Lab 2 (20 min)

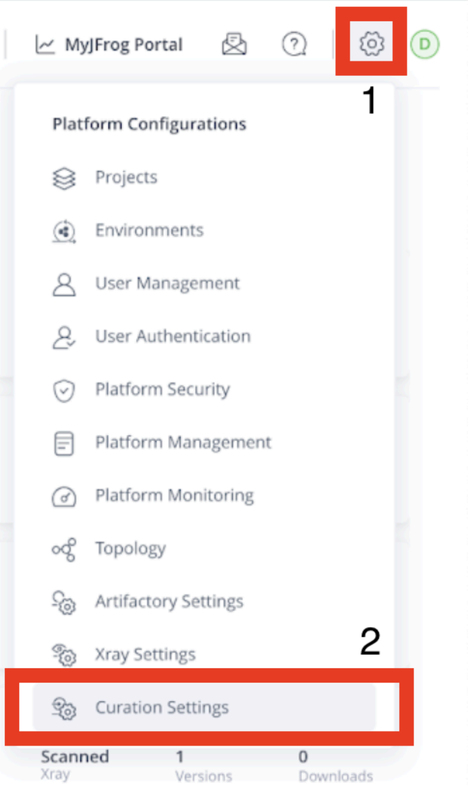
OVERVIEW: In this lab you will use JFrog Curation, configure policies with it and test it with a npm install command.

EXPECTED OUTCOME: Upon successful completion of this lab you will gain knowledge of how to curate open-source dependencies with the JFrog Platform.

