

# Module 03 - Using Jenkins

Workshop DevOps

# **Module Summary**

Fingerprints Remote API

# Jenkins Dashboard - Key Concepts

Job/Project: a runnable task (e.g. compiling code, running tests, etc.)

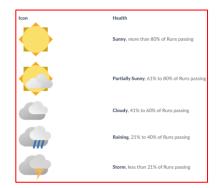
**Build**: the result of a single execution of a job/project

Build Status: last status of a build

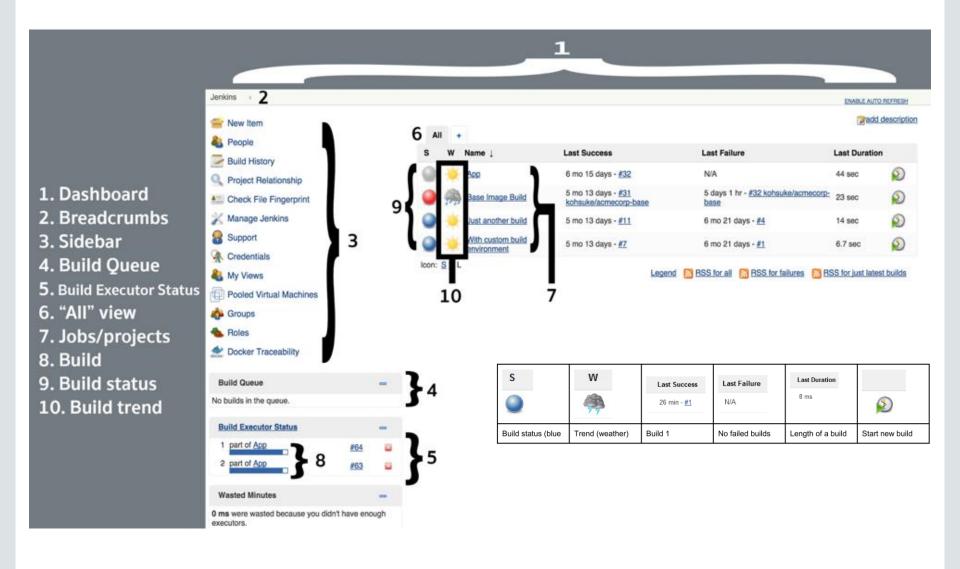


Build Trend: weather icon showing the trend of the last builds

View: a way to display jobs in tabbed categories



#### Jenkins Dashboard



## Job Configuration – Key Concepts

**Workspace**: a working directory where code, builds, and other temporary files are stored during a build

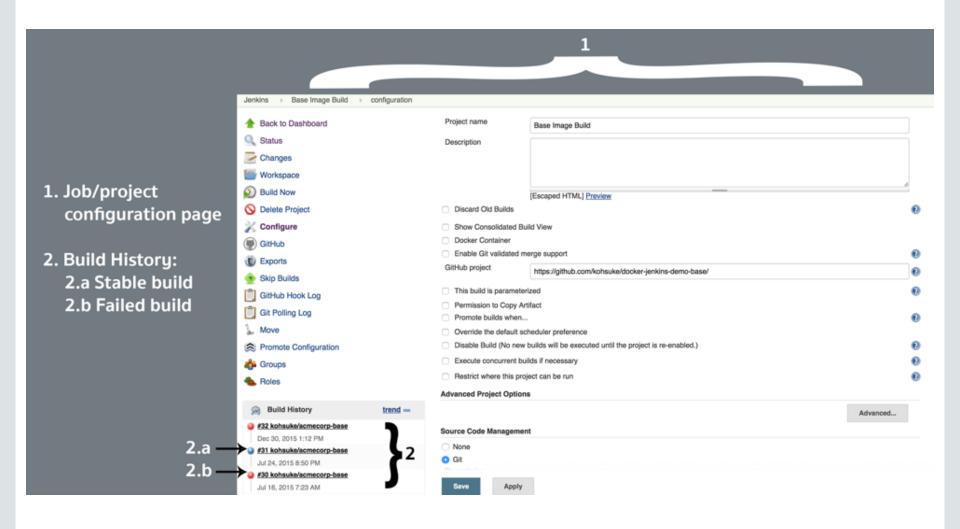
**Build trigger**: a criteria or a condition for triggering a build (e.g. time, code change, etc.)

