# SSA-223771: SISCO Stack Vulnerability in SIPROTEC 5 Devices

Publication Date:     2022-12-13
Last Update:          2023-08-08
Current Version:      V1.3
CVSS v3.1 Base Score: 7.5

## SUMMARY

A vulnerability in the third party component SISCO MMS-EASE could allow attackers to cause a denial of service condition with SIPROTEC 5 devices.

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

## AFFECTED PRODUCTS AND SOLUTION

| Affected Product and Versions | Remediation |
|---|---|
| SIPROTEC 5 6MD85 (CP200): <br> All versions < V7.58 | Update to V7.58 or later version <br> https://support.industry.siemens.com/cs/ww/en/view/109757428/ <br> See further recommendations from section Workarounds and Mitigations |
| SIPROTEC 5 6MD85 (CP300): <br> All versions < V7.58 | Update to V7.58 or later version <br> https://support.industry.siemens.com/cs/ww/en/view/109757428/ <br> See further recommendations from section Workarounds and Mitigations |
| SIPROTEC 5 6MD86 (CP200): <br> All versions < V7.58 | Update to V7.58 or later version <br> https://support.industry.siemens.com/cs/ww/en/view/109757428/ <br> See further recommendations from section Workarounds and Mitigations |
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| SIPROTEC 5 6MD89 (CP300): <br> All versions < V7.80 | Update to V7.80 or later version <br> https://support.industry.siemens.com/cs/ww/en/view/109742950/ <br> See further recommendations from section Workarounds and Mitigations |
| SIPROTEC 5 7KE85 (CP200): <br> All versions < V7.80 | Update to V7.80 or later version <br> https://support.industry.siemens.com/cs/ww/en/view/109757430/ <br> See further recommendations from section Workarounds and Mitigations |
| SIPROTEC 5 7KE85 (CP300): <br> All versions < V7.80 | Update to V7.80 or later version <br> https://support.industry.siemens.com/cs/ww/en/view/109757430/ <br> See further recommendations from section Workarounds and Mitigations |

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| SIPROTEC 5 7SA82 (CP100):<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109757433/<br>See further recommendations from section<br>Workarounds and Mitigations |
| SIPROTEC 5 7SA84 (CP200):<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109757433/<br>See further recommendations from section<br>Workarounds and Mitigations |
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| SIPROTEC 5 7SA87 (CP200):<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109757433/<br>See further recommendations from section<br>Workarounds and Mitigations |
| SIPROTEC 5 7SA87 (CP300):<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109757433/<br>See further recommendations from section<br>Workarounds and Mitigations |
| SIPROTEC 5 7SD82 (CP100):<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109757433/<br>See further recommendations from section<br>Workarounds and Mitigations |
| SIPROTEC 5 7SD84 (CP200):<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109757433/<br>See further recommendations from section<br>Workarounds and Mitigations |
| SIPROTEC 5 7SD86 (CP200):<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109757433/<br>See further recommendations from section<br>Workarounds and Mitigations |
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| SIPROTEC 5 7SJ81 (CP100):<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109751934/<br>See further recommendations from section<br>Workarounds and Mitigations |
| SIPROTEC 5 7SJ82 (CP100):<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109751934/<br>See further recommendations from section<br>Workarounds and Mitigations |
| SIPROTEC 5 7SJ85 (CP200):<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109751934/<br>See further recommendations from section<br>Workarounds and Mitigations |
| SIPROTEC 5 7SJ85 (CP300):<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109751934/<br>See further recommendations from section<br>Workarounds and Mitigations |
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| SIPROTEC 5 7SK82 (CP100):<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109757434/<br>See further recommendations from section<br>Workarounds and Mitigations |
| SIPROTEC 5 7SK85 (CP200):<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109757434/<br>See further recommendations from section<br>Workarounds and Mitigations |

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| SIPROTEC 5 7SL82 (CP100):<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109757433/<br>See further recommendations from section Workarounds and Mitigations |
| SIPROTEC 5 7SL86 (CP200):<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109757433/<br>See further recommendations from section Workarounds and Mitigations |
| SIPROTEC 5 7SL86 (CP300):<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109757433/<br>See further recommendations from section Workarounds and Mitigations |
| SIPROTEC 5 7SL87 (CP200):<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109757433/<br>See further recommendations from section Workarounds and Mitigations |
| SIPROTEC 5 7SL87 (CP300):<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109757433/<br>See further recommendations from section Workarounds and Mitigations |
| SIPROTEC 5 7SS85 (CP200):<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109757429/<br>See further recommendations from section Workarounds and Mitigations |
| SIPROTEC 5 7SS85 (CP300):<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109757429/<br>See further recommendations from section Workarounds and Mitigations |
| SIPROTEC 5 7ST85 (CP200):<br>All versions < V7.62 | Update to V7.62 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109740299/<br>See recommendations from section Workarounds and Mitigations |
| SIPROTEC 5 7UM85 (CP300):<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109757431/<br>See further recommendations from section Workarounds and Mitigations |

