CHIPKIN

Edwards IO,VS,FX Series FACP Serial Driver FS-8705-47

Chipkin - Enabling Integration

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1 Edwards and Kidde FACP Driver Description

This serial driver connects via RS232 to the printer port of an IO, VS, FX FACP .

The driver is capable of being linked with other FieldServer drivers to form regular FieldServer firmware that can be installed on QuickServer and other FieldServer gateways. Other drivers can access the Edwards or Kidde FACP data and serve using other protocols such as BACnet and Modbus. Over 120 protocols are supported. Any can be linked.

The driver is a passive client driver. It does not poll for data. It waits passively for the panel to transmit data. When an event is sent to the gateway it evaluates the event and turns data points on/off. These points are mapped onto BACnet / Modbus etc. objects so the BMS can read them,

The driver cannot be used to simulate an IO, VS, FX FACP. Because only the passive client side of the protocol is implemented.

Notes on how this driver stores data and how to manage system events are provided in the appendices. They are important.

Max Nodes Supported

FieldServer Mode	Nodes	Comments
Passive Client	Many	One (IO, VS, FX) FACP per gateway

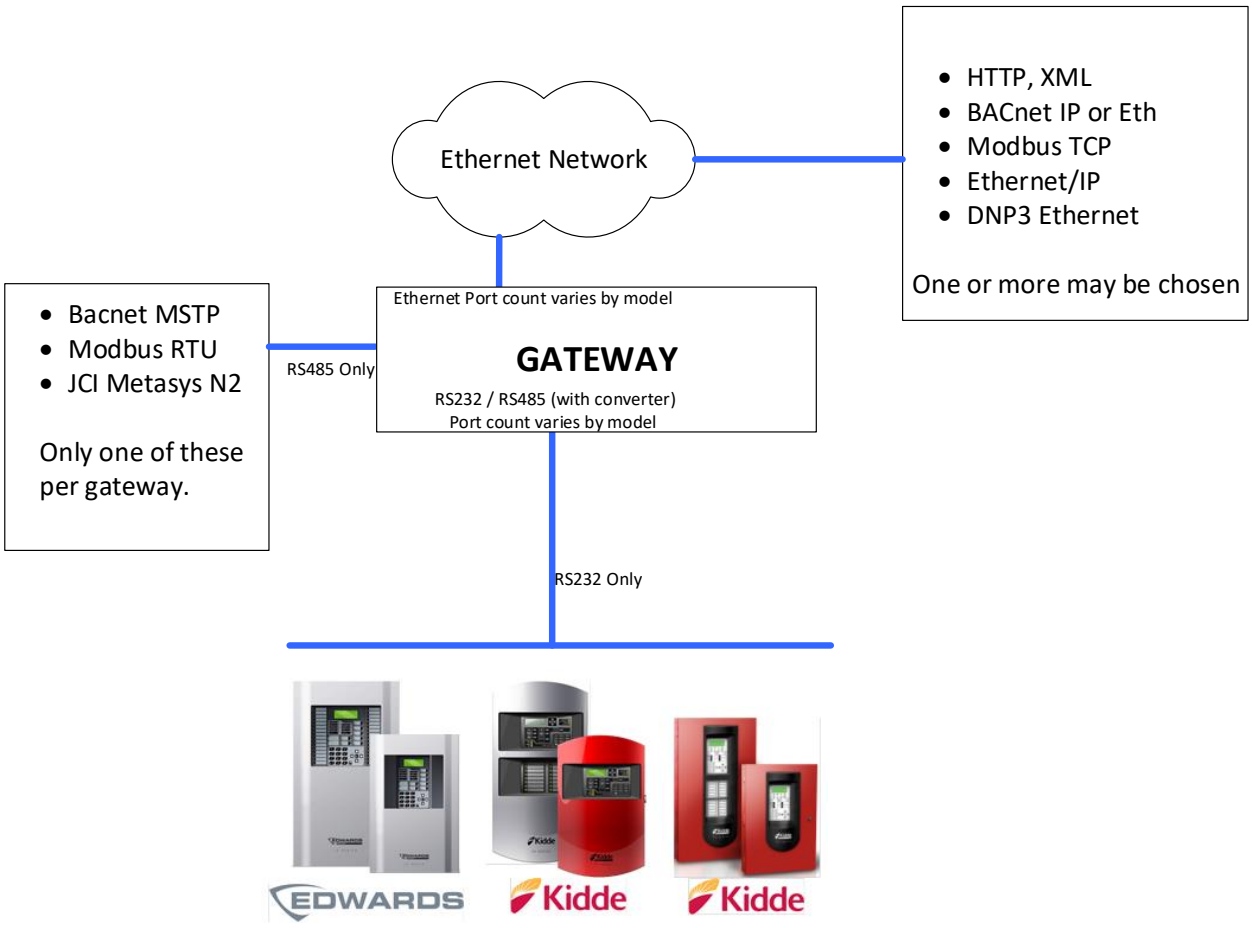
2 Driver Scope of Supply

2.1 Supplied with this driver

FieldServer Technologies PART #	Description
Cables	No specific cables are shipped with this driver.
FS-8705-46	Driver Manual.

3 Hardware Connections

3.1 Block Diagram

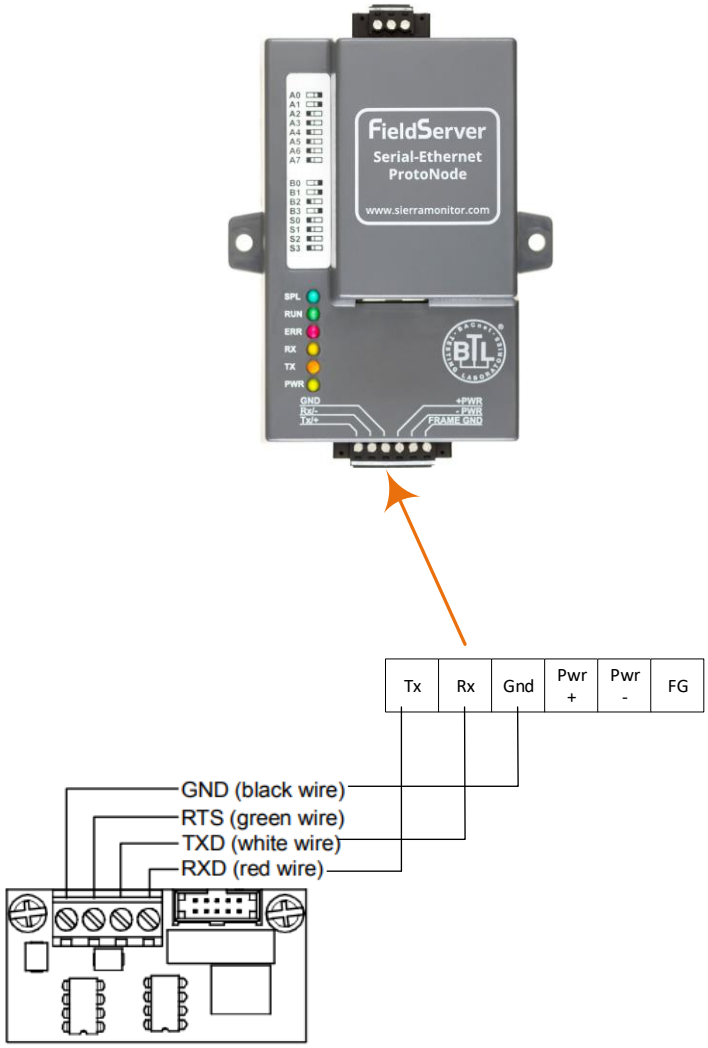


IO VS X Series Supported

3.2 Terminations

Please read this document

https://myeddie.edwardsutcfs.com/Media/Installation%20Sheets/3101095-EN%20R04%20SA-232%20RS-232%20Interface%20Card%20Installation%20Sheet.pdf



SA-232 (RS-232) Module

4 Configuring the FieldServer as an IO, VS, FX FACP Passive Client

For a detailed discussion on FieldServer configuration, please refer to the FieldServer Configuration Manual. The information that follows describes how to expand upon the factory defaults provided in the configuration files included with the FieldServer (See ".csv" sample files provided with the FS).

