



Jenkins Plugins

Jenkins plugins are the backbone of Jenkins' extensibility.

They allow Jenkins to integrate with countless tools — from source code management (Git, GitHub) to CI/CD, cloud platforms, testing, and security tools.

With plugins, Jenkins transforms from a simple automation server into a complete DevOps orchestration platform.

1. What Are Jenkins Plugins?

A Jenkins plugin is an add-on that extends the functionality of Jenkins.

Plugins can:

- Add new build steps, post-build actions, or triggers.
- Integrate external tools (GitHub, Docker, SonarQube, AWS, etc.).
- Provide UI enhancements, reporting dashboards, or security options.

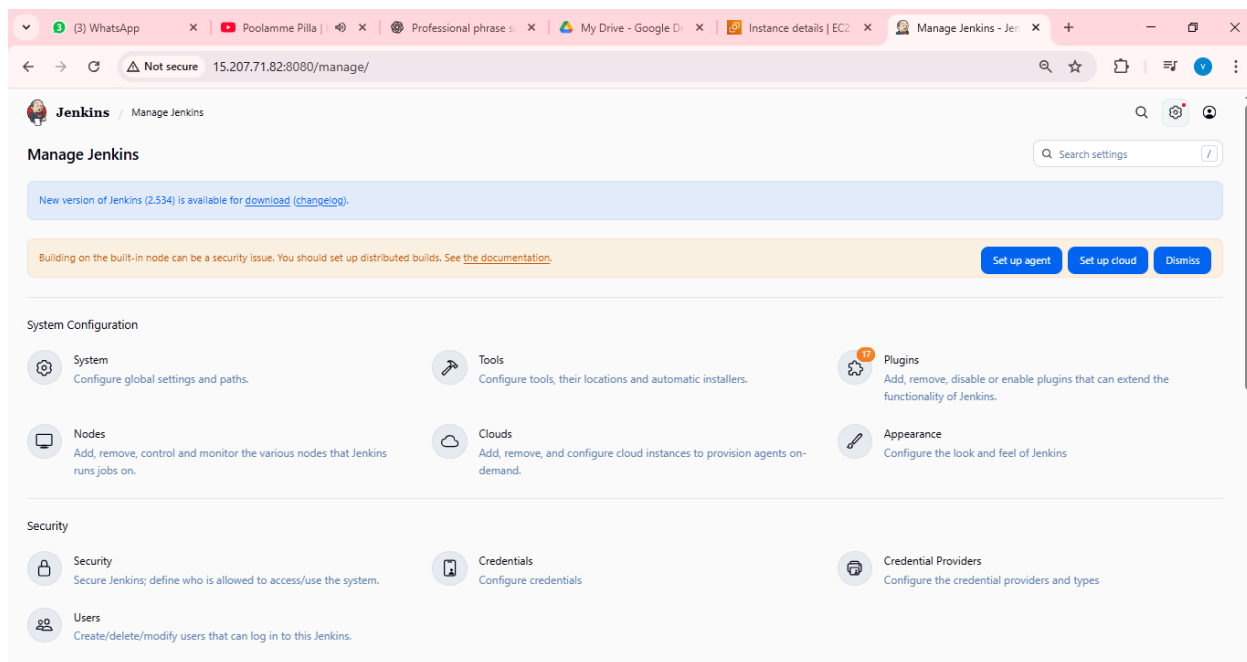
Example:

Without plugins → Jenkins can only run basic shell commands.