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| SIPROTEC 5 7UT82 (CP100):<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109757438/<br>See further recommendations from section Workarounds and Mitigations |
| SIPROTEC 5 7UT85 (CP200):<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109757438/<br>See further recommendations from section Workarounds and Mitigations |
| SIPROTEC 5 7UT85 (CP300):<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109757438/<br>See further recommendations from section Workarounds and Mitigations |
| SIPROTEC 5 7UT86 (CP200):<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109757438/<br>See further recommendations from section Workarounds and Mitigations |
| SIPROTEC 5 7UT86 (CP300):<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109757438/<br>See further recommendations from section Workarounds and Mitigations |
| SIPROTEC 5 7UT87 (CP200):<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109757438/<br>See further recommendations from section Workarounds and Mitigations |
| SIPROTEC 5 7UT87 (CP300):<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109757438/<br>See further recommendations from section Workarounds and Mitigations |
| SIPROTEC 5 7VE85 (CP300):<br>All versions < V7.80 | Update to V7.80 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109749865/<br>See further recommendations from section Workarounds and Mitigations |
| SIPROTEC 5 7VK87 (CP200):<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109757433/<br>See further recommendations from section Workarounds and Mitigations |
| SIPROTEC 5 7VK87 (CP300):<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109757433/<br>See further recommendations from section Workarounds and Mitigations |

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| SIPROTEC 5 Communication Module ETH-BA-2EL:<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109740816/<br>See further recommendations from section Workarounds and Mitigations |
| SIPROTEC 5 Communication Module ETH-BB-2FO:<br>All versions < V7.58 | Update to V7.58 or later version<br>https://support.industry.siemens.com/cs/ww/en/view/109740816/<br>See further recommendations from section Workarounds and Mitigations |

## WORKAROUNDS AND MITIGATIONS

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

- Disable IEC 61850 communications on the affected port of the device
- Restrict access to port 102/tcp to trusted IP addresses only

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

## GENERAL SECURITY RECOMMENDATIONS

Operators of critical power systems (e.g. TSOs or DSOs) worldwide are usually required by regulations to build resilience into the power grids by applying multi-level redundant secondary protection schemes. It is therefore recommended that the operators check whether appropriate resilient protection measures are in place. The risk of cyber incidents impacting the grid's reliability can thus be minimized by virtue of the grid design. Siemens strongly recommends applying the provided security updates using the corresponding tooling and documented procedures made available with the product. If supported by the product, an automated means to apply the security updates across multiple product instances may be used. Siemens strongly recommends prior validation of any security update before being applied, and supervision by trained staff of the update process in the target environment. As a general security measure Siemens strongly recommends to protect network access with appropriate mechanisms (e.g. firewalls, segmentation, VPN). It is advised to configure the environment according to our operational guidelines in order to run the devices in a protected IT environment.

Recommended security guidelines can be found at: https://www.siemens.com/gridsecurity

## PRODUCT DESCRIPTION

SIPROTEC 5 devices provide a range of integrated protection, control, measurement, and automation functions for electrical substations and other fields of application.

## VULNERABILITY CLASSIFICATION

The vulnerability classification has been performed by using the CVSS scoring system in version 3.1 (CVSS v3.1) (https://www.first.org/cvss/). The CVSS environmental score is specific to the customer's environment and will impact the overall CVSS score. The environmental score should therefore be individually defined by the customer to accomplish final scoring.

An additional classification has been performed using the CWE classification, a community-developed list of common software security weaknesses. This serves as a common language and as a baseline for weakness identification, mitigation, and prevention efforts. A detailed list of CWE classes can be found at: https://cwe.mitre.org/.

### Vulnerability CVE-2015-6574

The SNAP Lite component in certain SISCO MMS-EASE and AX-S4 ICCP products allows remote attackers to cause a denial of service (CPU consumption) via a crafted packet.

CVSS v3.1 Base Score    7.5
CVSS Vector             CVSS:3.1/AV:N/AC:L/PR:N/UI:N/S:U/C:N/I:N/A:H/E:P/RL:O/RC:C
CWE                     CWE-770: Allocation of Resources Without Limits or Throttling

## ACKNOWLEDGMENTS

Siemens thanks the following party for its efforts:

• Vera Mens from Claroty for reporting the vulnerability

## 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 (2022-12-13):    Publication Date
V1.1 (2022-12-21):    Corrected affected products list, fix versions, and download links
V1.2 (2023-03-14):    Corrected affected products list, fix versions, and download links
V1.3 (2023-08-08):    Added fix for SIPROTEC 5 7ST85 (CP200)

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