This section documents and describes the parameters necessary for configuring the FieldServer to communicate with IO, VS, FX FACPs.

The configuration file tells the FieldServer about its interfaces, and the routing of data required. In order to enable the FieldServer for IO, VS, FX FACPs monitoring and control, the driver's independent FieldServer buffers need to be declared in the "Data Arrays" section, the destination device addresses need to be declared in the "Client Side Nodes" section, and the data required from the servers needs to be mapped in the "Client Side Map Descriptors" section. Details on how to do this can be found below.

Note that in the tables, * indicates an optional parameter, with the bold legal value being the default.

4.1 Data Arrays

Section Title
Data_Arrays

Column Title	Function	Legal Values
Data_Array_Name	Provide name for Data Array	Up to 15 alphanumeric characters
Data_Array_Format	Provide data format. Each Data Array can only take on one format.	**Recommended**: UINT16 Also Supported: Float, Uint32, SInt16, Packed_Bit, Byte, Packed_Byte, Swapped_Byte
Data_Array_Length	Number of Data Objects. Must be larger than the data storage area required by the Map Descriptors for the data being placed in this array.	1-10,000

4.1.1 Data Arrays – Example

```
// Data Arrays

Data_Arrays

Data_Array_Name,        Data_Format,    Data_Array_Length,


DA_DATA,                FLOAT,          200
```

4.2 Data Arrays – Specific Names must be used

This driver stores data in Data Arrays with specific names. If they are not found then the relevant data is discarded. An error message is displayed.

The following Data Arrays should be created

Repeat these 2 for each Loop

Name	Type	Length
L01_Pri_Mult	UINT16	251 / 376
L01_Pri_Bin	Bit	251 / 376
Zone_Pri_Mult	UINT16	251 / 376
Zone_Pri_Bin	Bit	251 / 376
Annunciator_Pri_Mult	UINT16	251 / 376
Annunciator _Pri_Bin	Bit	251 / 376
Event_Pri_Mult	UINT16	251 / 376
Event_Pri_Bin	Bit	251 / 376
IOVSFX_Stats	UINT16	100
IOVSFX_HMI	UINT16	200

4.3 Client Side Nodes

Create one connection for each port that is connected to the FACP. Usually there is only one per gateway.

Section Title
Connections

Column Title	Function	Legal Values
Port	Specify which port the device is connected to the FieldServer	R1-R2
Protocol	Specify protocol used	IOVSFX
Baud*	Specify baud rate	Driver Supports: 110; 300; 600; 1200; 2400; 4800; **9600**; 19200; 28800; 38400; 57600 Baud FACP supports 1200, **9600**
Data_Bits *	Specify parity	Driver Supports: 7,**8** FACP supports: 8
Stop_Bits*	Specify data bits	Driver Supports: **1**,2 FACP supports: 1
Parity *	Specify stop bits	Driver Supports: Odd, Even, **None** FACP supports: None
IOVSFX_language	Select which of the 4 language it can expect the FACP to use. Enter exactly as shown in the legal values column. Brackets and all.	0(English) 1(French) 2(Portuguese) 3(Spanish)

4.4 Client Side Connection Descriptions – Example

```
// Client Side Connections


Connections

Port,        Baud    Parity,    Data_Bits,    Stop_Bits,    Protocol

R1,          9600    None,      8,            1,            IOVSFX
```

4.5 Client Side Nodes

Create one Node per FACP in the network only.

Section Title
Nodes

Column Title	Function	Legal Values
Node_Name	Provide name for node	Up 12 of the max of 32 alphanumeric characters possible to specify the Node name.
Node_ID	Not used directly by the driver	1-255
Protocol	Specify protocol used	IOVSFX

4.5.1 Client Side Nodes – Example

```
                    // Client Side Nodes


Nodes

Node_Name,    Node_ID,    Protocol,    Connection

FACP,         1,          IOVSFX       R2
```

4.6 Client Side Map Descriptors

4.6.1 FieldServer Related Map Descriptor Parameters

Column Title	Function	Legal Values
Map_Descriptor_Name	Name of this Map Descriptor	Up to 32 alphanumeric characters
Data_Array_Name	Name of Data Array where data is to be stored in the FieldServer	One of the Data Array names from “Data Array” section above
Data_Array_Offset	Starting location in Data Array	0 to maximum specified in “Data Array” section above
Function	Function of Client Map Descriptor.	Passive (waits for incoming message)

4.7 Driver Related Map Descriptor Parameters

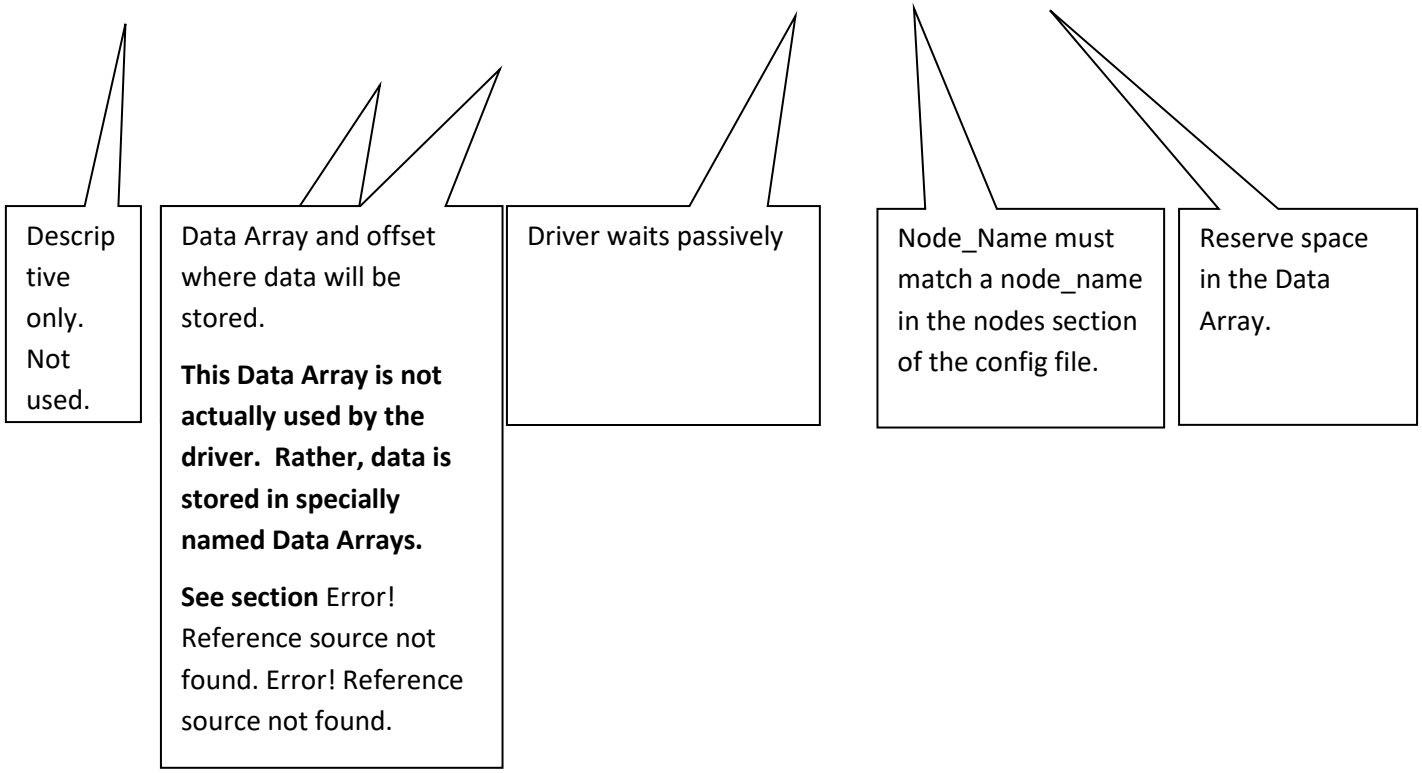
Column Title	Function	Legal Values
Node_Name	Name of Node to fetch data from	One of the node names specified in “Client Node Descriptor” above
Data_Type	This commonly used parameter is not used by this driver.	
Length	This commonly used parameter is not used by this driver.	Set to 1
Address	This commonly used parameter is not used by this driver.	

