

## 01. Introduction

### Software Types

- **Edge Computing** - Computation done at leaf nodes
- **Cloud Computing** - Host software on ext. data center
  - **Cloud-enabled** - Legacy applications modified to run on the cloud (vs. cloud-native)

### Software Development Process

- **Waterfall** - Sequential approach good for stable req.
- **Agile** - Iterative development with feedback loops and quick responses to changes
  - **Scrum** - Work done in sprints, where a subset of the product backlog is cleared

### Software Delivery

- **Deployment** - Make software available to use after dev.
  - Bare metal: Customized build for target platforms
  - Virtual machine: Use VM to run guest OS to run app.
  - Containers: Include only necessary OS processes and dependencies (Lighter than VM)
  - Serverless: Cloud-native servers that don't need developers to manage (Let provider manage resources)

**DevOps** - Practices combining software dev. and ops.

- Purpose: Reduce time between committing change to the change reaching production while ensuring quality
- **Cont. Integration** - Auto build, unit test, deploy to staging, and acceptance test, to show problems early
- **Continuous Delivery** - Same as above, except with manual deployment to production. Ensures that every good build is potentially ready for production release.
- **Continuous Deployment** - Same as above, but with auto deployment to production

## 02. Requirements