IBM Security AppScan Standard Scanner Plugin

Plugin Information
View IBM Security AppScan Standard Scanner on the plugin site for more information.

Version History

version 2.8

- [x] Fixed a NullPointerException while using "IncludeURLs" in advanced section

version 2.7

- [x] Fixed Jenkins required core
- [x] Removed unnecessary dependency

version 2.6

- [x] Fixed pipeline support and added respective how-to at the bottom of this page

Project Description

The purpose of this plugin is to allow Jenkins to perform dynamic analysis with IBM AppScan Standard with minimal configuration.

AppScan Standard is a security tool provided by IBM that will scan application for vulnerabilities in run-time.

IBM Security AppScan Standard supports:

- **Broad coverage** to scan and test for a wide range of application security vulnerabilities.
- **Accurate scanning and advanced testing** that delivers high levels of accuracy.
- **Quick remediation** with prioritized results and fix recommendations.
- **Enhanced insight and compliance** that helps manage compliance and provides awareness of key issues.

Configuring AppScan Standard to perform automated scanning with custom batch jobs or shell scripts can be a time-consuming and error-prone process.

This Jenkins plugin greatly simplifies the process of automating AppScan Standard by providing global settings and simple scan configuration within Jenkins.

For more information on IBM AppScan Standard, please visit the official IBM site at http://www-03.ibm.com/software/products/en/appscan-standard

Prerequisites

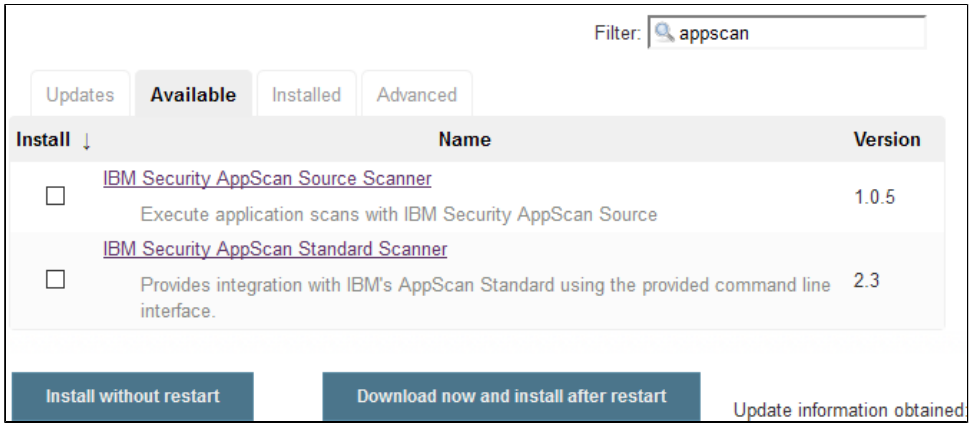
This plugin requires the following:

- AppScan Standard installed with a valid license on a node (slave) or master.

Plugin Setup

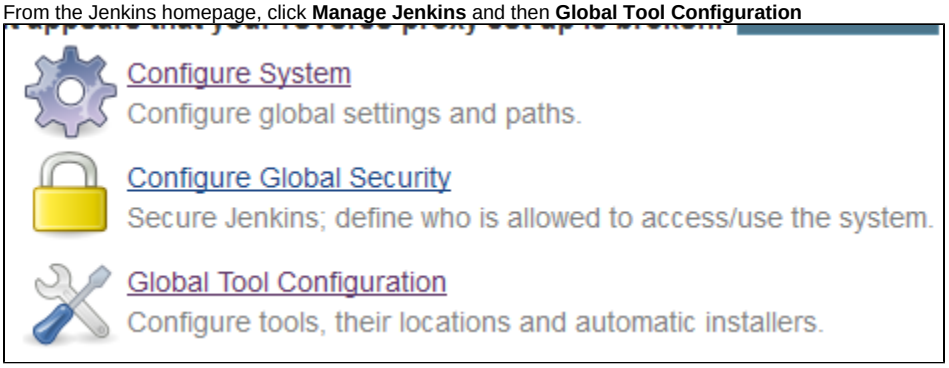
To download and install AppScan Standard plugin go to **Manage Jenkins** and then to **Manage Plugins**

