AccuRev

AccuRev Plug-In for Jenkins

Installation and Release Notes

Version 2013.1

Revised 13-November-2013

Copyright

Table of Contents

Preface

This book is your guide to installing AccuRev® Plug-In for Jenkins. It is intended for AccuRev and Jenkins system administrators.

What is AccuRev Plug-In for Jenkins?

AccuRev Plug-In for Jenkins is the integration between AccuRev and Jenkins continuous integration software that allows you to manage and automate build behavior in Jenkins based on files and directories that are under AccuRev source control.

Note: Prior to Release 2013.1, an AccuRev plug-in for Jenkins was provided by the Jenkins open source foundation and was known as the "Jenkins Accurev plugin" (available at http://jenkins-ci.org).

Using This Book

This book assumes you are familiar with your operating system and its commands, as well as with AccuRev and Jenkins.

The remaining chapters in this book describe how to install AccuRev Plug-In for Jenkins and provide information about current release:

Chapter	Description
Chapter 1 Introduction	Introduces the current release and describes its highlights.
Chapter 2 Installation Notes	Describes how to install AccuRev Plug-In for Jenkins.
Chapter 3 Release Notes	Provides information about enhancements, fixes, and known issues in current and recent AccuRev Plug-In releases.

Typographical Conventions

This book uses the following typographical conventions:

Convention	Description
`blue sans-serif`	Used for sample code or output.
`red monospace`	Used for examples.
bold	Used for command names, and button names in the AccuSync Web user interface
light italic	Used for emphasis, book titles, and for first use of important terms
blue italic	Identifies a hyperlink (to a page or Web URL, for example)

Contacting Technical Support

AccuRev offers a variety of options to meet your technical support needs. For complete information about AccuRev technical support services, visit our Web site:

http://www.accurev.com/support.html

License Issues

If you are having trouble with a license for your AccuRev product, visit the License Self Help page first to see if there is a solution for your problem:

http://www.accurev.com/support/license-self-help.html

Other Support Issues

To obtain technical support for an AccuRev product:

*   Go to *http://support.accurev.com/*

*   Or write AccuRev technical support at *support@accurev.com*

When you contact AccuRev technical support, please include the following information:

*   The AccuRev version

*   The operating system

*   If you are using an AccuBridge™ or AccuSync product:

    *   The AccuBridge version

    *   The version of the third-party system (JIRA or Rally, for example)

*   A brief description of the problem you are experiencing. Be sure to include which AccuRev interface you were using (Web user interface, Java GUI, or CLI), any error messages you received, what you were doing when the error occurred, whether the problem is reproducible, and so on.

*   A description of any attempts you have made to resolve the issue, including using the resources described in *Other Resources*.

*   A simple assessment of how the issue affects your organization.

Other Resources

In addition to contacting AccuRev technical support, consider taking advantage of the following resources:

*   AccuRev Known Problems and Solutions – *http://www.accurev.com/support/kps.html*

    The AccuRev Known Problems and Solutions page describes known problems in released versions of AccuRev products.

*   AccuRev User Forum – *http://www.accurev.com/ubbthreads/*

    The AccuRev User Forum is a valuable resource. In addition to access to AccuRev's international user community, the User Forum is the place to go for resources like:

    *   The AccuRev knowledge base

    *   The AccuRev FAQ

    Register as a User Forum member today.

*   AccuRev documentation – *http://www.accurev.com/documentation.html*

    This page provides access to AccuRev product documentation for all current and previous releases of most AccuRev products.

1. Introduction

AccuRev Plug-In for Jenkins (AccuRev Plug-In) integrates AccuRev source control management capability with Jenkins, a developer application that monitors the execution of repeated jobs, such as building a software project.

Note: Prior to Release 2013.1, the AccuRev Plug-In for Jenkins was provided by the Jenkins open source foundation and was known as the "Jenkins Accurev plugin" (available at http://jenkins-ci.org).

This chapter describes the highlights of the current release.

Highlights of this Release

AccuRev Plug-In Version 2013.1 includes several new features, including the following:

- **Use an AccuRev Reference Tree.** You can now use an AccuRev reference tree as the source of your build in Jenkins. When using a reference tree as the source of your build, AccuRev Plug-In confirms that the tree is valid, that it is has the correct parent stream, that it is updated, and that all files are populated. In addition, AccuRev Plug-In enables you to remove external files in the reference tree.

