



ICS-CERT

INDUSTRIAL CONTROL SYSTEMS CYBER EMERGENCY RESPONSE TEAM

ICS-CERT ALERT

ICS-ALERT-11-256-06— BECKHOFF TWINCAT DENIAL OF SERVICE VULNERABILITY

September 13, 2011

ALERT

SUMMARY

ICS-CERT is aware of a public report of a vulnerability with proof of concept (POC) exploit code affecting Beckhoff TwinCAT, a SCADA/HMI Product. According to the report, services running on Port 48899\UDP are vulnerable. This report was released without coordination with either the vendor or ICS-CERT.

ICS-CERT has not yet verified the vulnerabilities or POC code, but has reached out to the affected vendor to notify, confirm, and identify mitigations. ICS-CERT is issuing this alert to provide early notice of the report and identify baseline mitigations for reducing risks to these and other cybersecurity attacks.

The report included vulnerability details and proof-of-concept exploit code for the following vulnerability:

Vulnerability Type	Exploitability	Impact
Undetermined	Remote	Denial of Service

Please report any issues affecting control systems in critical infrastructure environments to ICS-CERT.

BACKGROUND

Beckhoff TwinCAT is a software system that is capable of controlling multiple programmable logic controllers in a system. This system is used in many industries including manufacturing, energy, water and wastewater, and building automation. Beckhoff is headquartered in Verl, Germany.

MITIGATION

ICS-CERT recommends that users take defensive measures to minimize the risk of exploitation of these vulnerabilities. Specifically, users should:

- Minimize network exposure for all control system devices. Control system devices should not directly face the Internet.^a

a. ICS-CERT ALERT, http://www.us-cert.gov/control_systems/pdf/ICS-Alert-10-301-01.pdf, accessed September 13, 2011.



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- Locate control system networks and devices behind firewalls, and isolate them from the business network.
- If remote access is required, employ secure methods such as Virtual Private Networks (VPNs).

ICS-CERT reminds organizations to perform proper impact analysis and risk assessment prior to taking defensive measures.

The Control System Security Program also provides a recommended practices section for control systems on the US-CERT website. Several recommended practices are available for reading or download, including *Improving Industrial Control Systems Cybersecurity with Defense-in-Depth Strategies*.^b

Organizations that observe any suspected malicious activity should follow their established internal procedures and report their findings to ICS-CERT for tracking and correlation against other incidents.

ICS -CERT CONTACT

ICS-CERT Operations Center

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For Control Systems Security Program (CSSP) Information and Incident Reporting: www.ics-cert.org

DOCUMENT FAQ

What is an ICS-CERT Alert? An ICS-CERT Alert is intended to provide timely notification to critical infrastructure owners and operators concerning threats or activity with the potential to impact critical infrastructure computing networks.

b. Control System Security Program (CSSP) Recommended Practices, http://www.us-cert.gov/control_systems/practices/Recommended_Practices.html