

# TRAINING CONTENT

## Continuous Integration

### Session-3

YOUR NEXT DESTINATION  
OF SOFTWARE OUTSOURCING

# Lecture Outline

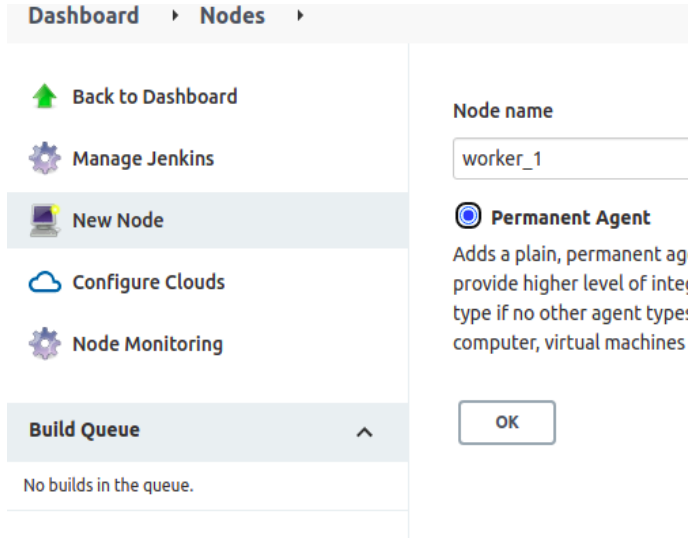
- ☐ Node Configuration
- ☐ User Input in Jenkins
- ☐ Parameterized job Configuration
- ☐ What is Declarative Pipeline
- ☐ How to write Declarative Pipeline
- ☐ References

# Manage Jenkins: Manage Nodes

## Pre-requisite: Install JAVA in Node machine

Go to manage Jenkins, in System Configuration we will see Manage Nodes and Clouds option. Click there. Node list will appear as we have seen in earlier slide.

Give a name of the Node, check Permanent Agent and Click ok.



Dashboard ▸ Nodes ▸

- Back to Dashboard
- Manage Jenkins
- New Node**
- Configure Clouds
- Node Monitoring

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**Build Queue** ^

No builds in the queue.

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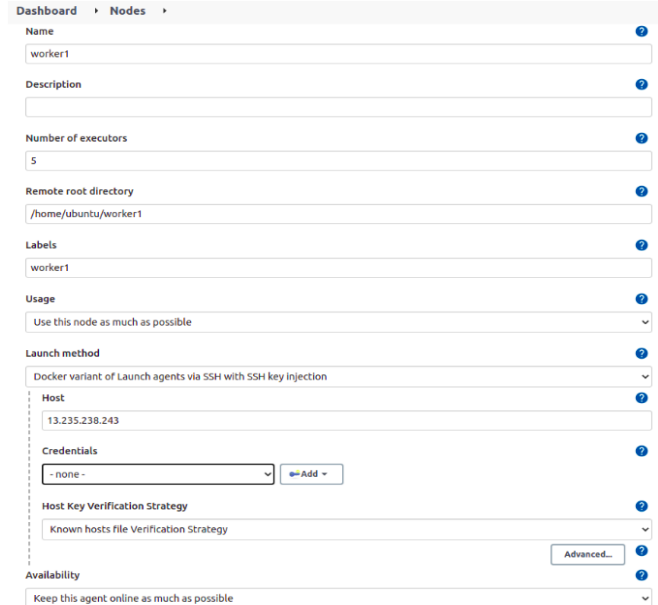
**Node name**

worker\_1

☒ **Permanent Agent**

Adds a plain, permanent agent that provides a higher level of integration if no other agent types are present on the computer, virtual machines, or containers.

OK



Dashboard ▸ Nodes ▸

**Name**

worker1

**Description**

**Number of executors**

5

**Remote root directory**

/home/ubuntu/worker1

**Labels**

worker1

**Usage**

Use this node as much as possible

**Launch method**

Docker variant of Launch agents via SSH with SSH key injection

**Host**

13.235.238.243

**Credentials**

- none - [Add](#)

**Host Key Verification Strategy**

Known hosts file Verification Strategy

[Advanced...](#)

