

Troubleshooting Guide

This section lists common issues encountered during Jenkins installation and job execution, along with their possible causes and solutions.

1. Jenkins does not start

Cause:

- Java is not installed or not added to system PATH
- Port 8080 is already in use

Solution:

- Verify Java installation using:

```
cmd  
java -version
```

- Set JAVA_HOME and update PATH
- Change Jenkins port in jenkins.xml file if required

2. Unable to unlock Jenkins (initial password not found)

Cause:

- Incorrect file path
- Jenkins service not running

Solution:

- Check the file path:

```
C:\Program Files\Jenkins\secrets\initialAdminPassword
```

- Restart Jenkins service
- Run Jenkins as administrator

3. Git not recognized in Jenkins

Cause:

- Git is not installed
- Git path not configured in Jenkins

Solution:

- Install Git for Windows
- Configure Git in:
[Manage Jenkins → Global Tool Configuration](#)

- Restart Jenkins after configuration

4. Maven build failure

Cause:

- Maven not configured
- pom.xml file missing
- Incorrect Java version

Solution:

- Configure Maven in Global Tool Configuration
- Verify pom.xml in project root
- Ensure correct JDK is selected

5. Webhook not triggering build

Cause:

- Incorrect webhook URL
- Jenkins not publicly accessible
- GitHub plugin not installed

Solution:

- Verify webhook URL:

`http://<IP>:8080/github-webhook/`

- Install GitHub plugin
- Enable “GitHub hook trigger for GITScm polling” in job

6. Email notification not sent

Cause:

- Incorrect SMTP configuration
- Firewall blocking email service
- Invalid credentials

Solution:

- Verify SMTP settings in Configure System
- Enable “Allow less secure apps” (if applicable)
- Test email configuration in Jenkins

7. Pipeline fails due to missing Jenkinsfile

Cause:

- Jenkinsfile not present in repository root
- Incorrect branch selected

Solution:

- Place Jenkinsfile in project root
- Ensure correct branch contains Jenkinsfile
- Re-run branch indexing

8. Plugin installation errors

Cause:

- Network issues
- Incompatible plugin versions

Solution:

- Check internet connectivity
- Update Jenkins to LTS
- Install compatible plugin versions
- Restart Jenkins after installation

9. Permission denied errors

Cause:

- Incorrect user permissions
- Matrix-based security misconfiguration

Solution:

- Verify user permissions in Configure Global Security
- Grant Job Read/Build permissions
- Save and re-login

10. Build stuck or not executing

Cause:

- No available agent
- Executor count set to zero

Solution:

- Increase number of executors
- Verify agent status
- Restart Jenkins

Summary

The troubleshooting guide helps in resolving common Jenkins-related issues during installation and job execution.

By following these solutions, system stability and build reliability can be maintained.