GHSL-2024-312: Arbitrary code execution and secret exfiltration in Azure API Management Developer Portal

GHSL-2024-312: Arbitrary code execution and secret exfiltration in Azure API Management Developer Portal - pwntester, @pwntester, GitHub Security Lab.

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Content

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Coordinated Disclosure Timeline

- 2024-10-22: Reported through MSRC.
- 2024-11-04: Vulnerable workflow is removed.
- 2024-11-27: MSRC issue is closed as resolved.

Summary

Secret exfiltration on GitHub's Azure/api-management-developer-portal repository.

Project

Azure API Management Developer Portal

Tested Version

Latest commit at the time of reporting.

Details

Code Injection (GHSL-2024-312)

The workflow cleanUpOpenenedIssues.yaml is triggered manually by maintainers of the repo:

```
on:
  workflow_dispatch:
```

However, the workflow loads untrusted data by loading fetching all opened issues in the repository and dumping the response into the issues.json file.

```
    - name: Fetch open issues
      id: issues
      uses: octokit/request-action@v2.x
      with:
        route: GET /repos/Azure/api-management-developer-portal/issues?state=open
      env:
        GITHUB_TOKEN: ${{ secrets.GITHUBACTIONS_TOKEN }}

    - name: Write issues to file
      run: |
        echo '${{ steps.issues.outputs.data }}' > issues.json
```

Because ${{ steps.issues.outputs.data }} contains untrusted data and is interpolated into a Bash script, a malicious actor could create an issue with a body or title of: `"foo' whoami 'bar"` which when interpolated into the script will make to break out of the single quotes context, inject the `whoami` command and return to the single quote context.

By gaining Code execution in the runner, the attacker will be able to gain the permissions of the `GITHUB_TOKEN` and also those of the `secrets.GITHUBACTIONS_TOKEN` token, both of them unknown to the reporter.

Impact

This issue may lead arbitrary code execution and secrets exfiltration.

Credit

This issue was discovered and reported by GHSL team member @pwntester (Alvaro Muñoz).

Contact

You can contact the GHSL team at `securitylab@github.com`, please include a reference to `GHSL-2024-312` in any communication regarding this issue.