Elastic Beanstalk

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WAY TO REINVENT YOURSELF

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1 Introduction to Elastic Beanstalk

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Introduction to Elastic Beanstalk

What is Elastic Beanstalk ?

- AWS Elastic Beanstalk is an easy-to-use service for deploying and scaling web applications and services.

- In simple terms it is platform as a service (PaaS) which takes our application code and deploys it while provisioning the supporting architecture and compute resources required for our code to run. Elastic Beanstalk also fully manages the patching and security updates for those provisioned resources

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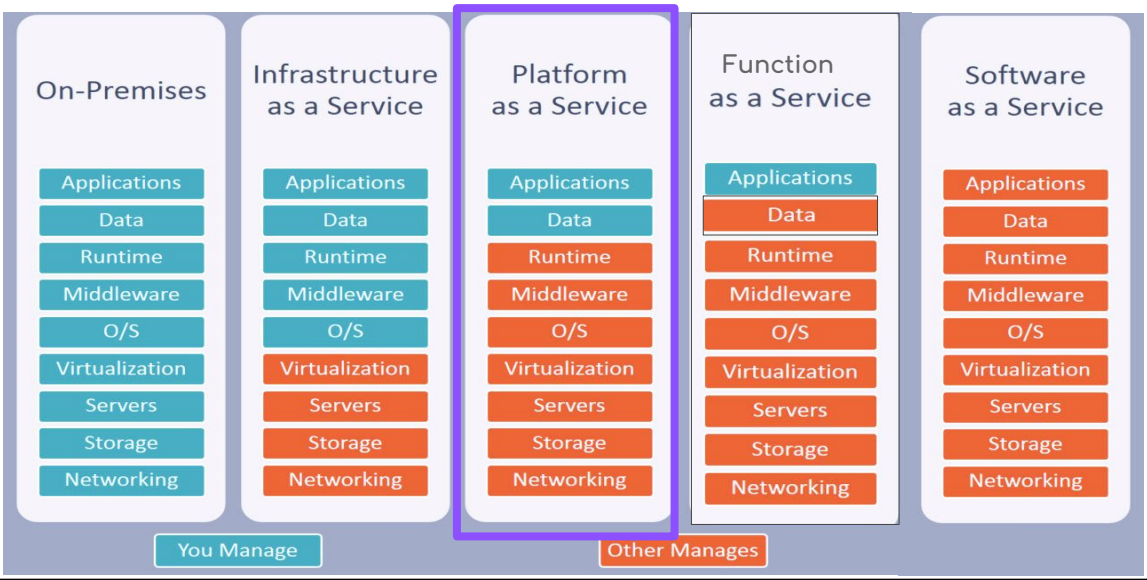
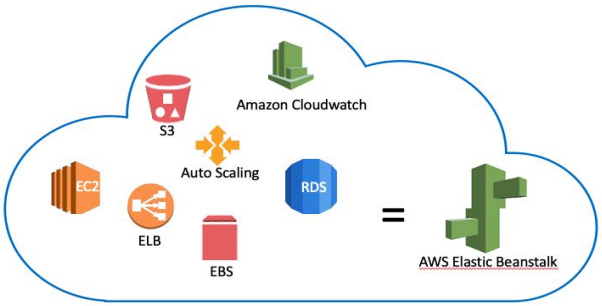
Introduction to Elastic Beanstalk

What is Elastic Beanstalk ?



Introduction to Elastic Beanstalk

Why AWS Elastic Beanstalk?



- Automates the details of capacity provisioning
- Load balancing
- Auto scaling
- Application deployment

Introduction to Elastic Beanstalk

Why AWS Elastic Beanstalk?