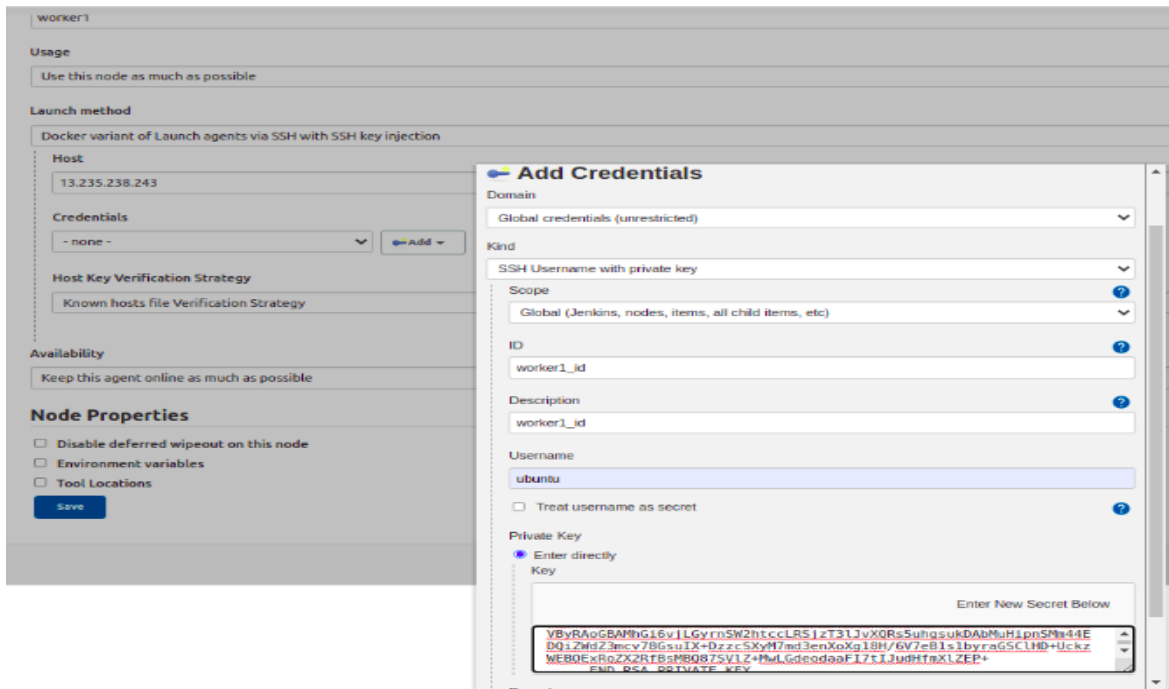
**Availability**

Keep this agent online as much as possible

# Manage Jenkins: Manage Nodes

Slave node's credential: In credential section lets create a credential

Click add and go add credential. Select SSH Username with private key from the list, Give a any id name, Server username which was ubuntu, Give the private key from the pem file and click Enter



The screenshot shows the Jenkins 'Manage Nodes' page for a node named 'worker1'. The 'Launch method' is set to 'Docker variant of Launch agents via SSH with SSH key injection'. The 'Host' is '13.235.238.243'. The 'Credentials' dropdown is set to '- none -' with an 'Add' button. The 'Host Key Verification Strategy' is 'Known hosts file Verification Strategy'. The 'Availability' section has 'Keep this agent online as much as possible' selected. The 'Node Properties' section has 'Disable deferred wipeout on this node', 'Environment variables', and 'Tool Locations' unchecked, with a 'Save' button.

The 'Add Credentials' dialog box is open, showing the following fields:

- Domain:** Global credentials (unrestricted)
- Kind:** SSH Username with private key
- Scope:** Global (Jenkins, nodes, items, all child items, etc)
- ID:** worker1\_id
- Description:** worker1\_id
- Username:** ubuntu
- Treat username as secret:** ☐
- Private Key:** Enter directly
- Key:** YBvRaoGBAfhG16v1LGyrnSN2htccLR51xT31JvX0R5uhsukDABuH1pnSHe44E DQ1ZMdZ3ecv7B6suIX+Dzcc5XyM7md3enXoXg18H/6V7eB1s1byraG5CLHD+Uckz WER0ExRoZX2RTB8sMB0875V1Z+MvLgdeodaoF17t1JudHfex1ZEP+ END RSA PRIVATE KEY