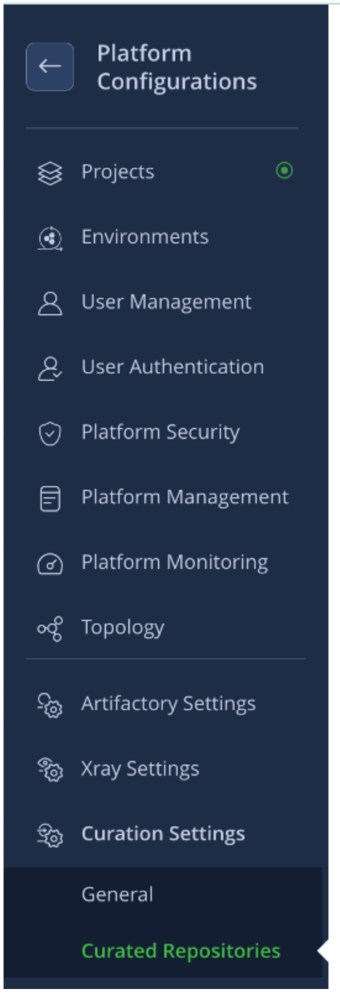
Step by step instructions

Phase #1 - Selecting a Repository to curate

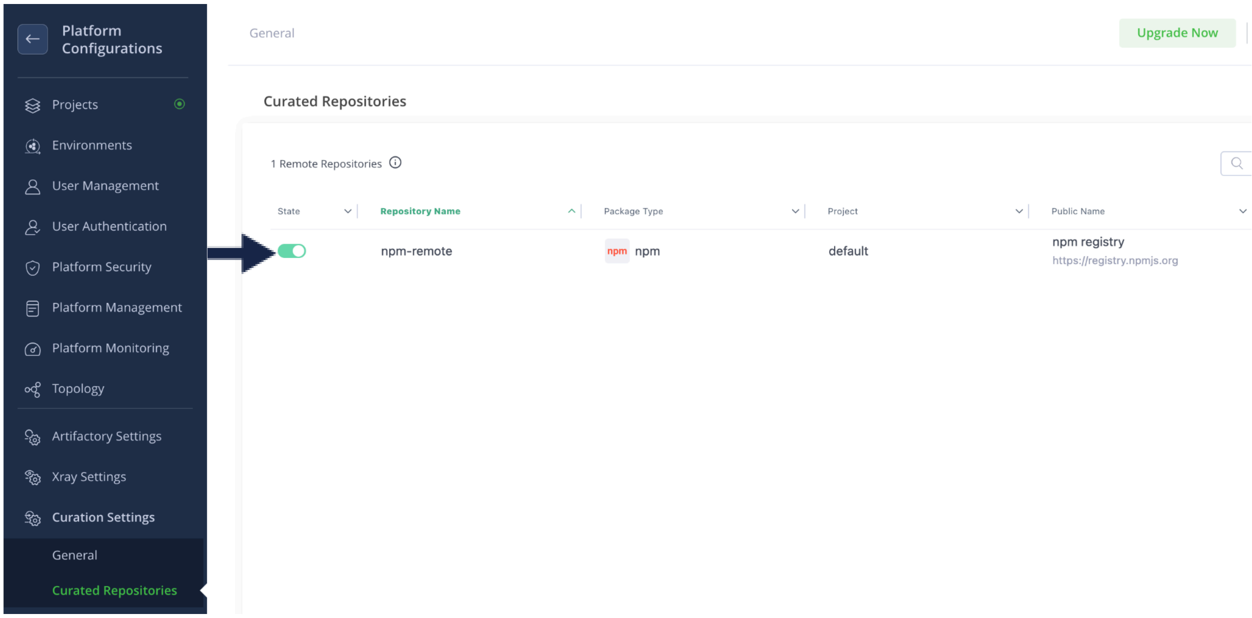
1. Click on 'Platform Configuration' -> 'Curation Settings' at the top right



2. From the left bar, select 'Curated Repositories'



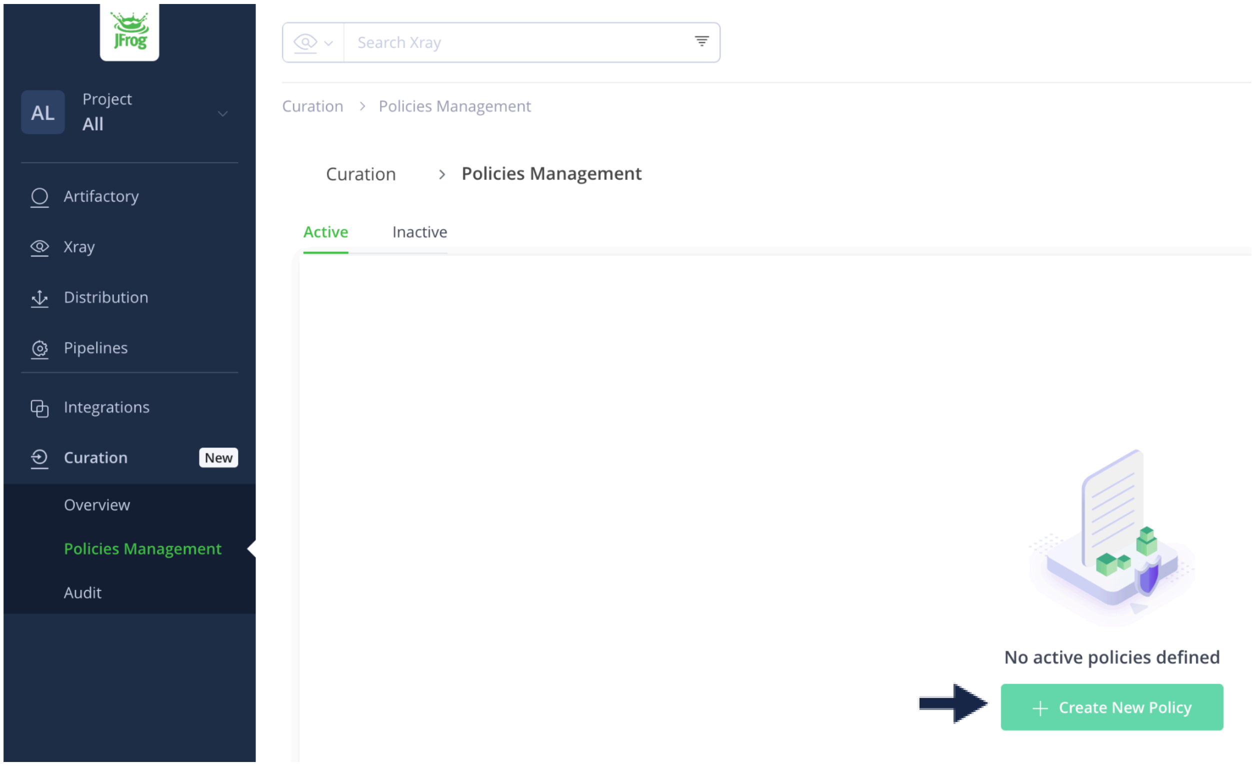
3. Turn On curation for the ‘npm-remote’ repository. This will enable you to enforce curation policies on this repository.