4.8 Examples

4.8.1 Map Descriptor Example – This is the only Map Descriptor required

This is the only map descriptor required. The Event Data is stored in a set of specially named Data Arrays. This Map Descriptor doesn't really do anything useful, but it is required.

```
Map_Descriptors
Map_Descriptor_Name , Data_Array_Name , Data_Array_Offset , Function , Node_Name , Length ,
CatchAll            , DA_Data         , 0                 , passive  , FACP      , 1
```



5 Configuring the FieldServer as to Emulate a FACP

This driver cannot be used to emulate a IO, VS, FX FACPs . For some protocols we implement the client and server sides – like Modbus. In such cases the protocol can be used to emulate a device. We do not normally do this for protocols where we expect our customer will always want the Client functionality. Ask our sales department if you need to emulate a device.

6 Revision History

Date	Resp	Format	Driver Ver.	Doc. Rev.	Comment
Jun 2020	PMC		0.00	0	Created.
Jul 2020	PMC		1.00vA	1	Updated
Jul 2020	PMC		1.00vA	2	Updated removed Honeywell. Redid block diagram
Oct 2020	PMC		1.01	3	Various edits. Removed notes about obsolete method for system errors. Most important edit = Finalized in Sept 2020 **Appendix K – Server Object Data and Addressing**
Oct 2020	PMC		1.01	4	Updated system event string table.
19 Nov 2020	PMC		1.04b	5	Edwards markups
23 Nov 2020	PMC		1.04c	6	SAS > iovsfx changes Data array name changes
1 Dec 2020	PMC		1.04f	7	BMS Node Id dialer.csv is now dialer.ini
14 May 2021	YC		1.04	8	Document format updated

Appendix A. How Data is Stored

Data is stored in Data Arrays with special names. See section ***Error! Reference source not found. Error! Reference source not found.***

Modules and Detector States

When an event from Loop xx (E.g. L01) is received then the appropriate data array is found. The offset into the data array yyy will be the detector or module number.

Lxx_Pri_Mult [yyy] = StateInteger

Where

StateInteger	**Meaning**
0	Not permitted because of BACnet Multistate limitation
1	Normal
2	Alarm
3	Trouble
4	Monitor
5	Supervisory

Lxx_Pri_Bint [yyy] = 0 (normal) or 1 (offnormal)

Eg.

L02_Pri_Mult[99] = 1 When Module 99 on loop 2 is in Normal State

L02_Pri_Bin[99] = 0 When an alarm on Module 99 on loop 2 is restored to normal.

Zone, Annunciator and System Events

When an event occurs for one of these 3 elements then data is stored in the appropriately named data arrays.

EG. For zone, annunciator, event x, where x is the number of the zone etc.

Zone_Pri_Mult [x] = StateInteger = 1,2,3,4,5 (See Above table of values)

Zone_Pri_Bin [x] = 0 (normal) or 1 (offnormal)

Eg. A system Event occurs. Its event #46.

Event_Pri_Bin[46] = 0 or 1. System event #46 (see table in appendix for which event #46 is)

HMI

Data Array Name = IOVSFX_HMI

Offset into IOVSFX _HMI	Meaning	
0	Synch is required	
1	Reset Rcvd	
2	Common Alarm	
3	Common Supervisory	
4	Common Monitor	
5	Common Trouble	
6	Common Disable	
20	Gateway Error	
21	Manual Reconciliation Required	
22	Firmware Rev number	
23	Firmware Rev Minor change letter	
24	Zone data required	
25	Annun status required	

Appendix B. System Reset & Synch

When a System Reset message is received, the driver will set all the data in the associated data arrays to zero.

To Synch the gateway to the FACP –

- Connect gateway power to FACP power so they boot at the same time.
- Push System Reset – All Active items will re-announce themselves. However we recommend the synch be done, when there are no off -normal states in the FACP.

Appendix C. Managing System Event Strings

A file called **sysstring.ini** is provided and installed with the driver.

IT MAY NOT CONTAIN ANY SPECIAL CHARS – e.g. French

If it is absent then an error will be reported.

If absent then system messages will cause many errors and will result in system data points not being active.

At startup the file is read. This is how the driver learns the text of the Panel System Events.

The file is a simple CSV test file. It must contain at least 4 columns.

The System String file may be edited – suggested only to add or change. Be careful the format must be preserved.

When the file is processed the diver creates a file called **syststring.txt**. It contains a copy of the strings that were processed. It is provided for support and checking reasons. It is not used. File may be uploaded on the gateway – File Transfer – General Files Tab of the web interface**.**

The firmware will generate this file If it is not absent

To regenerate – delete the file, restart the FSB

Only Chipkin can prepare the file contain in the firmware

GROOMING the export provided by Edwards into the sysstring.ini file.

There are 6 columns as per above

Remove all foreign chars

Replaces slashes with dashes

Make sure there are no duplicates – remove them

Allocate the action number

Remove the annunciator rows.

Developer Note: There is a line in slave.c which is commented out (normally). This line regenerates the file strings for the embedded HTML and ini files. The function is convert_file_to_hex();

In the following table

// Lines that begin a double slash are ignored and may be used for comments

Column 1 = Event Number – is ignored after 101cA

Column 2 = Action Number

1 = System Reset , If this item is active then all data arrays are cleared

2 = This will be treated as IOVSFX_SYS_EVENT__COMMON_ALARM

3 = This will be treated as IOVSFX_SYS_EVENT__COMMON_SUPER

4 = This will be treated as IOVSFX_SYS_EVENT__COMMON_MONITOR

5 = This will be treated as IOVSFX_SYS_EVENT__COMMON_TROUBLE

6 = This will be treated as IOVSFX_SYS_EVENT__COMMON_DISABLE

The states of these system messages will be displayed on the Web Page

For comparison purposes all strings are converted to lower case inside the driver.

Column 3 = System Event String in English

Column 4 = System Event String in Spanish

Column 5 = System Event String in Portuguese

Column 6 = System Event String in French

//Column1	Column2	Column 3	Column 4
//Index	Action	English - Event Description	Spanish - Event Description
0	0	E:000Loop 1 Initializing	E:000Lazo 1 inicializando
1	0	E:001Loop 1 Fault	E:001Falla en lazo 1
2	0	E:002Loop 1 Map Fault	E:002Falla Mapa Lazo 1
3	0	E:003Loop 1 Card Fault	E:003Falla Tarjeta Lazo 1
4	0	E:004Loop 1 Uncfgrd Alarm	E:004Alarma No Conf Lazo1
5	0	E:005Loop 1 Uncfgrd Trbl	E:005Falla No Conf Lazo 1
6	0	E:006Loop 1 Map Mismatch	E:006IncongruenciaMapa L1
7	0	E:007Loop 1 Over Limits	E:007LimiteSuperadoLazo 1
8	0	E:008Loop 1 Device 000	E:008Dispos 000 Lazo 1
9	0	E:009Loop 1 Mapping	E:009RealizandoMapeoLazo1
10	0	E:010Loop 2 Initializing	E:010Lazo 2 Inicializando
11	0	E:011Loop 2 Fault	E:011Falla en lazo 2
12	0	E:012Loop 2 Map Fault	E:012Falla Mapa Lazo 2
13	0	E:013Loop 2 Card Fault	E:013Falla Tarjeta Lazo 2
14	0	E:014Loop 2 Uncfgrd Alarm	E:014Alarma No Conf Lazo2
15	0	E:015Loop 2 Uncfgrd Trbl	E:015Falla No Conf Lazo2
16	0	E:016Loop 2 Map Mismatch	E:016IncongruenciaMapa L2
17	0	E:017Loop 2 Over Limits	E:017LimiteSuperadoLazo 2
18	0	E:018Loop 2 Device 000	E:018Dispos 000 Lazo 2
19	0	E:019Loop 2 Mapping	E:019RealizandoMapeoLazo2
20	0	E:020Loop 3 Initializing	E:020Lazo 3 Inicializando
21	0	E:021Loop 3 Fault	E:021Falla en lazo 3
22	0	E:022Loop 3 Map Fault	E:022Falla Mapa Lazo 3
23	0	E:023Loop 3 Card Fault	E:023Falla Tarjeta Lazo 3
24	0	E:024Loop 3 Uncfgrd Alarm	E:024Alarma No Conf Lazo3
25	0	E:025Loop 3 Uncfgrd Trbl	E:025Falla No Conf Lazo 3
26	0	E:026Loop 3 Map Mismatch	E:026IncongruenciaMapa L3
27	0	E:027Loop 3 Over Limits	E:027LimiteSuperadoLazo 3
28	0	E:028Loop 3 Device 000	E:028Dispos 000 Lazo 3

