

## **SSA-208356: DFT File Parsing Vulnerabilities in Solid Edge**

Publication Date: 2021-06-08  
Last Update: 2021-06-08  
Current Version: V1.0  
CVSS v3.1 Base Score: 7.8

### **SUMMARY**

Siemens has released a new version for Solid Edge to fix two vulnerabilities that could be triggered when the application read files in DFT file format. If a user is tricked to opening of a malicious file with the affected products, this could lead to application crash, or potentially arbitrary code execution on the target host system.

Siemens recommends to update to the latest versions and to limit opening of untrusted files from unknown sources in the affected products.

### **AFFECTED PRODUCTS AND SOLUTION**

Affected Product and Versions	Remediation
Solid Edge SE2020: All Versions < 2020MP14	Update to 2020MP14 or later version <a href="https://support.sw.siemens.com/">https://support.sw.siemens.com/</a> (login required)
Solid Edge SE2021: All Versions < SE2021MP5	Update to SE2021MP5 or later version <a href="https://support.sw.siemens.com/">https://support.sw.siemens.com/</a> (login required)

### **WORKAROUNDS AND MITIGATIONS**

Siemens has identified the following specific workarounds and mitigations that customers can apply to reduce the risk:

- Avoid to open untrusted files from unknown sources in Solid Edge

### **GENERAL SECURITY RECOMMENDATIONS**

As a general security measure, Siemens strongly recommends to protect network access to devices with appropriate mechanisms. In order to operate the devices in a protected IT environment, Siemens recommends to configure the environment according to Siemens' operational guidelines for Industrial Security (Download: <https://www.siemens.com/cert/operational-guidelines-industrial-security>), and to follow the recommendations in the product manuals.

Additional information on Industrial Security by Siemens can be found at: <https://www.siemens.com/industrialsecurity>

### **PRODUCT DESCRIPTION**

Solid Edge is a portfolio of software tools that addresses various product development processes : 3D design, simulation, manufacturing and design management.

### **VULNERABILITY CLASSIFICATION**

The vulnerability classification has been performed by using the CVSS scoring system in version 3.1 (CVSS v3.1) (<https://www.first.org/cvss/>). The CVSS environmental score is specific to the customer's

environment and will impact the overall CVSS score. The environmental score should therefore be individually defined by the customer to accomplish final scoring.

An additional classification has been performed using the CWE classification, a community-developed list of common software security weaknesses. This serves as a common language and as a baseline for weakness identification, mitigation, and prevention efforts. A detailed list of CWE classes can be found at: <https://cwe.mitre.org/>.

#### Vulnerability CVE-2021-31342

The ugeom2d.dll library lacks proper validation of user-supplied data when parsing DFT files. This could result in an out of bounds write past the end of an allocated structure. An attacker could leverage this vulnerability to execute code in the context of the current process. (ZDI-CAN-12993)

CVSS v3.1 Base Score	7.8
CVSS Vector	<a href="#">CVSS:3.1/AV:L/AC:L/PR:N/UI:R/S:U/C:H/I:H/A:H/E:P/RL:O/RC:C</a>
CWE	CWE-787: Out-of-bounds Write

#### Vulnerability CVE-2021-31343

The jutil.dll library lacks proper validation of user-supplied data when parsing DFT files. This could result in an out of bounds write past the end of an allocated structure. An attacker could leverage this vulnerability to execute code in the context of the current process. (ZDI-CAN-12994)

CVSS v3.1 Base Score	7.8
CVSS Vector	<a href="#">CVSS:3.1/AV:L/AC:L/PR:N/UI:R/S:U/C:H/I:H/A:H/E:P/RL:O/RC:C</a>
CWE	CWE-787: Out-of-bounds Write

## **ACKNOWLEDGMENTS**

Siemens thanks the following parties for their efforts:

- Trend Micro Zero Day Initiative for coordinated disclosure
- Cybersecurity and Infrastructure Security Agency (CISA) for coordination efforts

## **ADDITIONAL INFORMATION**

For further inquiries on security vulnerabilities in Siemens products and solutions, please contact the Siemens ProductCERT:

<https://www.siemens.com/cert/advisories>

## **HISTORY DATA**

V1.0 (2021-06-08): Publication Date

## **TERMS OF USE**

Siemens Security Advisories are subject to the terms and conditions contained in Siemens' underlying license terms or other applicable agreements previously agreed to with Siemens (hereinafter "License Terms"). To the extent applicable to information, software or documentation made available in or through a Siemens Security Advisory, the Terms of Use of Siemens' Global Website ([https://www.siemens.com/terms\\_of\\_use](https://www.siemens.com/terms_of_use), hereinafter "Terms of Use"), in particular Sections 8-10 of the Terms of Use, shall apply additionally. In case of conflicts, the License Terms shall prevail over the Terms of Use.