



BBMD and “Addendum O”

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The latest release of the BACnet Building Controller firmware (1.6.0.12) supports what the ASHRAE BACnet 135-2008 standard calls “Addendum O.” This allows you to send BACnet traffic through the Internet without the need for a VPN or intranet.

In various scenarios, the job requires an Operator Work Station (OWS) from which the entire Building Management System can be monitored and controlled. Regardless of whether this OWS is TotalControl, or you are using the graphics capability of the Building Controller, many times you will need to connect BACnet networks that are not on the same IP subnet. Typically this is done by configuring the OWS as a BACnet Broadcast Management Device (BBMD) and installing a BACnet router on each IP subnet that is not the same as the subnet of the OWS.

However, because of the way some BACnet messages are formatted per the standard, some messages that a BBMD sends can be broken when “port forwarding” is done by IP routers. IP routers (also called gateways) connect IP subnets together, and give you access to the Internet. Port forwarding is a function that is used to hide the “private” IP addresses your devices have from the “public” devices throughout the Internet. The problem is that port forwarding breaks the BBMD messages needed for BACnet devices to discover one another. VPN and Intranet methods are different than port forwarding, and typically BBMD messages are not broken when using VPN or intranet methods.

But now with Addendum O, you can create a BACnet system through the Internet even when port forwarding is being used. To do so, each Building Controller that is configured as a BBMD will need to have its BBMD network set to a “BBMD Addendum O” network, and then the BBMD Addendum O network configured with the Building Controller’s public IP address. The public

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IP address is the public address of the IP gateway through which the BBMD connects to the Internet. The scenario and configuration are shown on the right.

The situation is a little different if you are using TotalControl as a BBMD. The BACnet driver in TotalControl does not currently support Addendum O. Thus, you need a Building Controller on the same IP subnet as TotalControl in order to

perform the Addendum O functions. TotalControl would then be configured to communicate with the Building Controller using a different BACnet network than the BBMD.

See the adjacent illustration.