- Automates management tasks:

  - Monitoring,
  - Version deployment,
  - Health check
  - Log

Monitoring

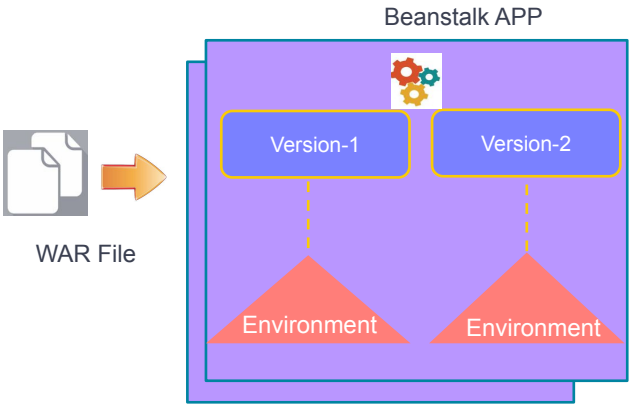
Health Check

2 Basic Concepts of Elastic Beanstalk

Basic Concepts of Elastic Beanstalk

Application

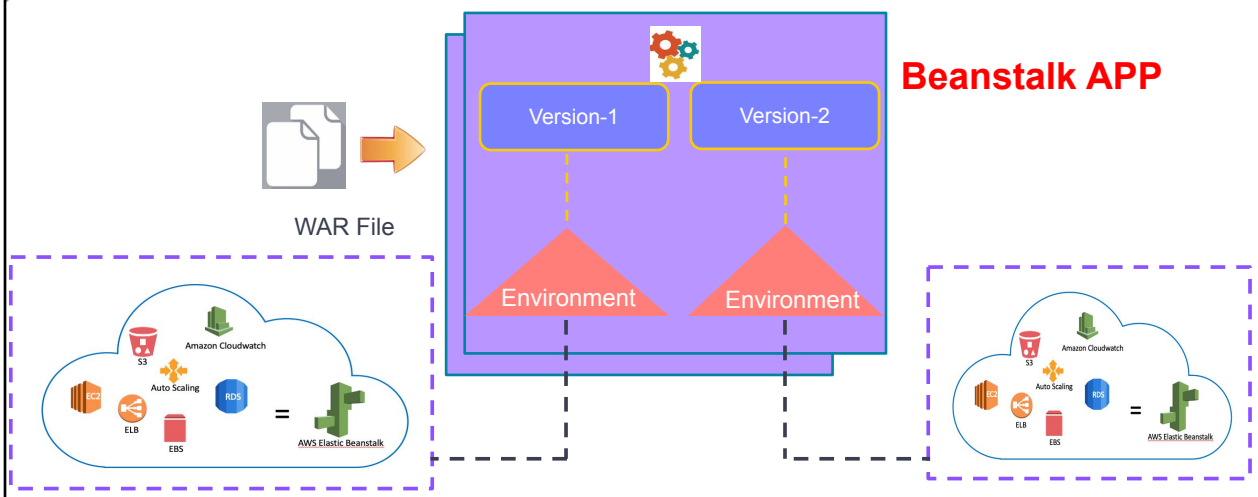
- An Elastic Beanstalk application is a logical collection of Elastic Beanstalk components, including environments, versions, and environment configurations. In Elastic Beanstalk an application is conceptually similar to a folder.



Application version

- Specific, labeled iteration of deployable code for a web application.

Basic Concepts of Elastic Beanstalk

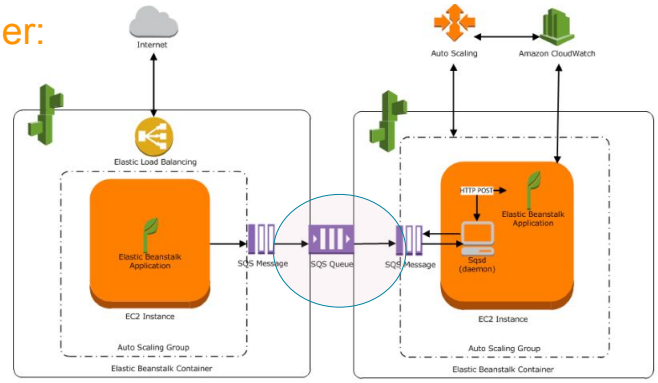


Environment

- An environment is **a collection of AWS resources** running an application version. Each environment runs only one application version at a time.

Basic Concepts of Elastic Beanstalk

Environment Tier:



- The environment tier designates the type of application that the environment runs, and determines what resources Elastic Beanstalk provisions to support it. An application that serves HTTP requests runs in a web server environment tier. A backend environment that pulls tasks from an Amazon Simple Queue Service (Amazon SQS) queue runs in a worker environment tier.