- **Filter for Poll SCM.** When used in conjunction with the **Poll SCM** option in the **Build Triggers** section of the Jenkins configuration page, this feature of the AccuRev Plug-In enables you to specify the files and directories that must change in order to start a build in Jenkins. This capability enables you to use changes to specific elements to start builds and to prevent builds from starting because of changes you want to ignore.

- **Web URLs rendered as active hyperlinks.** To improve usability, web URLs in build change reports appear as active hyperlinks. Additionally, build transactions and issues are also formatted as hyperlinks.

See *Chapter 3 Release Notes* for more information on new features.

What to Do Next

To install AccuRev Plug-In, see *Chapter 2 Installation Notes*.

For details about this release, see *Chapter 3 Release Notes*.

2. Installation Notes

This chapter describes how to install and configure AccuRev Plug-In for Jenkins. It provides information on system requirements, prerequisites, installing, upgrading, configuring, and uninstalling.

System Requirements

The system requirements for the AccuRev Plug-In for Jenkins are the same as those specified for your AccuRev installation and your Jenkins installation.

Prerequisites

Before installing the AccuRev Plug-In for Jenkins, ensure that the following conditions have been met:

- AccuRev Version 5.7 or higher must be installed
- The Jenkins server must be running
- The AccuRev client binary has to be in the PATH environment variable that is visible to both the Jenkins agent and the Jenkins server
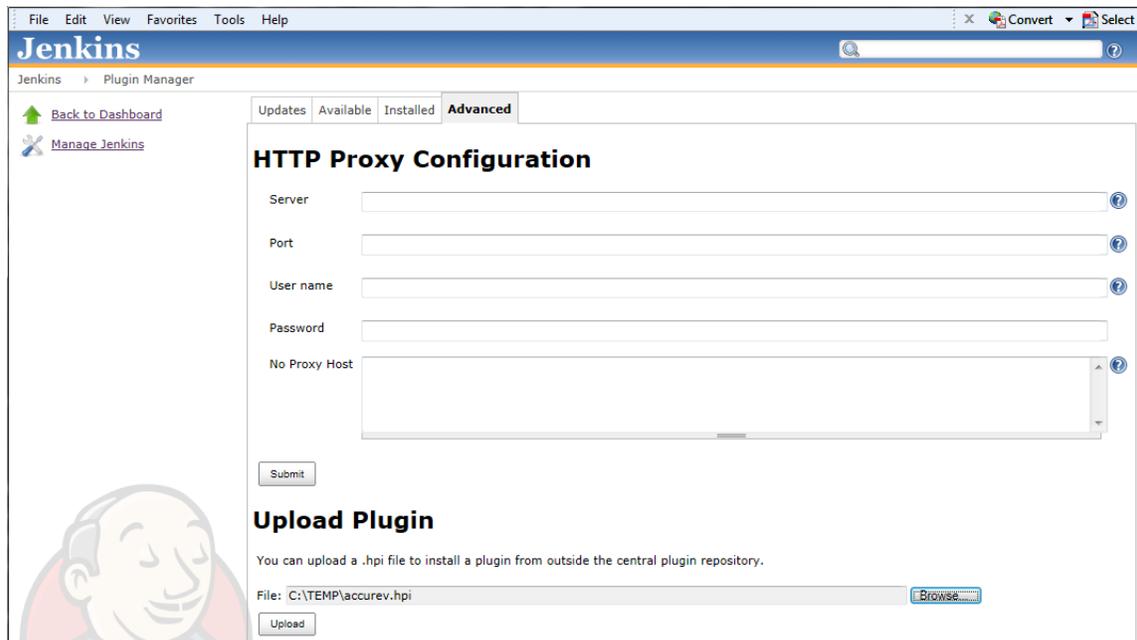
Installing AccuRev Plug-In for Jenkins

Use this procedure if you are installing AccuRev Plug-In for Jenkins for the first time. If you are upgrading from the "Jenkins Accurev plugin" provided by the Jenkins open source foundation, go to *Upgrading to AccuRev Plug-In for Jenkins* on page 5.

By default, AccuRev Plug-In for Jenkins is installed in the **plugins** directory under your JENKINS_HOME directory.

Note: Administrator privileges are required to install AccuRev Plug-In for Jenkins.

To install AccuRev Plug-In for Jenkins:

1. Go to the AccuRev Integrations downloads page on the AccuRev web site:

   http://www.accurev.com/customer-support-resources/downloads/integration-packages

2. Locate the AccuRev Plug-In for Jenkins in the **AccuRev CI Plug-Ins** section of the AccuRev Integrations downloads page, and download the **accurev.hpi** file to any location.

