Elastic Beanstalk

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Elastic Beanstalk

When you what to focus on your application development

APP — and a TOOLBOX for DEPLOYMENT, ENVIRONMENTS and INFRASTRUCTURE
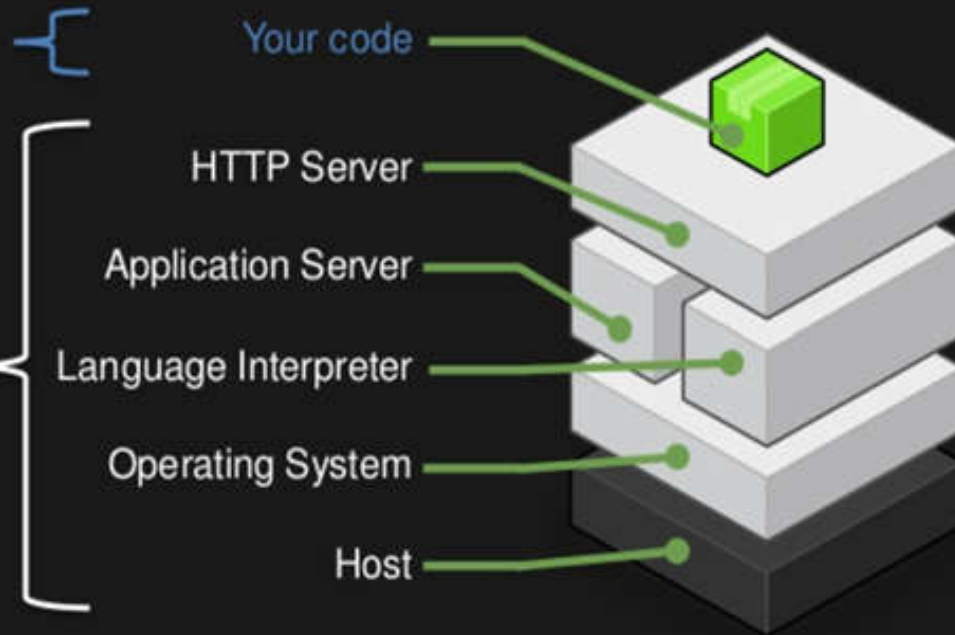
APP — AWS Elastic Beanstalk
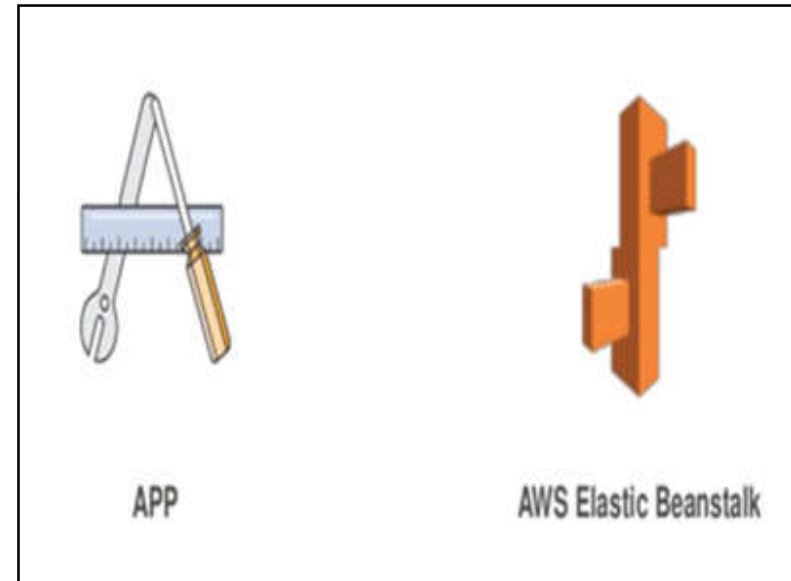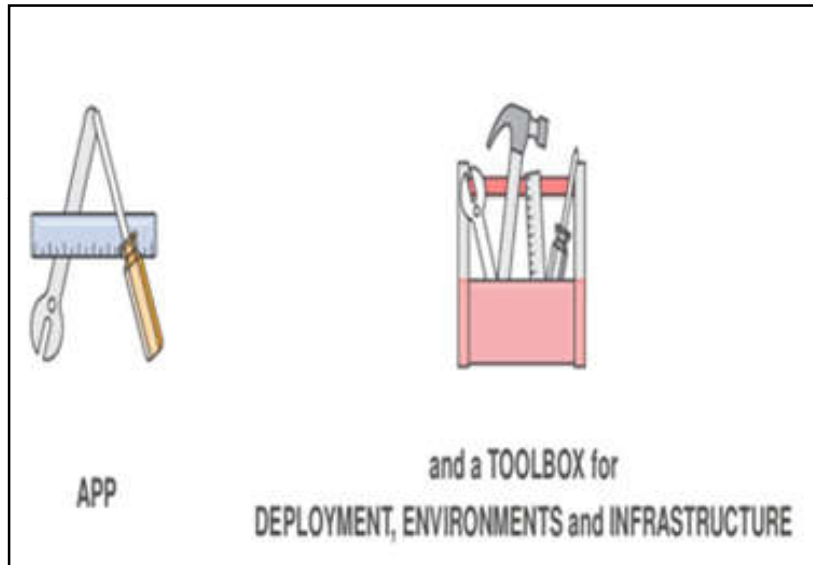
Elastic Beanstalk