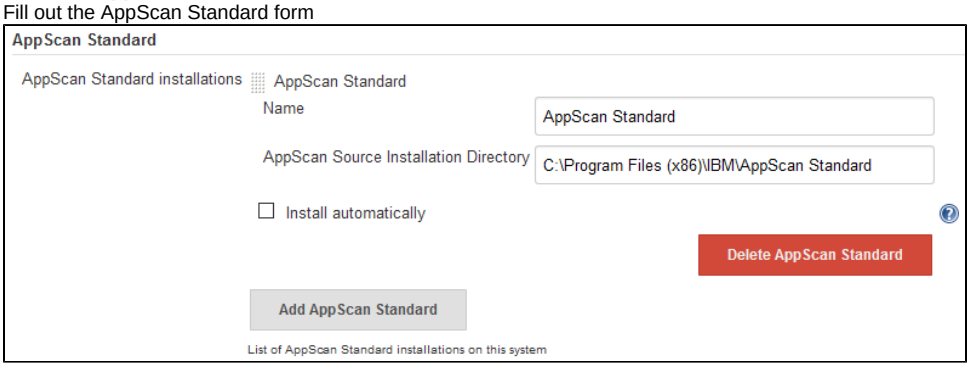
- Select the **Available Plugins** tab
- Search for **AppScan Standard**

- 

- Select and install.

Plugin Configuration

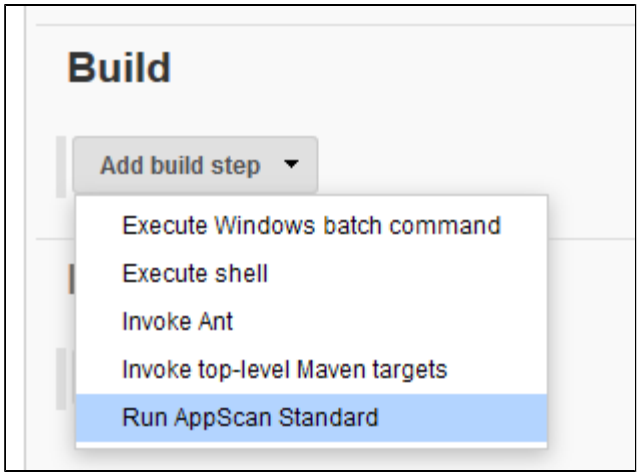
1. From the Jenkins homepage, click **Manage Jenkins** and then **Global Tool Configuration**
2. 

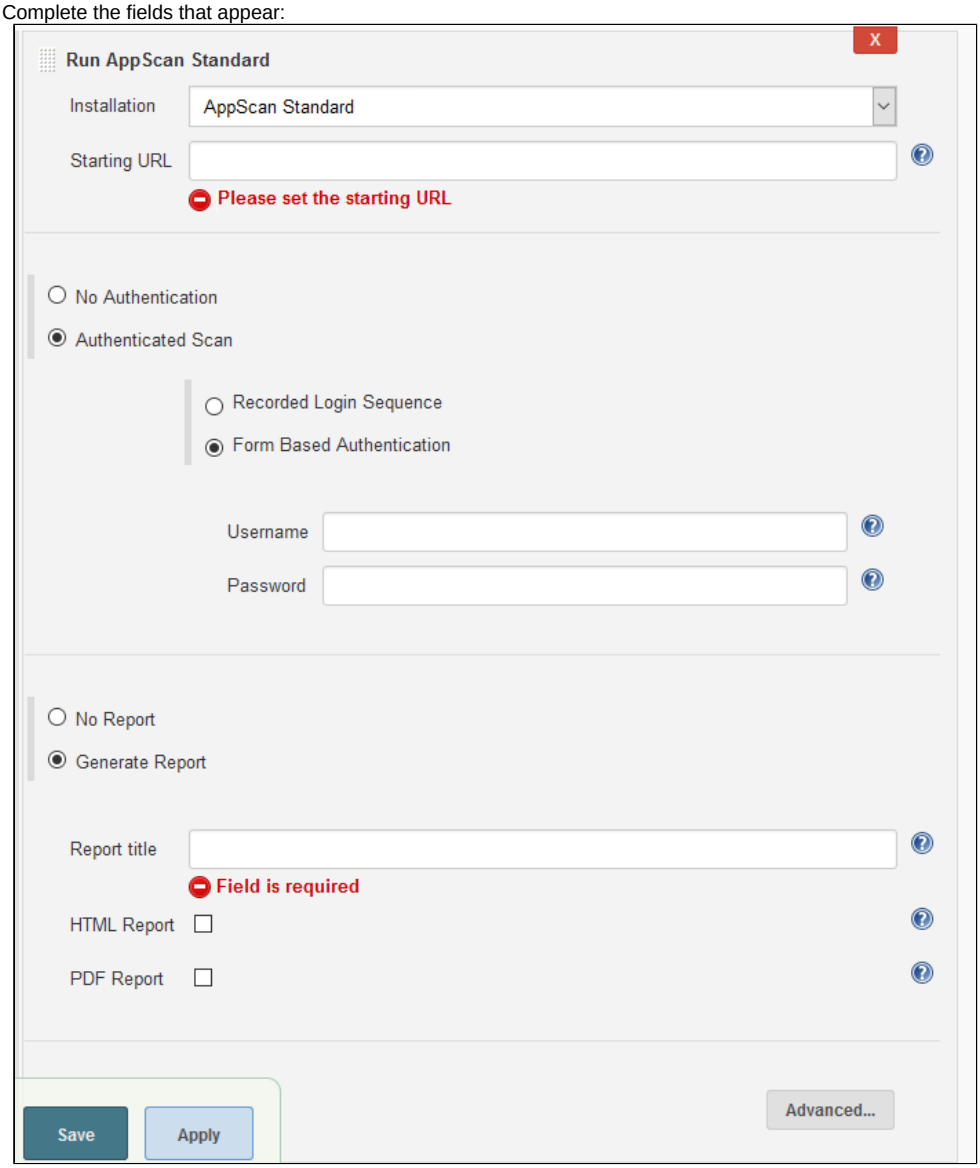
3. Scroll down the page and locate the section titled AppScan Standard
4. Click **Add AppScan Standard**
5. Fill out the AppScan Standard form
6. 

