Project Dependency Graph Plugin
User's Guide

July 14, 2016

1 General information

1.1 Plugin description

The Project Dependency Graph plugin for Jenkins visualizes the dependencies of a project. It displays the dependencies on other projects and libraries as a graph on the overview page of each job and build. Each dependency is linked to the artifact or source code repository.

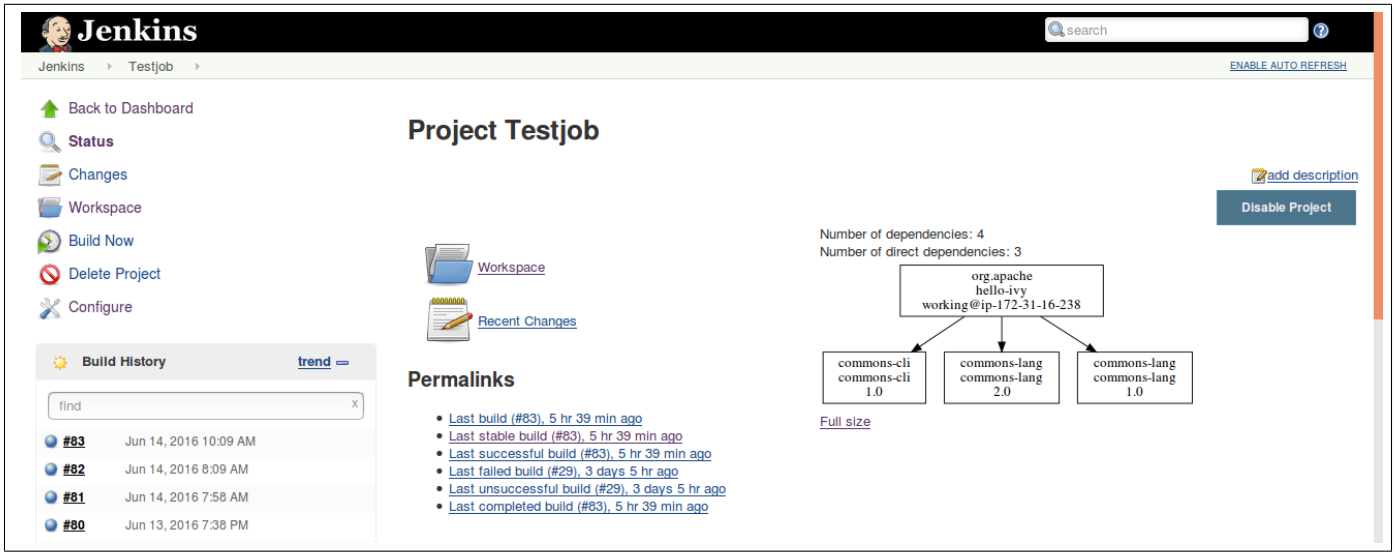

Figure 1: Example job overview with dependency graph

1.2 Further information

The creation of the graph is automatically triggered after your build completes. A graph is created only for successful builds.

The job overview page shows the dependency graph of the last successful build (even if the last build failed).

2 System and project requirements

- Operating system: Linux
- Installed Software: GraphViz

Currently the Project Dependency Graph plugin works only with Ivy projects. In Jenkins you can create an Ivy project in one of the following ways:

Using the Ivy plugin

Install the Ivy plugin. Create a new project and select "Ivy project".