3. In Jenkins, go to the **Plugin Manager** page, select the **Advanced** tab and specify the file path to the **accurev.hpi** file in the **File** box of the **Upload Plugin** section or use the **Browse** button to select the **accurev.hpi** file:

---

4. Click the **Upload** button. If the upload process is successful, Jenkins displays the following screen:
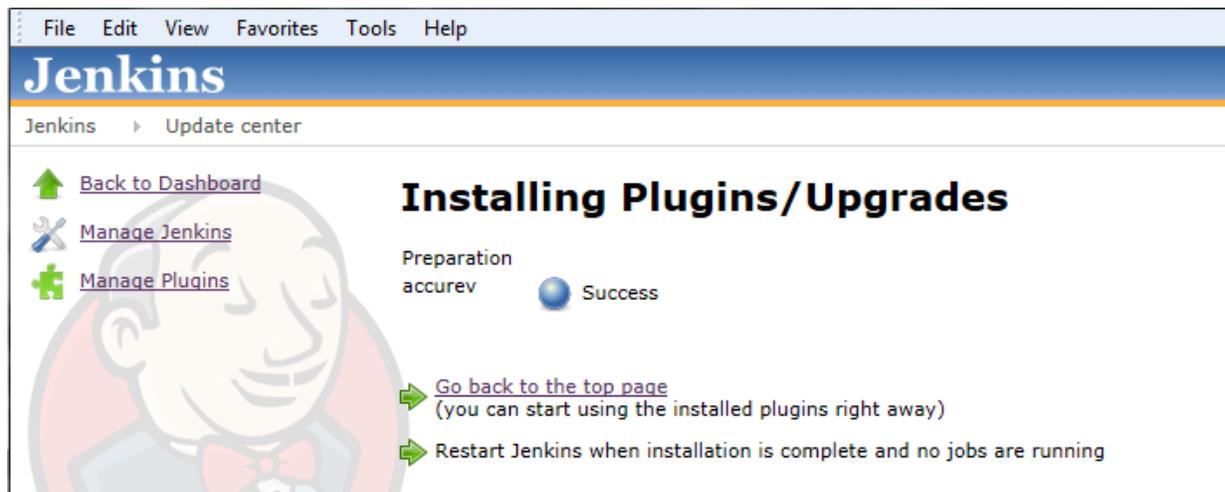
What to Do Next

After you have successfully installed AccuRev Plug-In for Jenkins, you must configure Jenkins to use it as the source control plug-in. Go to *Configuring Jenkins to Use AccuRev Plug-In* on page 7.

Upgrading to AccuRev Plug-In for Jenkins

Before you upgrade to AccuRev Plug-In for Jenkins, refer to the *Chapter 2 Upgrade Considerations* section for information about the implications of upgrading.

Upgrade Considerations

When upgrading from the "Jenkins Accurev plugin" (provided by the Jenkins open source foundation) to the AccuRev Plug-In for Jenkins (provided by AccuRev, Inc.), information related to any of the following settings is deleted:

- Valid transaction types
- Synchronize AccuRev CLI Operations
- Minimise AccuRev Login Operations
- Use Non-expiring Login
- Show one stream at a time
- Use Workspace
- Purge Workspace if last build failed
- Use update
- Use Revert
- Synchronize clock with Accurev server
- Ignore parent changes

During the upgrade process, information related to the following AccuRev options for a Job's configuration is maintained:

- Server (Name, Host, Username, Password, and Port)
- Depot
- Streams
- Sub-path
- Create and build from snapshot
- Snapshot Name Format

When upgrading to the AccuRev Plug-In, it is good practice to remove any remnants from previous versions of this plug-in by using the **Jenkins > Manage Jenkins > Manage Old Data** option.

Upgrade Procedure

Use the following procedure to upgrade to AccuRev Plug-In:

1. In Jenkins, go to **Jenkins > Manage Jenkins > Manage Plugins**.

2. On the **Plugin Manager** page, click the **Installed** tab.

3. Locate the Jenkins Accurev plugin and click the **Uninstall** button.

   The following message appears:

4. Click **Yes**.

5. Download and install the AccuRev Plug-In for Jenkins.

   See *Installing AccuRev Plug-In for Jenkins* on page 4 for more information.

Configuring Jenkins to Use AccuRev Plug-In

To integrate AccuRev source control capability with Jenkins, you must configure Jenkins for the AccuRev Plug-In.