29	0	E:029Loop 3 Mapping	E:029RealizandoMapeoLazo3
30	0	E:030Loop 4 Initializing	E:030Lazo 4 Inicializando
31	0	E:031Loop 4 Fault	E:031Falla en lazo 4
32	0	E:032Loop 4 Map Fault	E:032Falla Mapa Lazo 4
33	0	E:033Loop 4 Card Fault	E:033Falla Tarjeta Lazo 4
34	0	E:034Loop 4 Uncfgrd Alarm	E:034Alarma No Conf Lazo4
35	0	E:035Loop 4 Uncfgrd Trbl	E:035Falla No Conf Lazo 4
36	0	E:036Loop 4 Map Mismatch	E:036IncongruenciaMapa L4
37	0	E:037Loop 4 Over Limits	E:037LimiteSuperadoLazo 4
38	0	E:038Loop 4 Device 000	E:038Dispos 000 Lazo 4
39	0	E:039Loop 4 Mapping	E:039RealizandoMapeoLazo4
40	0	E:040System Startup	E:040Inicializ. Sistema
41	0	E:041Program Mode	E:041Modo de programacion
42	1	E:042Reset	E:042Reinicio
43	0	E:043Reset-Sil Inhibit	E:043Reinicio-Sil Inhibir
44	0	E:044Panel Silence	E:044Silencio del panel
45	0	E:045Signal Silence	E:045Silencio senales
46	0	E:046Drill	E:046Simulacro
47	0	E:047Walk Test	E:047Prueba Movil
48	0	E:048Test Fire	E:048Prueba de fuego
49	0	E:049Clear History	E:049Borrar Historial
50	0	E:050Time	E:050Tiempo
51	0	E:051Date	E:051Fecha
52	4	E:052Common Disable	E:052DeshabilitacionComun
53	5	E:053Common Trouble	E:053Falla Comun
54	0	E:054System Ground Fault	E:054FallaATierraDelSist.
55	0	E:055Battery Charger	E:055Cargador Bateria
56	0	E:056Battery Low	E:056Bateria Baja
57	0	E:057Battery Missing	E:057Sin Bateria
58	0	E:058Local AC Power	E:058Suministro Local CA
59	0	E:059Aux. Power 1	E:059Suministro Aux. 1

60	0	E:060Aux. Power 2	E:060Suministro Aux. 2
61	0	E:061System Wide AC Power	E:061EnergiaAC enSistema
62	2	E:062Common Alarm	E:062Alarma Comun
63	3	E:063Common Supervisory	E:063Supervision Comun
64	4	E:064Common Monitor	E:064Monitor Comun
65	0	E:065Common Trouble TELCO	E:065Falla Comun TELCO
66	0	E:066Common Trouble NETWK	E:066Falla Comun Red
67	0	E:067Outputs Are Latched	E:067Salidas Enganchadas
68	0	E:068Alarm ON	E:068Activar Alarma
69	0	E:069Self Test Fault	E:069Falla en Autoprueba
70	0	E:070Internal Fault	E:070Falla Interna
71	0	E:071Dialer Dsbl-Rem Disc	E:071DACT Des-Remoto Desc
72	0	E:072Dialer Line 1 Fault	E:072Falla en Linea1 DACT
73	0	E:073Dialer Line 2 Fault	E:073Falla en Linea2 DACT
74	0	E:074Dialer Deliver Fail	E:074DACT Falla de Envio
75	0	E:075Dialer Normal Test	E:075Prueba NormalDeDACT
76	0	E:076Dialer Abnormal Test	E:076PruebaAnormalDeDACT
77	0	E:077Dialer Configuration	E:077ConfiguracionDeDACT
78	0	E:078Net Comm Flt Pri 01	E:078Falla Comunicacion Red Pri 01
79	0	E:079Net Comm Flt Pri 02	E:079Falla Comunicacion Red Pri 02
80	0	E:080Net Comm Flt Pri 03	E:080Falla Comunicacion Red Pri 03
81	0	E:081Net Comm Flt Pri 04	E:081Falla Comunicacion Red Pri 04
82	0	E:082Net Comm Flt Pri 05	E:082Falla Comunicacion Red Pri 05
83	0	E:083Net Comm Flt Pri 06	E:083Falla Comunicacion Red Pri 06
84	0	E:084Net Comm Flt Pri 07	E:084Falla Comunicacion Red Pri 07
85	0	E:085Net Comm Flt Pri 08	E:085Falla Comunicacion Red Pri 08
86	0	E:086Net Conf Fault 01	E:086Falla Conf Red 01
87	0	E:087Net Conf Fault 02	E:087Falla Conf Red 02
88	0	E:088Net Conf Fault 03	E:088Falla Conf Red 03
89	0	E:089Net Conf Fault 04	E:089Falla Conf Red 04
90	0	E:090Net Conf Fault 05	E:090Falla Conf Red 05

91	0	E:091Net Conf Fault 06	E:091Falla Conf Red 06
92	0	E:092Net Conf Fault 07	E:092Falla Conf Red 07
93	0	E:093Net Conf Fault 08	E:093Falla Conf Red 08
94	0	E:094IPGateway Trouble	E:094IPFalla de Gateway
95	0	E:095DHCP Comm Fault	E:95Falla de comunicacion DHCP
96	0	E:096DNS Comm Fault	E:96Falla de Comunicacion DNS
97	0	E:097Net Comm Flt Sec 01	E:097Falla Comunicacion Red Sec 01
98	0	E:098Net Comm Flt Sec 02	E:098Falla Comunicacion Red Sec 02
99	0	E:099Net Comm Flt Sec 03	E:099Falla Comunicacion Red Sec 03
100	0	E:100Net Comm Flt Sec 04	E:100Falla Comunicacion Red Sec 04
101	0	E:101Net Comm Flt Sec 05	E:101Falla Comunicacion Red Sec 05
102	0	E:102Net Comm Flt Sec 06	E:102Falla Comunicacion Red Sec 06
103	0	E:103Net Comm Flt Sec 07	E:103Falla Comunicacion Red Sec 07
104	0	E:104Net Comm Flt Sec 08	E:104Falla Comunicacion Red Sec 08
105	0	E:105IPD Norml Test 01	E:105Prueba Normal de IPD 01
106	0	E:106IPD Norml Test 02	E:106Prueba Normal de IPD 02
107	0	E:107IPD Norml Test 03	E:107Prueba Normal de IPD 03
108	0	E:108IPD Norml Test 04	E:108Prueba Normal de IPD 04
109	0	E:109IPD Norml Test 05	E:109Prueba Normal de IPD 05
110	0	E:110IPD Norml Test 06	E:110Prueba Normal de IPD 06
111	0	E:111IPD Norml Test 07	E:111Prueba Normal de IPD 07
112	0	E:112IPD Norml Test 08	E:112Prueba Normal de IPD 08
113	0	E:113IPD Abnorml Test 01	E:113Prueba Anormal de IPD 01
114	0	E:114IPD Abnorml Test 02	E:114Prueba Anormal de IPD 02
115	0	E:115IPD Abnorml Test 03	E:115Prueba Anormal de IPD 03
116	0	E:116IPD Abnorml Test 04	E:116Prueba Anormal de IPD 04
117	0	E:117IPD Abnorml Test 05	E:117Prueba Anormal de IPD 05
118	0	E:118IPD Abnorml Test 06	E:118Prueba Anormal de IPD 06
119	0	E:119IPD Abnorml Test 07	E:119Prueba Anormal de IPD 07
120	0	E:120IPD Abnorml Test 08	E:120Prueba Anormal de IPD 08
121	0	E:121Fw Dwnld in Progress	E:121BajaMicroEnProgresso