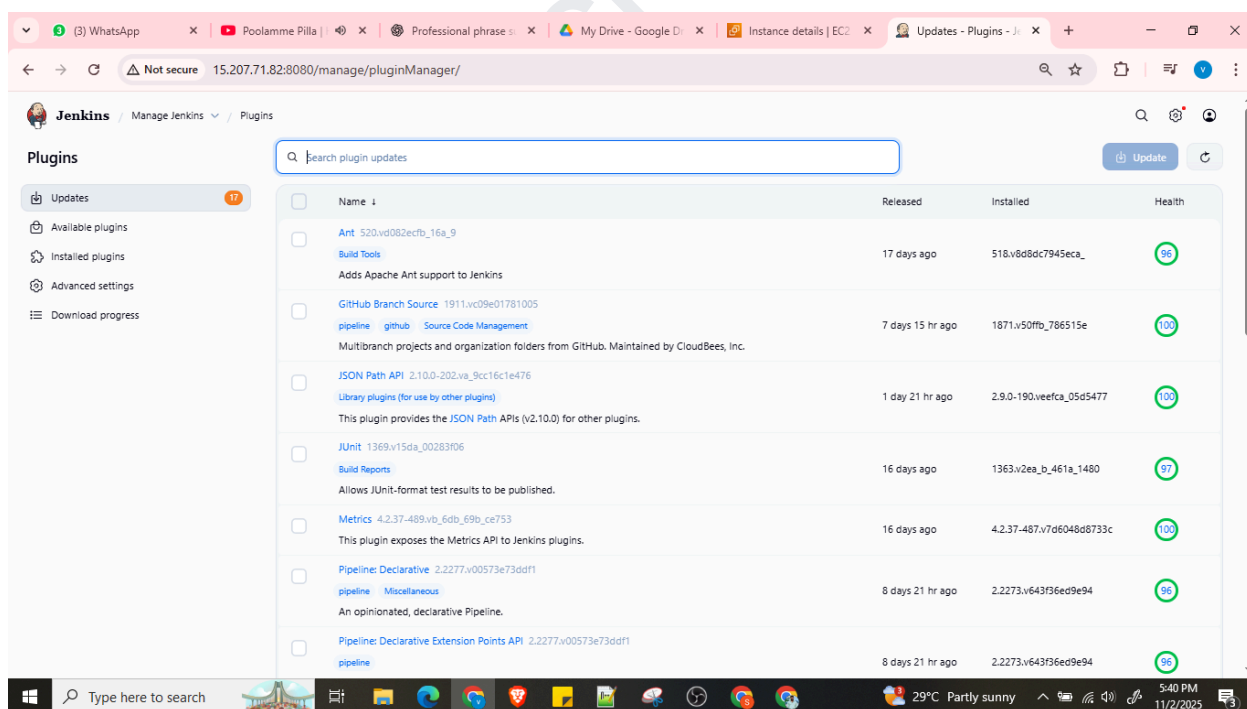
With plugins → Jenkins can build Maven projects, scan Docker images, trigger AWS deployments, and publish reports.

2. Managing Plugins in Jenkins

Accessing Plugin Manager



The screenshot shows the Jenkins 'Manage Jenkins' interface. At the top, there's a notification about a new version of Jenkins (2.534) available for download. Below this, there's a warning about building on the built-in node and buttons to 'Set up agent', 'Set up cloud', and 'Dismiss'. The main section is divided into 'System Configuration' and 'Security'. Under 'System Configuration', there are links for 'System', 'Tools', 'Nodes', 'Clouds', 'Plugins', and 'Appearance'. Under 'Security', there are links for 'Security', 'Users', 'Credentials', and 'Credential Providers'.



The screenshot shows the Jenkins 'Updates - Plugins' page. It displays a table of installed plugins with columns for Name, Released, Installed, and Health. The table lists several plugins, including Ant, GitHub Branch Source, JSON Path API, JUnit, Metrics, Pipeline: Declarative, and Pipeline: Declarative Extension Points API. Each plugin entry includes a checkbox, a link to the plugin's documentation, and a health status indicator (a green circle with a number).

Name	Released	Installed	Health
Ant 520.vd082ecfb_16a_9 Build Tools Adds Apache Ant support to Jenkins	17 days ago	518.v8d8dc7945eca_	95
GitHub Branch Source 1911.vc09e01781005 pipeline github Source Code Management Multibranch projects and organization folders from GitHub. Maintained by CloudBees, Inc.	7 days 15 hr ago	1871.v50fb_786515e	100
JSON Path API 2.10.0-202.va_9cc16c1e476 Library plugins (for use by other plugins) This plugin provides the JSON Path APIs (v2.10.0) for other plugins.	1 day 21 hr ago	2.9.0-190.veefca_05d5477	100
JUnit 1369.v15da_00283f06 Build Reports Allows JUnit-format test results to be published.	16 days ago	1363.v2ea_b_461a_1480	97
Metrics 4.2.37-489.vb_6db_69b_ce753 This plugin exposes the Metrics API to Jenkins plugins.	16 days ago	4.2.37-487.v7d6048d8733c	100
Pipeline: Declarative 2.2277.v00573e73dd1f pipeline Miscellaneous An opinionated, declarative Pipeline.	8 days 21 hr ago	2.2273.v643f36ed9e94	95
Pipeline: Declarative Extension Points API 2.2277.v00573e73dd1f pipeline	8 days 21 hr ago	2.2273.v643f36ed9e94	95

