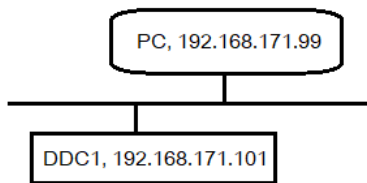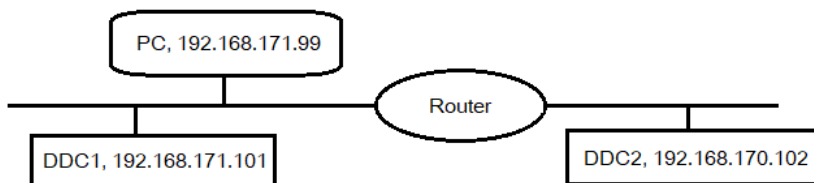# TT231101 – OPEN - BACnet BBMD Configuration

1. Normally BACnet software/controller can only communicate within the same subnet, like this.

2. If you've BACnet device that are on another subnet, like below, then you will not be able to communicate with it directly.

3. When you use a BACnet viewer (e.g. YABE) to search the devices on the network, you will only see those that are on the same subnet, like below.
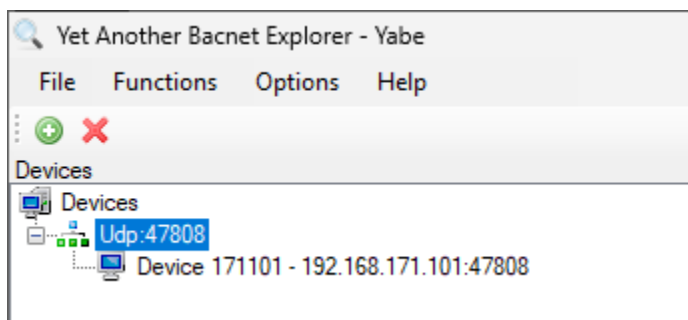
4. To communicate BACnet controller on the other subnet, you will need to setup BBMD in one of the controllers on each subnet. First, we access the controller "192.168.171.101" using Chrome, go to "System", "BACnet".
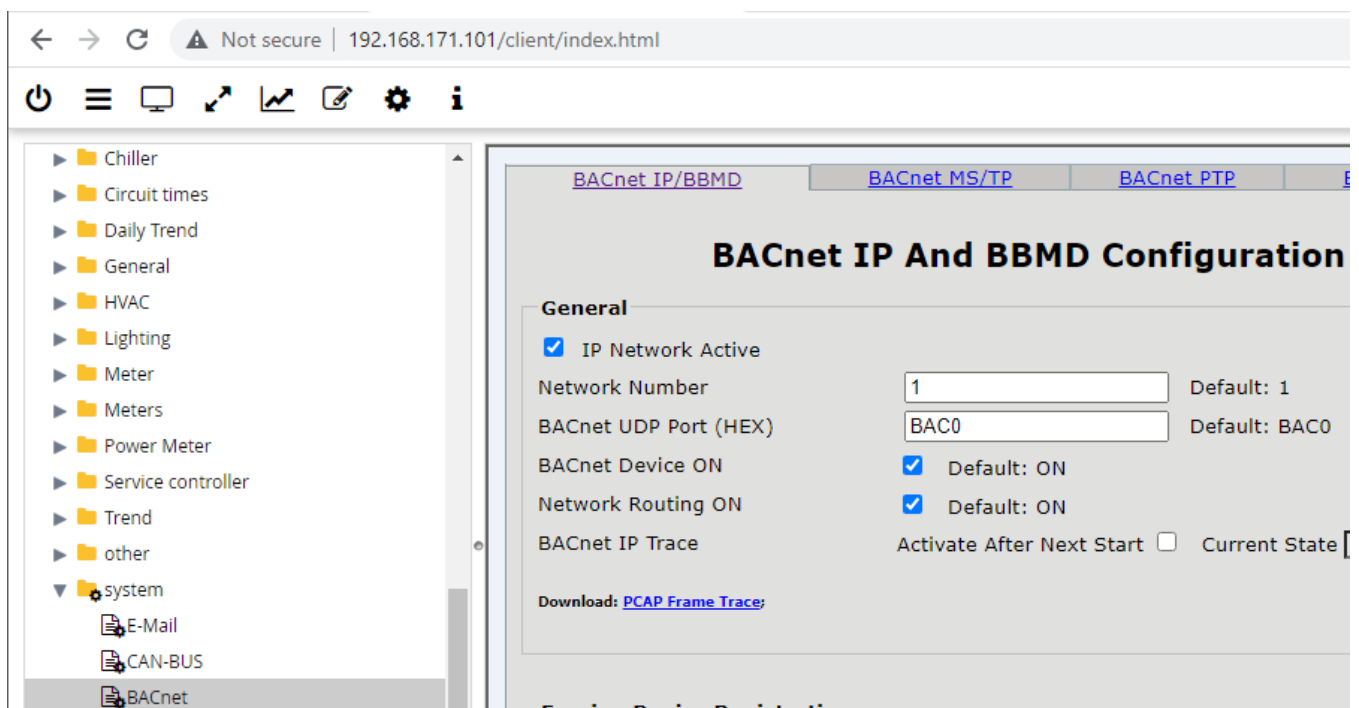
5. Scroll down until you see "Broadcast Distribution Table".

