Automic
Let's Automate Business.

Automic Release Automation

ONE Automation

JENKINS Plugin User Guide

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Contents

1 Introduction

The ARA plugin for Jenkins allows to automatically create packages and trigger general and application deployment workflows in ARA after a build has ended successfully in Jenkins.

Target Audience

This guide is intended for administrators and managers who wish to integrate powerful tools for agile development, continuous integration and automated deployment with Jenkins and Automic Release Automation.

Readers should have basic knowledge of the administration of Jenkins and Automic Release Automation.

1.1 About Jenkins

Jenkins is a project-oriented build, test and track software for continuous integration (CI) and continuous delivery (CD).

Jenkins helps developers find and solve defects in code and automate build testing. Furthermore, it makes easier to integrate changes and speeds up the software development process. ARA can seamlessly integrate with Jenkins to manage the post-build steps of an integrated deployment.

See also:

- https://wiki.jenkins-ci.org/display/JENKINS/Meet+Jenkins

1.2 About ARA

Automic Release Automation is an end-to-end solution for planning, coordinating and automating software release processes, including automated deployment of applications across large-scale server environments and covers all mentioned use cases.

Purpose

The purpose of Automic Release Automation is to unify enterprise application and infrastructure automation functionality onto a single platform - without the need of managing multiple tools. Users first architect and control the execution of application process flows, then orchestrate the underlying infrastructure to meet required service levels.

ARA streamlines application release workflow managements for even the most highly-scaled environments while reducing deployment cost across the organization including development, testing and production.

The particular aim is to enable consistent, traceable and auditable deployment for multi-tier applications across heterogeneous and distributed IT infrastructures, reaching from physical or virtual to cloud computing platforms. To improve efficiency, quality and release cycle time, a highly automated system like Automic Release Automation is preferred.

Main Functions

ARA does the following:

PACKAGING	DEPENDENCIES	DEPLOYMENT	PROMOTION	COMPLIANCE
Deploy Config items at the same time	Ensure *Application* dependencies between *Components* via modelling	Install *Applications* on assigned operating *Environments*	Deliver tested *Packages* to higher *Environments*	Document compliance to processes and *Application* configurations
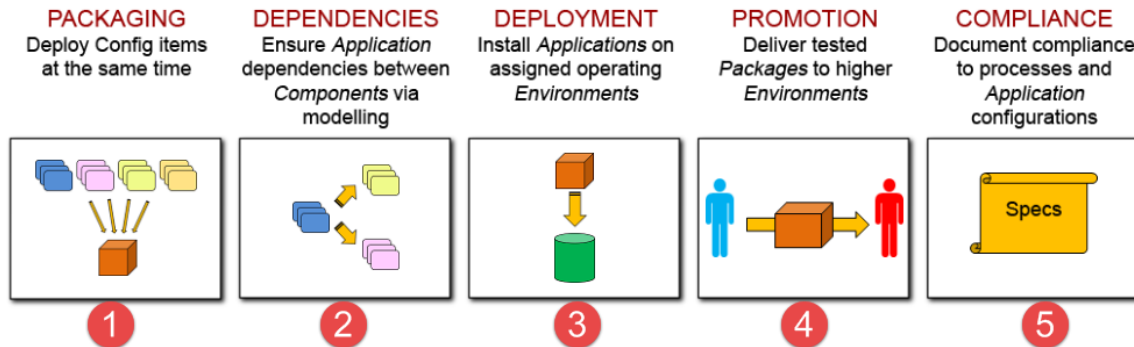
1. It allows modelling the various components of an application, which are defined as meta-data elements in ARA, with all necessary technical references to the physical elements, and then the packaging of these components for simultaneous deployment. By using the Automation Engine's powerful synchronization capabilities, it is able to deploy, at the same time, the artifacts that are intended to stay together in a single package.
2. As components of an application generally carry important dependencies across one another, ARA provides native capabilities to build those dependencies via modelling tools, so that the application is deployed in the right sequence. A dependency of a component on another can be enforced using ARA's modeling tools, rather than makeshift orchestration mechanisms.
3. ARA deploys the right components to the right environments and it does so natively. Teams no longer have to worry about pushing the proper artifacts to their assigned systems. ARA does that for them.
4. ARA is capable of staging by allowing users to design structured deployment environments. Hence, each environment like DEV, QA and PRODUCTION exists in ARA as distinct entities and the same component can be deployed seamlessly across these environments without the need for manual handling and configuration.
5. ARA is particularly adept at enforcing governance and compliance. It provides all the necessary tools to comply with a team's internal processes without having to design checks and balances and fail-safe mechanisms. It will further audit deployments to ensure that everything goes smoothly and without error, all the time.

