How Does a Cloud Platform Get Into Building Automation?

Achieving ESG targets, reducing operational costs, and improving user satisfaction are all possible with tools like a cloud platform and a comprehensive, structured data set. Today, the necessary data is typically collected via building automation systems.

The challenge: Many building automation systems, both in existing and new buildings, are proprietary – i.e., they are equipped with licenses or require manufacturer-specific know-how. This presents a hurdle for aforementioned solutions such as cloud platforms, as they do not connect directly to such systems and cannot process proprietary protocols.

“Everything from a single source” sounds tempting at first, but a closer look reveals the following disadvantages:

- No incentivization of open protocols with few opportunities for third-party vendors. Instead, vertical solutions with vendor-specific field systems.
- Hardly any possibility for independent testing of how well automation systems really work in operation.
- Connecting meters can be associated with major hurdles or high costs – but meters are essential for professional ESG reporting.
- Often, established building automation vendors impose warranty restrictions, if third-party providers connect to the appropriate building automation network. It is contradictory for manufacturers of open, standardized systems to protect them from third-party access with such restrictions..

The solution is to follow the concept of “everything from a single source”, but at the same time to **define open interfaces in order to be independent of the manufacturer.**

Which points you should definitely include in your contract:

- Used BAS protocol BACnet IP standardized according to ISO 16484-5: All setpoints must be available as analog / digital outputs / values with a priority array
- Connection of all data points from stand-alone systems (interfaces must be clarified) to the BA system or use of manufacturer‘s own platforms with publicly available and publicly documented API interface, ideally with pre-available software-development kits (SDKs)
- Connection of all meters (interfaces must be clarified) to BACnet-IP via, for example, MBus or Modbus or third-party providers with open interfaces
- Establishment and transfer of a uniform data point identification system, ideally following a recognized rule of technology: Consistent adherence to the data point identification system for all data points
- Descriptions for all BACnet objects in human-readable plain text
- Use of the standardized BACnet unit system, establishment and transfer of all (TRIC) MSR planning schemes to the revision status
- Reference to possible readout of data from the BA network via a gateway (edge device) already before acceptance for monitoring purposes / or announcement of independent data acquisition and evaluation from third party providers. Announcement of the possibility that a digital, superordinate, optimizing control can be used
- Star network cabling of all controllers to a central BA switch
- On-site internet access in close proximity to the central BA switch

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