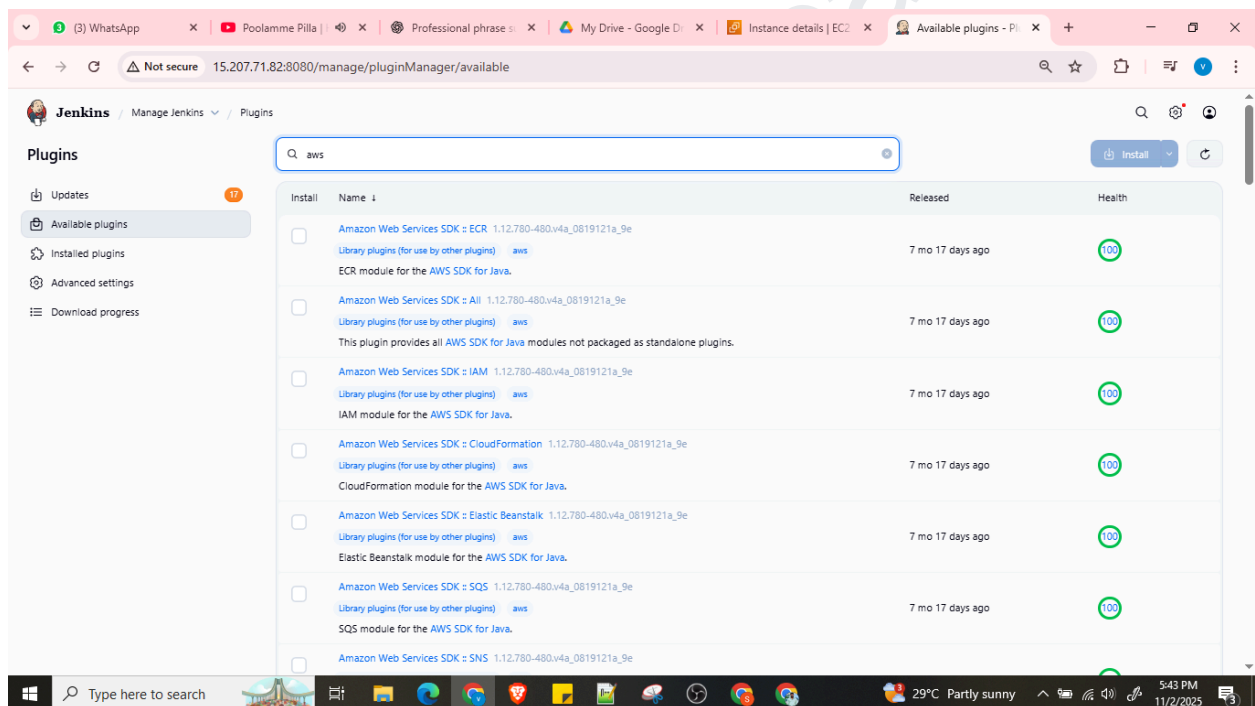
JENKINS

Navigate to:

Dashboard → Manage Jenkins → Plugins → Available / Installed / Updates / Advanced

Jenkins Plugin Manager has four tabs:

Tab	Description
Updates	Shows available updates for installed plugins
Available	Lists all new plugins you can install
Installed	Displays currently installed plugins
Advanced	Allows manual upload of .hpi or .jpi plugin files



The screenshot shows the Jenkins Plugin Manager interface in a web browser. The 'Available' tab is selected, displaying a list of plugins. A search bar at the top contains the text 'aws'. The table below lists several AWS SDK plugins, each with an 'Install' checkbox, a detailed name, a description, a 'Released' date, and a 'Health' status (all showing 100%).

Install	Name	Released	Health
<input type="checkbox"/>	Amazon Web Services SDK : ECR 1.12.780-480.v4a_0819121a_9e Library plugins (for use by other plugins) aws ECR module for the AWS SDK for Java.	7 mo 17 days ago	100
<input type="checkbox"/>	Amazon Web Services SDK : All 1.12.780-480.v4a_0819121a_9e Library plugins (for use by other plugins) aws This plugin provides all AWS SDK for Java modules not packaged as standalone plugins.	7 mo 17 days ago	100
<input type="checkbox"/>	Amazon Web Services SDK : IAM 1.12.780-480.v4a_0819121a_9e Library plugins (for use by other plugins) aws IAM module for the AWS SDK for Java.	7 mo 17 days ago	100
<input type="checkbox"/>	Amazon Web Services SDK : CloudFormation 1.12.780-480.v4a_0819121a_9e Library plugins (for use by other plugins) aws CloudFormation module for the AWS SDK for Java.	7 mo 17 days ago	100
<input type="checkbox"/>	Amazon Web Services SDK : Elastic Beanstalk 1.12.780-480.v4a_0819121a_9e Library plugins (for use by other plugins) aws Elastic Beanstalk module for the AWS SDK for Java.	7 mo 17 days ago	100
<input type="checkbox"/>	Amazon Web Services SDK : SQS 1.12.780-480.v4a_0819121a_9e Library plugins (for use by other plugins) aws SQS module for the AWS SDK for Java.	7 mo 17 days ago	100
<input type="checkbox"/>	Amazon Web Services SDK : SNS 1.12.780-480.v4a_0819121a_9e		