State	Repository Name	Package Type	Project	Public Name
●	npm-remote	npm npm	default	npm registry https://registry.npmjs.org

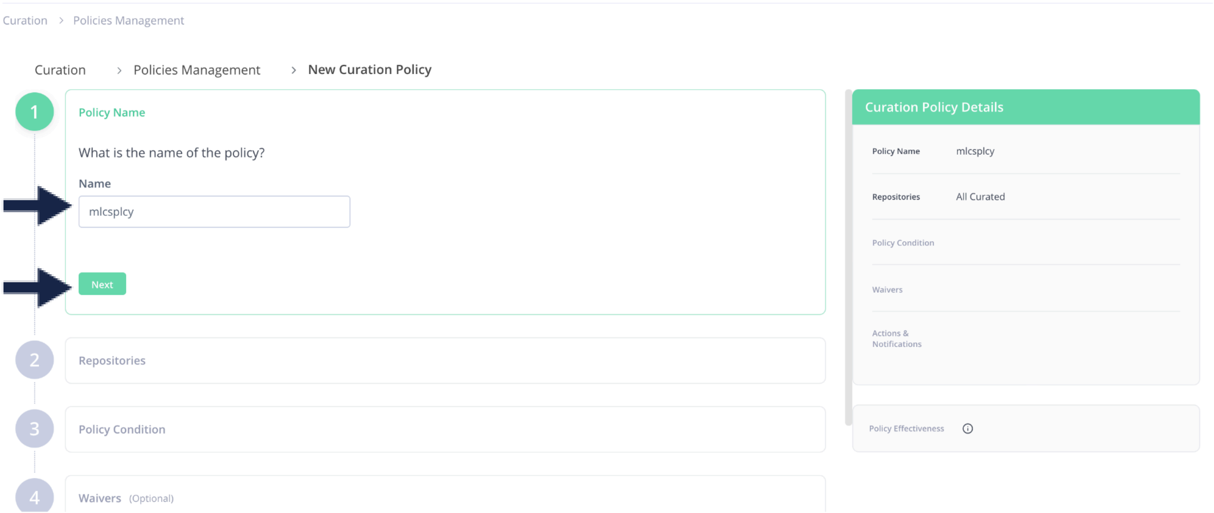
Phase #2 - Creating a Curation policy

4. Click on the back arrow at the Platform Configurations banner and from the left bar select 'Curation' -> 'Policies Management'