Basic Concepts of Elastic Beanstalk

Platform:

Supported platform versions

- Docker
- Multicontainer Docker
- Preconfigured Docker
- Go
- Java SE
- Tomcat
- .NET Core on Linux
- .NET on Windows Server
- Node.js
- PHP
- Python
- Ruby

Elastic Beanstalk Deployment Policy

All at once – Deploy the new version to all instances simultaneously. All instances in your environment are out of service for a short time while the deployment occurs.

Rolling – Deploy the new version in batches. Each batch is taken out of service during the deployment phase, reducing your environment's capacity by the number of instances in a batch.

Rolling with additional batch – Deploy the new version in batches, but first launch a new batch of instances to ensure full capacity during the deployment process.

Immutable – Deploy the new version to a fresh group of instances by performing an immutable update.

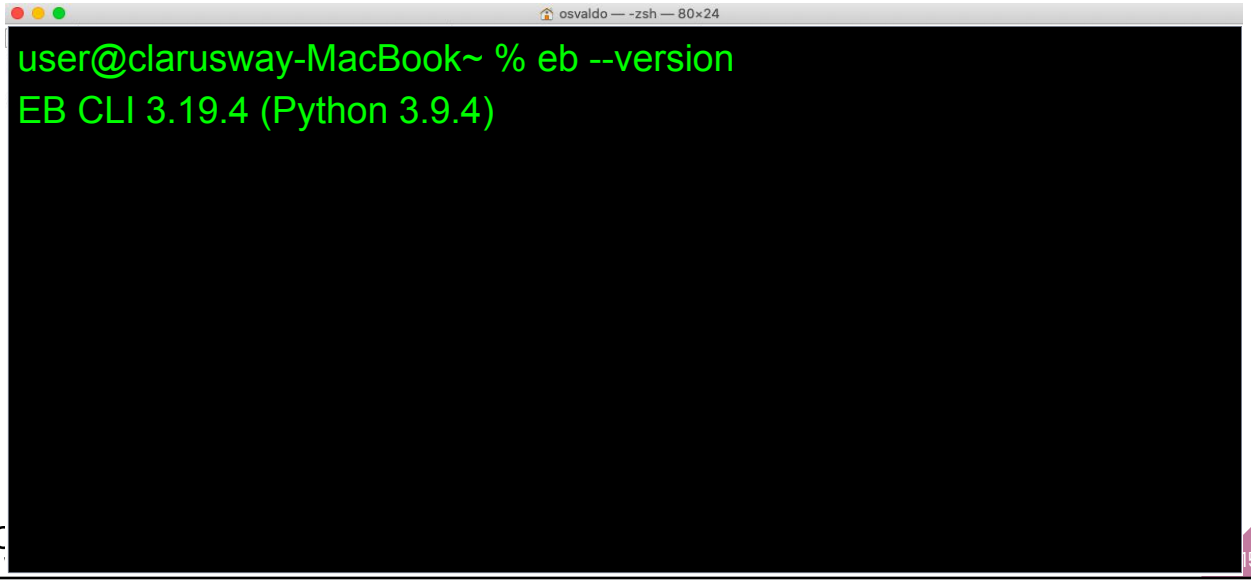
Traffic splitting – Deploy the new version to a fresh group of instances and temporarily split incoming client traffic between the existing application version and the new one.

Summary of Terms / Concepts

Concept	What it Means
Application	Logical collection of Elastic Beanstalk components required for a working deployment
Application Version	A labelled version of an application (e.g. 1.0, 1.1, 2.0, etc…)
Environment	A set of AWS resources running a specific application version (e.g. DEV, TEST, PROD)
Environment Tier	The type of application that an environment runs (either Web or Worker)
Platform	Combination of OS, programming language, web server - i.e. the “technology stack”

Basic Concepts of Elastic Beanstalk

Elastic Beanstalk Command Line Interface (EB CLI)



Elastic Beanstalk

Let's get our hands dirty!

- Creating Application

THANKS!

Any questions?

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