1. a. **Name**: A name for this instance of AppScan Standard. This is just to help manage environments that may have multiple installation
   b. **AppScan Standard Installation Directory**: The path to the installation directory. Note: the default value is C:\Program Files (x86)\IBM\AppScanStandard\
2. Click **Save**

Using the plugin

1. Create a new job or access an existing job
2. Select **Configure**
3. Select "**Add build step**" and select "**Run AppScan Standard**"

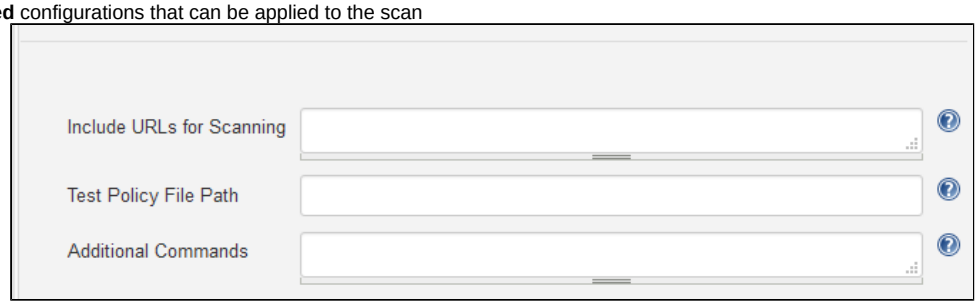
4. 

5. Complete the fields that appear:
6. 

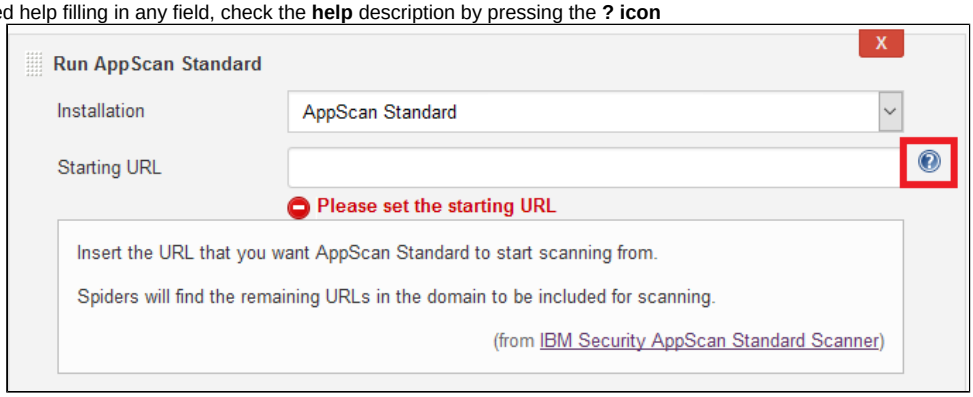
7. **Installation** will show the name you provided for the installation on the global configuration screen.
    a. i. If you have not added an installation, please go the the Jenkins Global Tool Configuration link under Manage Jenkins.
    ii. If you only have one installation configured, the installation should be selected for you. If you plan to execute AppScan Standard on multiple Jenkins nodes, you may need to configure multiple installation paths.
    b. **Starting URL** is the URL AppScan Standard will use to run the spiders on to find compile a list of URIs to scan.
    c. **Authenticated Scan** will scan the website logged in as the provided account, this will provide better scanning results.
        i. **Recorded Login Sequence** uses a recorded login sequence (you must generate it using AppScan Standard previously) to login.

