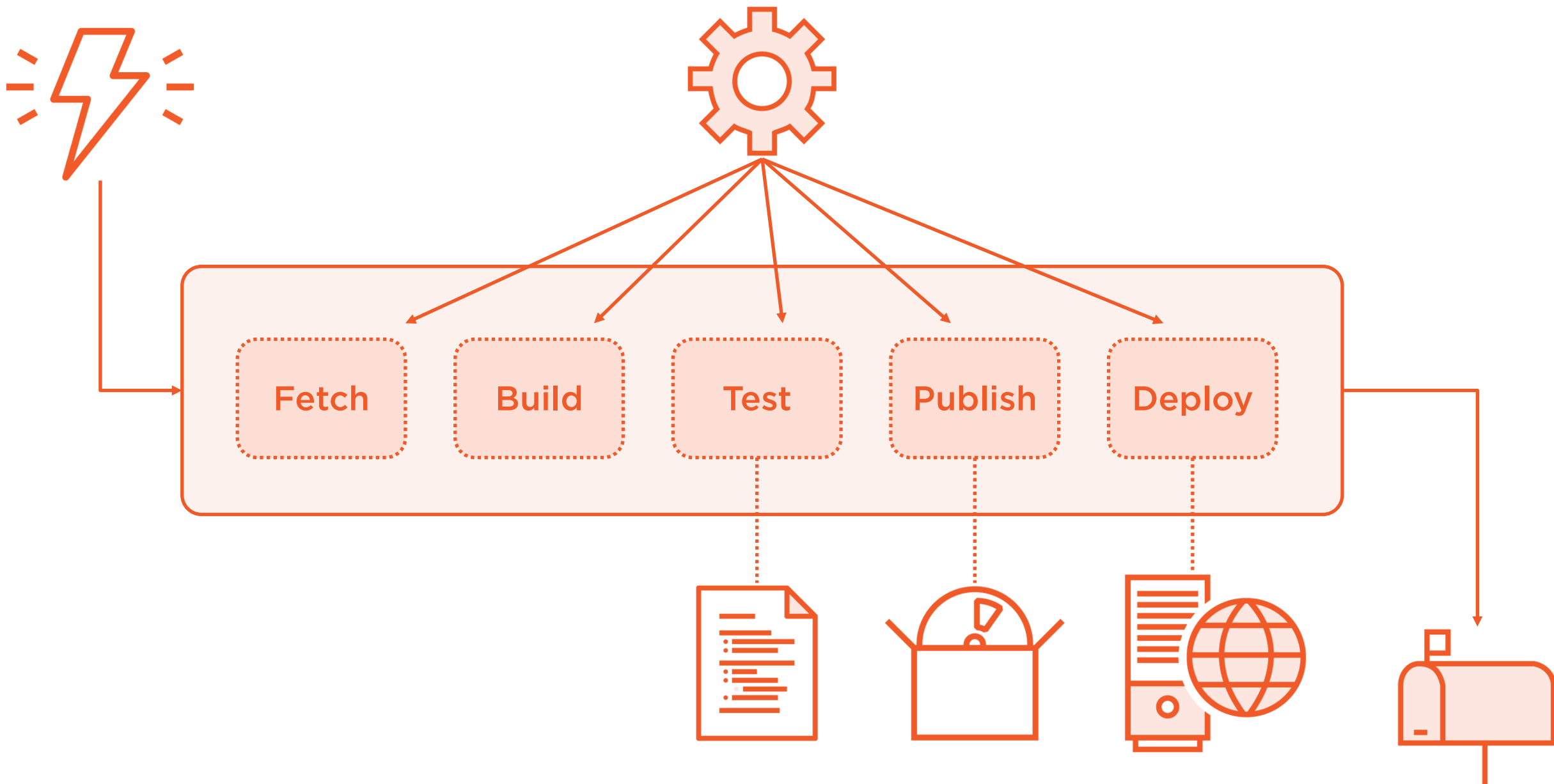# Installing and Using Plugins
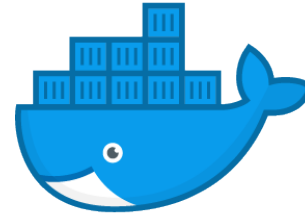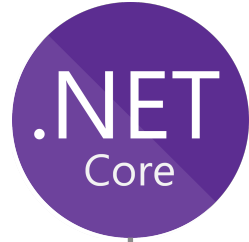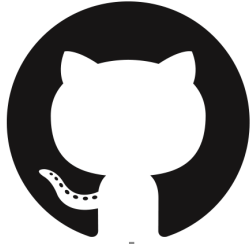
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CONSULTANT & TRAINER