- Elastic Beanstalk uses PAAS model (platform as a service).

- It help users quickly deploy and manage applications in the AWS Cloud without managing the infrastructure.

- Elastic Beanstalk automatically handles capacity provisioning, load balancing, scaling, and application health monitoring.

- Support a large range of platform for development such as java, .net, nodejs, php, python, ruby etc.

Elastic Beanstalk

Elastic Beanstalk
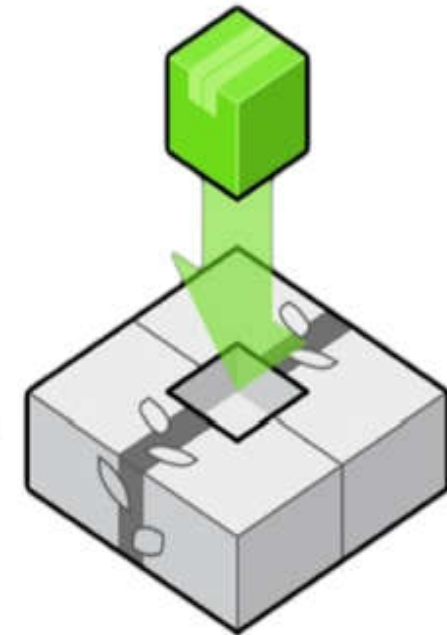
Elastic Beanstalk

- Easily **deploy, monitor,** and **scale** applications
- Infrastructure provisioned and managed by EB. You maintain **complete control**.
- Preconfigured **application containers** that are easily customizable.
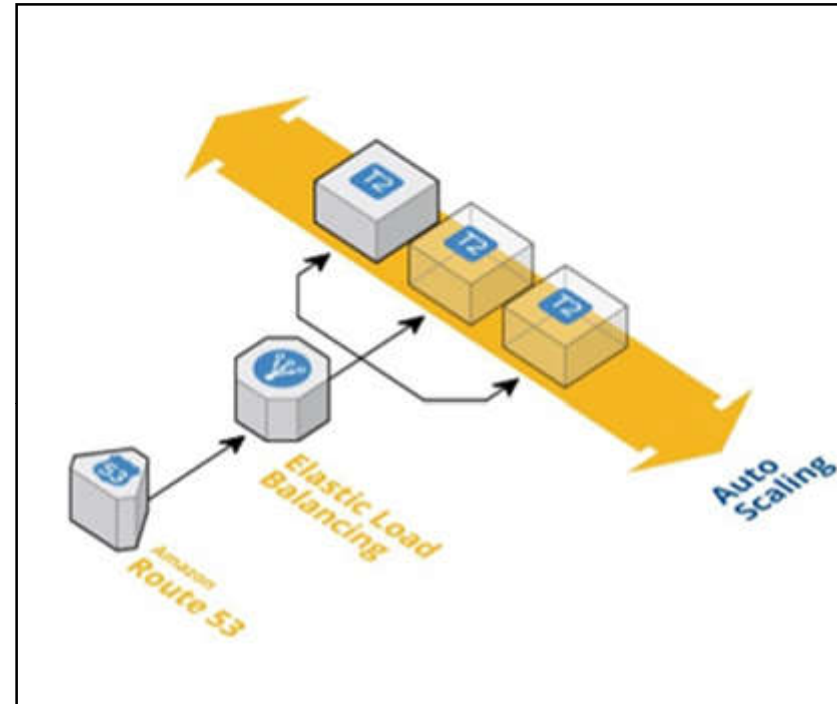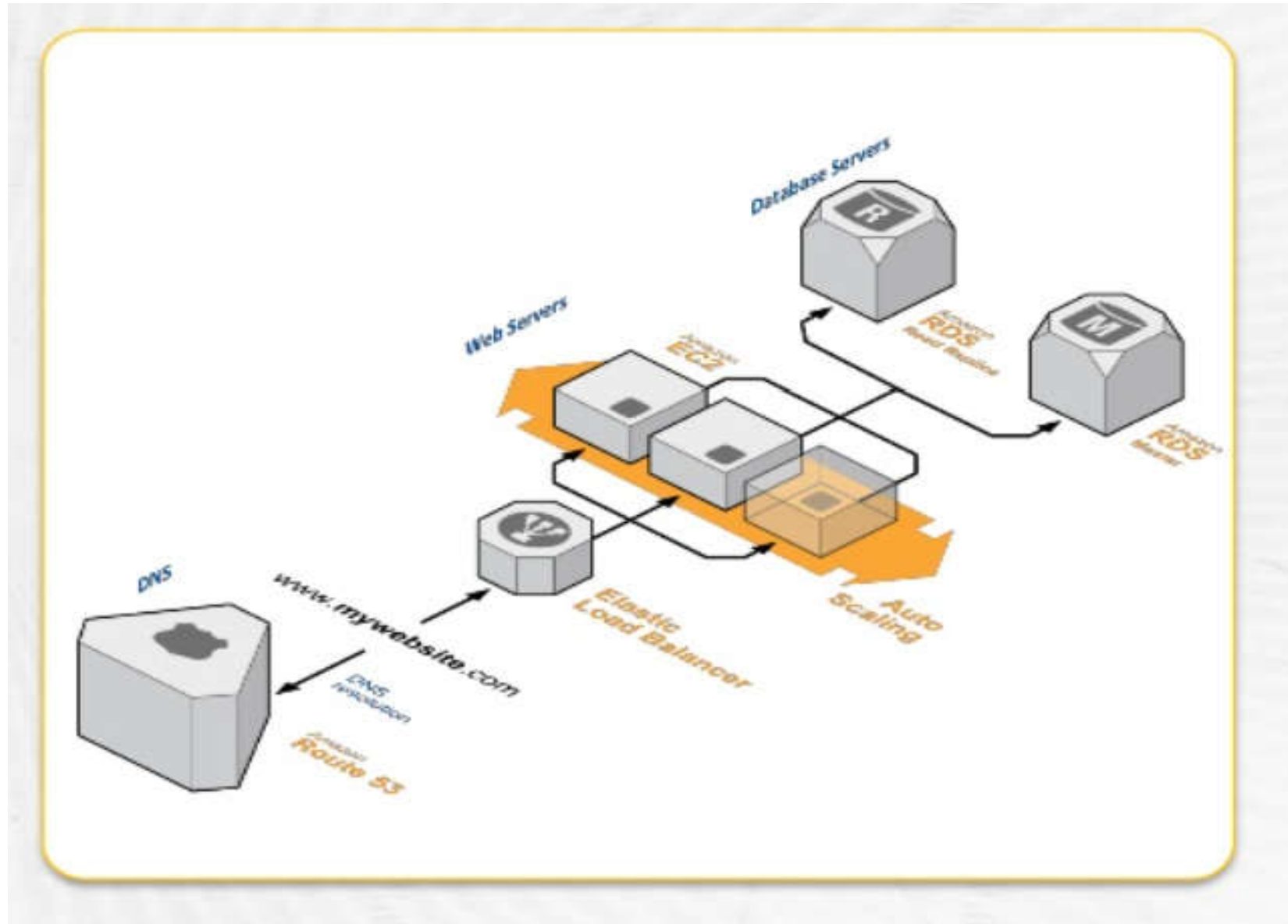- **Platform updates** handled automatically/manually within maintenance window

