Schneider Electric Security Notification

Harmony HMI Products Configured by Vijeo Designer or EcoStruxure Machine Expert

11 May 2021

Overview

Schneider Electric is aware of a vulnerability in Harmony HMI Products configured by Vijeo Designer or EcoStruxure Machine Expert

The Harmony HMI products are configured by Vijeo Designer software or EcoStruxure Machine Expert, a unique solution software for developing, configuring, and commissioning an entire machine in a single software environment.

Failure to apply the remediations provided below may risk illegal memory access, which could result in denial of service, illegal access to system information.

Affected Products

Product	Configuration Software
Harmony STO	Configured by Vijeo Designer– all versions prior to V6.2 SP11
Harmony STU	
Harmony GTO	
Harmony GTU	
Harmony GTUX	
Harmony GK	
Harmony HMISCU	Configured by EcoStruxure™ Machine Expert – all versions prior to V2.0

Vulnerability Details

CVE ID: **CVE-2021-22705**

CVSS v3.1 Base Score 7.4 | High | CVSS:3.1/AV:L/AC:H/PR:N/UI:N/S:U/C:H/I:H/A:H

A *CWE-119: Improper Restriction of Operations within the Bounds of a Memory Buffer* vulnerability exists that could cause denial of service or unauthorized access to system information when interacting directly with a driver installed by Vijeo Designer or EcoStruxure™ Machine Expert.

Remediation

Configuration	Remediation Steps
Vijeo Designer – all versions prior to V6.2 SP11	1. On the engineering workstation, update to Version V6.2 SP11 and above of Vijeo Designer which includes a fix for this vulnerability and is available for download here: https://www.se.com/ww/en/product-range-download/1054-vijeo-designer/?parent-subcategory-id=82307&filter=business-1-industrial-automation-and-control&selected-node-id=12146993558#/software-firmware-tab 2. Connect to Harmony HMI and download the project file using Vijeo Designer V6.2 SP11
EcoStruxure™ Machine Expert – all versions prior to V2.0	1. On the engineering workstation, update to EcoStruxure™ Machine Expert V2.0 or above which includes a fix for this vulnerability and is available for download here: https://www.se.com/ww/en/product-range/2226-ecostruxure-machine-expert-%28somachine%29/?N=1968388748#software-and-firmware 2. On the HMISCU Logic Controller, update to latest firmware version available within EcoStruxure™ Machine Expert V2.0

Customers should use appropriate patching methodologies when applying these patches to their systems. We strongly recommend the use of back-ups and evaluating the impact of these patches in a Test and Development environment or on an offline infrastructure. Contact Schneider Electric's Customer Care Center if you need assistance removing a patch.

If customers choose not to apply the remediation provided above, they should immediately apply the following mitigations to reduce the risk of exploit:

- Use Vijeo Designer and EcoStruxure™ Machine Expert V2.0 software only on a trusted workstation and Harmony Product.
- Harden your workstation and Harmony Product following the best cybersecurity practices (antivirus, updated operating systems, strong password policies, application White Listing software, etc.) using the Recommended Cybersecurity Best Practices document.

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General Security Recommendations

We strongly recommend the following industry cybersecurity best practices.

- Locate control and safety system networks and remote devices behind firewalls and isolate them from the business network.
- Install physical controls so no unauthorized personnel can access your industrial control and safety systems, components, peripheral equipment, and networks.
- Place all controllers in locked cabinets and never leave them in the “Program” mode.
- Never connect programming software to any network other than the network for the devices that it is intended for.
- Scan all methods of mobile data exchange with the isolated network such as CDs, USB drives, etc. before use in the terminals or any node connected to these networks.
- Never allow mobile devices that have connected to any other network besides the intended network to connect to the safety or control networks without proper sanitation.
- Minimize network exposure for all control system devices and systems, and ensure that they are not accessible from the Internet.
- When remote access is required, use secure methods, such as Virtual Private Networks (VPNs). Recognize that VPNs may have vulnerabilities and should be updated to the most current version available. Also, understand that VPNs are only as secure as the connected devices.

For more information refer to the Schneider Electric Recommended Cybersecurity Best Practices document.

Acknowledgements

Schneider Electric recognizes the following researcher for identifying and helping to coordinate a response to this vulnerability:

CVE	Researcher
CVE-2021-22705	Jie Chen (NSFOCUS)

For More Information

This document provides an overview of the identified vulnerability or vulnerabilities and actions required to mitigate. For more details and assistance on how to protect your installation, contact your local Schneider Electric representative or Schneider Electric Industrial Cybersecurity Services. These organizations will be fully aware of this situation and can support you through the process.

https://www.se.com/ww/en/work/support/cybersecurity/overview.jsp

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https://www.se.com/ww/en/work/services/field-services/industrial-automation/industrial-cybersecurity/industrial-cybersecurity.jsp

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We provide **energy and automation digital** solutions for **efficiency and sustainability.** We combine world-leading energy technologies, real-time automation, software and services into integrated solutions for Homes, Buildings, Data Centers, Infrastructure and Industries.

We are committed to unleash the infinite possibilities of an **open, global, innovative community** that is passionate with our **Meaningful Purpose, Inclusive and Empowered** values.

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Product Security Office

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