

# AWS Elastic Beanstalk

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## Agenda

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## Introduction:

- Easy-to-use service for deploying and scaling web applications and services
- Ability to just upload code
- Elastic Beanstalk automatically handles the deployment
- Supports resource provisioning, load balancing, auto-scaling, and monitoring

## Supported languages :

- PHP
- Java
- Python
- Ruby
- Node.js
- .NET
- Go

## AWS Code deploy vs Elastic Beanstalk

Code Deploy	Elastic Beanstalk
➤ Automates code deployments to currently running EC2 instances	➤ Web application deployment service
➤ Does not provision resources	➤ Can Launch Additional Aws Resources- Ex: Load balancers and EC2 instances
➤ Does not provide application-level monitoring	➤ Provides Application Monitoring

## Platform History

Configuration and Solution Stack Name	AMI	Language	AWS X-Ray	Application Server	Proxy Server
Java 8 with Tomcat 8 version 2.5.4 <i>64bit Amazon Linux 2016.09 v2.5.4 running Tomcat 8 Java 8</i>	2016.09.0	Java 1.8.0_121	1.0.0	Tomcat 8.0.41	Apache 2.2.31
Java 7 with Tomcat 7 version 2.5.4 <i>64bit Amazon Linux 2016.09 v2.5.4 running Tomcat 7 Java 7</i>	2016.09.0	Java 1.7.0_131	1.0.0	Tomcat 7.0.75	Apache 2.2.31
Java 6 with Tomcat 7 version 2.5.4 <i>64bit Amazon Linux 2016.09 v2.5.4 running Tomcat 7 Java 6</i>	2016.09.0	Java 1.6.0_41	1.0.0	Tomcat 7.0.75	Apache 2.2.31

Features

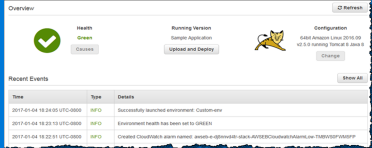
- Built-in Cloud Watch monitoring metrics such as
  - Average CPU utilization
  - Request count
  - Average latency
- E-mail notifications via Amazon SNS when:
  - Application health changes
  - Application servers are added or removed

Features

- Supports highly variable amounts of traffic via
  - AutoScaling
  - LoadBalancers
- Application security by enabling HTTPS protocol on the load balancer
- Ability to access server log files without Logging into Servers
- Ability to restart the application servers in a single command
- Selects the most appropriate EC2 instance type matching the CPU requirements

Components


- Logical collection of Elastic Beanstalk components
- Application Version
- Environment
- Environment Configurations



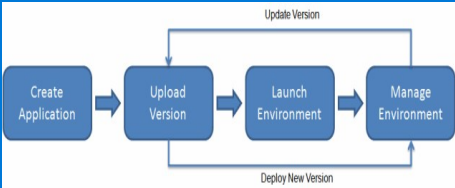
Advantages and Disadvantages

- Fast and Simple to begin
  - Developer Productivity
  - Impossible to outgrow
  - Complete Resource Control
- Unreliable Deployments
  - Deployment Speed
  - Old Application Versions

UseCases:

Logo	Company	Website
	AMAZON CORPORATE LLC	amazon.com
	RetailMeNot Inc.	retailmenot.com
	VEVO LLC	vevo.com
	Credible Labs, Inc.	credible.com
	GeoFeedia, Inc.	geofeedia.com

Usability



## Pricing

- No additional charge for AWS Beanstalk
- New AWS customers who are eligible for the AWS free usage tier can deploy an application in Elastic Beanstalk for free

## Technological Alternatives

- Heroku
- Google App Engine
- PythonAnywhere
- Convex
- AppFog
- AppHarbor

## Demo

- AWS Elastic Beanstalk- UI
- AWS Elastic Beanstalk- CLI
- Java Web Application - Tomcat Web server