5. Click on 'Create New Policy'

6. Choose a name for the policy and click ‘Next’


Curation > Policies Management

Curation > Policies Management > New Curation Policy

1 Policy Name

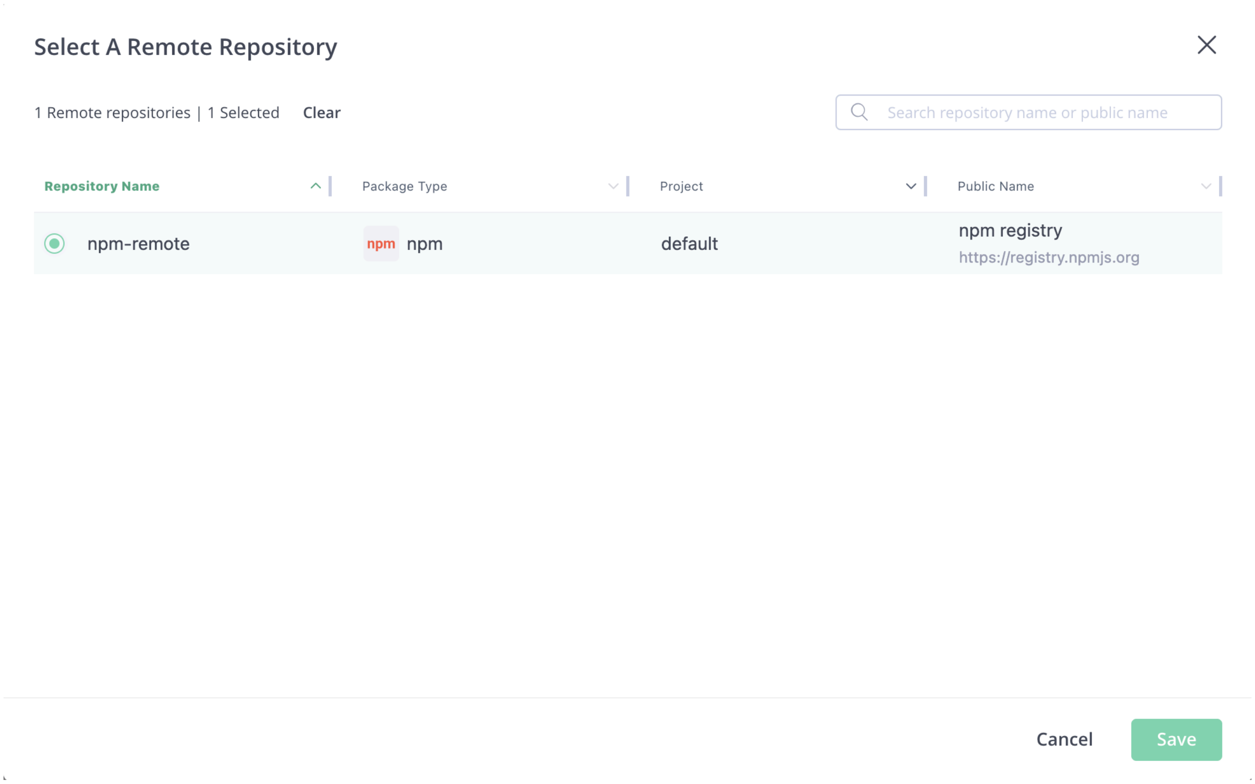
What is the name of the policy?

Name: mlcsplcy

Curation Policy Details

Policy Name	mlcsplcy
Repositories	All Curated
Policy Condition	
Waivers	
Actions & Notifications	

7. Choose the specific ‘npm-remote’ repository. This means the policy will be enforced only on the ‘npm-remote’ repository. Click ‘Next’.