Elastic Beanstalk Environment

1. EC2 Instances - Servers that host the application.

2. Load Balancer for auto-scaling and balancing network traffic and request.

3. Route 53 - Configure Route 53 and get a domain name.
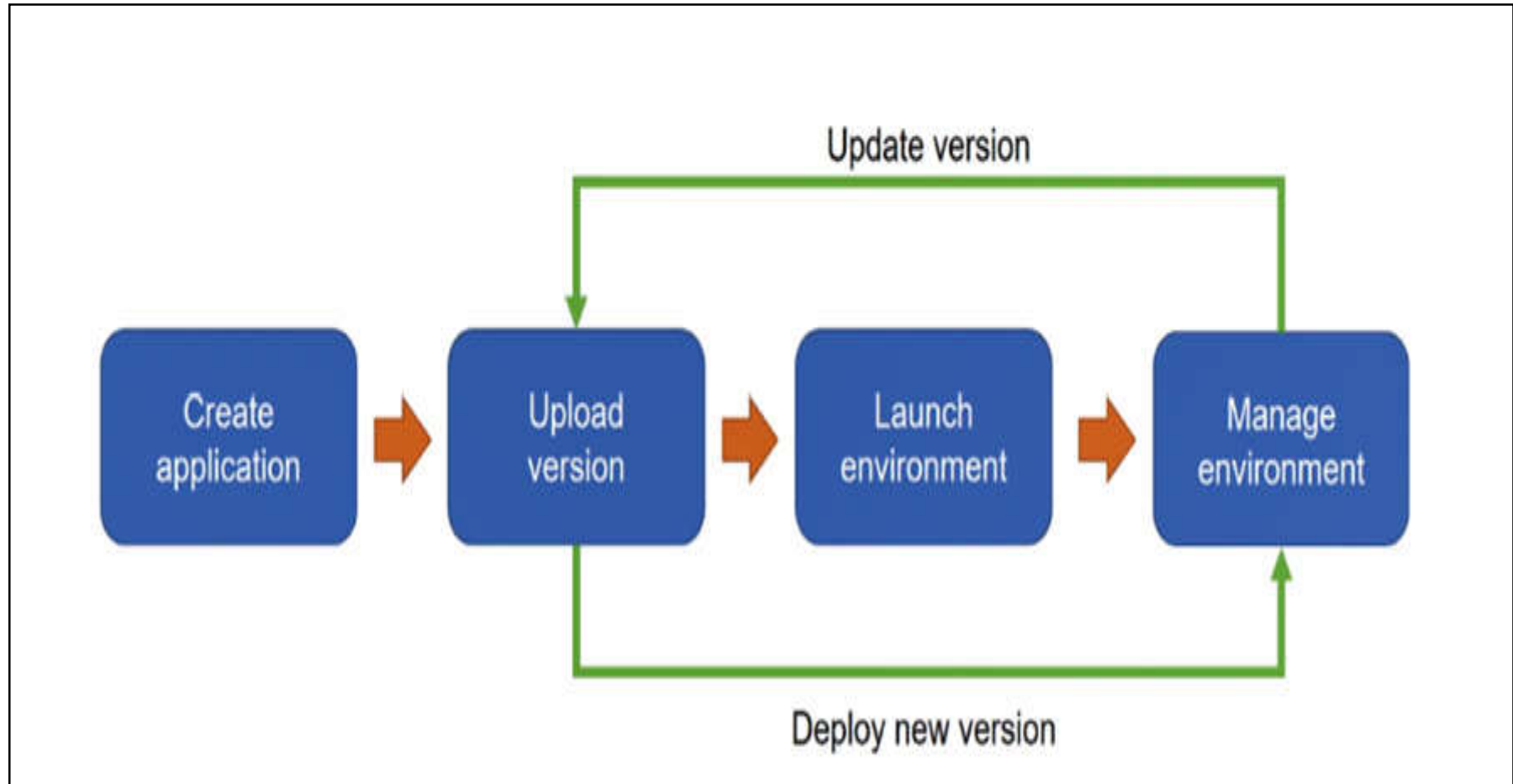
Elastic Beanstalk Environment