2 Links & Guides

You can find links to resources for Jenkins and Automic Release Automation in the table below.

| Component	Link
ARA for Jenkins plugin	The ARA for Jenkins plugin can be downloaded from the Automic Marketplace.
Automic Release Automation	You can download ARA v12 from: http://downloads.automic.com/.
	Compatibility Information and system requirements can be found on our website Automic Compatibility Checker (https://docs.automic.com/tools/compatibility_checker).
	ARA v12 documentation is available on Automic Docs

3 Installing the ARA Plugin

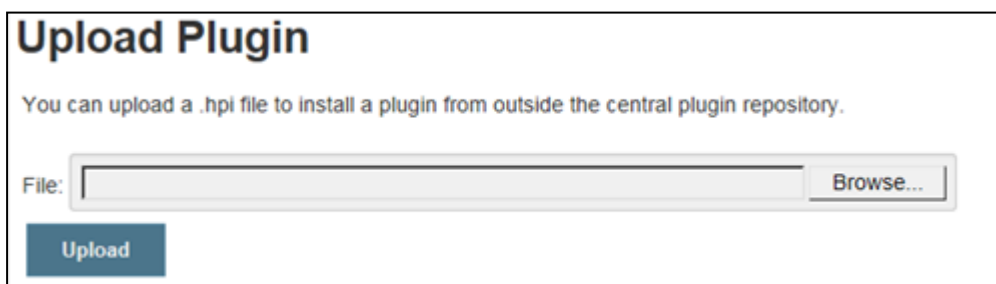*The ARA plugin can be easily installed by following the steps below.*

Preparation Steps

1. Download the ARA for Jenkins plugin from the Automic Marketplace.
2. Extract the file to a folder and locate the `PLG.AUTOMIC_JENKINS.hpi` file.