122	0	E:122Fw Download Aborted	E:122BajaMicroAbortado
123	0	E:123Fw Download Failed	E:123Baha Micro Falla
124	0	E:124Fw Download Completd	E:124Baja Micro Completo
125	0	E:125NAC 01	E:125NAC 01
126	0	E:126NAC 02	E:126NAC 02
127	0	E:127NAC 03	E:127NAC 03
128	0	E:128NAC 04	E:128NAC 04
129	0	E:129Printer	E:129Impresora

Column 5	**Column 6**
Portuguese - Event Description	**French - Event Description**
E:000Inicializando Loop 1	E:000Initialis. Boucle 1
E:001Falha Loop 1	E:001Defaut Boucle 1
E:002Loop 1 Map Falha	E:002Defaut Map Boucle1
E:003Loop 1 Falha Placa	E:003Defaut Carte Boucle 1
E:004Loop 1 Alarm Desconf	E:004Alm Boucle1 non cnfg
E:005Loop 1 Uncfgrd Trbl	E:005Pan. Boucle1 noncnfg
E:006Loop 1 Map Falha	E:006Dispar. plan boucle1
E:007 Loop 1 Over Limits	E:007Boucle1 hors limite
E:008Loop 1 Disp 000	E:008Boucle 1 Adr Disp 0
E:009Loop 1 Mapping	E:009Mappage Boucle 1
E:010Inicializando Loop 2	E:010Initialis. Boucle 2
E:011Falha Loop 2	E:011Defaut Boucle 2
E:012Loop 2 Map Falha	E:012Defaut Map Boucle2
E:013Loop 2 Falha Placa	E:013Defaut Carte Boucle 2
E:014Loop 2 Alarm Desconf	E:014Alm Boucle2 non cnfg
E:015Loop 2 Uncfgrd Trbl	E:015Pan. Boucle2 noncnfg
E:016Loop 2 Map Falha	E:016Dispar. plan boucle2
E:017Loop 2 Over Limits	E:017Boucle2 hors limite
E:018Loop 2 Disp 000	E:018Boucle 2 Adr Disp 0

E:019Loop 2 Mapping	E:019Mappage Boucle 2
E:020Inicializando Loop 3	E:020Initialis. Boucle 3
E:021Falha Loop 3	E:021Defaut Boucle 3
E:022Loop 3 Map Falha	E:022Defaut Map Boucle3
E:023Loop 3 Falha Placa	E:023Defaut Carte Boucle 3
E:024Loop 3 Alarm Desconf	E:024Alm Boucle3 non cnfg
E:025Loop 3 Uncfgrd Trbl	E:025Pan. Boucle3 noncnfg
E:026Loop 3 Map Falha	E:026Dispar. plan boucle3
E:027Loop 3 Over Limits	E:027Boucle3 hors limite
E:028Loop 3 Disp 000	E:028Boucle 3 Adr Disp 0
E:029Loop 3 Mapping	E:029Mappage Boucle 3
E:030Inicializando Loop 4	E:030Initialis. Boucle 4
E:031Falha Loop 4	E:031Defaut Boucle 4
E:032Loop 4 Map Falha	E:032Defaut Map Boucle4
E:033Loop 4 Falha Placa	E:033Defaut Carte Boucle 4
E:034Loop 4 Alarm Desconf	E:034Alm Boucle4 non cnfg
E:035Loop 4 Uncfgrd Trbl	E:035Pan. Boucle4 noncnfg
E:036Loop 4 Map Falha	E:036Dispar. plan boucle4
E:037Loop 4 Over Limits	E:037Boucle4 hors limite
E:038Loop 4 Disp 000	E:038Boucle 4 Adr Disp 0
E:039Loop 4 Mapping	E:039Mappage Boucle 4
E:040Inic do Sistema	E:040Demarrage Systeme
E:041Modo de Programa	E:041Mode Programm.
E:042Reset	E:042Rearmer
E:043Inibir Reset-Sil	E:043Inhiber Rearm.-Sil.
E:044Silenciar Painel	E:044Silence Panneau
E:045Silenciar Sinais	E:045Arret Signaux
E:046Proced Teste	E:046Exercice
E:047Teste Comunicacao	E:047Essai sur place
E:046Proced. Teste	E:048Test Feu
E:049Apagar Historico	E:049Effacer Historique

E:050Tempo	E:050Heure
E:051Data	E:051Date
E:052Disabilitar Com	E:052Neutral. Commun
E:053Falha Comum	E:053Panne commune
E:054Falha de Terra	E:054Fuite Terre Systeme
E:055Carregador de Bat	E:055Chargeur de batterie
E:056Bateria Fraca	E:056Batterie faible
E:057Sem Bateria	E:057Batterie manquant
E:058Alimentacao AC Local	E:058Alim. ca locale
E:059Fonte Auxiliar 1	E:059Alim. auxil. 1
E:060Fonte Auxiliar 2	E:060Alim. auxil. 2
E:061Alimentacao AC Sist.	E:061Alim ca systeme
E:062Alarme Comum	E:062Alarme Commun
E:063Supervisao Comum	E:063Supervise Commun
E:064Monitor Comum	E:064Moniteur Commun
E:065Falha Comum TELCO	E:065Panne commune DACT
E:066Falha Comum REDE	E:066Panne commune Reseau
E:067Output Bloqueados	E:067Sorties Verrouill.
E:068Alarme Ligado	E:068Act Alarme
E:069Falha no Test Aut	E:069Panne d auto-test
E:070Falha Interna	E:070Defaut interne
E:071Discar Dsbl-Rem Disc	E:071Neut.DACT-Disc Dist.
E:072Falha Discagem 1	E:072Defaut Ligne1 DACT
E:073Falha Discagem 2	E:073Defaut Ligne2 DACT
E:074Falha de Discagem	E:074Defaut envoi DACT
E:075Teste do Disc Normal	E:075Essai DACT normal
E:076Teste Discador	E:076Essai DACT anormal
E:077Config do Discador	E:077Configuration DACT
E:078Falha Comunicacao Rede Pri 01	E:078Erreur pri comm reseau 01
E:079Falha Comunicacao Rede Pri 02	E:079Erreur pri comm reseau 02
E:080Falha Comunicacao Rede Pri 03	E:080Erreur pri comm reseau 03

E:081Falha Comunicacao Rede Pri 04	E:081Erreur pri comm reseau 04
E:082Falha Comunicacao Rede Pri 05	E:082Erreur pri comm reseau 05
E:083Falha Comunicacao Rede Pri 06	E:083Erreur pri comm reseau 06
E:084Falha Comunicacao Rede Pri 07	E:084Erreur pri comm reseau 07
E:085Falha Comunicacao Rede Pri 08	E:085Erreur pri comm reseau 08
E:086Falha Conf Rede 01	E:086Net Def. Conf 01
E:087Falha Conf Rede 02	E:087Net Def. Conf 02
E:088Falha Conf Rede 03	E:088Net Def. Conf 03
E:089Falha Conf Rede 04	E:089Net Def. Conf 04
E:090Falha Conf Rede 05	E:090Net Def. Conf 05
E:091Falha Conf Rede 06	E:091Net Def. Conf 06
E:092Falha Conf Rede 07	E:092Net Def. Conf 07
E:093Falha Conf Rede 08	E:093Net Def. Conf 08
E:094IPFalha de Gateway	E:094IPPanne du Passage
E:095Falha de Comunicacao DHCP	E:095Erreur de communication DHCP
E:096Falha de Comunicacao DNS	E:096Erreur de communication DNS
E:097Falha Comunicacao Rede Sec 01	E:097Erreur sec comm reseau 01
E:098Falha Comunicacao Rede Sec 02	E:098Erreur sec comm reseau 02
E:099Falha Comunicacao Rede Sec 03	E:099Erreur sec comm reseau 03
E:100Falha Comunicacao Rede Sec 04	E:100Erreur sec comm reseau 04
E:101Falha Comunicacao Rede Sec 05	E:101Erreur sec comm reseau 05
E:102Falha Comunicacao Rede Sec 06	E:102Erreur sec comm reseau 06
E:103Falha Comunicacao Rede Sec 07	E:103Erreur sec comm reseau 07
E:104Falha Comunicacao Rede Sec 08	E:104Erreur sec comm reseau 08
E:105Teste Normal de IPD 01	E:105Test normal IPD 01
E:106Teste Normal de IPD 02	E:106Test normal IPD 02
E:107Teste Normal de IPD 03	E:107Test normal IPD 03
E:108Teste Normal de IPD 04	E:108Test normal IPD 04
E:109Teste Normal de IPD 05	E:109Test normal IPD 05
E:110Teste Normal de IPD 06	E:110Test normal IPD 06
E:111Teste Normal de IPD 07	E:111Test normal IPD 07