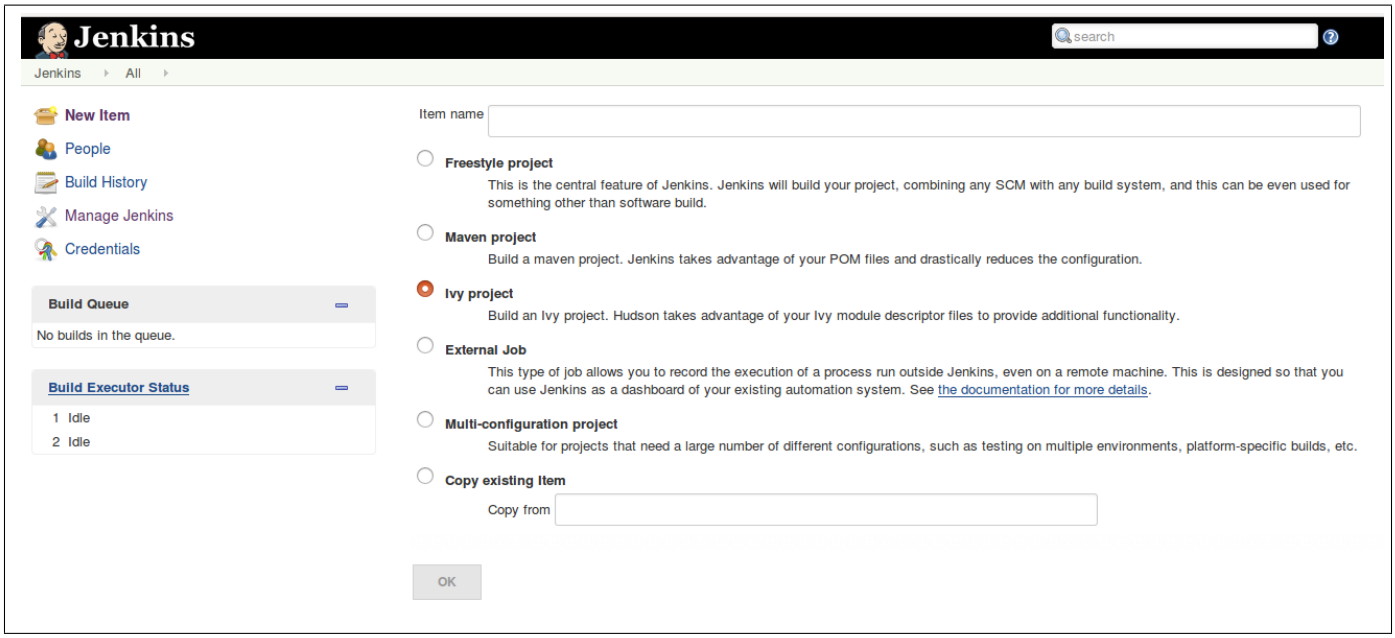

Figure 2: Creating an Ivy project using the Ivy plugin

As a Freestyle project

You can also create a new "Freestyle project". Make sure your project is an ivy project, i.e. has valid ivy.xml and build.xml files.

3 Configuration

3.1 System configuration

In order to build any Ivy project you need to tell Jenkins where to find your JDK, Ant and Ivy installations.

Go to "Manage Jenkins" → "Configure System". Add a JDK and an Ant installation to your settings.

