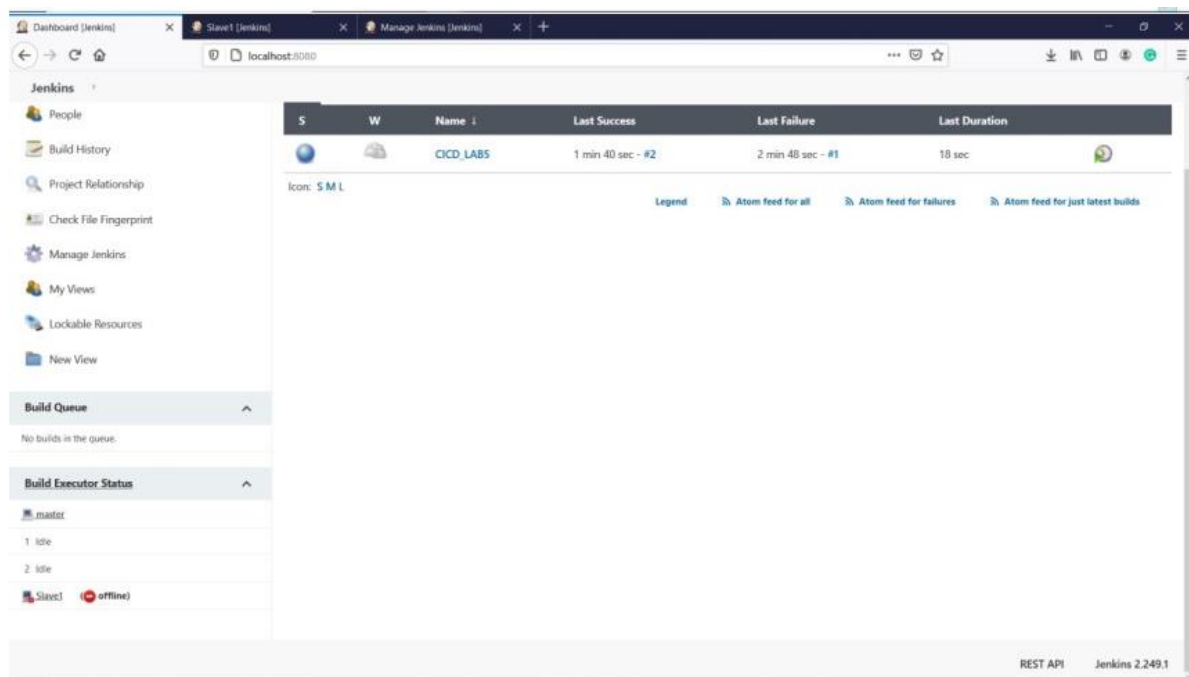


Implementing Master/Slave architecture in Jenkins

- Start the Jenkins service using the `java -jar jenkins.war` command in the command prompt
- Go to the Jenkins dashboard at `localhost:8080`



LAB 8

- Go to settings and use manage nodes and cloud settings under manage Jenkins options to create a new slave

Jenkins

1 Idle

2 Idle

Sandbox bypass vulnerability

Restore the previous version of Jenkins

Downgrade to 2.251

System Configuration

- Configure System**
Configure global settings and paths.
- Global Tool Configuration**
Configure tools, their locations and automatic installers.
- Manage Plugins**
Add, remove, disable or enable plugins that can extend the functionality of Jenkins.
There are updates available
- Manage Nodes and Clouds**
Add, remove, control and monitor the various nodes that Jenkins runs jobs on.
- Install as Windows Service**
Installs Jenkins as a Windows service to this system, so that Jenkins starts automatically when the machine boots.