E:112Teste Normal de IPD 08	E:112Test normal IPD 08
E:113Teste Anormal de IPD 01	E:113Test anormal IPD 01
E:114Teste Anormal de IPD 02	E:114Test anormal IPD 02
E:115Teste Anormal de IPD 03	E:115Test anormal IPD 03
E:116Teste Anormal de IPD 04	E:116Test anormal IPD 04
E:117Teste Anormal de IPD 05	E:117Test anormal IPD 05
E:118Teste Anormal de IPD 06	E:118Test anormal IPD 06
E:119Teste Anormal de IPD 07	E:119Test anormal IPD 07
E:120Teste Anormal de IPD 08	E:120Test anormal IPD 08
E:121FW atualiz em andam.	E:121Tele logiciel progre
E:122FW atualiz. abortada	E:122Tele logiciel aband
E:123FW atualiz. falhou	E:123Tele logiciel echou
E:124FW atualiz. completa	E:124Tele logiciel compl
E:125NAC 01	E:125Circuit Signaux 1
E:126NAC 02	E:126Circuit Signaux 2
E:127NAC 03	E:127Circuit Signaux 3
E:128NAC 04	E:128Circuit Signaux 4
E:129Impressora	E:129Imprimante

Appendix D. Sample Configuration

For reference only. Do not use. It is not kept up to date. Configurations can be generated with the push of a button and retrieved for review. See notes on the HMI.

```
Bridge
Title                , System_Node_id
IOVSFX Config Rev 999qQ  (IOVSFX REv999aA)   , 99
//================================================================================
//
//    DATA ARRAYS - One protocol stores data, the other extracts and serves it
//                  This is how the protocols share data
Data_Arrays
Data_Array_Name , Data_Format , Data_Array_Length
L01_Pri_Mult    , UINT16      , 326
L01_Pri_Bin     , Bit         , 326
L02_Pri_Mult    , UINT16      , 326
L02_Pri_Bin     , Bit         , 326
L03_Pri_Mult    , UINT16      , 326
L03_Pri_Bin     , Bit         , 326
Zone_Pri_Mult   , UINT16      , 200
Zone_Pri_Bin    , Bit         , 200
Zone_Pri_Alm    , Bit         , 200
Annun_Pri_Mult  , UINT16      , 200
Annun_Pri_Bin   , Bit         , 200
Event_Pri_Mult  , UINT16      , 200
Event_Pri_Bin   , Bit         , 200
SYS_EVENTS      , UINT16      , 250
IOVSFX_HMI      , UINT16      , 250
IOVSFX_STATS    , UINT16      , 250
DA_DATA         , UINT16      , 250
L00_Pri_Mult    , UINT16      , 326
L00_Pri_Bin     , Bit         , 326
```

```
//================================================================================
//
//    Passive Client - Waits passively for messages from the FACP
//
Connections
Port , Baud , Data_Bits , Stop_Bits , Parity , Protocol    ,IOVSFX_Language ,IC_Timeout
R2   , 9600 , 8         , 1         , None   , IOVSFX      ,0(English)   ,3


Nodes
Node_Name  , Node_ID , Protocol
FACP01     ,       1 , IOVSFX

Map_Descriptors
Map_Descriptor_Name , Data_Array_Name , Data_Array_Offset , Function , Node_Name , Length
CatchAll            , DA_DATA         , 0                 , Passive  , FACP01    , 1
```

```
Ports
Port , Baud , Data_Bits , Stop_Bits , Parity , Protocol
R1   , 9600 , 8         , 1         , None   , Modbus_RTU

Nodes
Node_Name         , Node_ID , Protocol
vFACP_ModbusRTU   ,      5  , Modbus_RTU

Map_Descriptors
Map_Descriptor_Name                  , Address   , Length , Data_Array_Name , Data_Array_Offset , Function  , Node_Name         ,
Loop 0 Multistates                   , 30001     , 0    , L326_Pri_Mult    , 0                 , Server    , vFACP_ModbusRTU  ,
Loop 1 Multistates                   , 31001     , 1    , L326_Pri_Mult    , 0                 , Server    , vFACP_ModbusRTU  ,
Loop 2 Multistates                   , 32001     , 2    , L326_Pri_Mult    , 0                 , Server    , vFACP_ModbusRTU  ,
Loop 3 Multistates                   , 33001     , 3    , L326_Pri_Mult    , 0                 , Server    , vFACP_ModbusRTU  ,

Loop 0 Off Normal                    , 10001     , 326    , L00_Pri_Bin     , 0                 , Server    , vFACP_ModbusRTU  ,
Loop 1 Off Normal                    , 11001     , 326    , L00_Pri_Bin     , 0                 , Server    , vFACP_ModbusRTU  ,
Loop 2 Off Normal                    , 12001     , 326    , L00_Pri_Bin     , 0                 , Server    , vFACP_ModbusRTU  ,
Loop 3 Off Normal                    , 13001     , 326    , L00_Pri_Bin     , 0                 , Server    , vFACP_ModbusRTU  ,

Zone Multistates                     , 35001     , 100    , Zone_Pri_Mult   , 0                 , Server    , vFACP_ModbusRTU  ,
Annuniator Multistates               , 35101     , 100    , Annun_Pri_Mult  , 0                 , Server    , vFACP_ModbusRTU  ,
Event Multistates                    , 35201     , 100    , Event_Pri_Mult  , 0                 , Server    , vFACP_ModbusRTU  ,
Zone Off Normal                      , 15001     , 100    , Zone_Pri_Bin    , 0                 , Server    , vFACP_ModbusRTU  ,
Event Off Normal                     , 15101     , 100    , Event_Pri_Bin   , 0                 , Server    , vFACP_ModbusRTU  ,
```

```
Connections
Adapter , Protocol
N1      , Bacnet_IP

Nodes
Node_Name        , Node_ID , Protocol
vFACP_BACIP      ,    111  , Bacnet_IP

Map_Descriptors
Map_Descriptor_Name                   , Data_Type , Object_Id , Data_Array_Name , Data_Array_Offset , Function  , Node_Name     , Property      ,Description
L=1 D=001 Priority Multistate         , MI        , 1001      , L01_Pri_Mult    , 001               , Server    , vFACP_BACIP   , Present_Value , Detector 001 Loop 1 Device 001
L=1 D=001 Priority OffNormal          , BI        , 1001      , L01_Pri_Bin     , 001               , Server    , vFACP_BACIP   , Present_Value , Detector 001 Loop 1 Device 001
L=1 D=001 Priority Alarm              , BI        , 11001     , L01_Pri_Alm     , 001               , Server    , vFACP_BACIP   , Present_Value , Detector 001 Loop 1 Device 001
L=1 D=001 Priority Supervisory        , BI        , 21001     , L01_Pri_Sup     , 001               , Server    , vFACP_BACIP   , Present_Value , Detector 001 Loop 1 Device 001
L=1 D=001 Priority Monitor            , BI        , 31001     , L01_Pri_Mon     , 001               , Server    , vFACP_BACIP   , Present_Value , Detector 001 Loop 1 Device 001
L=1 D=001 Priority Trouble            , BI        , 41001     , L01_Pri_Trb     , 001               , Server    , vFACP_BACIP   , Present_Value , Detector 001 Loop 1 Device 001
L=1 D=002 Priority Multistate         , MI        , 1002      , L01_Pri_Mult    , 002               , Server    , vFACP_BACIP   , Present_Value , Detector 002 Loop 1 Device 002
L=1 D=002 Priority OffNormal          , BI        , 1002      , L01_Pri_Bin     , 002               , Server    , vFACP_BACIP   , Present_Value , Detector 002 Loop 1 Device 002
L=1 D=002 Priority Alarm              , BI        , 11002     , L01_Pri_Alm     , 002               , Server    , vFACP_BACIP   , Present_Value , Detector 002 Loop 1 Device 002
L=1 D=002 Priority Supervisory        , BI        , 21002     , L01_Pri_Sup     , 002               , Server    , vFACP_BACIP   , Present_Value , Detector 002 Loop 1 Device 002
L=1 D=002 Priority Monitor            , BI        , 31002     , L01_Pri_Mon     , 002               , Server    , vFACP_BACIP   , Present_Value , Detector 002 Loop 1 Device 002
L=1 D=002 Priority Trouble            , BI        , 41002     , L01_Pri_Trb     , 002               , Server    , vFACP_BACIP   , Present_Value , Detector 002 Loop 1 Device 002
L=1 D=003 Priority Multistate         , MI        , 1003      , L01_Pri_Mult    , 003               , Server    , vFACP_BACIP   , Present_Value , Detector 003 Loop 1 Device 003
L=1 D=003 Priority OffNormal          , BI        , 1003      , L01_Pri_Bin     , 003               , Server    , vFACP_BACIP   , Present_Value , Detector 003 Loop 1 Device 003
L=1 D=003 Priority Alarm              , BI        , 11003     , L01_Pri_Alm     , 003               , Server    , vFACP_BACIP   , Present_Value , Detector 003 Loop 1 Device 003
L=1 D=003 Priority Supervisory        , BI        , 21003     , L01_Pri_Sup     , 003               , Server    , vFACP_BACIP   , Present_Value , Detector 003 Loop 1 Device 003
```