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Fetch Build Test Publish Deploy
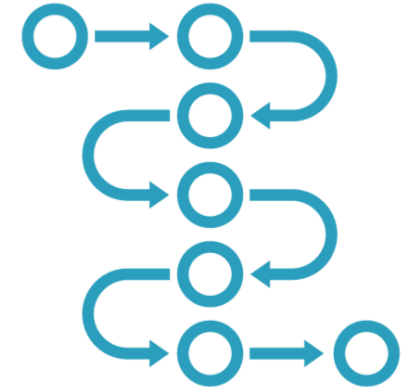
Fetch   Build   Test   Publish

Standard approach
Freestyle job
Shell steps
Manual plugin setup

Portable scripts
Freestyle job
Scripted steps
Offline plugin setup

Self-contained
Pipeline job
Declarative steps
Automated plugin setup

Demo

Standard Jenkins build

- Install required plugins

- Freestyle job

- Shell steps & plugins

Demo

Publish and notify

- Install required plugins
- Publish to Docker Hub
- Notify using Slack

Fetch

GitHub plugin
5 dependencies

Build

Shell step
Server dependency

Test

Shell step
Server dependency

MSTest plugin
6 dependencies

Publish

Docker Hub plugin
9 dependencies

Shell step
Server dependency

Notify

Slack plugin
12 dependencies

Freestyle job

- Stored in Jenkins
- Disconnected from dev workflow

Shell steps

- Silent tool dependencies
- Incorrect pipeline order

Plugins

- Manual installation
- Unused features
- Workarounds for issues
- Duplication of effort

Demo

Jenkins build with portable scripts

- Automate plugin install
- Freestyle job
- CI scripts & plugins

Fetch

Git plugin
16 dependencies

Build

Shell scripts
Server dependency

Test

Shell scripts
Server dependency

MSTest plugin
6 dependencies

Publish

Shell scripts
Server dependency

Notify

Slack plugin
12 dependencies

- GitHub Integration
- CloudBees Docker Publish

Freestyle job

– Stored in Jenkins

Shell scripts

– Tool dependencies

– Pipeline config in scripts

– Shared with dev workflow

– Duplication of effort

Plugins

– Dependency sprawl

– Manual dependency management

Demo

Self-contained Jenkins build

- Improved plugin automation
- Pipeline job with Jenkinsfile
- Declarative steps & plugins

Fetch

Git plugin
16 dependencies

Build

Declarative stage
Server dependency
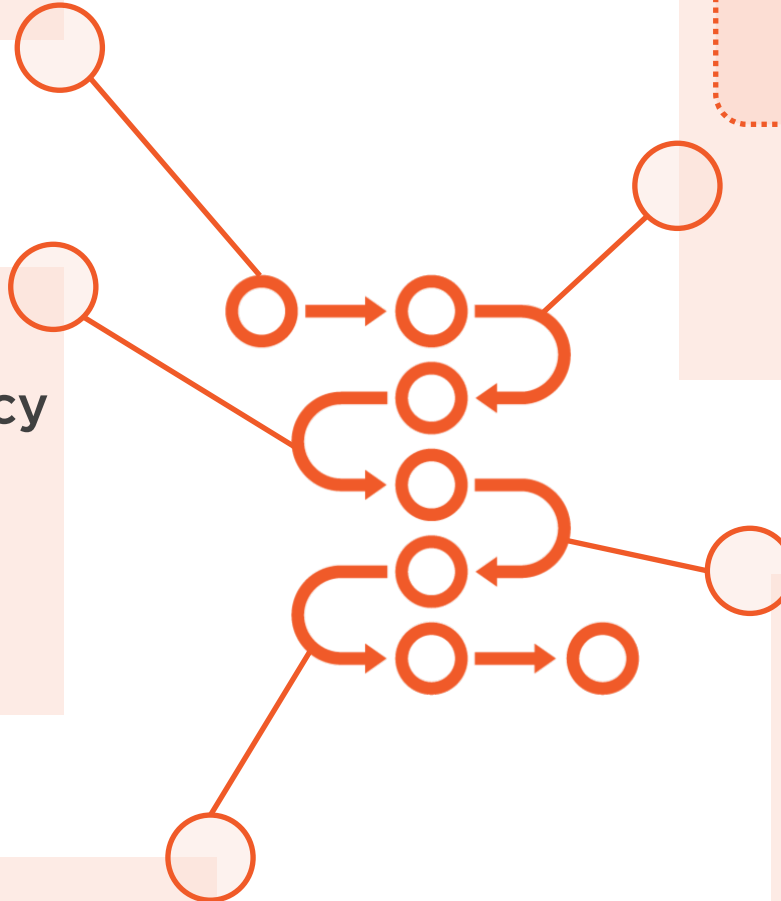---
Pipeline plugin
22 dependencies