ii. **Form Based Authentication** tries to login automatically using the credentials provided, this method may fail depending on your website's authentication configuration.

d. **Generate Report** will generate and save a report with the vulnerabilities found by AppScan Standard.
   i. **Report title** the generated report will be saved using this title for the name.
   ii. **HTML Report** saves the report in HTML format.
   iii. **PDF** saves the report in PDF format.
      1. You can save both formats in one run.

e. **Advanced** configurations that can be applied to the scan
   i. 

   ii. **Include URLs for Scanning** allows you to manually include URLs for scanning in case the spiders miss them
   iii. **Test Policy File Path** will use the specified test policy instead of the default options
   iv. **Additional Commands** can be used to execute additional options available in the command line interface that are not available in plugin's graphical user interface.

f. If you need help filling in any field, check the **help** description by pressing the **? icon**
   i. 

8. Click **Save** at the bottom
9. Run the job.

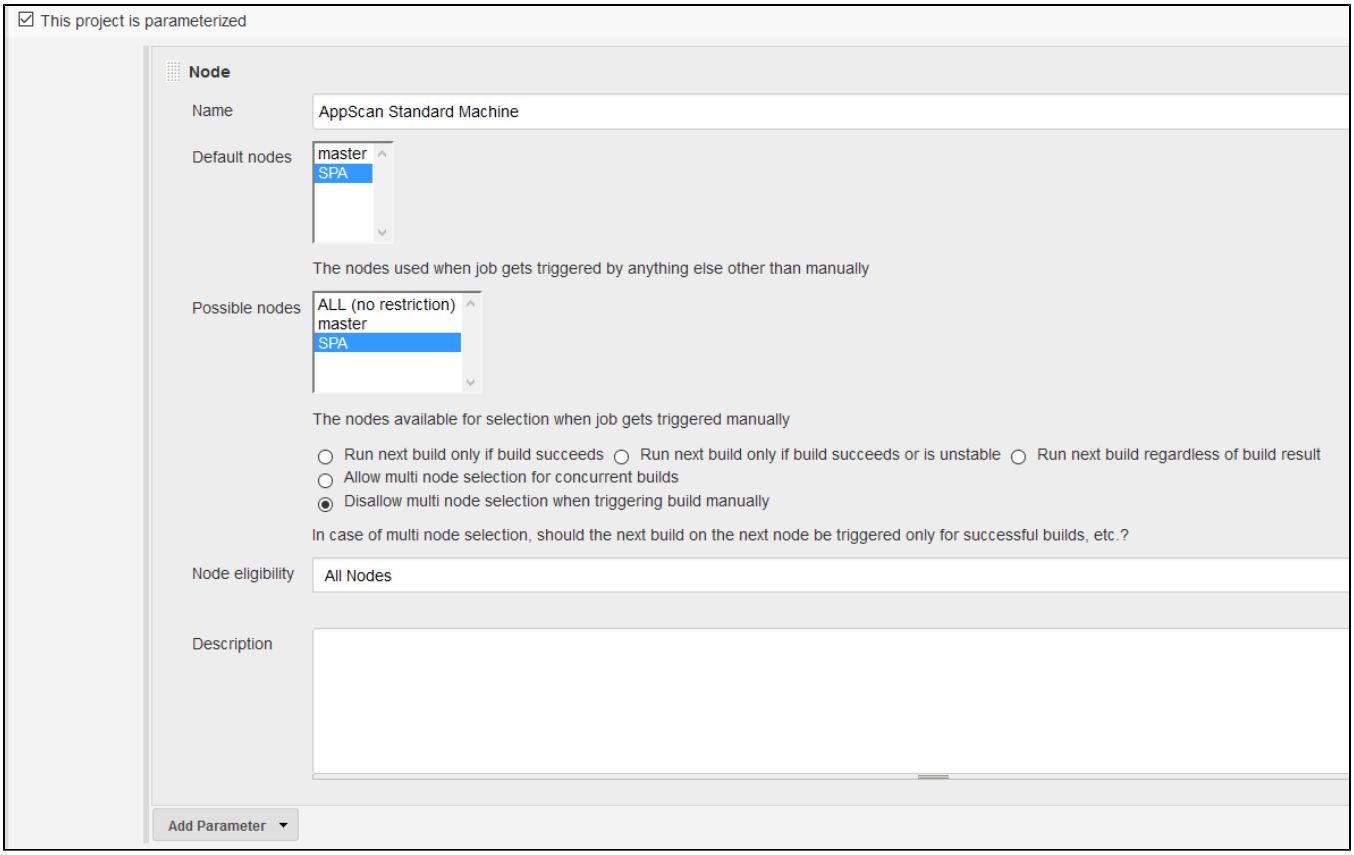
Using Nodes to run AppScan Standard Plugin