# Parameterized job Plugins



Enabled

<p><b>Active Choices Plug-in</b> 2.6.4</p> <p>This plug-in provides additional parameter types for jobs, that allow you to cascade changes and render images or other HTML elements instead of the traditional parameter.</p> <p><a href="#">Report an issue with this plugin</a></p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p><b>Build With Parameters</b> 76.v9382db_f78962</p> <p>Allows the user to provide parameters for a build in the url (similar to /job/JOBNAME/buildWithParameters), prompting for confirmation before triggering the job.</p> <p><a href="#">Report an issue with this plugin</a></p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p><b>Extended Choice Parameter Plugin</b> 359.v35dcfdd0c20d</p> <p>Adds extended functionality to Choice parameter</p> <p><a href="#">Report an issue with this plugin</a></p> <div><p>Warning: The currently installed plugin version may not be safe to use. Please review the following security notices:</p><ul style="list-style-type: none"><li><a href="#">Stored XSS vulnerability</a></li><li><a href="#">Stored XSS vulnerability</a></li><li><a href="#">Arbitrary JSON and property file read vulnerability</a></li><li><a href="#">CSRF vulnerability and missing permission checks allow SSRF</a></li></ul></div>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p><b>Git Parameter Plug-In</b> 0.9.18</p> <p>Adds ability to choose branches, tags or revisions from git repositories configured in project.</p> <p><a href="#">Report an issue with this plugin</a></p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

# Parameterized job in Jenkins



## Project Repotagtest

This build requires parameters:

BRANCH

ENV

NAME

Build

# What is pipeline in Jenkins



In Jenkins, a pipeline refers to a series of steps or actions that are executed in a specific order to build, test, and deploy software applications. A pipeline is defined using a domain-specific language called the Jenkins Pipeline DSL(Domain Specific Language) or using a visual editor provided by Jenkins.

Two types of pipeline

- Declarative Pipeline
- Scripted Pipeline(Based on Groovy Language)

# Declarative Pipeline



```
pipeline {
  agent any

  tools {
    maven 'local_maven'
    jdk 'JDK_11'
    git 'local_git'
  }
  stages {
    stage('git clone') {
      steps {
        git branch: 'main', credentialsId: '93d5da1b-dcd0-4e46-8caa-ad6647ecc52f', url: 'http://test-gitlab.local.com/gitlab-instance-148b6b38/myfirstproject.git'
      }
    }

    stage('Build stage') {
      steps {
        echo 'This is build stage'
      }
    }

    stage('Test stage') {
      steps {
        echo 'This is Test stage'
      }
    }

    stage('Deploy stage') {
      steps {
        echo 'This is deploy stage'
      }
    }
  }

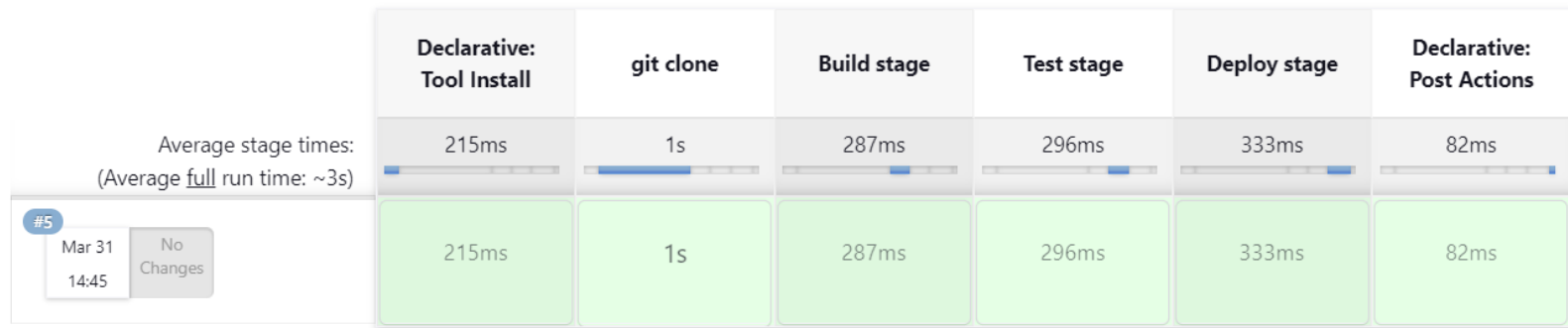
  post {
    always {
      echo 'I will always say Hello again!'
    }
  }
}
```



# Declarative Pipeline



## Stage View



# References

<https://www.jenkins.io/doc/book/pipeline/syntax/>

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Thank You

A white L-shaped line is positioned to the right of the "Thank You" text.

Get in touch with us:

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