The screenshot shows the Jenkins 'Available plugins' page. The search bar contains 'azure'. The table lists the following plugins:

Install	Name	Released	Health
<input type="checkbox"/>	Azure SDK API 254.v095ca_4461c94 Library plugins (for use by other plugins) azure Exposes the Azure SDK for Java to other Jenkins plugins.	20 days ago	100
<input type="checkbox"/>	Azure Credentials 404.vd0fb_33a_8a_14e credentials azure Manage Azure credentials using Jenkins Credentials API	3 days 19 hr ago	96
<input type="checkbox"/>	Microsoft Entra ID (previously Azure AD) 619.v53317a_30e630 Security Authentication and User Management azure A Jenkins authentication & authorization plugin for Microsoft Entra ID (a.k.a. Azure Active Directory, Azure AD)	26 days ago	94
<input type="checkbox"/>	Azure Commons 1.1.3 Library plugins (for use by other plugins) azure Common APIs for Azure related Jenkins plugins <div>This plugin is deprecated. In general, this means that it is either obsolete, no longer being developed, or may no longer work. Learn more.</div>	4 yr 6 mo ago	51
<input type="checkbox"/>	Azure Key Vault 327.v3f37dc30312a_ azure Azure Key Vault integration, provides a build wrapper, declarative pipeline step, credential provider and configuration-as-code integration.	23 days ago	96

The screenshot shows the Jenkins 'Available plugins' page. The search bar contains 'docker'. The table lists the following plugins:

Install	Name	Released	Health
<input type="checkbox"/>	Docker 1274.vc0203fd2e74 Cloud Providers Cluster Management docker This plugin integrates Jenkins with Docker	7 mo 29 days ago	96
<input type="checkbox"/>	Docker Commons 457.v0f62a_94f11a_3 Library plugins (for use by other plugins) docker Provides the common shared functionality for various Docker-related plugins.	5 mo 6 days ago	97
<input type="checkbox"/>	Docker Pipeline 634.vcdc7242b_eda_7 pipeline DevOps Deployment docker Build and use Docker containers from pipelines.	19 days ago	94
<input type="checkbox"/>	Docker API 3.6.0-129.vf6f5db_c0f589 Library plugins (for use by other plugins) docker This plugin provides docker-java API for other plugins.	1 mo 0 days ago	100
<input type="checkbox"/>	docker-build-step 2.12 Build Tools docker This plugin allows to add various docker commands to your job as build steps. <div>Warning: This plugin version may not be safe to use. Please review the following security notices: • CSRF vulnerability and missing permission check</div>	1 yr 5 mo ago	62



Most Used Jenkins Plugins (NOT Installed by Default)

1. AWS Credentials Plugin

Used to add AWS Access Key & Secret Key securely.

2. Azure Credentials Plugin

Used to add Azure Service Principal credentials.

3. Docker Pipeline Plugin

Enables Docker build and push inside Jenkinsfile.

4. Docker Plugin

Allows Jenkins to communicate with Docker Engine.

5. Kubernetes Plugin

Used to spin up Jenkins agents dynamically in Kubernetes clusters.

6. SonarQube Scanner Plugin

Required for code quality & security analysis using SonarQube.

7. JFrog Artifactory Plugin

Used for pushing & pulling artifacts from Artifactory.

8. Slack Notification Plugin

Sends build notifications to Slack channels.



9. Email Extension Plugin (Email-ext)

Provides advanced email templates and custom notification triggers.

10. Role-Based Authorization Strategy Plugin

Allows RBAC (role-based access control) in Jenkins.

11. Workspace Cleanup Plugin

Cleans build workspace before or after runs.

12. SSH Agent Plugin

Used for SSH key-based access to servers or Git repositories.

13. Build Timeout Plugin

Automatically aborts jobs that exceed a time limit.

14. OWASP Dependency-Check Plugin

Performs security scanning for vulnerable dependencies.

15. Pipeline: AWS Steps

Adds advanced AWS steps like S3 upload, EC2 operations, etc.

16. Pipeline: GitHub Notifications

Allows GitHub commit status updates from Jenkins.

17. Terraform Plugin

Helps run Terraform init/plan/apply inside pipelines.