Appendix A

Protocol Resources

INFORMATION IN THIS CHAPTER

- Modbus Organization
- DNP3 Users Group
- OPC Foundation
- Common Industrial Protocol (CIP) / Open Device Vendor Association (ODVA)
- PROFIBUS / PROFINET International (PI)

While industrial network protocols were covered at a high level in Chapter 6, fully understanding how these protocols work will facilitate the assessment and security of industrial networks. The following organizations provide in-depth documentation and support for the five leading industrial network protocols: Modbus, DNP3, OPC, CIP, and PROFIBUS/PROFINET.

MODBUS ORGANIZATION

The Modbus Organization is a group consisting of independent users and automation device manufacturers who manage the development and use of the Modbus protocols. Their website contains information about the Modbus protocols, as well as technical resources for development, integration, and testing of Modbus. Includes directories of Modbus suppliers and industrial devices utilizing Modbus.

- http://www.modbus.org/

DNP3 USERS GROUP

The DNP Users Group is a nonprofit organization that maintains and promotes the Distributed Network Protocol (DNP3). Their website provides documentation on the uses and benefits of DNP3, as well as technical documents and conformance testing. Includes member directories and listings of all conformance tested products.

- http://www.dnp.org

OPC FOUNDATION

The OPC Foundation is an organization that maintains the open specifications of the OPC protocol, in an effort to standardize and ensure interoperability of process data communications. Their site includes the latest resources for OPC Classic, OPC UA, and OPC XI (.NET). Provides whitepapers, sample code, technical specifications, and software development kits. Includes member directories and product lists, as well as technical support, webinars and other resources.

• http://www.opcfoundation.org/

COMMON INDUSTRIAL PROTOCOL (CIP) / OPEN DEVICE VENDOR ASSOCIATION (ODVA)

Open Device Vendor Association (ODVA) is an international association made of automation companies, which manages the development of DeviceNet, EtherNet/IP, CompoNet, and ControlNet protocols utilizing the Common Industrial Protocol (CIP). The ODVA website provides technical specifications, conformance testing policies, training, and other resources. Includes member and product directories.

• http://www.odva.org

PROFIBUS & PROFINET INTERNATIONAL (PI)

PROFIBUS and PROFINET International (PI) is an international organization that is responsible for the PROFIBUS and PROFINET industrial protocol. The PI website provides access to a range of protocol specifications, presentations, white papers, technical descriptions, books, installation assistance, testing, certification, and software tools.

• http://www.profibus.com/