If you have AppScan Standard installed on a node you must configure the build to run on that node so that the plugin can reach the installation.

First you must set that machine as a node (slave), you can follow this guide to do so.

Afterwards you can use the Node and Label Parameter Plugin, following the guide provided in its wiki achieving this goal should be straightforward.

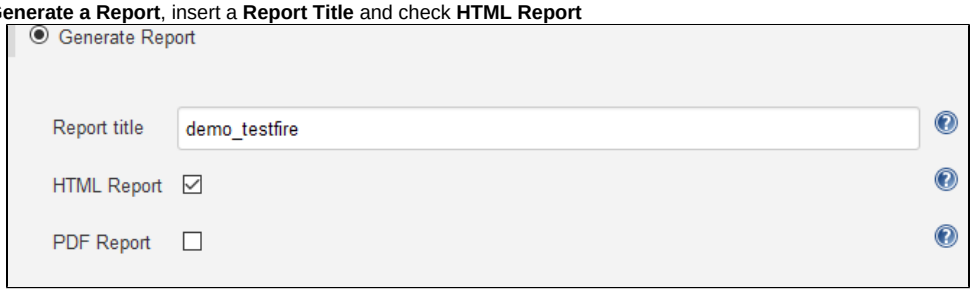
Setting a parameter on the build would look something like the image below.