To Install the ARA Plugin

1. Log in to Jenkins and select **Manage Jenkins**.
2. Click on **Manage Plugins** as shown below:
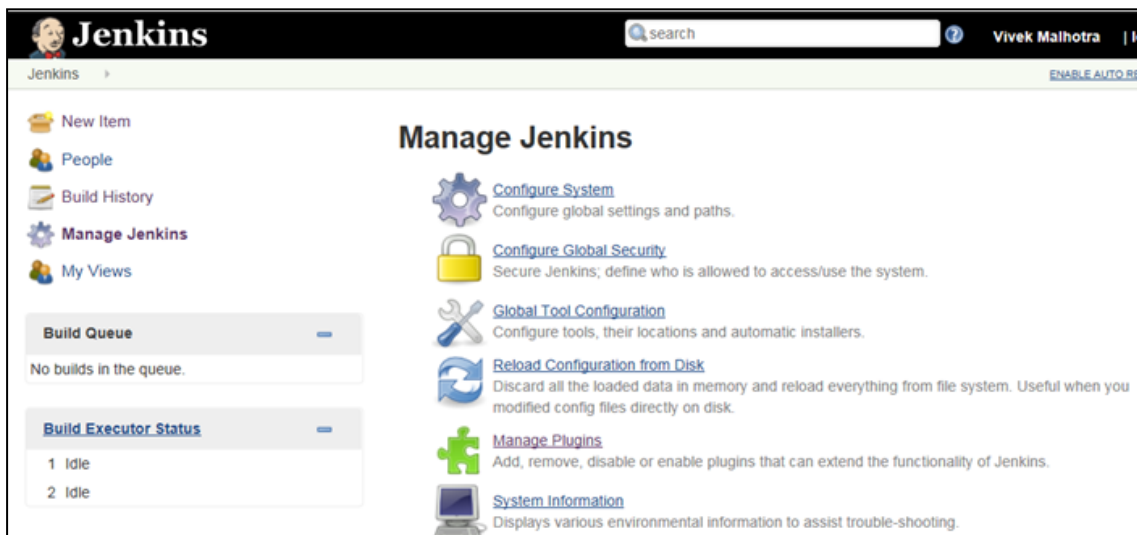
3. Select the **Advanced** tab and scroll down to the **Upload Plugin** section.
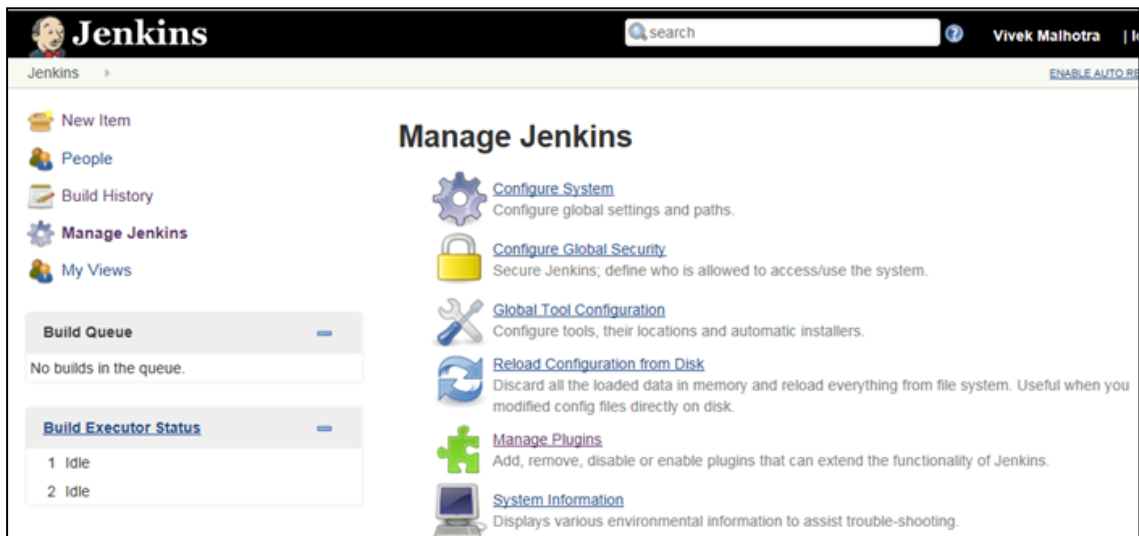

4. Browse to the location where the extracted `.hpi` file was saved.
5. Select the file and click **Upload**.
6. Restart the servlet container.

Now your Jenkins for Automic Release Automation integration is ready for operation.

4 Updating the ARA Plugin

Updates can be performed by simply uninstalling the existing version of the plugin and installing a new one.

To Update the ARA Plugin

1. Download the latest version of the ARA for Jenkins plugin from the Automic Marketplace.
2. Extract the file to a folder and get the latest `PLG.AUTOMIC_JENKINS.hpi` file.
3. Log in to Jenkins and and select **Manage Jenkins**.
4. Click on **Manage Plugins** as shown below:

5. Select the **Installed** tab.
6. Locate the **PLG.AUTOMIC_JENKINS** plugin and click **Uninstall**.

7. Select the **Advanced** tab and scroll down to the **Upload Plugin** section.
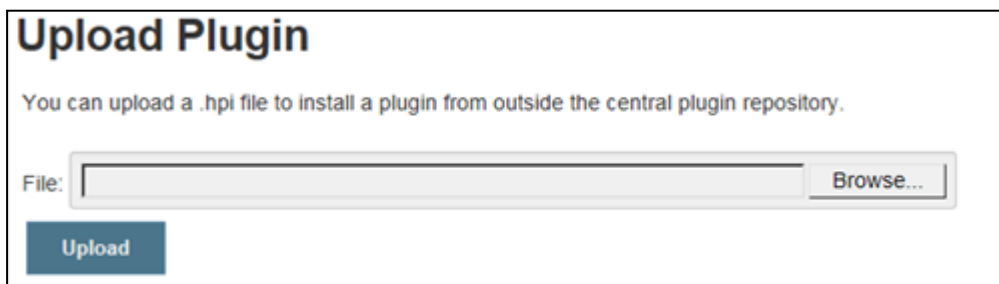
8. Browse to the location where the extracted `.hpi` file was saved.