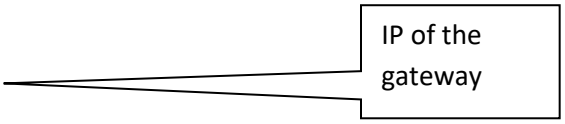
```
Connections

Adapter , Protocol

N1      , Ethernet/IP


Nodes

Node_Name        , Node_ID , Protocol

vFACP_EIP        ,      6  , Ethernet/IP


Map_Descriptors

Map_Descriptor_Name                    , EIP_TAG_NAME       , Length , Data_Array_Name , Data_Array_Offset , Function  , Node_Name          ,EIP_SERVICE,EIP_CON_TYP ,EIP_BACKPLANE
, EIP_CPU_SLOT

Loop 0 Multistates                     , loop0_multistates  , 326    , L00_Pri_Mult    , 0                , Server    , vFACP_EIP          , DATA_TABLE_READ , Explicit , 1 , 1

Loop 0 Off Normal                      , loop0_offnormal    , 326    , L00_Pri_Bin     , 0                , Server    , vFACP_EIP          , DATA_TABLE_READ

Loop 1 Multistates                     , loop1_multistates  , 326    , L01_Pri_Mult    , 0                , Server    , vFACP_EIP          , DATA_TABLE_READ , Explicit , 1 , 1

Loop 1 Off Normal                      , loop1_offnormal    , 326    , L01_Pri_Bin     , 0                , Server    , vFACP_EIP          , DATA_TABLE_READ

Loop 2 Multistates                     , loop2_multistates  , 326    , L02_Pri_Mult    , 0                , Server    , vFACP_EIP          , DATA_TABLE_READ , Explicit , 1 , 1

Loop 2 Off Normal                      , loop2_offnormal    , 326    , L02_Pri_Bin     , 0                , Server    , vFACP_EIP          , DATA_TABLE_READ

Loop 3 Multistates                     , loop3_multistates  , 326    , L03_Pri_Mult    , 0                , Server    , vFACP_EIP          , DATA_TABLE_READ , Explicit , 1 , 1

Loop 3 Off Normal                      , loop3_offnormal    , 326    , L03_Pri_Bin     , 0                , Server    , vFACP_EIP          , DATA_TABLE_READ

Zone Multistates                       , zone_multistates   , 200    , Zone_Pri_Mult   , 0                , Server    , vFACP_EIP          , DATA_TABLE_READ , Explicit , 1 , 1

Annuniator Multistates                 , annun_multistates  , 200    , Annun_Pri_Mult  , 0                , Server    , vFACP_EIP          , DATA_TABLE_READ , Explicit , 1 , 1

Event Multistates                      , event_multistates  , 200    , Event_Pri_Mult  , 0                , Server    , vFACP_EIP          , DATA_TABLE_READ , Explicit , 1 , 1

Zone Off Normal                        , zone_offnorml      , 200    , Zone_Pri_Bin    , 0                , Server    , vFACP_EIP          , DATA_TABLE_READ , Explicit , 1 , 1

Event Off Normal                       , event_offnormal    , 200    , Event_Pri_Bin   , 0                , Server    , vFACP_EIP          , DATA_TABLE_READ , Explicit , 1 , 1

Annuniator Off Normal                  , annun_Offnormal    , 200    , Annun_Pri_Bin   , 0                , Server    , vFACP_EIP          , DATA_TABLE_READ , Explicit , 1 , 1

System Events                          , system_events      , 200    , Sys_Events      , 0                , Server    , vFACP_EIP          , DATA_TABLE_READ , Explicit , 1 , 1
```

Appendix E. Auto Configuration

This driver is capable of being used as a tool to generate a configuration. It uses the dialer.ini report produced by the FSCP configuration software.

Process

1. Download dialer. to the gateway. ini (rename the file exported from the FACP software to dialer.ini)
2. Browse to 192.168.1.24/iovsfx.html



3. Trigger and apply the auto generation by clicking the button.

IOVSFX FACP Configuration

Offset	Parameter	Value
1	Language	0, English
2	Max Loops	4
3	Max Devices	250
4	BMS Protocol	1 - BACnet IP
5	BMS Node Id	37001
6	BMS Mac Addr (MSTP Only)	0
7	Serve MultiState (Mi) objects to BMS	1
8	Serve Off Normal Binary (Bi) objects to BMS	1
9	Serve System Event data to BMS	1
11	Serve Annun data to BMS	1
10	Serve Zone data to BMS	1
12	Max Zone Number	100

Retrieve config.csv Generate and use new configuration

Valid BMS Node Id

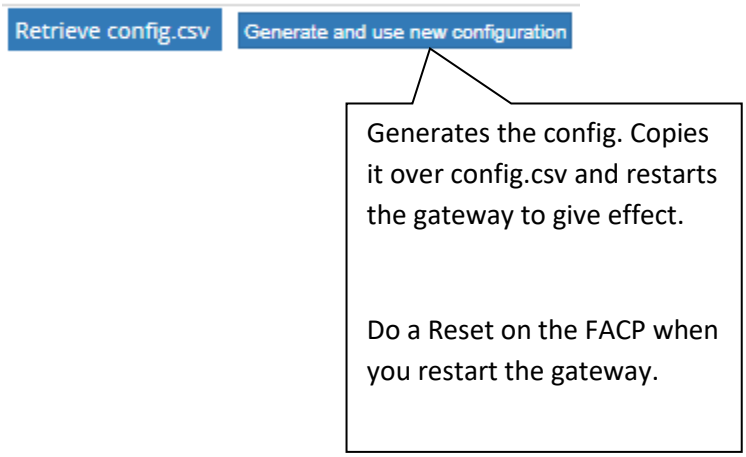
Modbus: 1-247

DNP3: 1-255

EIP: 1-255

BACnet: 1-A big number. Eg 37001

These are the 2 actions possible .



Problems ? The process generates a file called dialer.txt. This can be manually retrieved from the gateway. Each line in dialer.ini that was processed is written to dialer.txt for verification purposes.