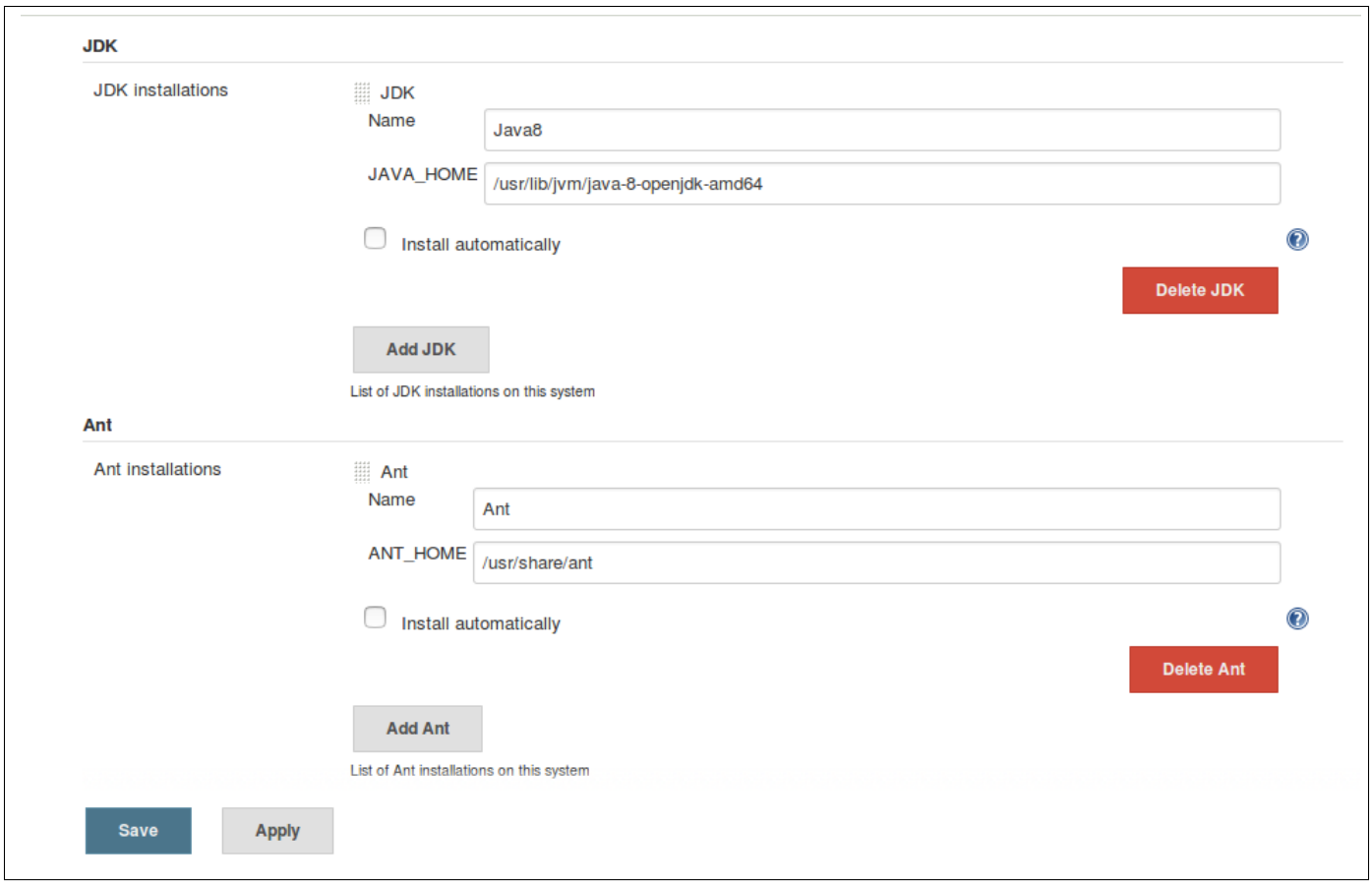

Figure 3: Adding JDK and Ant installation

You also need an Ivy installation. Copy the Ivy(...).jar into the "Ant_Home/lib" directory to be able to use Ivy.

3.2 Job configuration

You can activate the Project Dependency Graph plugin in the Job configuration. You will find it as a post-build action ("Show Dependency Graph").

Figure 4: Activated plugin

Here you can also choose whether you want all dependencies displayed or only direct dependencies. The default is set to show all dependencies.

Figure 5: Customized plugin

Important: The Project Dependency Graph plugin uses the report generated by Ivy to resolve the dependencies. You need to activate the generation of the xml report file in the project's build.xml. To do this, set attribute xml = "true" for target "report".

```
<!-- ==================================
     target: report
     ================================== -->
<target name="report" depends="resolve" description="--> generates a report of dependencies">
    <ivy:report todir="${build.dir}" xml="true"/>
</target>
```

Figure 6: Altering the Ivy report

You will also have to tell Jenkins to create the report.

Either add the build step "Execute shell" to your project's build steps in the job configuration and call "ant report" or install the Ivy report plugin and use its features to create an Ivy report (see `https://wiki.jenkins-ci.org/display/JENKINS/Ivy+Report+Plugin`).

Figure 7: Creating an Ivy report with build step "Execute shell"