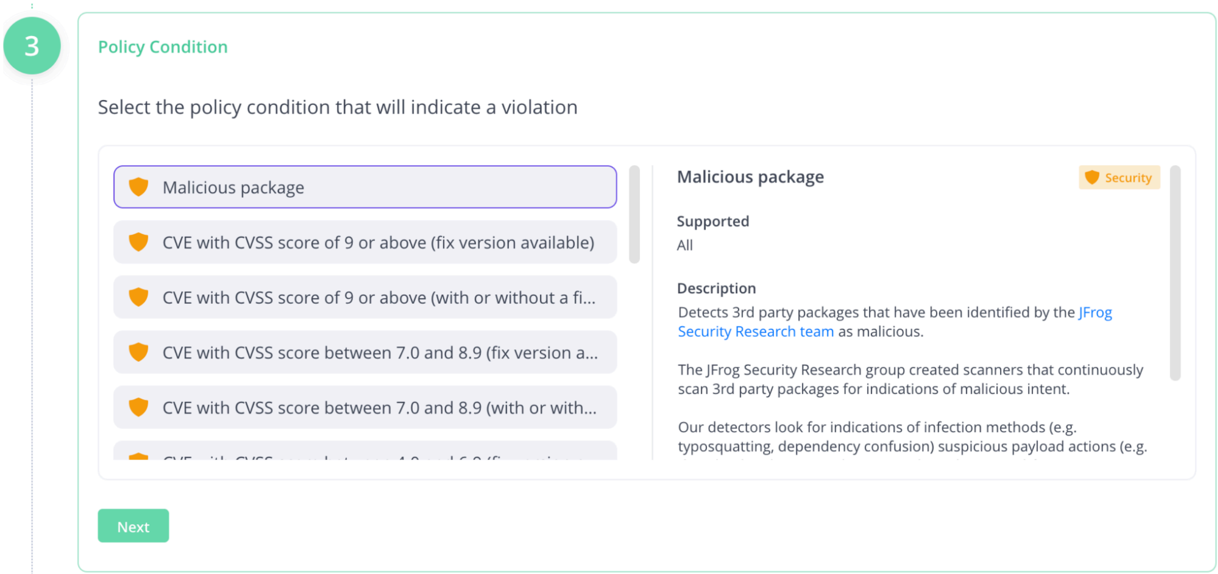

Select A Remote Repository

1 Remote repositories | 1 Selected Clear

Repository Name	Package Type	Project	Public Name
● npm-remote	npm	default	npm registry https://registry.npmjs.org

8. Now it’s time to choose a condition for the policy. Take a look at the different options, some are security related, some are license related and some are operational.

Curation enables you to pick the right OSS dependency based on different types of criterias. For this lab, let's choose 'Malicious Package' as the condition. Click 'Next'.



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Policy Condition

Select the policy condition that will indicate a violation

Malicious package
CVE with CVSS score of 9 or above (fix version available)
CVE with CVSS score of 9 or above (with or without a fi...
CVE with CVSS score between 7.0 and 8.9 (fix version a...
CVE with CVSS score between 7.0 and 8.9 (with or with...

Malicious package

Security

Supported

All

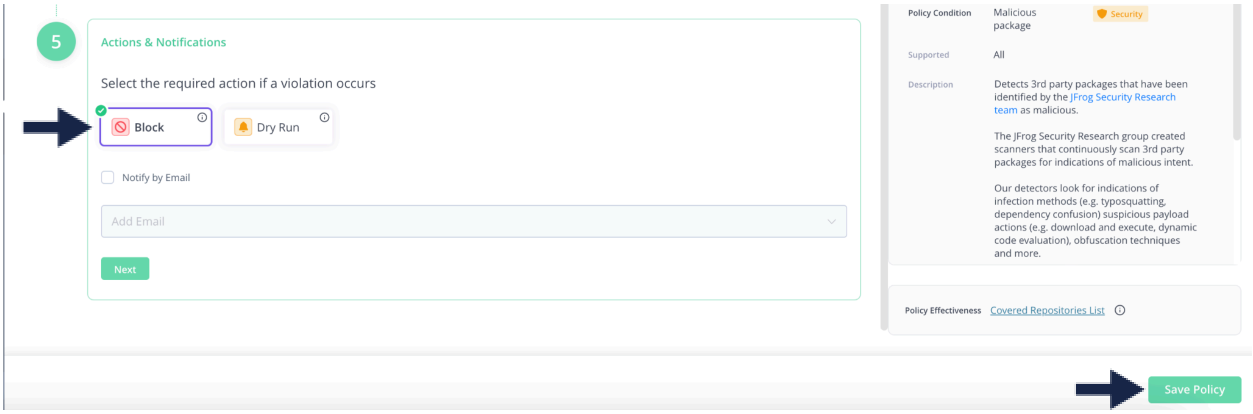
Description

Detects 3rd party packages that have been identified by the JFrog Security Research team as malicious.

The JFrog Security Research group created scanners that continuously scan 3rd party packages for indications of malicious intent.