To configure Jenkins to use AccuRev Plug-In:

1. In Jenkins, select **Jenkins > Manage Jenkins > Configure Systems**.

2. On the Jenkins configuration page, locate the **AccuRev** > **Servers** section and specify the **Name**, **Host**, **Username**, **Password**, and **Port** for each AccuRev server you want to use.

3. Click **Save** or **Apply** when you are finished.

4. In Jenkins, configure a new or existing job.

   - To configure a new job, select **Jenkins > New Job**, enter a **Job name**, select a job type, and click **OK**.

   - To configure an existing job, select the job to open it and select **Configure**.

5. In the **Source Code Management** section on the Jenkins configuration page, select **AccuRev**.

6. Specify an AccuRev **Server**, **Depot**, and **Stream** for the current job. Optionally, you can select **Advanced** and specify any of the following AccuRev options:

Option Name	Description
Use Reference Tree	By default, AccuRev Plug-in for Jenkins checks out the latest changes without using a reference tree. When not using a reference tree, AccuRev Plug-in for Jenkins uses the **accurev pop -R** command to extract all the files. However, there may be situations when the use of a reference tree is preferred, such as when you want to use the latest versions of files that you do not intend to modify. You can think of a reference tree as a read-only portal to the AccuRev data repository. If the **Use Reference Tree** check box is selected, AccuRev Plug-in for Jenkins attempts to use the reference tree specified in the **Reference Tree** field. When using a reference tree, the following AccuRev commands are used: **accurev show refs** to validate that the reference tree is valid and has the correct parent stream; **accurev chref** if the workspace is in the wrong directory or on the wrong machine (optional); **accurev update** to update the reference tree; **accurev pop -O -R** to ensure that all files are populated and that the reference tree always contains the fresh update
Reference Tree	If the **Use Reference Tree** option is selected, specify the reference tree in this text box. AccuRev Plug-in for Jenkins manages the process of migrating the reference tree to the appropriate build machine and relocating the reference tree to use the correct location. Note that these changes are recorded in the AccuRev repository. Note that you must create a reference tree in AccuRev before you can specify it here.
Clean Reference Tree	When this check box is selected, AccuRev Plug-In for Jenkins deletes any external files (that is, files that are not under source control) in the reference tree.

Option Name (cont'd)	Description (cont'd)
Sub-path	Some projects only use a portion of the stream or reference tree and, in these instances, it is not necessary to check out the entire contents of the repository, such as when you are accessing, for example, a large remote repository to build a sub-module. In such cases, it may be useful to set up a sub-path. If you specify a sub-path, the plugin makes a "best effort" to ensure that only the sub-path is populated. This means that the files within the sub-path will be fetched, at least, although side-effects may result in files from other locations being fetched as well. Directories and files must be specified in a comma-separated list and you can use relative pathnames.
Filter for Poll SCM	If the **Poll SCM** check box in the **Build Triggers** section of the Jenkins configuration page is selected, you can use this option to specify the directories or files you want Jenkins to check before starting a build. When you use this option, only changes in the directories or files you specify can trigger a build. Directories and files must be specified in a comma-separated list and can use relative pathnames. For example, you could use: `src/com/my-company/main/my-file.java,src/com/test,src/com/webapp/my-file2.xml` where "src" is the immediate sub-folder under your stream or reference tree.
Create and build from snapshot	When this check box is selected, AccuRev Plug-In for Jenkins creates a snapshot of the target stream, then populates and builds from that snapshot. NOTE: If the snapshot name already exists, the process fails and the build stops.
Snapshot Name Format	If the **Create and build from snapshot** check box is selected, you can specify the naming conventions for the snapshot in this field. The format you specify configures the manner in which the snapshot is named and it allows the use of environment variables using the same syntax as Apache Ant uses for property expansion. For example, a literal $ must be escaped by using $$, and ${*name*} resolves to the value of environment variable "*name*". The **Snapshot Name Format** option may be set to any combination of literal text and environment variables, subject to naming restrictions for AccuRev snapshots. Specifically, the snapshot name must begin with a non-digit other than dot (.), and must not include either a slash (/) or a backslash (\). For example, "${ACCUREV_STREAM}_${BUILD_NUMBER}_Snapshot" would take the name of the stream being built, append an underscore, append the build number and, finally, append "_Snapshot", which would result in a snapshot name of the form "MyStreamName_1234_Snapshot". If this option is not set, the snapshot name defaults to "${JOB_NAME}_${BUILD_NUMBER}".

