

Schneider Electric Security Notification

ConneXium Network Manager (CNM) Software

12 October 2021

Overview

Schneider Electric is aware of a vulnerability in its ConneXium Network Manager (CNM) software.

The [ConneXium Network Manager \(CNM\)](#) is a software which allows users to configure one or more Ethernet devices with a few button clicks, reducing the need to log into each device independently.

Failure to apply the mitigations provided below may lead to unauthorized access to configuration settings, which could result in arbitrary code execution on the CNM workstation.

Affected Product and Versions

ConneXium Network Manager (Ethernet network management software) – all versions

Vulnerability Details

CVE ID: **CVE-2021-22801**

CVSS v3.1 Base Score 7.8 | High | CVSS:3.1/AV:L/AC:L/PR:N/UI:R/S:U/C:H/I:H/A:H

A *CWE-269: Improper Privilege Management* vulnerability exists that could cause an arbitrary command execution when the software is configured with specially crafted event actions.

Remediations

Customers can protect their installation with the following:

- **STEP 1:** Download and run the CNM Alarms Disabler Tool here:
https://www.se.com/us/en/download/document/CNM_Alarms_Disabler_Tool/

Usage:

Place the disabler tool and the .cxn project file in the same directory.

In a shell prompt, and in the chosen directory, execute the following command:

```
disabler -projectfile {source project filename} -resultfile {converted project filename}
```

Important: The converter secures and modifies the CNM database and store it in a new project file. Before a database coming from an untrusted source is loaded into CNM, customers must run the converter. Note that the original database is not modified. So if the original database needs to be loaded once more, it must be converted first.

Schneider Electric Security Notification

- **STEP 2:** Set up the “Edit Password” in the [CNM software](#). The “Edit Mode” is enabled by default. Customers must activate the edit protection by switching to “Run mode” before exiting the application. Please refer to the chapter “Edit Mode” of the user manual.

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:

- Harden the workstation running ConneXium Network Manager (CNM) Software.
- Do not load .cxn files received from untrusted sources.
- Use session without administrator rights when it is not necessary.

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.

Schneider Electric Security Notification

Acknowledgements

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

CVE	Researcher
CVE-2021-22801	David Yesland working with Trend Micro's Zero Day Initiative

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: <https://www.se.com/ww/en/work/solutions/cybersecurity/>. These organizations will be fully aware of this situation and can support you through the process.

For further information related to cybersecurity in Schneider Electric's products, visit the company's cybersecurity support portal page:

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

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Revision Control:

Version 1.0 <i>12 October 2021</i>	Original Release
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