9. Select the file and click **Upload**.
10. Restart the servlet container.

✓ The ARA plugin has been successfully updated.
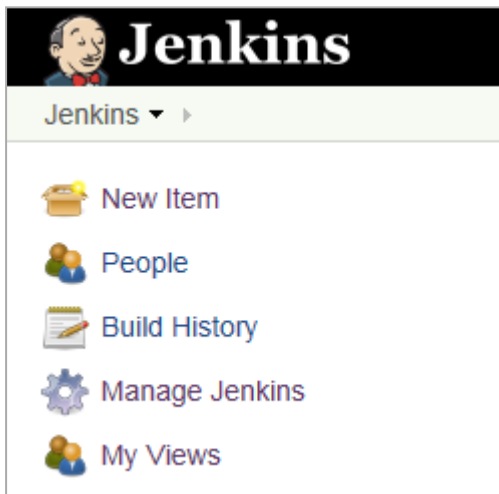
5 Using the ARA Plugin

You can use the ARA plugin from any existing or new Jenkins jobs.

5.1 Creating a Package in ARA from a Post-build Action in Jenkins

This topic describes how to create ARA packages from Jenkins after a build has ended successfully.

### To Create a Package from Jenkins

1. Go to the main page and create a new build job (**New Item**) or use an existing one.

2. If you are creating a new build job, enter the necessary information in the **General**, **Source Code Management**, **Build Triggers** and **Build** sections.
3. At the bottom of the page, click the **Add post-build action** button in the **Post-build Actions** section.

4. Add **ARA Create Package** as a post-build action.
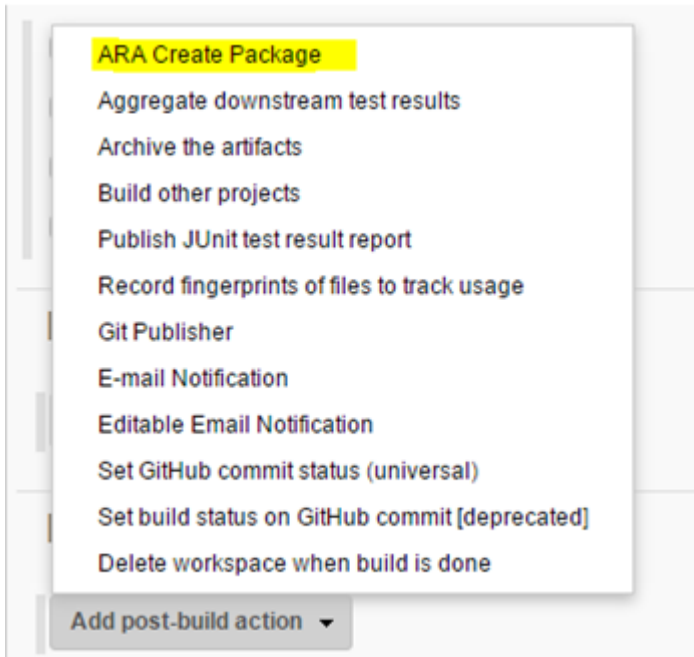
5. Enter the URL of the Automic Release Automation installation.

6. Enter the user name used to log in to Automic Release Automation with the following format: client/username/department or system/client/username/department. E.g. 1000/USER/DEP or AUTOMIC/1000/USER/DEP.
7. Enter the password used to log in to Automic Release Automation.
8. Click **Test connection** to verify the connection. If the connection details are correct, the plugin pulls all required data from ARA.

9. Once the connection has been checked, fill in the other fields as follows:

1. **Package Name**: name of the package which will be created in Automic Release Automation.

   ⓘ This value can also contain variables (e.g. Build environment variable). Variables must start with $.

