

Minimal Jenkins Installation for ALM Octane

How to set up a minimal Jenkins instance to trigger UFT One test runs from ALM Octane

1 Introduction

The following guide is for teams who work with UFT One and ALM Octane, and want to run UFT One tests from ALM Octane using a local CI server. The guide describes how to install Jenkins on your local machine, and install the ALM Octane Jenkins plugin in order to run your UFT One tests in ALM Octane.

This guide is based on Jenkins version 2.263.4.

2 Prerequisites

- Java version 8 or 11. To verify your Java version, go [here](#). Java can be downloaded from [Oracle](#), and may require sign in to download.
- Git version 2 or higher, from [here](#).
- Git is use to access UFT One tests that are stored on the Git repository.
- For server hardware prerequisites, see [here](#).
- This document assumes that UFT One is installed on the local machine.

3 How to install Jenkins

Download the Jenkins installer from the [Jenkins site](#).
Select the LTS version installer based on your operating system.

3.1 Installation

Run the downloaded installer file, and follow the installation process [here](#) (for Windows).

Complete the following screens of the wizard:

- The initial Jenkins page **Getting started** will open automatically on the browser after installation is complete, in the location **http://localhost:port** (where port is chosen during installation).
- **Unlock Jenkins**. Provide an initial password from the file given to you during the installation.
- **Customize Jenkins**. Select the option **Install Suggested Plugins**.
If download of plugins fails due to proxy issues, skip this phase by selecting Select Plugin to install and de-selecting all plugins. Alternatively, select continue after installation finishes and add plugins later.
- **Create First Admin User**. Set the username and new password.
Remember these credentials, which will be used for all activity done in Jenkins.
- **Instance Configuration**. Provide an external URL for your local Jenkins, for example **http://<machine_name>:8081**. This URL will be visible in ALM Octane.

4 Moving JENKINS_HOME on Windows

If you planning to run UFT One tests on your local machine where Jenkins is installed, and you are working with the Windows operating system, you must verify that **JENKINS_HOME** is not located on

C:\Windows\System32\config\systemprofile\AppData\Local\Jenkins\.jenkins

If that is the case, you need to move the **JENKINS_HOME** directory to another location on your machine (for example C:\jenkins_home), as described in this section.

4.1 How to check the JENKINS_HOME location

- Open the Jenkins Server home page and click **Manage Jenkins > Configure System**.
- On the top of the page you can find the **Home directory** attribute that holds the **JENKINS_HOME** location.

4.2 How to move JENKINS_HOME

1. Browse to the location where Jenkins is installed (C:\Program Files\Jenkins).
2. Open the file jenkins.xml for editing.
3. Locate the attribute:
`<env name="JENKINS_HOME" value="%LocalAppData%\Jenkins\.jenkins"/>`
4. Change the **value** attribute to a location where you will have Jenkins data. For example:
`<env name="JENKINS_HOME" value="C:\jenkins_home"/>`
5. Restart Jenkins.
6. Configure Jenkins again from the phase **Unlock Jenkins** as described above for the new location. Verify the initial password file is located in the new chosen location.

5 How to install the plugins

5.1 Define proxy

If your network requires a proxy to connect to the Internet, set up the proxy configuration as follows:

1. Go to **Manage Jenkins > Manage Plugins > Advanced** and define the necessary HTTP Proxy Configuration details:
 - If the ALM Octane server is located outside of the Jenkins server's private network, define the proxy server's details to enable Jenkins to communicate with ALM Octane.
 - If the ALM Octane server and the Jenkins server are both in the same private network (common if you are using ALM Octane on premises), instruct Jenkins not to use the proxy to reach ALM Octane. Add ALM Octane's URL to the No Proxy Host list (given Octane is located in the following URL = <https://octane.myhost.com:8080>, you can define octane no proxy host partially as following : *octane*).

Note: In this case, you may still need the proxy server details defined to enable Jenkins to access other external resources, such as GitHub or Jenkins update site.
2. Test that Jenkins can now reach ALM Octane:
 - Click the Advanced button beneath the HTTP Proxy Configuration details.
 - Enter ALM Octane's URL and click Test URL.

5.2 Install the Jenkins plugin

1. Install from the Jenkins download center: Manage Jenkins > Manage Plugins > Available tab. Search for the plugin: Application Automation Tools.
2. If you do not have it installed, also install the Git plugin.
3. After installing the plugins, restart Jenkins.

6 How to configure the plugin

6.1 Connect the plugin to ALM Octane

1. Ask your space admin for an API access Client ID and Client secret. The plugin uses these for authentication when communicating with ALM Octane.
2. The space admin can obtain the Client ID and Client secret in ALM Octane Settings. The access keys must be assigned the CI/CD Integration role in all relevant workspaces.
3. Go to the Jenkins Server home page and click **Manage Jenkins > Configure System**.
4. Scroll down to the ALM Octane CI section and click **Add ALM Octane server**.
5. Follow the instructions on the screen to complete the configuration:
 - For Location, enter the URL of the ALM Octane server, using its fully qualified domain name (FQDN). Use the following format (port number is optional): `http://<ALM Octane hostname / IP address> {:<port number>}/ui/?p=<shared space ID>`. For example, in this URL, the shared space ID is 1002: `http://myServer.myCompany.com:8081/ui/?p=1002`
 - Tip: You can copy the URL from the address bar of the browser in which you opened ALM Octane.

- When entering the Client ID and Client secret, make sure to enter the exact text without leading or trailing spaces.
- For Jenkins user, enter the Jenkins user ALM Octane will use to execute jobs on the server.
 - Note: Make sure the user can log in to Jenkins and has the minimum permission required for this integration (**Job Build** permissions).
We strongly recommend specifying a Jenkins user for ALM Octane.
If you do not specify a Jenkins user, ALM Octane uses the Anonymous user, and is limited to Anonymous's user permissions.
- Test Connection - The test connection process is verifying the connectivity between Jenkins and Octane URL provided.
- In case of any error on test connection you can try to look on plugin log to understand the problem.
Plugin log can be found here: <jenkins url>/userContent/nga/logs/nga.log
- Save the configuration.

7 Connect to UFT One

Integrate ALM Octane with UFT One via Jenkins, as described in the ALM Octane Help Center [here](#).

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