Drägerwerk AG & Co.KGaA, 23542 Lübeck

Our reference
PSA-21-124-1

Phone number
+49 451 882-6166

Vulnerability and Incident Reporting
product-security@draeger.com

Dräger Product Security Advisory PSA-21-124-1

Atla A350 SW 1.0n Security Vulnerabilities

Legal Notice

This Product Security Advisory is based on all our findings that we had at the time of publication. However, the facts of the case are being reviewed on an ongoing basis and it is possible that this may result in changed assessments or that assessments contained in this advisory may turn out to be incorrect. We also reserve the right to change or revoke any recommendations. In addition, differences may result from the circumstances of the individual case on site. This information is naturally not available to us and has not been taken into account. Dräger can therefore accept no responsibility that the information presented here is conclusive or comprehensively correct for you. Therefore, please check carefully to what extent deviations can arise for your individual case. If necessary, you will be informed about new findings through following advisories.

1 Publication Date

2021-05-04

2 Overview

Within the framework of our internal quality monitoring of our Atlan family products, we have discovered that the internal processor of the Atlan A300, A300XL, A350 and A350XL may became overloaded if the Medibus interface of the Atlan A350 is disrupted by external non-Medibus-compliant data packages. No such case has yet been reported to Dräger in connection with devices on the market.

Such processor overload does not have a sudden impact but – depending on the set data transmission rate (baud rate) – have a gradual effect over a period of several hours.

The full text of this advisory can be accessed through https://static.draeger.com/security.

3 Affected Products

The following Dräger devices are affected by these vulnerabilities:

Dräger Atlan A350, software versions 1.00 up to and including 1.01.

4 How to verify if the product is affected

In Standby-Mode go to **System Setup > System Status** to view the installed software version

5 Vulnerability Description

CWE-20: Improper Input Validation
Atlan does not handle certain specifically crafted non-Medibus-compliant data via the Medibus interface properly.

6 Impact

The following symptoms were observed in the lab:

- No data transmission to the connected device (e.g. to the patient monitor).
- Delayed display of real-time curves for pressure, flow and CO2 on the Atlan screen
- The airway pressure shown on the status display of the mixing unit deviates from the curve displayed on the device screen

7 Severity

The severity may be different in certain use environments. The intended connection of the RS-232 interface is a point-to-point connection, leading to an attack vector “local”, but in certain environments this serial connection is routed over ethernet using third party off-the-shelf converters. This may then lead to a higher score, as the attack vector can also be “network”.

The CVSSv3.1 Scores for the vulnerability are:

1. *Denial of Service via RS-232:* **Base Score 3.2 (LOW)**
   CVSS:3.1/AV:L/AC:H/PR:N/UI:N/S:C/C:N/I:N/A:L
2. *Denial of Service via RS-232 routed via Ethernet:* ***Base Score 4.0 (MEDIUM)***
   CVSS:3.1/AV:N/AC:H/PR:N/UI:N/S:C/C:N/I:N/A:L

Drägerwerk AG & Co. KGaA
Moislinger Allee 53-55
23558 Lübeck, Germany
Postal address:
23542 Lübeck, Germany
Tel +49 451 882-0
Fax +49 451 882-2080
info@draeger.com
www.draeger.com
VAT no. DE135082211

Bank details:
Commerzbank AG, Lübeck
IBAN: DE95 2304 0022 0014 6795 00
Swift-Code: COBA DE FF 230
Sparkasse zu Lübeck
IBAN: DE15 2305 0101 0001 0711 17
Swift-Code: NOLADE21SPL

Registered office: Lübeck
Commercial register:
Local court Lübeck HRB 7903 HL
General partner: Drägerwerk Verwaltungs AG
Registered office: Lübeck
Commercial register:
Local court Lübeck HRB 7395 HL

Chairman of the Supervisory Board
for Drägerwerk AG & Co. KGaA
and Drägerwerk Verwaltungs AG:
Stefan Lauer
Executive Board:
Stefan Dräger (chairman)
Rainer Klug
Gert-Hartwig Lescow
Dr. Reiner Piske
Anton Schrofner

8 Remediation

The vulnerability will be fixed in SW 2.0. Customers will be contacted by Dräger Service to arrange a date for the software to be updated free of charge.
Dräger has provided all users with a supplement to the Atlan Instructions for Use describing measures to reduce the effects described above to the extent that your surgical procedures are not disrupted.

9 Contact Information

If you have any further questions related to the impact of the vulnerabilities, please contact your designated regional marketing manager. For reporting incidents and potential vulnerabilities in our devices, please refer to https://static.draeger.com/security to contact the Product Security team directly.

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10 Revision History

VERSION	DATE	COMMENTS
1.0	2021-05-04	Initial Advisory Release

Drägerwerk AG & Co. KGaA
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