Our detectors look for indications of infection methods (e.g. typosquatting, dependency confusion) suspicious payload actions (e.g.

9. Here we can add a waiver that will exclude specific packages from the policy being created. A waiver can be added also after policy creation. Let's skip and click on 'Next'.
10. Currently, Curation has two different actions: 'Block', which will block the download request and return a proper error message, or 'Dry Run', which will only simulate the curation flow. Let's choose 'Block' and click on 'Save Policy' on the bottom right.



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Actions & Notifications

Select the required action if a violation occurs

□ Notify by Email

Policy Condition Malicious package

Security

Supported All

Description Detects 3rd party packages that have been identified by the JFrog Security Research team as malicious.

The JFrog Security Research group created scanners that continuously scan 3rd party packages for indications of malicious intent.

Our detectors look for indications of infection methods (e.g. typosquatting, dependency confusion) suspicious payload actions (e.g. download and execute, dynamic code evaluation), obfuscation techniques and more.

Policy Effectiveness Covered Repositories List

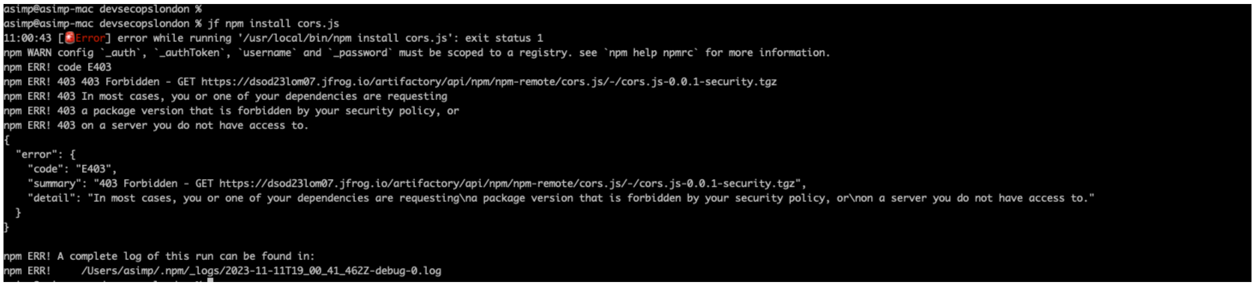
Congratulations, you've created your first curation policy!

Phase #3 - Testing your Curation policy

11. Open your terminal and make sure you are in a session in your ec2 instance.
12. 'npm config' has been preset to point to npm-remote repository.
13. Run an 'npm install' command. We will try to download the malicious package 'cors.js'.

```
jf npm install cors.js
```

14. You should be able to receive the following message, if you did - congratulations, Curation was configured successfully. Otherwise, go back to Phase #2 or ask for help.

