

SSA-173318: Unquoted Search Path Vulnerability in SICAM PQ Analyzer

Publication Date: 2022-01-11
Last Update: 2022-01-11
Current Version: V1.0
CVSS v3.1 Base Score: 3.4

SUMMARY

SICAM PQ Analyzer uses an unquoted registry entry and is thus vulnerable to an unquoted search path vulnerability.

Siemens has released an update for the SICAM PQ Analyzer and recommends to update to the latest version.

AFFECTED PRODUCTS AND SOLUTION

Affected Product and Versions	Remediation
SICAM PQ Analyzer: All versions < V3.18	Update to V3.18 or later version https://support.industry.siemens.com/cs/ww/en/view/109804322 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:

- Make sure these executables do not exist, cannot be created or cannot be executed (e.g. by Group Policy Software Restriction):
 - C:\Program.*
 - C:\Program Files.*
 - C:\Program Files (x86)\Siemens.*
 - C:\Program Files (x86)\Siemens Energy\SICAM\PQ.*

Please note that blocking of e.g. “C:\Program.exe” is not sufficient, as the attacker might be able to plant “C:\Program.com”, “C:\Program.msi” or an executable with any other extension there.

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 to Digital Grid Products can be found at:

<https://www.siemens.com/gridsecurity>

PRODUCT DESCRIPTION

SICAM PQ Analyzer is a power quality system software that provides options to evaluate archived PQ measuring data and fault records.

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-2021-45460

A service is started by an unquoted registry entry. As there are spaces in this path, attackers with write privilege to those directories might be able to plant executables that will run in place of the legitimate process.

Attackers might achieve persistence on the system ("backdoors") or cause a denial of service.

CVSS v3.1 Base Score	3.4
CVSS Vector	CVSS:3.1/AV:L/AC:L/PR:H/UI:N/S:U/C:N/I:L/A:L/E:P/RL:O/RC:C
CWE	CWE-428: Unquoted Search Path or Element

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 (2022-01-11): Publication Date

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