Integration with AWS

Section 6

What you will learn in this section

What you will learn in this section

Theory:

- Introduction to Amazon Web Services (AWS)

What you will learn in this section

Theory:

- Introduction to Amazon Web Services (AWS)
- Master/slave architecture in Jenkins

What you will learn in this section

Theory:

- Introduction to Amazon Web Services (AWS)
- Master/slave architecture in Jenkins

Practice:

- Install Jenkins on AWS

What you will learn in this section

Theory:

- Introduction to Amazon Web Services (AWS)
- Master/slave architecture in Jenkins

Practice:

- Install Jenkins on AWS
- Set up a Jenkins build farm on AWS

Overview

Video 6.1

What you will learn in this video

- Introduction to AWS

What you will learn in this video

- Introduction to AWS

- Master/slave architecture in Jenkins

What you will learn in this video

- Introduction to AWS

- Master/slave architecture in Jenkins

- What we are going to build in the next videos

Amazon Web Services (AWS)

- AWS is a **cloud computing provider selling on-demand computing resources**

Amazon Web Services (AWS)

- AWS is a **cloud computing provider selling on-demand computing resources**

- Cloud computing allows to **spin up a new server within minutes** and decommission it when it's not needed any more

Amazon Web Services (AWS)

- AWS is a **cloud computing provider selling on-demand computing resources**

- Cloud computing allows to **spin up a new server within minutes** and decommission it when it's not needed any more

- Computing resources are **billed by usage** (no upfront costs)

Amazon Web Services (AWS)

- AWS is a **cloud computing provider selling on-demand computing resources**

- Cloud computing allows to **spin up a new server within minutes** and decommission it when it's not needed any more

- Computing resources are **billed by usage** (no upfront costs)

- AWS is currently the **market leader in cloud computing**

©Amazon Web Services, Inc.

Prerequisite

- Sign up for an AWS account at https://portal.aws.amazon.com/billing/signup

Prerequisite

- Sign up for an AWS account at https://portal.aws.amazon.com/billing/signup

- Read the AWS Free Tier at https://aws.amazon.com/free/

Warning

- **Registration** with AWS **requires a credit card**

Warning

- **Registration** with AWS **requires a credit card**

- The practical parts in this section will use resources in the **AWS free tier**

Warning

- **Registration** with AWS **requires a credit card**

- The practical parts in this section will use resources in the **AWS free tier**

- You are going to be **billed if you exceed resources in the free tier**

Warning

- **Registration** with AWS **requires a credit card**

- The practical parts in this section will use resources in the **AWS free tier**

- You are going to be **billed if you exceed resources in the free tier**

- You can monitor billing costs in AWS via the **Billing Console**

Warning

- **Registration** with AWS **requires a credit card**

- The practical parts in this section will use resources in the **AWS free tier**

- You are going to be **billed if you exceed resources in the free tier**

- You can monitor billing costs in AWS via the **Billing Console**

- **Stop/terminate the AWS resources** when you don't use them to avoid costs

Warning

- **Registration** with AWS **requires a credit card**

- The practical parts in this section will use resources in the **AWS free tier**

- You are going to be **billed if you exceed resources in the free tier**

- You can monitor billing costs in AWS via the **Billing Console**

- **Stop/terminate the AWS resources** when you don't use them to avoid costs

- You undertake the practical part entirely **at your own risk**

Master/Slave Architecture in Jenkins

Master/Slave Architecture in Jenkins

Master/Slave Architecture in Jenkins

Jenkins Master

Jenkins Master

Jenkins Slave 1

Jenkins Slave 2
CC BY-SA 3.0

Jenkins Slave 3

Jenkins Master

Job 1

Jenkins Slave 1   Jenkins Slave 2   Jenkins Slave 3

Master/Slave Architecture in Jenkins
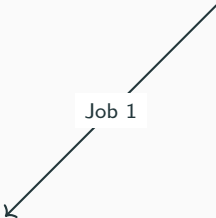
Jenkins Master