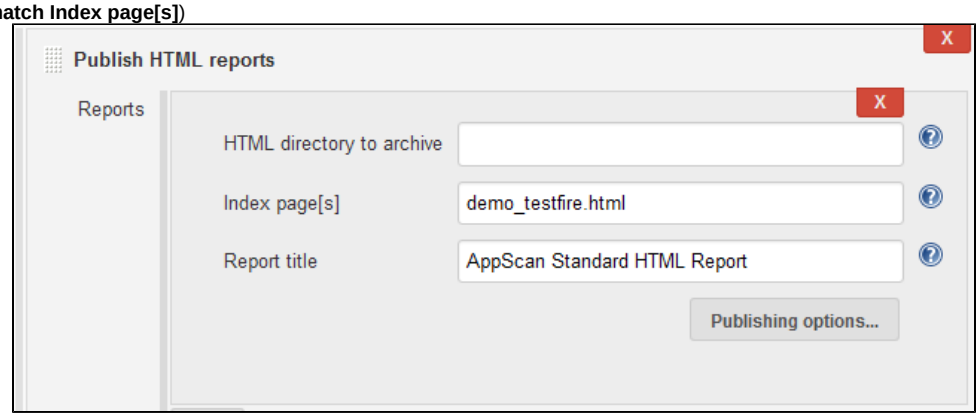


Using HTML Publisher Plugin with AppScan Standard Plugin

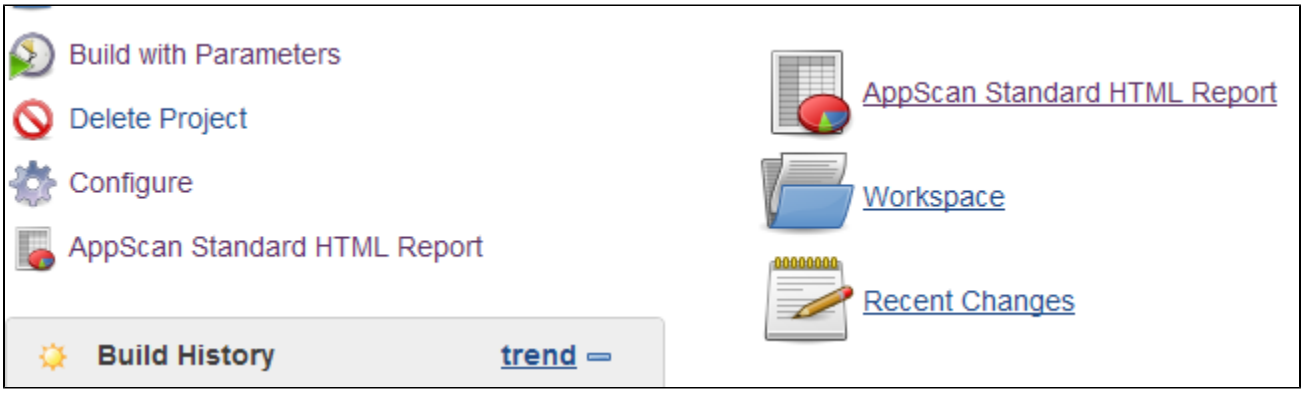
To take full advantage of this plugin, you may want to combine it with HTML Publisher Plugin

If you already have HTML Publisher installed, this can be achieved in 2 simple steps:

1. Select **Generate a Report**, insert a **Report Title** and check **HTML Report**
   a. 

2. In the **Post-build Actions** add **Publish HTML reports**, press **Add** and fill it in to match the settings from AppScan Standard Plugin (**report title must match Index page[s]**)
   a. 

When the build completes you will have a new item in the job's page, press it to access the report generated by AppScan Standard.



The expected result should be similar to the image below **if you allow CSS in Jenkins**, if you only see text then CSS is most likely blocked (set by default), this link explains how to change that option.

If you change the CSS options, they won't be applied to the current report, you must re-run the build/scan.

