CODESYS Control - Out-of-bounds Write

CODESYS Security Advisory 2026-10

Published: 2026-05-21

Last Change: 2026-05-26

Identifiers, Type and Severity

CVE-2026-8047
CERT@VDE: VDE-2026-057
CODESYS: CDS-97024, CDS-97194

CWE-1284: Improper Validation of Specified Quantity in Input

CVSS v3.1 Base Score: 7.5 | High | CVSS:3.1/AV:N/AC:L/PR:N/UI:N/S:U/C:N/I:N/A:H

1 Summary

The CmpWebServer component in the CODESYS Control Runtime allows users to create browser-based visualizations for monitoring and controlling industrial processes.
Due to improper bounds checking, a specially crafted HTTP request from an unauthenticated remote attacker may lead to a size-limited out-of-bounds write, causing a denial of service of the affected device.

The CODESYS Control runtime system is only affected if the web server is active, which by default requires a running application with an enabled Web Visualization.

2 Affected Products

The following products are affected in all versions from 3.5.21.0 and before 3.5.22.20.
• CODESYS Control RTE (SL)
• CODESYS Control RTE (for Beckhoff CX) SL
• CODESYS Control Win (SL)
• CODESYS HMI (SL)
• CODESYS Runtime Toolkit

The following products are affected in all versions from 4.15.0.0 and before 4.21.0.0.
• CODESYS Control for BeagleBone SL
• CODESYS Control for emPC-A/iMX6 SL
• CODESYS Control for IOT2000 SL
• CODESYS Control for Linux ARM SL
• CODESYS Control for Linux SL
• CODESYS Control for PFC100 SL
• CODESYS Control for PFC200 SL
• CODESYS Control for PLCnext SL
• CODESYS Control for Raspberry Pi SL
• CODESYS Control for WAGO Touch Panels 600 SL
• CODESYS Virtual Control SL

3 Impact

Successful exploitation allows an unauthenticated remote attacker to trigger an out-of-bounds write, causing the CODESYS Control Runtime to crash and resulting in a denial of service on the affected device.

4 Remediation

Update the following products to version 3.5.22.20.
• CODESYS Control RTE (SL)
• CODESYS Control RTE (for Beckhoff CX) SL
• CODESYS Control Win (SL)
• CODESYS HMI (SL)
• CODESYS Runtime Toolkit

Update the following products to version 4.21.0.0. The release of this version is expected in June 2026.
• CODESYS Control for BeagleBone SL
• CODESYS Control for emPC-A/iMX6 SL
• CODESYS Control for IOT2000 SL
• CODESYS Control for Linux ARM SL
• CODESYS Control for Linux SL
• CODESYS Control for PFC100 SL
• CODESYS Control for PFC200 SL
• CODESYS Control for PLCnext SL
• CODESYS Control for Raspberry Pi SL
• CODESYS Control for WAGO Touch Panels 600 SL

• CODESYS Virtual Control SL

The CODESYS Development System and the products available as CODESYS add-ons can be downloaded and installed directly with the CODESYS Installer or be downloaded from the CODESYS Store. Alternatively, as well as for all other products, you will find further information on obtaining the software update in the CODESYS Update area https://www.codesys.com/download/.

5 General Security Recommendations

As part of a security strategy, CODESYS GmbH strongly recommends at least the following best-practice defense measures:

• Use controllers and devices only in a protected environment to minimize network exposure and ensure that they are not accessible from outside

• Use firewalls to protect and separate the control system network from other networks

• Activate and apply user management and password features

• Limit the access to both development and control system by physical means, operating system features, etc.

• Use encrypted communication links

• Use VPN (Virtual Private Networks) tunnels if remote access is required

• Protect both development and control system by using up to date virus detecting solutions

For more information and general recommendations for protecting machines and plants, see also the CODESYS Security Whitepaper.

6 Acknowledgments

Coordination done by CERT@VDE.

CODESYS GmbH thanks all parties involved for their efforts.

7 Further Information

For additional information regarding the CODESYS products, especially the above-mentioned versions, or about the described vulnerability please contact CODESYS support.

8 Disclaimer

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9 Bibliography

[1] CERT@VDE: https://cert.vde.com
[2] CODESYS GmbH: CODESYS Security Whitepaper
[3] CODESYS GmbH: Coordinated Disclosure Policy
[4] CODESYS GmbH download area: https://www.codesys.com/download
[5] CODESYS GmbH security information page: https://www.codesys.com/security
[6] CODESYS GmbH support contact site: https://www.codesys.com/support

[7] Common Vulnerabilities and Exposures (CVE): https://cve.mitre.org
[8] Common Weakness Enumeration (CWE): https://cwe.mitre.org
[9] CVSS Calculator: https://www.first.org/cvss/calculator/3.1

The latest version of this document can be found here:

https://api-www.codesys.com/fileadmin/user_upload/CODESYS_Group/Ecosystem/Up-to-Date/Security/Security-Advisories/Advisory2026-10_CDS-97024.pdf

Change History

Version	Description	Date
1.0	Initial version	2026-05-21
2.0	CWE adapted	2026-05-26