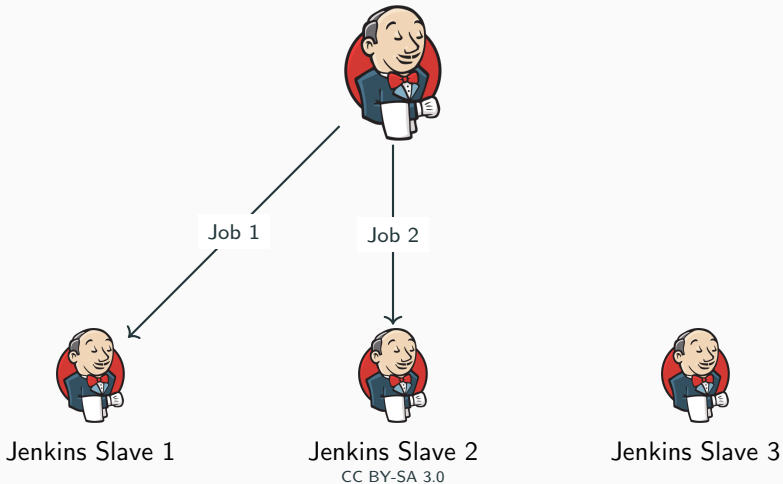Job 1   Job 2

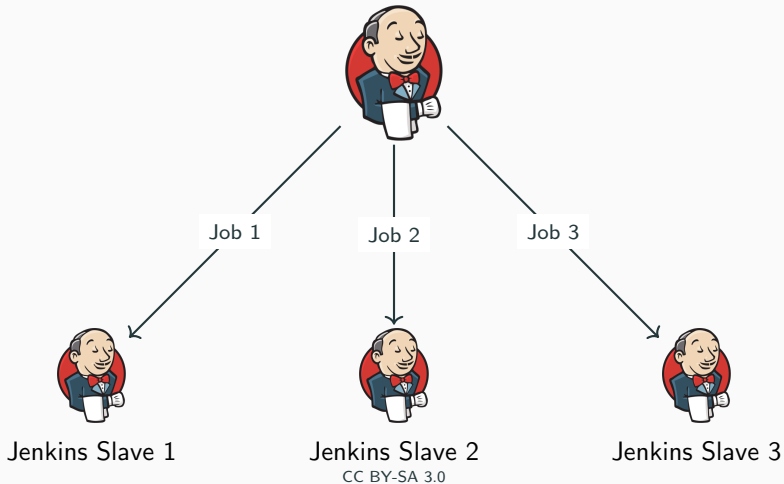Jenkins Slave 1   Jenkins Slave 2   Jenkins Slave 3

Master/Slave Architecture in Jenkins

Jenkins Master

Job 1   Job 2   Job 3

Jenkins Slave 1

Jenkins Slave 2

Jenkins Slave 3

Advantages of Distributed Builds

Advantages of Distributed Builds

- **Flexibility**: run jobs on machines with different configuration

Advantages of Distributed Builds

- **Flexibility**: run jobs on machines with different configuration

- **Resilience**: if slave node fails, it doesn't affect jobs running on other slaves

Advantages of Distributed Builds

- **Flexibility**: run jobs on machines with different configuration

- **Resilience**: if slave node fails, it doesn't affect jobs running on other slaves

- **Scalability**:

Advantages of Distributed Builds

- **Flexibility**: run jobs on machines with different configuration

- **Resilience**: if slave node fails, it doesn't affect jobs running on other slaves

- **Scalability**:
  - Free resources from master

Advantages of Distributed Builds

- **Flexibility**: run jobs on machines with different configuration

- **Resilience**: if slave node fails, it doesn't affect jobs running on other slaves

- **Scalability**:
    - Free resources from master
    - Run multiple jobs in parallel

Advantages of Distributed Builds

- **Flexibility**: run jobs on machines with different configuration

- **Resilience**: if slave node fails, it doesn't affect jobs running on other slaves

- **Scalability**:
  - Free resources from master
  - Run multiple jobs in parallel
  - Share the load

Advantages of Distributed Builds

- **Flexibility**: run jobs on machines with different configuration

- **Resilience**: if slave node fails, it doesn't affect jobs running on other slaves

- **Scalability**:
  - Free resources from master
  - Run multiple jobs in parallel
  - Share the load
  - Scale up resources at peak times and scale down at low activity times

Single Master vs Multi Master
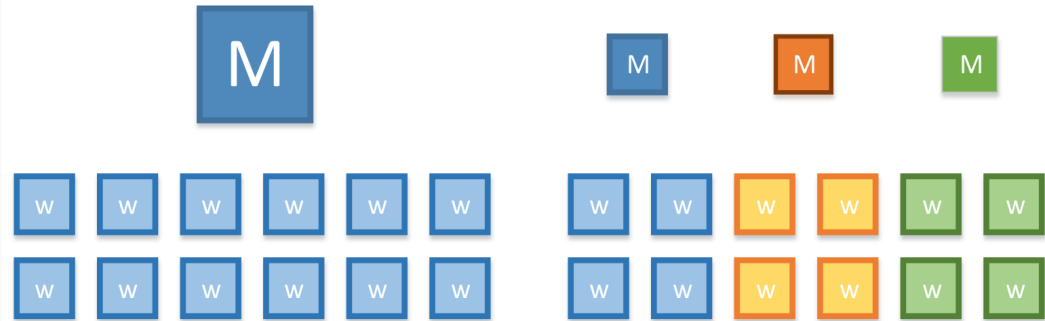

Image: https://docs.aws.amazon.com/aws-technical-content/latest/jenkins-on-aws/jenkins-on-aws.pdf ©Amazon Web Services, Inc.

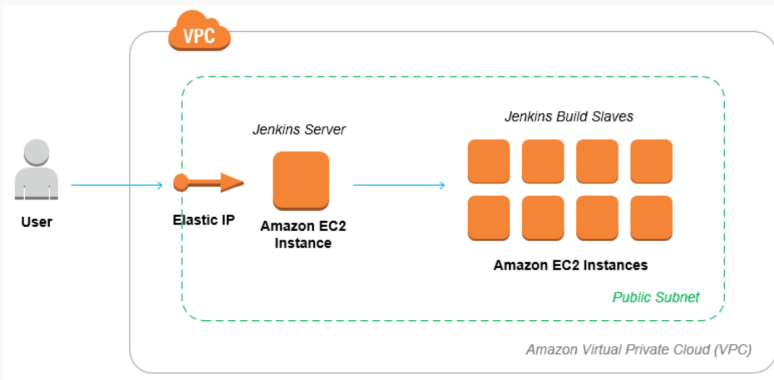Image: https://aws.amazon.com/getting-started/projects/setup-jenkins-build-server ©Amazon Web Services, Inc.

Next Video

Video 6.2 Install Jenkins on AWS