Security

- Configure Global Security**
Secure Jenkins; define who is allowed to access/use the system.
- Manage Credentials**
Configure credentials
- Configure Credential Providers**
Configure the credential providers and types
- Manage Users**
Create/delete/modify users that can log in to this Jenkins

localhost:8080/computer

Status Information

- Run the slave node on the slave

```
Command Prompt - java -jar agent.jar -jnlpUrl http://localhost:8080/computer/Slave1/slave-agent.jnlp -secret c4155d83d8ee5e2dba51e68da343e26441de9f8eb8eb7159c1cc13cf7e5ef75f -workDir "G:\Study material\CCD\Slave1"

G:\Study material>cd CCD
G:\Study material\CCD>cd Slave1
G:\Study material\CCD\Slave1>java -jar agent.jar -jnlpUrl http://localhost:8080/computer/Slave1/slave-agent.jnlp -secret c4155d83d8ee5e2dba51e68da343e26441de9f8eb8eb7159c1cc13cf7e5ef75f -workDir "G:\Study material\CCD\Slave1"
Sep 12, 2020 9:02:56 PM org.jenkinsci.remoting.engine.WorkDirManager initializeWorkDir
INFO: Using G:\Study material\CCD\Slave1\remoting as a remoting work directory
Sep 12, 2020 9:02:56 PM org.jenkinsci.remoting.engine.WorkDirManager setupLogging
INFO: Both error and output logs will be printed to G:\Study material\CCD\Slave1\remoting
Sep 12, 2020 9:02:57 PM hudson.remoting.jnlp.Main createEngine
INFO: Setting up agent: Slave1
Sep 12, 2020 9:02:57 PM hudson.remoting.jnlp.Main$CuiListener <init>
INFO: Jenkins agent is running in headless mode.
Sep 12, 2020 9:02:57 PM hudson.remoting.Engine startEngine
INFO: Using Remoting version: 4.5
Sep 12, 2020 9:02:57 PM org.jenkinsci.remoting.engine.WorkDirManager initializeWorkDir
INFO: Using G:\Study material\CCD\Slave1\remoting as a remoting work directory
Sep 12, 2020 9:02:57 PM hudson.remoting.jnlp.Main$CuiListener status
INFO: Locating server among [http://localhost:8080/]
Sep 12, 2020 9:02:57 PM org.jenkinsci.remoting.engine.JnlpAgentEndpointResolver resolve
INFO: Remoting server accepts the following protocols: [JNLPA-connect, Ping]
Sep 12, 2020 9:02:57 PM hudson.remoting.jnlp.Main$CuiListener status
INFO: Agent discovery successful
Agent address: localhost
Agent port: 57274
Identity: 59:4a:3b:94:0e:bd:ab:ac:a3:2a:58:a1:28:17:2d:c1
Sep 12, 2020 9:02:57 PM hudson.remoting.jnlp.Main$CuiListener status
INFO: Handshaking
Sep 12, 2020 9:02:57 PM hudson.remoting.jnlp.Main$CuiListener status
INFO: Connecting to localhost:57274
Sep 12, 2020 9:02:57 PM hudson.remoting.jnlp.Main$CuiListener status
INFO: Trying protocol: JNLPA-connect
Sep 12, 2020 9:02:57 PM hudson.remoting.jnlp.Main$CuiListener status
INFO: Remote identity confirmed: 59:4a:3b:94:0e:bd:ab:ac:a3:2a:58:a1:28:17:2d:c1
Sep 12, 2020 9:02:59 PM hudson.remoting.jnlp.Main$CuiListener status
INFO: Connected
```

LAB 8

- Run the project specifying the slave node

The top screenshot shows the Jenkins web interface for 'Agent Slave1 (Slave1)'. The status is 'Agent is connected.' and 'Projects tied to Slave1' are listed as 'None'. The left sidebar shows navigation options like 'Back to List', 'Status', 'Delete Agent', 'Configure', 'Build History', 'Load Statistics', 'Script Console', 'Log', 'System Information', and 'Disconnect'. The 'Build Executor Status' section shows '1 idle' executor.

The bottom screenshot shows a Windows File Explorer window for the 'Slave1' workspace. The directory structure is as follows:

| Name | Date modified | Type | Size |
|--------------------------------|--------------------|---------------------|----------|
| remoting | 9/12/2020 9:02 PM | File folder | |
| workspace | 9/12/2020 10:37 PM | File folder | |
| agent.jar | 9/12/2020 8:59 PM | Executable Jar File | 1,486 KB |
| maven3-interceptor-commons.jar | 9/12/2020 10:39 PM | Executable Jar File | 7 KB |
| maven35-agent.jar | 9/12/2020 10:39 PM | Executable Jar File | 9 KB |
| maven35-interceptor.jar | 9/12/2020 10:39 PM | Executable Jar File | 21 KB |