Test

Declarative stage
Server dependency

MSTest plugin
6 dependencies

Publish

Declarative stage
Server dependency

Credentials plugins
7 dependencies

Notify

Slack plugin
12 dependencies

Fetch
Git plugin
16 dependencies

Build & Test
Declarative stage
Docker dependency

Pipeline plugin
22 dependencies

Publish Test Results
Declarative stage
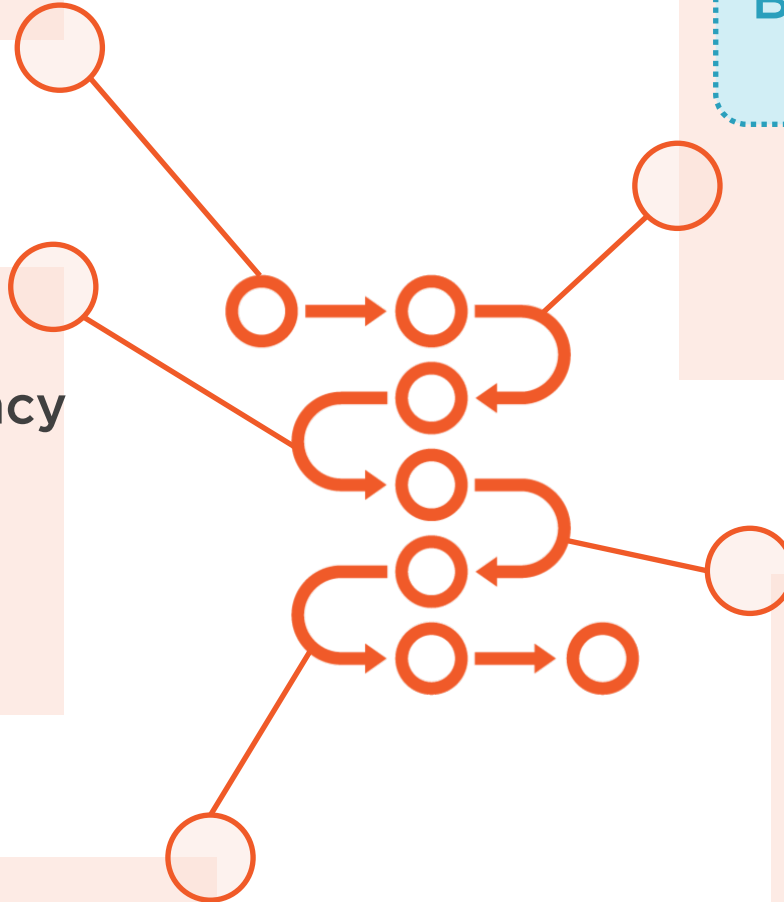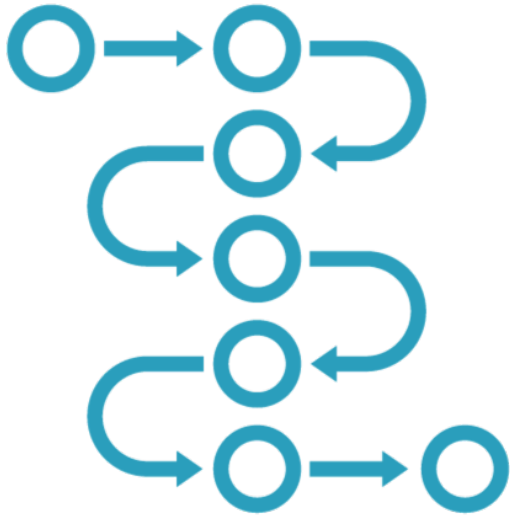Docker dependency
---
MSTest plugin
6 dependencies

Publish
Declarative stage
Docker dependency

Credentials plugins
7 dependencies

Notify
Slack plugin
12 dependencies

Pipeline job

- Stored in SCM

Declarative stages

- Tool dependencies
- Shared with dev workflow
- Centralized toolchain

Plugins

- Minimal requirements
- Dependency sprawl
- Automated setup

Summary

Classic freestyle jobs
- Maintenance burden
- Decouple CI from dev workflow
- Encourage plugin dependency

New pipeline jobs
- Jenkinsfile in SCM
- CI process & dependencies clear
- Encourage plugins for integration

Plugin management
- Multiple installation options
- Automation & repeatability

Up Next:
Writing Custom Plugins