

# Jenkins

Securing Jenkins

# Lesson Objectives

➤ In this lesson, you will learn about:

- Introduction
- Securing Jenkins using Security realms
  - Authentication
  - Authorization
- How to configure/setup matrix based security



# Introduction

- As default in Jenkins, all users are allowed to create, configure and run build jobs.
- To secure project configuration in a larger organization setups, Jenkins supports with enabling of security.
- Jenkins supports several security models, and can integrate with several user repositories.
- Also Jenkins supports with Authentication and authorization mechanisms.
- For authenticating users, Jenkins offers number of options.
- Authorization can be either project specific, or Jenkins environment specific.

# Securing Jenkins using Security realms

- Jenkins identifies and manage users in a number of ways from built-in user database to integration with enterprise directories.
- Users can be authenticated in any on the way as listed below:
  - Simple Security
  - Using Jenkins Built-in User database.
  - Using an LDAP Repository.
  - Using Microsoft Active Directory
  - Using Unix Users and Groups
  - Delegating to the servlet Container,
  - Integrating with other systems.

# Securing Jenkins using Security realms

## Activating Security in Jenkins

In “Manage Jenkins” screen, Click on “ Configure Global Security” link and do the configuration as shown below:

☒ Enable security

TCP port for JNLP slave agents: ☐ Fixed :  ☒ Random ☐ Disable

Markup Formatter: Raw HTML

Treat the text as HTML and use it as is without any translation

Access Control

**Security Realm**

- ☐ Delegate to servlet container
- ☒ Jenkins's own user database
  - ☒ Allow users to sign up
- ☐ LDAP
- ☐ Unix user/group database

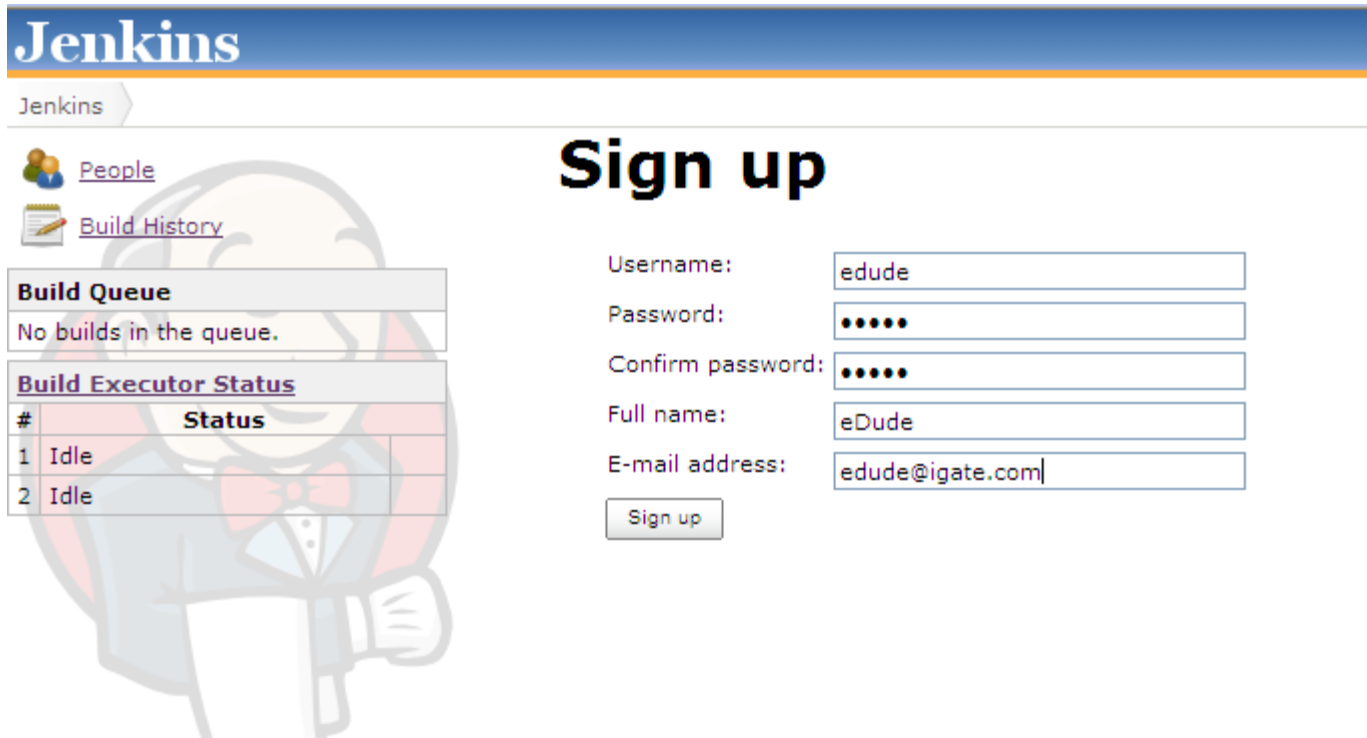
**Authorization**

- ☐ Anyone can do anything
- ☐ Legacy mode
- ☒ Logged-in users can do anything
- ☐ Matrix-based security
- ☐ Project-based Matrix Authorization Strategy

# Securing Jenkins using Security realms-

## Simple Security in Jenkins

In Jenkins dashboard screen, click on “signup” link to create a new user and fill the details as shown below:



The screenshot shows the Jenkins dashboard with a sidebar on the left and a main content area. The sidebar includes links for 'People' and 'Build History', a 'Build Queue' section stating 'No builds in the queue.', and a 'Build Executor Status' table. The main content area is titled 'Sign up' and contains a form with fields for Username, Password, Confirm password, Full name, and E-mail address, followed by a 'Sign up' button.

**Jenkins**

Jenkins

[People](#)

[Build History](#)

**Build Queue**

No builds in the queue.

**Build Executor Status**

#	Status
1	Idle
2	Idle

## Sign up

Username:

Password:

Confirm password:

Full name:

E-mail address:


# Securing Jenkins using Security realms-

## Authentication and Authorization

To assign authentication strategies for authorized persons, do the configuration as shown below in “enabling security”:

### Authorization

- ☐ Anyone can do anything
- ☐ Legacy mode
- ☐ Logged-in users can do anything
- ☒ Matrix-based security

User/group	Overall					Slave					Job					Run		View		SCM					
	Administer	Read	RunScripts	UploadPlugins	ConfigureUpdateCenter	Configure	Delete	Create	Disconnect	Connect	Create	Delete	Configure	Read	Discover	Build	Workspace	Cancel	Delete	Update	Create	Delete	Configure	Read	Tag
 ilearn	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Anonymous	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

User/group to add:

Add

- ☐ Project-based Matrix Authorization Strategy

# Summary

➤ In this lesson, you have learnt about:

- Introduction
- Securing Jenkins using Security realms
  - Authentication
  - Authorization
- How to setup/configure matrix based security and use it

