CODESYS Control - Incorrect Authorization

CODESYS Security Advisory 2026-08

Published: 2026-05-21

Last Change: 2026-05-21

Identifiers, Type and Severity

CVE-2026-8046
CERT@VDE: VDE-2026-056
CODESYS: CDS-97148, CDS-97482

CWE-863: Incorrect Authorization

CVSS v3.1 Base Score: 6.5 | Medium | CVSS:3.1/AV:N/AC:L/PR:L/UI:N/S:U/C:N/I:H/A:N

1 Summary

The CODESYS Control runtime system provides a user management mechanism with multiple privilege groups including the visualization administrators group, which is intended solely to manage visualization users.

Due to insufficient authorization checks an authenticated remote user with low-privileged visualization administrator access can delete higher-privileged accounts. However, independent mechanisms protect the deletion of the last remaining device admin user, preventing a complete loss of administrative access to the device.

The CODESYS Control runtime system is only affected if the optional visualization user management feature is enabled and a visualization administrator account has been configured.

2 Affected Products

The following products are affected in all versions 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 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 of this vulnerability allows an authenticated, low-privileged remote visualization administrator to perform unauthorized deletion of user accounts within the device user management. This results in a persistent denial-of-service for legitimate users and may prevent logins of communication clients.

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

This issue was reported by ABB AG.

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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Note: Not all CODESYS features are available in all territories. For more information on geographic restrictions, please contact sales@codesys.com.

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/Advisory2026-08_CDS-97148.pdf

Change History

Version	Description	Date
1.0	Initial version	2026-05-21