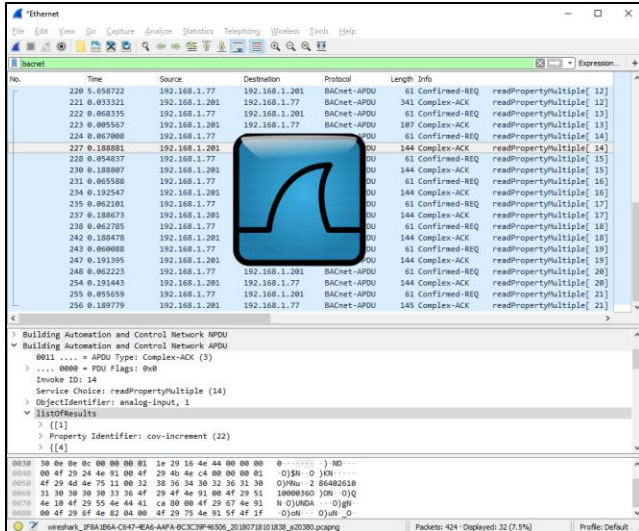


July 18, 2018



## CAS-1000-04

# Chipkin™ BACnet Wireshark Report Tool

## Requirements

- Windows: 7/8/10
- RAM: 1GB
- Disk: 10MB free space

## PRODUCT DESCRIPTION

The CAS BACnet Wireshark Report Tool is a tool to help debug problematic device installations on sites with BACnet networks. The tool decodes the captured BACnet messages from a Wireshark PCap log file into their XML representations and outputs a comprehensive report of important information and statistics. The outputted report and xml files provide the user with an informed understanding of their network so that they can easily locate and debug problematic devices.

## REPORT CONTENT

- Global PDU count
- Packet-size statistics
- Hop count statistics
- Network information
  - Network addresses
  - Number of sent messages and received messages and their service type
  - BACnet networks
  - Device addresses
  - BACnet objects
  - BACnet object properties and a history of their values



**Important:** CAS BACnet Wireshark Report Tool requires Wireshark to be installed.



**Note:** Only \*.pcap Wireshark log files are supported at this time.

## EXAMPLE OUTPUT

WIRESHARK BACNET REPORT TOOL v1.0.0

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FYI: Packets received: 154

FYI: Packets successfully processed: 154

FYI: Packets unsuccessfully processed: 0

### Global PDU Count

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- Abort: 8
- Complex-Ack: 31
- Confirmed-REQ: 76
- Error: 20
- Simple-Ack: 7
- Unconfirmed-REQ: 12

### Packet Statistics

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#### Packet size stats:

Average packet size: 89 bytes

Largest packet size: 532 bytes (Pkt: 153)

Smallest packet size: 15 bytes (Pkt: 2)

Packets with size 1-60 bytes: 109 (70%)

Packets with size 61-100 bytes: 1 (0%)

Packets with size 101-300 bytes: 34 (22%)

Packets with size 301-1200 bytes: 10 (6%)

Packets with size 1201+ bytes: 0 (0%)

#### Hop count stats:

Lowest hop count: 255 bytes (Pkt: 1)

Packets with hop count 1-49: 0 (0%)

Packets with hop count 50-99: 0 (0%)

Packets with hop count 100-249: 0 (0%)

Packets with hop count 250-255: 76 (100%)

### Networks Information

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Network Address: 172.16.21.102

Sent.Messages: 22  
 Recv.Messages: 18  
 Sent.PDU.ConfirmedRequest: 22  
 Recv.PDU.ComplexAck: 10  
 Recv.PDU.Abort: 5  
 Recv.PDU.Error: 3

BACnet Network: 0 (Local network)  
 Device Address: 0 (Local device address)

Network Address: 172.16.21.101

Sent.Messages: 62  
 Recv.Messages: 61  
 Sent.PDU.UnconfirmedRequest: 7  
 Sent.PDU.ComplexAck: 20  
 Sent.PDU.SimpleAck: 7  
 Sent.PDU.Abort: 8  
 Sent.PDU.Error: 20  
 Recv.PDU.ConfirmedRequest: 61

BACnet Network: 389

Device Address: 0x05F17D

Object Identifier - device: 389501

Property - apduTimeout: 3000 (Pkt: 4)

Property - applicationSoftwareVersion: v1 (Pkt: 6)

Property - description: [Error: Error-class: property, Error-code: unknownProperty] (Pkt: 8)

Property - deviceAddressBinding: {No response}

Property - location: [Error: Error-class: property, Error-code: unknownProperty] (Pkt: 12)

Property - objectName: Chipkin Automation Systems Simulated Bacnet Device 1 (Pkt: 16)

Property - firmwareRevision: {No response}

Object Identifier - analogInput: 1

Property - objectIdentifier: analogInput, 1 (Pkt: 32)

Property - eventState: normal (0) (Pkt: 32)

Property - units: noUnits (95) (Pkt: 34)

Property - outOfService: false (Pkt: 34)

Property - objectType: analogInput (0) (Pkt: 34)

