



Scope of building automation functionality increased:
Beckhoff controller features new BACnet objects and services

Updated TwinCAT BACnet/IP software fully supports Revision 12

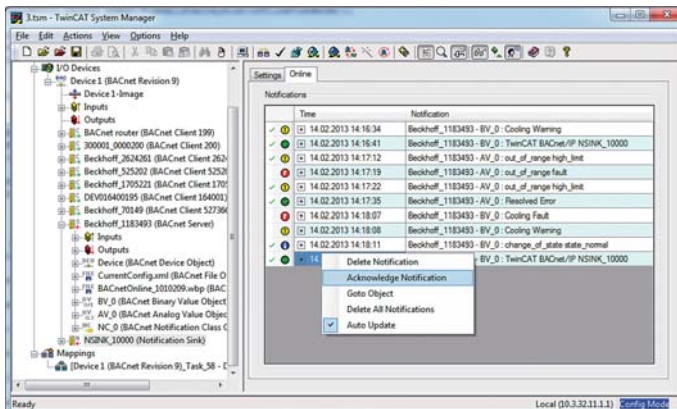
The TwinCAT BACnet/IP software supplement from Beckhoff is now available with Revision 12 in addition to the version certified in accordance with the worldwide BACnet standard ISO 16484-5:2010. The implementation of extended alarm and event services, additional object types and improved device management as well as the increased performance of TwinCAT BACnet/IP offer a series of advantages for building automation. With a large range of BACnet controllers, Beckhoff provides solutions that are precisely scalable in terms of performance for all applications.

Extensions to alarm and event management

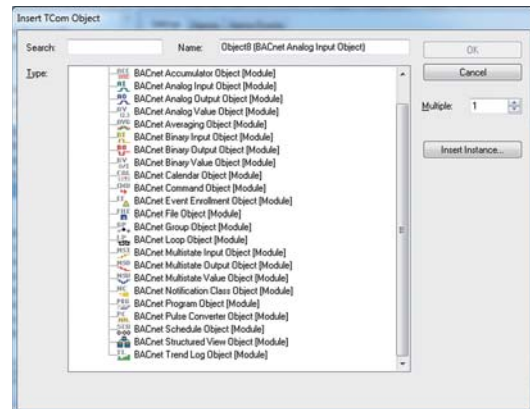
The implementation of Revision 12 in TwinCAT BACnet/IP encompasses numerous extensions for alarm and event services: For instance, access to GetAlarmSummary, GetEventInformation and GetEnrollmentSummary offers the possibility to display BACnet objects with an active event state and to sort or filter them according to various criteria. Incoming alarm, event or change messages are clearly displayed and confirmed via the new notification monitor (AcknowledgeAlarm). The rules for triggering alarm and event messages – including those dynamically generated at runtime – can be defined by means of the newly implemented EventEnrollment object type.

New BACnet object types

Furthermore, the implementation of Revision 12 provides additional BACnet object types: the Accumulator object type permits the display of counter data; PulseConvertor objects serve to count and represent counting pulses; Averaging objects can prepare statistical data from other BACnet properties. With full support for StructuredView objects, BACnet clients can also be displayed hierarchically. An integrated configuration tool is available in the TwinCAT System Manager which permits systematic access to BACnet clients. The properties of remote BACnet objects can be read and written by PLC programs. Clearly integrated via folder trees, the programming is simplified. Pre-defined function blocks from the TwinCAT BACnet



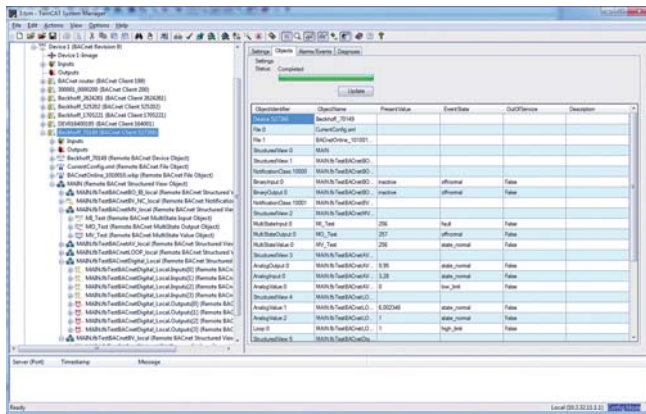
Notification monitor: clear display and management of alarm, event and change messages



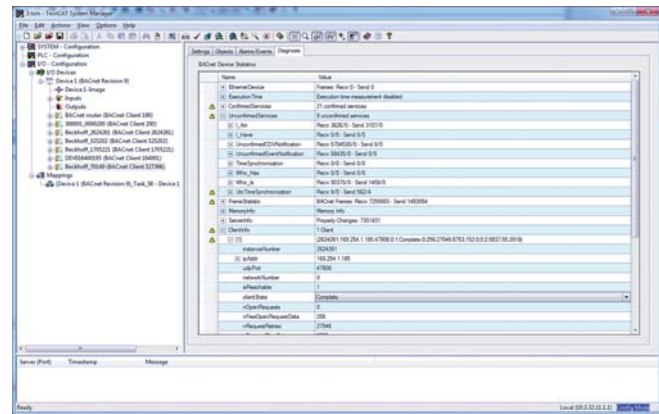
Structured configuration of BACnet server and client objects

library can also be used in the PLC program for BACnet servers. BACnet objects are automatically created in the TwinCAT System Manager, BACnet properties are initialized and links to PLC variables are established with PLC automapping.

tion from Beckhoff BACnet clients can be read via BACnet and displayed in the System Manager. In addition, precise information now exists for the communication state of individually configured BACnet clients.



Structured configuration of BACnet server and client objects



Clear diagnosis of BACnet communication

Optimized device management

The TwinCAT BACnet/IP supplement now includes new features in terms of device management. For instance, the BACnet backup and restore of device configurations can be realized via the TwinCAT System Manager. Files can be read and written via BACnet services and device restarts can be initiated easily. Both programming interfaces (ADS) and convenient graphic user interfaces are available for this.

Improvements in detail

Numerous additional improvements can be found in the details of this TwinCAT supplement update. For instance, the UDP port for the BACnet/IP communication is configurable. Beckhoff supports additional coding types in the processing of character strings; information about device restarts is available to management applications via RestartNotifications. There are also new configuration wizards for TwinCAT BACnet/IP that facilitate the improved handling of BACnet. The scaling factors for analog objects can be calculated or message receivers can be supplemented. There are also extensions to the comprehensive diagnostics options: diagnostic informa-

The optimization of the execution performance of TwinCAT BACnet/IP, together with the extraordinary scalability of the Beckhoff BACnet controllers – from the inexpensive CX8091 and CX9020 Embedded PC series to larger controllers for processing several thousand data points – continues to enhance the portfolio of solutions for BACnet users. Apart from change notifications (COV), the network-optimized use of the ReadPropertyMultiple service is also available now for the transmission of client data. Devices that do not support change messages can be integrated efficiently by summarizing large amounts of property data in one message.

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Further Information:
www.beckhoff.com/BACnet