

## SSA-753746: Denial of Service Vulnerabilities in SIMATIC WinCC Affecting Other SIMATIC Software Products

Publication Date: 2024-02-13  
Last Update: 2024-04-09  
Current Version: V1.1  
CVSS v3.1 Base Score: 6.5  
CVSS v4.0 Base Score: 7.1

### SUMMARY

Two null point dereference vulnerabilities affect multiple SIMATIC software products. These could allow an attacker to cause a persistent denial of service condition in the RPC Server of these products.

Siemens has released new versions for the affected products and recommends to update to the latest versions.

### AFFECTED PRODUCTS AND SOLUTION

Affected Product and Versions	Remediation
OpenPCS 7 V9.1: All versions affected by <a href="#">all CVEs</a>	Currently no fix is available The vulnerability is fixed if SIMATIC WinCC V7.5 SP2 Update 15 or later version is installed on the same system See further recommendations from section <a href="#">Workarounds and Mitigations</a>
SIMATIC BATCH V9.1: All versions affected by <a href="#">all CVEs</a>	Currently no fix is available The vulnerability is fixed if SIMATIC WinCC V7.5 SP2 Update 15 or later version is installed on the same system See further recommendations from section <a href="#">Workarounds and Mitigations</a>
SIMATIC PCS 7 V9.1: All versions affected by <a href="#">all CVEs</a>	Currently no fix is available Update to V9.1 SP2; then update SIMATIC WinCC to V7.5 SP2 Update 15 or later version See further recommendations from section <a href="#">Workarounds and Mitigations</a>
SIMATIC Route Control V9.1: All versions affected by <a href="#">all CVEs</a>	Currently no fix is available The vulnerability is fixed if SIMATIC WinCC V7.5 SP2 Update 15 or later version is installed on the same system See further recommendations from section <a href="#">Workarounds and Mitigations</a>
SIMATIC WinCC Runtime Professional V18: All versions affected by <a href="#">all CVEs</a>	Currently no fix is available See recommendations from section <a href="#">Workarounds and Mitigations</a>

SIMATIC WinCC Runtime Professional V19: All versions affected by <a href="#">all CVEs</a>	Currently no fix is available See recommendations from section <a href="#">Workarounds and Mitigations</a>
SIMATIC WinCC V7.4: All versions affected by <a href="#">all CVEs</a>	Currently no fix is planned See recommendations from section <a href="#">Workarounds and Mitigations</a>
SIMATIC WinCC V7.5: All versions < V7.5 SP2 Update 15 affected by <a href="#">all CVEs</a>	Update to V7.5 SP2 Update 15 or later version <a href="https://support.industry.siemens.com/cs/ww/en/view/109793460/">https://support.industry.siemens.com/cs/ww/en/view/109793460/</a> See further recommendations from section <a href="#">Workarounds and Mitigations</a>
SIMATIC WinCC V8.0: All versions < V8.0 SP4 affected by <a href="#">all CVEs</a>	Update to V8.0 SP4 or later version <a href="https://support.industry.siemens.com/cs/ww/en/view/109818723/">https://support.industry.siemens.com/cs/ww/en/view/109818723/</a> See further recommendations from section <a href="#">Workarounds and Mitigations</a>

## **WORKAROUNDS AND MITIGATIONS**

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

- Ensure that SIMATIC WinCC, SIMATIC WinCC Runtime Professional and SIMATIC PCS 7 stations communicate via encrypted channels (i.e. activate feature “Encrypted Communication” in SIMATIC WinCC and SIMATIC PCS 7). Enabling “Encrypted Communication” completely mitigates the vulnerability

Product-specific remediations or mitigations can be found in the section [Affected Products and Solution](#). Please follow the [General Security Recommendations](#).

## **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**

SIMATIC PCS 7 is a distributed control system (DCS) integrating SIMATIC WinCC, SIMATIC Batch, SIMATIC Route Control, OpenPCS 7 and other components.

SIMATIC WinCC is a supervisory control and data acquisition (SCADA) system.

SIMATIC WinCC Runtime Professional is a visualization runtime platform used for operator control and monitoring of machines and plants.

## **VULNERABILITY DESCRIPTION**

This chapter describes all vulnerabilities (CVE-IDs) addressed in this security advisory. Wherever applicable, it also documents the product-specific impact of the individual vulnerabilities.

### **Vulnerability CVE-2023-48363**

The implementation of the RPC (Remote Procedure call) communication protocol in the affected products do not properly handle certain unorganized RPC messages. An attacker could use this vulnerability to cause a denial of service condition in the RPC server.

CVSS v3.1 Base Score	6.5
CVSS Vector	<a href="#">CVSS:3.1/AV:A/AC:L/PR:N/UI:N/S:U/C:N/I:N/A:H/E:P/RL:O/RC:C</a>
CVSS v4.0 Base Score	7.1
CVSS Vector	<a href="#">CVSS:4.0/AV:A/AC:L/AT:N/PR:N/UI:N/VC:N/VI:N/VA:H/SC:N/SI:N/SA:N</a>
CWE	CWE-476: NULL Pointer Dereference

### **Vulnerability CVE-2023-48364**

The implementation of the RPC (Remote Procedure call) communication protocol in the affected products do not properly handle certain malformed RPC messages. An attacker could use this vulnerability to cause a denial of service condition in the RPC server.

CVSS v3.1 Base Score	6.5
CVSS Vector	<a href="#">CVSS:3.1/AV:A/AC:L/PR:N/UI:N/S:U/C:N/I:N/A:H/E:P/RL:O/RC:C</a>
CVSS v4.0 Base Score	7.1
CVSS Vector	<a href="#">CVSS:4.0/AV:A/AC:L/AT:N/PR:N/UI:N/VC:N/VI:N/VA:H/SC:N/SI:N/SA:N</a>
CWE	CWE-476: NULL Pointer Dereference

## **ACKNOWLEDGMENTS**

Siemens thanks the following party for its efforts:

- Yu Cong for reporting and coordinated disclosure

## **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 (2024-02-13):	Publication Date
V1.1 (2024-04-09):	Added a mitigation

## **TERMS OF USE**

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