Property - objectName: Analog Input 1 (Pkt: 34)

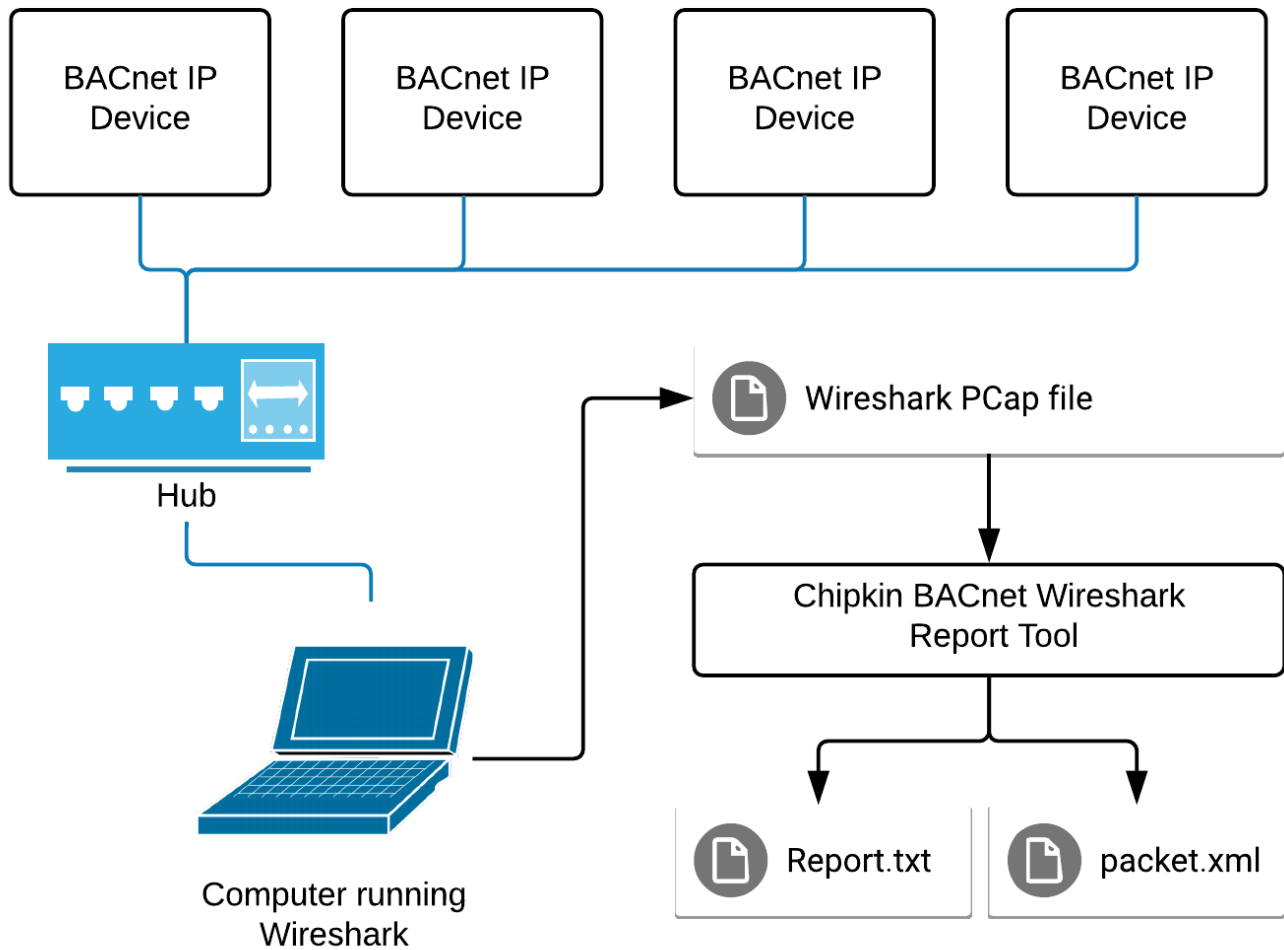
Property - presentValue: 100 (Pkt: 37)

Property - statusFlags: b0000 (Pkt: 37)

...

## CONNECTION CONFIGURATIONS

This block diagram consists of four BACnet IP devices communicating via a hub. A computer running Wireshark captures the messages entering the hub and saves them in a PCap file. The Chipkin BACnet Wireshark Report Tool decodes and processes the PCap file and outputs a Report.txt containing important information and statistics as well as a \*.xml file for every packet in the PCap file.



## CUSTOMER SUPPORT

The BACnet Wireshark Report Tool was developed by Chipkin, and we are proud to provide support for our products. For technical support, sales and customer service, please call us at 1 (866) 383-1657.

## REVISION HISTORY

This table summarizes the update history for this data sheet. Please contact Chipkin by phone or email for an updated version of this document.

DATE	RESP.	DOCUMENT REVISION	COMMENTS
18 Jul 2018	BDC	00	Created.

Thanks for choosing Chipkin's protocol gateways, data clients and integration services to meet your building and industrial automation requirements!

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