2. **Package Type**: Deployment or Generic (additional types may be added by the ARA administrator).

3. **Application**: select the application by its name from a list provided by Automic Release Automation.

4. **Folder**: the folder in which the package should be created.

   ⓘ Folders are used in Automic Release Automation to manage user rights

5. **Owner**: select the owner by its name from a list provided by Automic Release Automation.

   ⓘ Owners are used in Automic Release Automation for filtering entities and to manage user rights as they are stored in folders

6. **Components**: by default, all components of the application are assigned to the package. If you click **Add Component**, only the selected components will be assigned.

   1. Optionally, you can specify one or more conditions for each component, so that only the ones which comply with the conditions are added to the package. To do so.
      1. Click **Add condition**.
      2. Select the condition operation from the dropdown list and provide a

value.

> ℹ️ Values are case insensitive and can contain regular expressions and variables. Variables must start with $. If the value is not specified, the corresponding condition will be skipped.

> ℹ️ A component is added into a package only if all conditions are met.

2. **Properties**: click **Add Property** if you want to overwrite the custom properties of the package.
3. **Dynamic Properties**: click **Add Dynamic Property** if you want to overwrite the dynamic properties of the package.

> ℹ️ Custom and dynamic property values can also contain variables (e.g. Build environment variable). Variables must start with $.

10. You can create multiple ARA packages by clicking **Add ARA Package** as many times as needed.
11. Click **Save**.

✓ As of now, after each successful build the packages defined in the **ARA Create Package** post-build action will be automatically triggered in ARA.
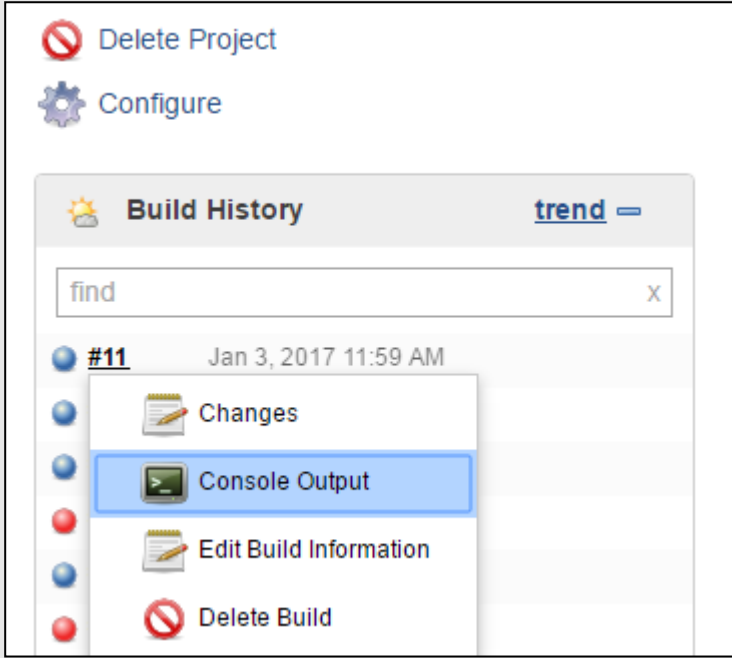
Post Build Step Behavior

Please note the following:

- If the build fails, ARA packages will not be created at all.
- If the package creation failed for some reason, the build will fail as well.
- If multiple packages are added and one of them cannot be created, the subsequent packages will not be created either. E.g. If you want to create Package1, Package2, Package3 and Package4 and for some reason the creation of Package2 fails, the subsequent packages (Package3 and Package4) will not be created and the build will be marked as failed.
- Generic packages can also be created. For this type of packages neither applications nor components will be associated to the package created.
- If the association of components/properties/dynamic properties to the package fails, the build will fail but the package will still be created in ARA.

6 Troubleshooting

This section provides information about general troubleshooting steps.

Error	Possible solution
I can't find the build output.	• To check the build output, click the **Console Output** of the build.