6. Activate BBMD, set the IP address of the controller on the other subnet. Click "Save Changes".

7. Click "Restart BACnet Process" and wait until it's finished and return to the "BACnet IP and BBMD Configuration" page.

8. Next, we will do the same for the controller "192.168.170.102" on the other subnet. Please make sure you can access the controller on the other subnet, for example, you can ping it successfully.

9. Activate BBMD, set the IP address of the controller on the other subnet. Click "Save Changes". Click "Restart BACnet Process" and wait until it's finished and return to the "BACnet IP and BBMD Configuration" page.
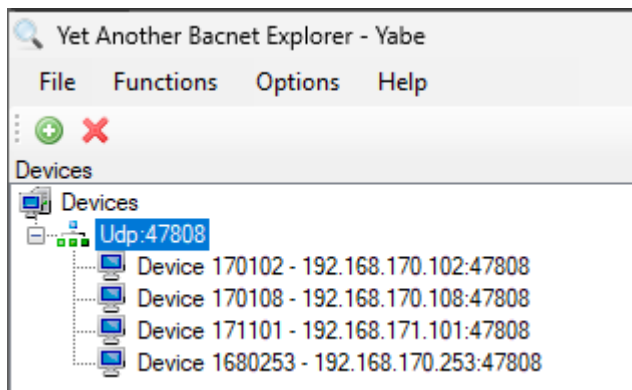
10. Now you'll be able to see the BACnet controller "192.168.170.102". Please note that all other controllers on the same subnet as "192.168.170.102" can communicate through the BBMD controller "192.168.170.102", so only 1 controller on each subnet is required to setup as BBMD.

11. Please note the BACnet devices with different IP address and/or subnet mask, like below, cannot communicate when they're connect together on the same network (without a router).
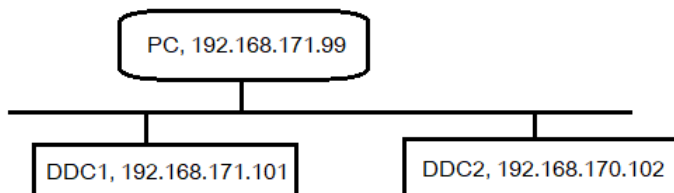
12. This won't work even after you setup BBMD as above. A possible solution is to change the DDC2 IP to "192.168.171.102" (same subnet as the other BACnet devices).
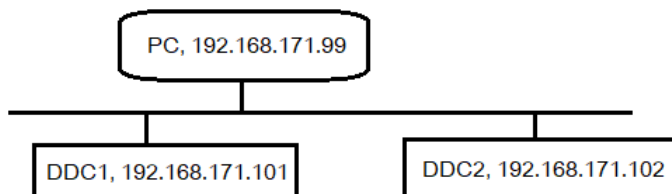
13. BACnet communicates on UDP protocol, the server listens on UDP port 47808 by default. This port number is reserved by IANA, and has been chosen to be remembered in hexadecimal form - BAC0. You may need to setup the router to allow/enable this (UDP port 47808) communication on both sides of the network.

14. Please note that you need to set the gateway correctly in both BBMD controllers, for example

Controller program	Information	Description	Program version	IP address	Subnet mask	Gateway
1 DDC101	OPEN 600 EMS		1.064d	192.168.171.101	255.255.255.0	192.168.171.1

Controller program	Information	Description	Program version	IP address	Subnet mask	Gateway
1 DDC102	OPEN 600 EMS		1.086e	192.168.170.102	255.255.255.0	192.168.170.1