Uninstalling AccuRev Plug-In for Jenkins

To uninstall the AccuRev Plug-In for Jenkins:

1. In Jenkins, go to **Jenkins > Manage Jenkins > Manage Plugins**.

2. On the **Plugin Manager** page, click the **Installed** tab.

3. Locate the **Accurev Plugin** and click the **Uninstall** button.

4. In the confirmation dialog box, click **Yes**.

3. Release Notes

This chapter describes new features in AccuRev Plug-In for Jenkins. It also explains how features contained in AccuRev Plug-In for Jenkins differ from the "Jenkins Accurev plugin," which was previously provided by the Jenkins open source foundation.

Differences between the Jenkins Accurev plugin and the AccuRev Plug-In for Jenkins

The following table lists the options that are contained in the "Jenkins Accurev plugin" (from the Jenkins open source foundation), or in the AccuRev Plug-In for Jenkins (from AccuRev, Inc.), or in both plug-ins.

Option Name	Jenkins Accurev plugin (Jenkins open source foundation)	AccuRev Plug-In for Jenkins 2013.1 (AccuRev, Inc.)
Server	Yes	Yes
Depot	Yes	Yes
Stream	Yes	Yes
Use Workspace	Yes	No
Purge Workspace if last build failed	Yes	No
Use update	Yes	No
Use Revert	Yes	No
Synchronize clock with AccuRev server	Yes	No
Sub-path	Yes	Yes
Create and build from snapshot	Yes	Yes
Snapshot Name Format	Yes	Yes
Ignore parent stream	Yes	No
Use Reference Tree	No	Yes
Reference Tree	No	Yes
Clean Reference Tree	No	Yes
Filter for Poll SCM	No	Yes
Valid transaction types	Yes	No
Synchronize AccuRev CLI Operations	Yes	No

Option Name (cont'd)	Jenkins Accurev plugin (Jenkins open source foundation) (cont'd)	AccuRev Plug-In for Jenkins 2013.1 (AccuRev, Inc.)
Minimise AccuRev Login Operations	Yes	No
Use Non-expiring Login	Yes	No
Show one stream at a time	Yes	No

AccuRev Plug-In for Jenkins

Version 2013.1

31013 -- Users can list directories and files that trigger builds when changed

Users can now specify directories or files that trigger a new build in Jenkins when any of the specified elements have changed. AccuRev polls for changes to these directories and files. This capability allows you to prevent builds from starting because of changes you want to ignore.

To specify a list of directories or files to poll for changes:

1. In Jenkins, configure a new or existing job:

   - To configure a new job, select **Jenkins > New Job**, enter a **Job name**, select a job type, and click **OK**.

   - To configure an existing job, select the job to open it and select **Configure**.

2. In the **Build Triggers** section of the Jenkins configuration page, select **Poll SCM**.

3. In the **Source Code Management** section on the Jenkins configuration page, select **AccuRev**.

4. In the **AccuRev** section of the Jenkins configuration page, select **Advanced**.

5. In the **Filter for Poll SCM** box of the AccuRev section, enter any directories or files using a comma-separated list.

   Note that you can use relative path names. For example, you could use:

   `src/com/my-company/main/my-file.java,src/com/test,src/com/webapp/my-file2.xml`

   where "src" is the immediate sub-folder under your stream or reference tree.

6. Select **Save** or **Apply**.

31018 -- Users can specify a reference tree as the build source

Users can now specify an AccuRev reference tree to be the source for the directories and files that are populated during a build. Optionally, users can remove external files from the reference tree.

Note: You must first create a reference tree in AccuRev before using it as the source of your build in Jenkins.

To specify a reference tree as the build source:

1. In Jenkins, configure a new or existing job:

   - To configure a new job, select **Jenkins > New Job**, enter a **Job name**, select a job type, and click **OK**.

- To configure an existing job, select the job to open it and select **Configure**.

2. In the **Source Code Management** section on the Jenkins configuration page, select **AccuRev**.

3. In the AccuRev section of the Jenkins configuration page, select **Advanced**.

4. In the AccuRev **Advanced Options** section, select **Use Reference Tree**.

5. In the **Reference Tree** field, enter the name of the existing reference tree in AccuRev that you want to use as the source of the build.

6. Optionally, you can select **Clean Reference Tree** to delete external files from the reference tree. This option deletes any external files and performs an **accurev pop -O** command on any modified files, so that the reference tree always contains a fresh update.

7. Select **Save** or **Apply**.

31020 -- URLs listed in build change reports are rendered as active hyperlinks

To improve usability, web URLs in build change reports appear as active hyperlinks. Additionally, build transactions and issues are also formatted as hyperlinks.