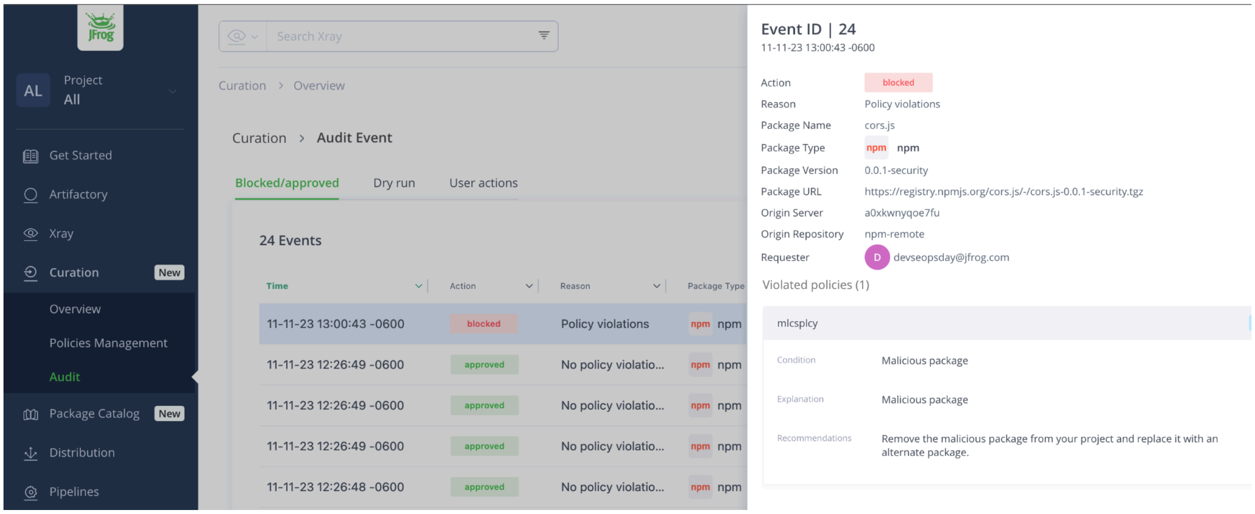


```
asimp@asimp-mac devsecopslondon %
asimp@asimp-mac devsecopslondon % jf npm install cors.js
11:00:43 [Error] error while running '/usr/local/bin/npm install cors.js': exit status 1
npm WARN config `_auth`, `_authToken`, `username` and `_password` must be scoped to a registry. see `npm help npmrc` for more information.
npm ERR! code E403
npm ERR! 403 403 Forbidden - GET https://dsod23lom07.jfrog.io/artifactory/api/npm/npm-remote/cors.js/-/cors.js-0.0.1-security.tgz
npm ERR! 403 In most cases, you or one of your dependencies are requesting
npm ERR! 403 a package version that is forbidden by your security policy, or
npm ERR! 403 on a server you do not have access to.
{
  "error": {
    "code": "E403",
    "summary": "403 Forbidden - GET https://dsod23lom07.jfrog.io/artifactory/api/npm/npm-remote/cors.js/-/cors.js-0.0.1-security.tgz",
    "detail": "In most cases, you or one of your dependencies are requesting\na package version that is forbidden by your security policy, or\non a server you do not have access to."
  }
}

npm ERR! A complete log of this run can be found in:
npm ERR!     /Users/asimp/.npm/_logs/2023-11-11T19_00_41_462Z-debug-0.log
```

Phase #4 - Inspecting the Curation event

15. Go back to the JPD UI, and click on 'Curation' -> 'Audit'. Here you should be able to see the last event, which is a rejection of your npm install request.



24 Events

Time	Action	Reason	Package Type
11-11-23 13:00:43 -0600	blocked	Policy violations	npm npm
11-11-23 12:26:49 -0600	approved	No policy violatio...	npm npm
11-11-23 12:26:49 -0600	approved	No policy violatio...	npm npm
11-11-23 12:26:49 -0600	approved	No policy violatio...	npm npm
11-11-23 12:26:48 -0600	approved	No policy violatio...	npm npm