Terms in EB

- Elastic Beanstalk **application** is a file containing the source code. Source code file is the application in the Elastic Beanstalk environment.
- **Application Version** refers to the application which are uploaded with upgraded version.
- Collection of AWS resources is an **environment** and an environment can only run one application version at a time. When you create an environment, Elastic Beanstalk provisions the resources needed to run the application version you specified.
- A **platform** is a combination of all the AWS Beanstalk components, an Operating system, a programming language runtime, and a web server to run the applications.
- **Configuration** of an environment is a set of parameters like security group, Instance type, and platform version.
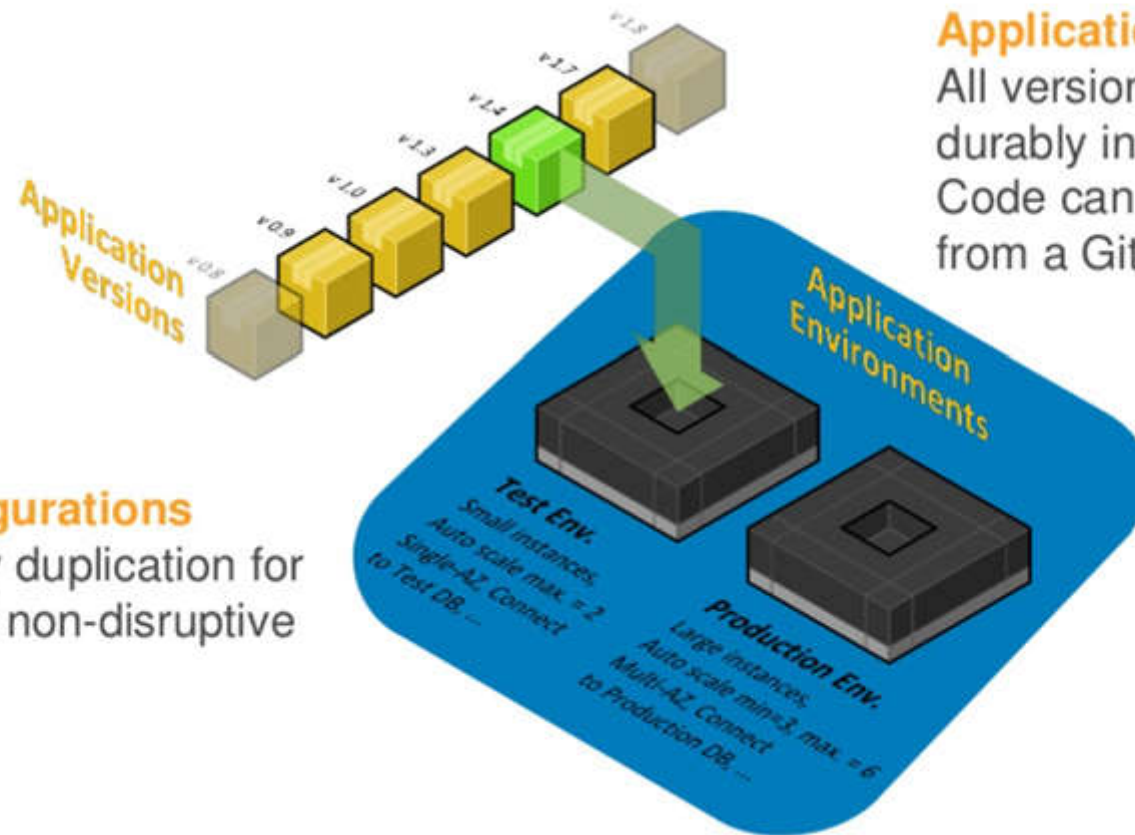
Elastic Beanstalk Environment

- Two types
  - Single Instance
  - Load balancing / auto scaling
- Two Tiers
  - Web servers - An application that serves HTTP requests runs web server environment.
  - Workers - An application using Amazon Simple Queue Service (SQS) runs in an Worker environment.

Application Deployment Cycle

Elastic Beanstalk

Elastic Beanstalk Object Model

Application

Environments

- Infrastructure resources (such as EC2 instances, ELB load balancers, and Auto Scaling groups)
- Runs a single application version at a time for better scalability
- An application can have many environments (such as staging and production)

Application versions

- Application code
- Stored in Amazon S3
- An application can have many application versions (easy to rollback to previous versions)

Saved configurations

- Configuration that defines how an environment and its resources behave
- Can be used to launch new environments quickly or roll-back configuration
- An application can have many saved configurations

Thank You