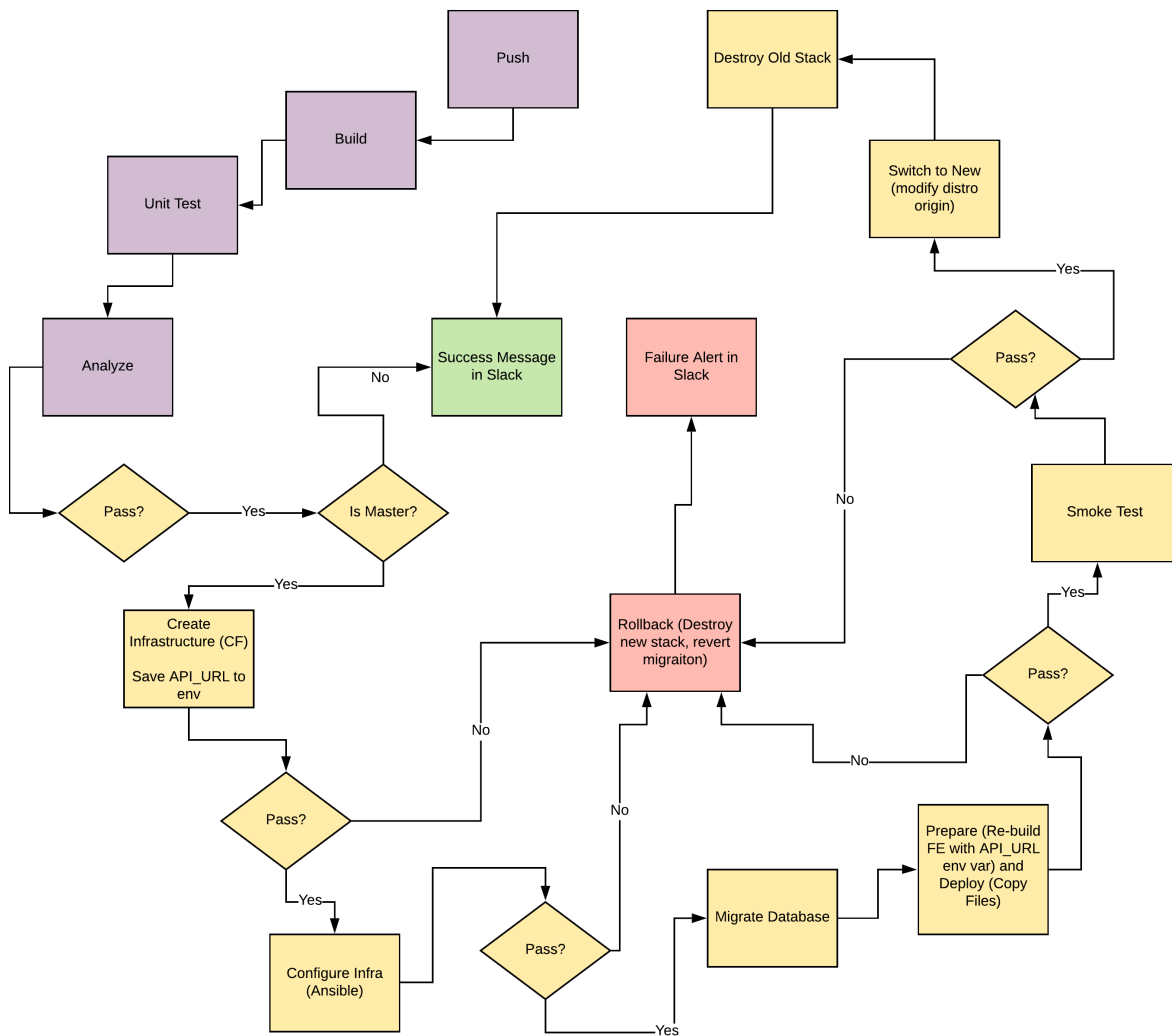
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I. Explain the Fundamentals and Benefits of CI/CD to Achieve, Build, and Deploy Automation for Cloud-Based Software Products

Top business benefits of CI/ CD are improving velocity, productivity, and sustainability of software dev teams. For example,

- catch compile errors after merge and automate infrastructure cleanup can save developer's time and reduce infrastructure costs from unused resources;
- faster, more frequent, and easier production deployments will increase revenue because new value-generating features are released more quickly to market;
- detect security vulnerabilities is helpful to avoid cost to prevent embarrassing or costly security holes;
- automated smoke tests and rollback triggered by job failure ensures revenue to be protected by quick undo to return production to working state.



II. Pipeline Building Blocks

Use the above solution as a reference, the stages of CI/CD pipeline include both pass decision branch and failing ones added in some branches to represent failure, with the following components: Build, Test, Analyze, Deploy, Verify, Promote, and Revert, for rolling back or undoing changes in case any verification fails after deployment.