Tab 1

Liferay DXP 7.4 Code Inspection

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1. Functional Details

In today's fast-paced development environment, ensuring the quality and security of your code is paramount. Manual code reviews can be tedious and often miss critical issues. The **Code Inspection Module,** the Liferay Administrator can easily check the health of the deployed code and analyze the codebase for various issues, including style violations, potential bugs, and security vulnerabilities.

This tool integrates **Checkstyle** for generating detailed reports, ensuring your code meets defined coding standards. This proactive approach not only gives a health check report of code but also helps in enhancing the overall software quality. This module facilitates the Liferay Administrator to effortlessly generate a detailed **View Report** and download it as a **PDF**, providing comprehensive insights into your code's quality and adherence to secure coding standards. It also has a fabulous "Inline view" interface that helps administrators to easily access the required information.

2. Tools & Frameworks

Below are the required framework / technology / third party tools.

- **JDK** - **11**
- **Liferay DXP 7.4**
- **Checkstyle.jar [source: https://checkstyle.sourceforge.io/]**
- **Supported Code Repository: Git**

3. Deployment

Below are the installation / deployment steps.

Deploy the codeinspect-1.0.0.jar file to the Liferay DXP server.

1. The deploy folder is located under the **Liferay Home Directory**. This is typically where Liferay is installed or extracted.
   Ex: **Liferay_Home/deploy**
2. Copy or move your module's JAR (or WAR) file into the **deploy** folder.
3. Open the Liferay console (e.g., `catalina.out` for Tomcat, or the terminal where Liferay is running).
4. Watch for logs indicating that the module is being deployed.
5. You should see messages like:

```
5.819 INFO  [com.liferay.portal.kernel.deploy.auto.AutoDeployScanner][AutoDeployDir:212] Processing codeinspect-1.0.0.jar
6.771 INFO  [fileinstall-directory-watcher][BundleStartStopLogger:71] STOPPED codeinspect_1.0.0 [1402]
7.330 INFO  [Refresh Thread: Equinox Container: 2cc41ba7-500a-49dc-b6fa-ae52a864021b][BundleStartStopLogger:68] STARTED codeinspect_1.0.0 [1402]
```

4. Results

To start using the utility, please follow the below steps.

1. Please enable the jQuery library before using the application. Navigate to **System Settings -> Third-Party -> jQuery** and check **Enable jQuery**.
2. The component should automatically create below folders, however to avoid permission related issues, we recommend manually creating folder in advance
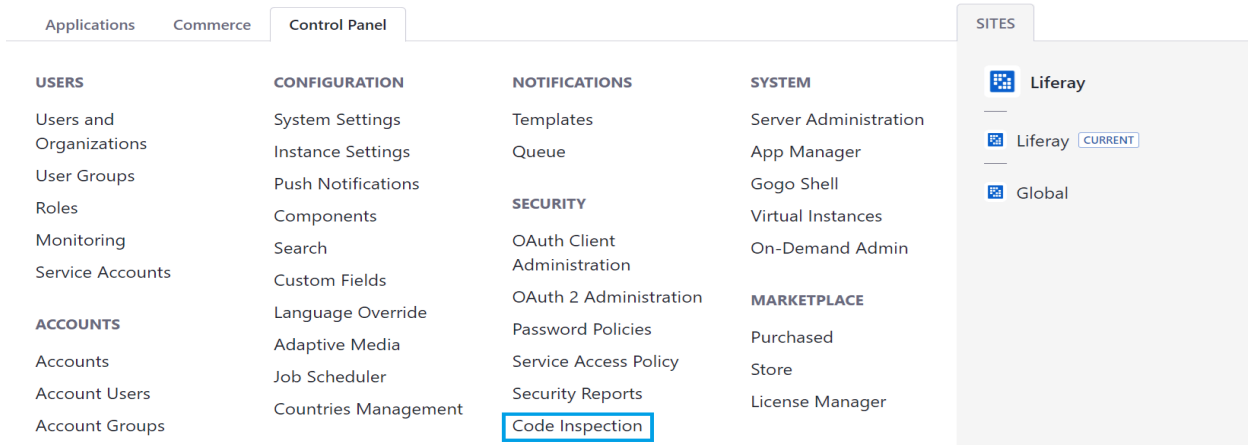
   1. Windows Paths:

      - C:\Users\<YourUsername>\code-inspect\reports
      - C:\Users\<YourUsername>\code-inspect\checkstyle-reports
      - C:\Users\<YourUsername>\code-inspect\repo-clones

   2. Linux/Mac Paths:

      - /home/<YourUsername>/code-inspect/reports
      - /home/<YourUsername>/code-inspect/checkstyle-reports
      - /home/<YourUsername>/code-inspect/repo-clones

3. Login to Liferay as Administrator and Navigate to ***Application Menu -> Control Panel.***
4. Under the category of "SECURITY", You should see a new item as "Code Inspection".

5. You can enter any the github repository url and click on "Inspect Now" to initiate the code inspection process.
   Note: It may take a few minutes to complete the process.
   Note: Based on organization git configuration, it may require going through a multi-factor authentication process.

6. Once the scanning process is completed, the report will automatically show under the "Inspection Reports" section.

Inspection Reports

Sl.no	View Report	Total Issues Found	Date of Creation	Download Report
1	Code Inspect Report 2024-11-18 07:03:58	43	18-11-2024	⤓
2	Code Inspect Report 2024-11-18 07:02:14	43	18-11-2024	⤓
3	Code Inspect Report 2024-11-18 06:53:27	43	18-11-2024	⤓

7. Upon clicking the row of any report, an accordion menu with Summary of Alerts will be displayed

21	Code Inspect Report 2024-11-15 11:37:18	595	15-11-2024	

Summary of Alerts		
Risk Level	**Number of Alerts**	
High	0	+
Medium	7	+
Low	501	-

Sl.no	Message	Description
1	WARN	D:\AI-Web Content\codeinspect-report\clone\clone_1731670612593\.git\objects\pack\pack-fd4457d5bd9ebe47722bcb01c93bea0ff7c51205.idx:1: File length is 6,946 lines (max allowed is 2,000). [FileLength]
2	WARN	D:\AI-Web Content\codeinspect-report\clone\clone_1731670612593\.git\objects\pack\pack-fd4457d5bd9ebe47722bcb01c93bea0ff7c51205.pack:1: File length is 163,900 lines (max allowed is 2,000). [FileLength]

Informational	87	+

8. Clicking the PDF symbol will download the Code Inspection Report

Repository Url

Enter Repository Url Here   **Inspect Now**

Inspection Reports

Sl.no	View Report	Total Issues Found	Date of Creation	Download Report
1	Code Inspect Report 2024-11-18 07:03:58	43	18-11-2024	
2	Code Inspect Report 2024-11-18 07:02:14	43	18-11-2024	

9. Upon clicking any of the report links, the Code Inspection report full details view page will be displayed.

Code Inspection Report

SL.No	Message	Description
1	WARN	D:\AI-Web Content\codeinspect-report\clone\clone_1731913434832\.git\objects\pack\pack-122cc459c29911bfcd7d5f43d62b01644ec266fc.pack:1: File length is 72,527 lines (max allowed is 2,000). [FileLength]
2	WARN	D:\AI-Web Content\codeinspect-report\clone\clone_1731913434832\drivers\chromedriver.exe:1: File length is 53,642 lines (max allowed is 2,000). [FileLength]
3	WARN	D:\AI-Web Content\codeinspect-report\clone\clone_1731913434832\drivers\geckodriver.exe:1: File length is 16,720 lines (max allowed is 2,000). [FileLength]
4	WARN	D:\AI-Web Content\codeinspect-report\clone\clone_1731913434832\drivers\IEDriverServer.exe:1: File length is 8,873 lines (max allowed is 2,000). [FileLength]
5	WARN	D:\AI-Web Content\codeinspect-report\clone\clone_1731913434832\src\main\java\in\ptmantra\actiondriver\Action.java:58:19: Catching 'Exception' is not allowed. [IllegalCatch]

5. Help

We hope this module helps portal administrators to validate the code inspection of their portal.
There is a lot coming in the next version with AI enabled features.
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