I don't know where the logs for the ARA create package post build step are displayed.	• The logs are displayed as follows:
	
	`" ......Post build step (ARA create package) starts......"`
	
	`//post build step log`
	
	`"......Post build step (ARA create package) ends......."`

7 About Automic Software, Community and Support

This topic introduces the Automic Software company and how to leverage the full potential of our solutions to you.

You can also obtain Automic documentation online from docs.automic.com.

7.1 About Automic

Automic Software is dedicated to business automation.

Automic is the world's most comprehensive platform in automating businesses. Founded 1985, Automic pioneered the largest, independent, globally deployed automation platform which powers the enterprise, application and infrastructure. Now, as the consumerization of IT accelerates, Automic is re-imagining how organizations integrate next generation service models such as Cloud, DevOps and Big Data. Today, our software automates tens of millions of operations a day for over 2,000 customers worldwide. We challenge conventional thinking, enabling our customers to be faster, smarter, in control. Automic – the standard in business automation.

Find out more at our website www.automic.com.

Download Center

The Automic Download Center (downloads.automic.com) is the place where you find product downloads, documentation, release notes and information on new releases and hot-fixes about your Automic solution.

Marketplace

The Automic Marketplace (https://marketplace.automic.com/) features hundreds of business automation templates and solutions for enterprise automation needs including workload automation, service orchestration, DevOps initiatives, big data operations and social media outreach. DevOps engineers can also access a broad range of open-source containers to facilitate rapid application release automation. Users are able to provide ratings, review and feedback on existing plugins, get support and request new plugins.

Automic Community

Join the Automic Community (community.automic.com) to talk with other users from around the world to learn how they optimize their business automation with Automic. Interact with the Automic Team to get ONE Automation tips and tricks straight from the source.

Technical Support

Our Technical Support Team (support@automic.com) is ready to support you, anytime and anywhere. Three support centers located in Europe, the United States, and Asia Pacific build the core of the Automic support organization.

Training Services

We offer a range of training options on how to get the most out of your Automic solution. Depending on your location, either open training sessions at an Automic Software Service Center, or personalized training sessions at your company's site suits best. Visit the training site and get detailed information about currently offered courses: http://automic.com/about/training/

Global Headquarter: Automic Software GmbH, Am Europlatz 5, 1120 Vienna, Austria

7.2 Automic Community

Want to connect with other Automic users to compare notes or learn how others are tackling problems that you're running into?

Talk with other users from around the world to learn how they optimize their business automation with Automic. Interact with the Automic Team to get ONE Automation tips and tricks straight from the source.

Join the Automic Community (community.automic.com) and become an Automic Insider and be among the first to get news about new products and events, even before they are generally announced!

7.3 Download Center

Make sure that you are using our products to their fullest potential.

The Automic Download Center (downloads.automic.com) is the place where you find product downloads, documentation and information on new releases and hot-fixes about your Automic solution. It's all in one place: from service hotfixes, release notes, and all guides. You will also find patch descriptions, known bugs or workarounds.

7.4 Marketplace

Access largest marketplace of templates and solutions for automating any part of your enterprise!

The Automic Marketplace (https://marketplace.automic.com/) features hundreds of business automation templates and solutions for enterprise automation needs including workload automation, service orchestration, DevOps initiatives, big data operations and social media outreach. DevOps engineers can also access a broad range of open-source containers to facilitate rapid application release automation. Users are able to provide ratings, review and feedback on existing plugins, get support and request new plugins.

7.5 Technical Support

We have a support team you can trust.

Our team of professionals is ready to support you, anytime and anywhere. Three support centers located in Europe, the United States, and Asia Pacific build the core of the Automic support organization.

Our Technical Support Team (support@automic.com) makes sure that your closest Automic experts are never more than a few hours flight away, no matter on which continent your subsidiaries and data centers are located. Automic software is designed to provide global connectivity for international companies. You are employing Automic software on a global scale and therefore you can expect global service.

7.6 Training Services

Do you want to learn even more about Automic solutions?

We offer a range of training options on how to get the most out of your Automic solution. Depending on your location, either open training sessions at an Automic Software Service Center, or personalized training sessions at your company's site suits best. Visit the training site and get detailed information about currently offered courses.

See also: http://automic.com/about/training/