MBS®

Visualisation and analysis of BACnet networks implementation, maintenance, diagnosis and repair

"Swiss army knife" for building automation

# BACeye/SC

BACeye, the cross-manufacturer de-facto standard is now available for BACnet Secure Connect (BACnet/SC). The customer-favourite "Swiss army knife" for commissioning, maintenance, diagnostics and repairs for building automation networks has been upgraded **to the current Revision 22 of the BACnet standard.** This makes our innovative tool perfect for use in networks based on the BACnet/SC security infrastructure.

For more information: www.mbs-solutions.de

# BACeye/SC

## "Swiss army knife" for building automation

Obtaining neutral information about data exchange in a BACnet network is not always easy. Especially if the various components have been supplied by different manufacturers. BACeye/SC is a cross-functional tool that can be used to clearly visualise networks and quickly identify problems.

This compact tool by Krefeld-based MBS GmbH makes the work of system integrators, commissioning engineers, plant operators and end users considerably easier. It didn't get its reputation among customers as the de-facto standard for nothing. To keep it this way, the browser is getting an upgrade to the latest BACnet standard Revision 22 that enables users to establish their own security infrastructure (BACnet Secure Connect – BACnet/SC). This means the tried-and-tested BACeye 2.0 version will become the innovative BACeye/SC tool.

Whether at airports, hospitals or office buildings – for professionally commissioning BACnet networks with multiple devices from different manufacturers, every technician dreams of a neutral tool with a wide range of possible applications that can be used right from the start to check whether a system has been set up as intended in terms of the type, number, names and functions of the data points, setting the necessary alarms, and much more. A neutral helper like this is also welcome once the system is up and running, e.g. when malfunctions occur between the central control system and the devices at field level.

### Handling variety

As a leading international standard, the BACnet network protocol has already greatly simplified the exchange of data between devices from different manufacturers. But when inconsistencies arise in the network, diagnosis can be complicated and time-consuming – the variety of products and manufacturers in the world of building automation becomes a stumbling block. BACeye/SC is an effective means of gaining neutral information on data exchange. Launched by Krefeld-based MBS GmbH in 2014, the tool can be used to handle a range of tasks in BACnet networks.

BACeye is now available in its third version and is being marketed as BACeye/SC. It is based on the BACnet standard in protocol revision 22. Like its predecessors, it establishes a direct relationship between the field level and the control technology. The entire network with all its devices is recorded and displayed in a clearly arranged manner based on the BACnet structure, so that the user can easily access it. For each device on the field level, its properties can be displayed in a list that can not only be searched, but also sorted. In addition, properties can be displayed and edited for the individual objects.

### A single tool for a wide range of tasks

In addition to these basic functions, other features for analysing BACnet networks are available; for example:

- Communications can be recorded in packet protocols in order to log the read out and written values. These packet logs can be subsequently visualised with the appropriate software (Wireshark).

- Data point lists can be generated as EDE files.

- System-specific formatted data point lists can be exported.

- Trendlogdaten can be read to constitute a list or graphically and exported to document the exchange of information.

- Timetables can be displayed and parameterised graphically and clearly.

- Object properties can be exported as a csv file, which can be opened using text or spreadsheet programmes.

- The Back-up/Restore functions facilitate backing up and restoring data from BACnet devices irrespective of product.

- It is possible to display BACnet Port Object for a full visualisation with all properties in the interface.

- Users can snapshot, export and read the system status. This allows users to compare the snapshot of the status taken during commissioning with the current system status during a fault.

- For use in networks that rely on the BACnet/SC security infrastructure

**OTHER FEATURES / SUPPORTED FEATURES**

BACeye 2.0 is a unique cross-vendor tool. Previously, most manufacturers of building automation devices offered only tools developed for their own product lines, which therefore could not be used with other devices. With its neutral visualisation, the MBS tool has meanwhile become the de facto standard to such an extent that some manufacturers no longer offer their own developments – instead, they rely on BACeye. Thanks to the upgrade to Revision 22, BACeye/SC will also play a leading role on the market.

## Security included

With the upgrade to the BACnet standard Revision 22, BACeye/SC combines these features with the full range of functions of the BACnet/SC security infrastructure – such as access restriction, authentication, authorisation and encryption. It can be used in protected communication environments and allows for encrypted browsing. However, browsers can still be used in traditional systems that communicate via BACnet/IP.

## Streamlined processes

BACeye was not designed for daily system operations; it is used for commissioning, maintenance, diagnostics and repairs. In short, the tool helps to identify problems. In contrast to the rather more abstract presentation in control technology, it provides clear and detailed information on relationships at field level. It can

be used to accelerate the commissioning of BACnet networks, maintenance or diagnostic processes. If misunderstandings between different parties occur, the events can be neutrally displayed and, if necessary, documented.

## Customer feedback taken into account

And that will also be true in the future. More functionalities to enhance the tool are already in the pipeline. In developing BACeye further, MBS will continue to follow advancements in the BACnet standard, which is after all also constantly evolving. The latest version is based largely on user feedback. There will soon be options to generate or delete new objects, and a plug-in interface will facilitate the integration of other tools. Its customer focus will help BACeye win over all users and manufacturers who appreciate a compact, neutral tool in building automation.

BACeye/SC
**Test now for free**

Learn more about the opportunities offered by BACeye/SC and download a free trial version of the "Swiss army knife" for building automation.

**DOWNLOAD YOUR TRIAL VERSION**

# BACnet Secure Connect

## Building automation for optimum protection

At present, some 25 million devices exchange data via BACnet, the first version of which appeared in 1995. Now, with its own security structure, the manufacturer-independent communication standard is fit to face the demands of digitalisation.
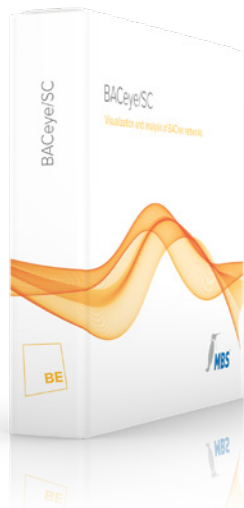
Initially, with its closed networks and long innovation cycles, the requirements of building automation in terms of operational safety were very different to those of information technology (IT). Today, however, internet technologies, the convergence of IT and building automation (GA) and cloud-based applications call for a high degree of protection for communications (such as access restrictions, authentication, authorisation, encryption).

**MORE INFORMATION**

## Invitation to a virtual plugfest with BACnet/SC

A test environment for secure communication with BACnet/SC, set up on the initiative of Delta Controls and MBS GmbH, is now available to all manufacturers. "We are inviting you to link up to our virtual platform free of charge," says Dusko Lukanic-Simpson, Managing Director of Delta Controls Germany GmbH in Leinfelden-Echterdingen.

The objective is to establish multi-vendor communication capable of demonstrating to property operators that data exchanges are effective and secure with BACnet/SC. The motivation for the partnership emerged from consistent application of the new security infrastructure. Delta Controls started by linking test set-ups for its enteliWEB building control system to BACnet/SC at its various company sites. In the next step, these were linked to products of MBS GmbH whereby the universal router UBR 01, gateways and software were already equipped with BACnet/SC

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or by telephone:
+49 21 51 72 94-0

**Hardware requirements:**
- Ethernet network card
- A BACnet MS/TP router (e.g. MBS UBR-01 | MK II) is required for communication with BACnet MS/TP networks.

In general, we assume that BACeye/SC can also be used with Windows 7 / 8. Since these systems are no longer supported by Microsoft, we have not carried out complete compatibility tests here.

**Current version number:** 3.0