Vulnerability of Information Disclosure, Information Tampering, Unauthorized Operation and Denial-of-Service (DoS) between MELSEC iQ-R, iQ-F, Q, L and FX series CPU modules and GX Works3/GX Works2

June 23, 2020 Mitsubishi Electric Corporation

Overview

There is a vulnerability of information disclosure, information tampering, unauthorized operation and denial-of-service (DoS) due to cleartext communication between MELSEC iQ-R, iQ-F, Q, L and FX series CPU modules and GX Works3/GX Works2 (CWE-319). When performing communication via untrusted networks or hosts, there are risks of communication data eavesdropping/tampering, unauthorized operation and denial-of-service (DoS) attacks from malicious attackers.

Affected products

All versions of MELSEC iQ-R, iQ-F, Q, L and FX series CPU modules are affected.

Description

There is a vulnerability due to cleartext communication between MELSEC iQ-R, iQ-F, Q, L and FX series CPU modules and GX Works3/GX Works2. The vulnerability (CVE-2020-5594) causes information disclosure, information tampering, unauthorized operation and denial-of-service (DoS) condition (CWE-319).

Impact

There is a possibility of information disclosure, information tampering, unauthorized operation and denial-of-service (DoS) attacks from malicious attackers.

Mitigation

When performing communication via untrusted networks or hosts, please encrypt the communication path by setting up a VPN to mitigate the impact of this vulnerability.

Acknowledgements

Mitsubishi Electric would like to thank Shunkai Zhu, Rongkuan Ma and Peng Cheng from NESC Lab of Zhejiang University who reported this vulnerability.

Contact information

Please contact your local Mitsubishi Electric representative.