**Build step**: a task executed during the build process (e.g. shell script)

Post-build step: additional task executed at the end of the build

**Artifact**: an immutable file generated at the end of the build (jar/zip file)

## **Job Configuration**

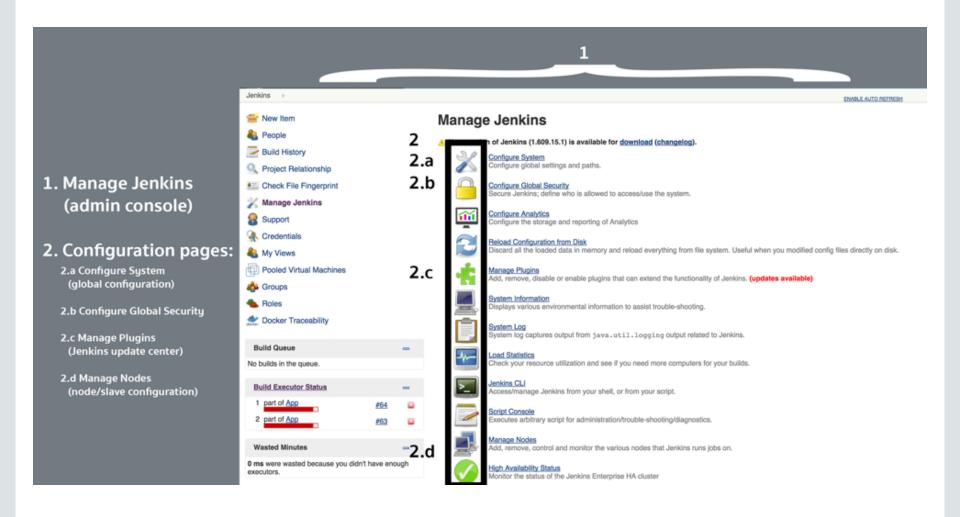


## Manage Jenkins – Key Concepts

Plugin: an extension to Jenkins core functionalities

**Node**: a machine part of the Jenkins environment and capable of executing a job (master/agent)

# Manage Jenkins



## Different Types of Jenkins Jobs (1/2)

**Freestyle**: Freestyle build jobs are general-purpose build jobs, which provides maximum flexibility. It can be used for any type of project.

**Pipeline**: This project runs the entire software development workflow as code. Instead of creating several jobs for each stage of software development, you can now run the entire workflow as one code.

**Multiconfiguration**: The multiconfiguration project allows you to run the same build job on different environments. It is used for testing an application in different environments.

## Different Types of Jenkins Jobs (2/2)

**Folder**: This project allows users to create folders to organize and categorize similar jobs in one folder or subfolder.

**GitHub Organization**: This project scans your entire GitHub organization and creates Pipeline jobs for each repository containing a Jenkinsfile

**Multibranch Pipeline**: This project type lets you implement different Jenkinsfiles for different branches of the same project.

# **Fingerprints**

Jenkins utilizes fingerprints for tracking a specific instance of a file. This is critically important when attempting to determine which particular version of a file was used during a build.

The fingerprint of a file is simply a MD5 checksum that can be used for comparing files.

MD5: d41d8cd98f00b204e9800998ecf8427e

#### Remote API

Many objects of Jenkins provide the REST remote access API. <a href="http://localhost:8080/api/">http://localhost:8080/api/</a>

The simplest way to access Jenkins REST API is to gather the User Token which is available by selecting your User and clicking on Configure.

#### http://localhost:8080/user/jenkins/configure

API Token		
User ID	jenkins	
API Token	f1499cc9852c899d327a1f644e61a64d	?
	Change API Token	

# Labs

03 - Using Jenkins