Advantech SE Technical Share Document

Date	2019 / 06 / 10	**Related Product**	WebAccessSCADA
Category	■FAQ □ SOP □ Driver Tech Note		
Abstract	How to make WA SCADA BACnet driver poll a data by ReadProperty Service		
Keyword	BACnet service, object access services, ReadProperty, ReadPropertyMultiple		
Related OS			

Revision History				
Date	Version	Author	Reviewer	Description
2019/06/10	V1.0	Owen.Chang	Nick.Liu	

■ **Problem Description & Architecture:**

BACnet is a communications protocol which was designed to allow communication of building automation and control systems for applications such as heating, ventilating, and air-conditioning control (HVAC), lighting control, access control, and fire detection systems and their associated equipment. The BACnet protocol provides mechanisms for computerized building automation devices to exchange information, regardless of the particular building service they perform.

The BACnet protocol defines a number of services that are used to communicate between building devices. The following table list out the part of object access services.

SERVICE	DESCRIPTION
AddListElement	Adds one or more items to a property that is a list.
RemoveListElement	Removes one or more items from a property that is a list.
CreateObject	Used to create a new instance of an object in the serving device.
DeleteObject	Used to delete a particular object in the serving device.
ReadProperty	Returns a value of one property of one object.
ReadPropertyConditional	Returns the values of multiple properties in multiple objects.
ReadPropertyMultiple	Returns the values of multiple properties of multiple objects.
WriteProperty	Writes a value to one property of one object.
WritePropertyMultiple	Writes values to multiple properties of multiple objects.

BACnet devices are not required to implement every single Service. Just one Service, **ReadProperty**, is required to be processed by all BACnet devices.

Normally, no matter polling multiple data or single data, due to the default configuration, WebAccess both uses **ReadPropertyMultiple** service to reduce bandwidth usage, but some BACnet slave device may not

support **ReadPropertyMultiple** service**.** This SOP will show you how to make WebAccess SCADA BACnet driver poll a data by ReadProperty service.

■ **Brief Solution - Step by Step:**

The following is the configuration page for BACnet driver:

Max Property/Request defines how many data one command polls back. If we take a deeper look, you will find that ReadProperty is used only when **Max Property/Request** is equal to **1.**

The following is the service implemented by the value of **Max Property/Request**:
0 = Read 70 tags each poll – **ReadPropertyMultiple** service**.**
1= Read 1 tag per poll – **ReadProperty** service**.**
Above 2(n) = Read 2(n) tags each poll –**ReadPropertyMultiple** service**.**

Thus, if next time BACnet Slave only support **ReadProperty** service**.** Please adjust **Max Property/Request** to **1.**

■ **Reference:**
http://www.bacnet.org/Bibliography/ES-7-96/ES-7-96.htm
https://en.wikipedia.org/wiki/BACnet