Event ID | 24
11-11-23 13:00:43 -0600

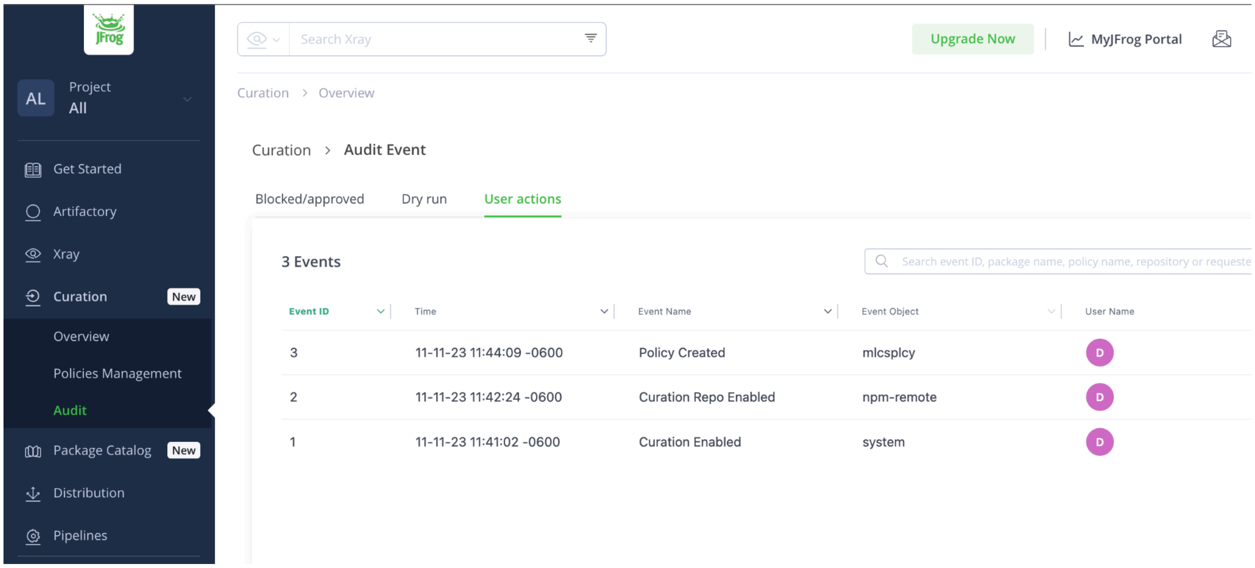
Action	blocked
Reason	Policy violations
Package Name	cors.js
Package Type	npm npm
Package Version	0.0.1-security
Package URL	https://registry.npmjs.org/cors.js/-/cors.js-0.0.1-security.tgz
Origin Server	a0xkwnyqoe7fu
Origin Repository	npm-remote
Requester	D devseopsday@jfrog.com

Violated policies (1)

mlcsplcy

Condition	Malicious package
Explanation	Malicious package
Recommendations	Remove the malicious package from your project and replace it with an alternate package.

16. In addition, if you click on 'User Actions', you should be able to see the audit trail of the policy you created in Phase #2.
Inspect the information provided on this action.



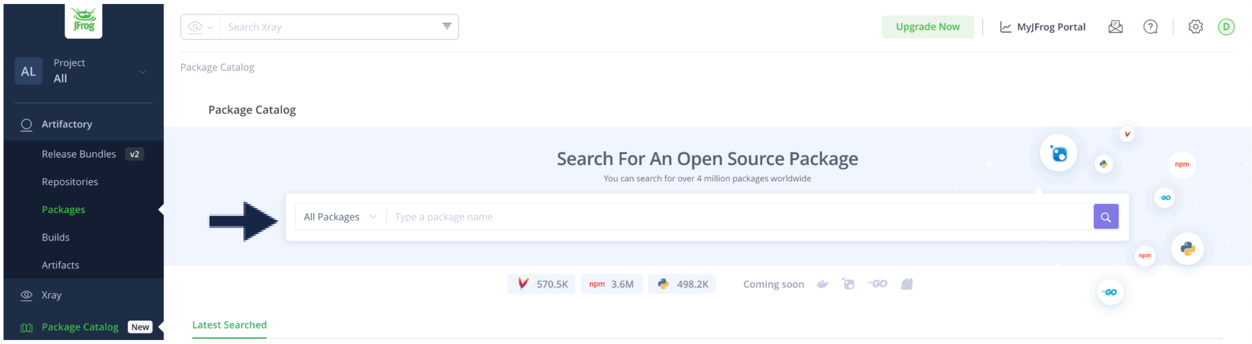
3 Events

Event ID	Time	Event Name	Event Object	User Name
3	11-11-23 11:44:09 -0600	Policy Created	mlcsplcy	D
2	11-11-23 11:42:24 -0600	Curation Repo Enabled	npm-remote	D
1	11-11-23 11:41:02 -0600	Curation Enabled	system	D

Congratulations! You have completed Lab 2

Phase #5 - BONUS - Inspecting the package in JFrog Catalog

17. Go back to the UI, and click on ‘Package Catalog’. Search for the ‘cors.js’ package.



18. What kind of information does the catalog provide on cors.js? What is the core issue and what is the remediation?