Summary

Issue Types 29

TOC

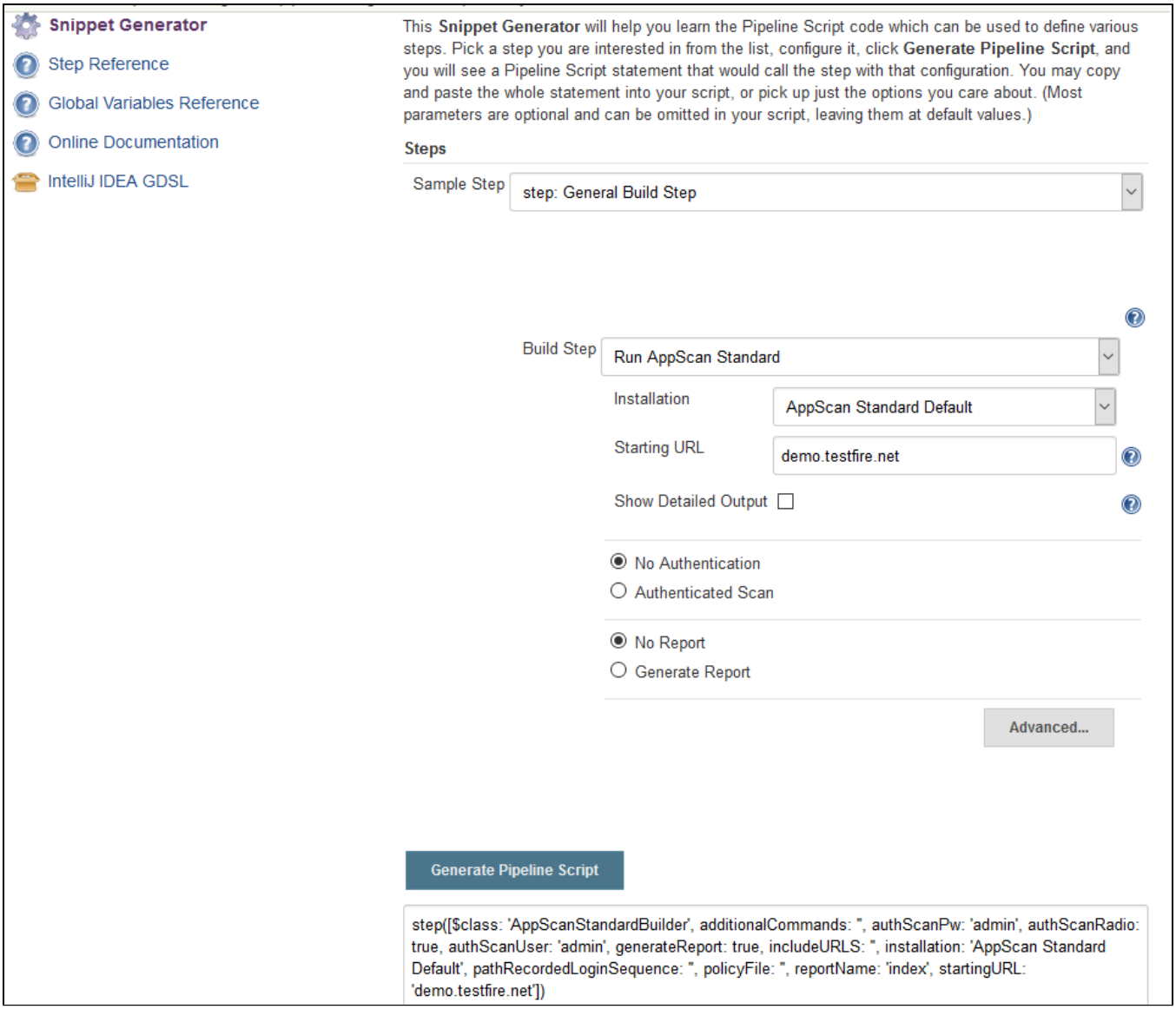
	Issue Type	Number of Issues
H	Cross-Site Scripting	4
H	DOM Based Cross-Site Scripting	3
H	Link to Non-Existing Domain Found	1
H	Poison Null Byte Windows Files Retrieval	1
H	SQL Injection	2
H	Unencrypted Login Request	4
M	Directory Listing	2
M	Link Injection (facilitates Cross-Site Request Forgery)	2
M	Padding Oracle On Downgraded Legacy Encryption (a.k.a. POODLE)	1
M	Phishing Through Frames	2
L	Autocomplete HTML Attribute Not Disabled for Password Field	1
L	Body Parameters Accepted in Query	3
L	Compressed Directory Found	2
L	Database Error Pattern Found	3
L	Direct Access to Administration Pages	2
L	Directory Listing Pattern Found	2
L	Hidden Directory Detected	3
L	Microsoft ASP.NET Debugging Enabled	2
L	Missing "Content-Security-Policy" header	2
L	Missing "X-Content-Type-Options" header	2
L	Missing "X-XSS-Protection" header	2
L	Unencrypted __VIEWSTATE Parameter	1
L	Unsigned __VIEWSTATE Parameter	1
I	Application Error	4
I	Application Test Script Detected	2
I	Email Address Pattern Found	2
I	HTML Comments Sensitive Information Disclosure	2
I	Link to unclassified site	3
I	Possible Server Path Disclosure Pattern Found	2

Running AppScan Standard in a Pipeline

1. Navigate to "Pipeline Syntax" (follow a, b or c below)
    a. (create a pipeline job, save and it will be on the left side menu)
    b. (navigate to an existing pipeline job, it will be on the left side menu)
    c. (navigate to http://JENKINS-URL-HERE/pipeline-syntax/)

2. In "Steps" find "step: General Build Step"
3. in "Build Step" find "Run AppScan Standard"
4. Configure AppScan Standard plugin as usual
5. Press "Generate Pipeline Script" and copy the resulting script
6. Paste the script in your pipeline inside a node

The end result would look like the image below.



A resulting script looks something like the one below, you can use this one as your starting point.

```
stage ('Run AppScan Standard') {
    node {
        step([$class: 'AppScanStandardBuilder', additionalCommands: '', authScanPw: '',
            authScanUser: '', includeURLS: '', installation: 'AppScan Standard Default',
            pathRecordedLoginSequence: '', policyFile: '', reportName: '', startingURL: '
demo.testfire.net'])
    }
}
```

Scheduled Tasks for version 2.9

- Implement Quality Gate support for AppScan Standard (fails build on % of errors)

Compatibility

Version 2.8 of this plugin is compatible with:

- Jenkins 2.0 and newer
- IBM Security AppScan Standard 9.0.3.x