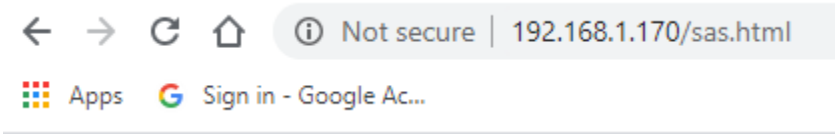
Dialer.ini must have the following columns

Contact ID Event Code,Label,Description,FireWorks State,Group/Partition ID,Group/Partition Label,Zone/User ID,Zone/User Label,Language Code

Sample of dialer.ini

```
Contact ID Event Code,Label,Description,FireWorks State,Group/Partition ID,Group/Partition Label,Zone/User ID,Zone/User Label,Language Code
111401001,Detector 001 Loop 1 Device 001  Active, ,Alarm,01,Group,001, ,en-US
111801001,Detector 001 Loop 1 Device 001  Alarm Verify, ,Monitor,01,Group,001, ,en-US
157001001,Detector 001 Loop 1 Device 001  Disable, ,Trouble,01,Group,001, ,en-US
139301001,Detector 001 Loop 1 Device 001  Maintenance Alert, ,Monitor,01,Group,001, ,en-US
111801001,Detector 001 Loop 1 Device 001  Pre Alarm, ,Monitor,01,Group,001, ,en-US
161401001,Detector 001 Loop 1 Device 001  Test, ,Monitor,01,Group,001, ,en-US
137301001,Detector 001 Loop 1 Device 001  Trouble, ,Trouble,01,Group,001, ,en-US
100001001,Detector 001 Loop 1 Device 001  Active3, ,Trouble,01,Group,001, ,en-US
```

Appendix F. Web Screen



Red = 1 = Problem

Green = 0 = normal

FACP Status

Offset	Parameter	Status
1	Manual Synch Required	0
2	Common Alarm	0
3	Common Supervisory	0
4	Common Monitor	0
5	Common Trouble	0
6	Common Disable	0

The panel reports whether any point is in alarm, super…. These are called ‘Common Alarm’ etc.

If the FACP thinks there are no common alarms active then the gateway should check to see if any of its points are in alarm. If they are then the FACP and gateway require synching. This same argument applies to all of the above common points.

Appendix G. Installation and preparation of the gateway

This driver must be installed on a gateway with at least one RS232 port for connection to the FACP.

The following files must be loaded onto the gateway before shipping to site.

- config.csv (Setup – File Transfer – Configuration Tab)
- dialer.ini (optional) (Setup – File Transfer – **Other** Tab)
- fserver.bin (firmware). Suitable for ARM7 gateways (all gateways sold after 1Jan2019)

  (Setup – File Transfer – Firmware Tab)
- iovsfx.js (required if you are using iovsfx.html) (Setup – File Transfer – **Other** Tab)
- iovsfx.html (does not affect operation of driver) (Setup – File Transfer – **Other** Tab)

Appendix H. Driver Error Messages

*If the message directs you to contact tech support and provide them with a log file then you should capture a full diagnostic **– during which you should reproduce the sequence of actions that caused the problem**. How ? Google "Chipkin simplified support"

Error Message	Explanation and corrective action
We have shown place holders for the parts of the message which change. %s is a place holder for a text string. %d is a place holder for a number %c is a place holder for an alpha character.	***FYI messages are informational and do not require a corrective action. Simply use them to confirm configuration / behaviors are what you expect.***
IOVSFX:01 Err. Cant recognize event=<%s>	*This error should not occur. *Do a diagnostic and contact support. This error might occur if the panel is configured for one language and the gateway another.
IOVSFX:02 FYI Missing DA=%s in config.	The driver needs to store event data but cant find the appropriately named data array. To resolve this problem the configuration must be updated. Its not as simple as just adding the data array – it must also be mapped onto server objects. This error could occur if a gateway has been configured for 2 loops but a device on loop 3 reports, for example. We suggest doing a diagnostic and contacting support. Variations of this message may be printed. They help support identify the source of the problem.
IOVSFX:03 Err. Index=%d EventText=%s	*This error should not occur. *Do a diagnostic and contact support.

	This error might occur if the panel is configured for one language and the gateway another.
IOVSFX:04 FYI Creating file=%s	Message may be noted and ignored unless unexpected. It is printed by the auto configuration process.
IOVSFX:05 Err Sys message not found <%s>	*This error should not occur. *Do a diagnostic and contact support. A system event has occurred, and the event description is not recognized. This could arise from problems with a file called sysstring.ini – if it was absent or corrupted this error could occur. It could also occur if the panel has firmware which has new / different system strings. This error might occur if the panel is configured for one language and the gateway another.
IOVSFX:06 FYI Cleared on Reset DA=%s[0..%d]	May be noted and ignored unless unexpected. message is printed when a system reset message is received and data is being set to zeros.
IOVSFX:07 FYI Loading file=<%s>	May be noted and ignored unless unexpected. message is printed the file sysstring.ini is being loaded.
IOVSFX:08 ERR Mas %s System messages	There are more messages in sysstring.ini than the driver supports. This should not occur. *This error should not occur. *Do a diagnostic and contact support.
IOVSFX:09 FYI Autoconfig based on CDR File=%s	This message reports that file required as part of the auto config process is being used. Autoconfig requires the presence of a file called dialer.ini on the gateway.
IOVSFX:10 ERR File=%s not found.	This message reports that file required as part of the auto config process is missing. Autoconfig requires the presence of a file called dialer.ini on the gateway.

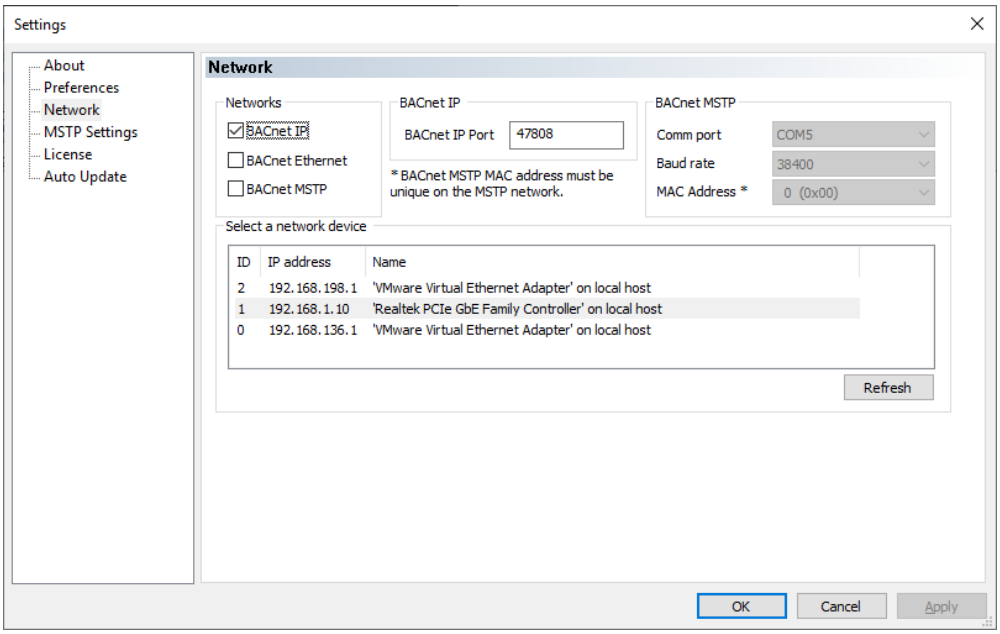
IOVSFX:11 FYI Report Active	The FACP can print reports on the same printer port the gateway is using. Normally they should not be printed. However they should not disrupt the operation of the gateway. Ignore this message unless it is unexpected.
IOVSFX:15 ERR Creating auto.csv.	You cannot select more than one of these 3 serial protocols since there is only on serial port available. Change your selection and try again
IOVSFX:16 FYI Sys Events only have a simple state	Reminds you that 2ndary alarms are not available.
IOVSFX:17 FYI DataArray=IOVSFX_HMI Might be required.	Some features of this driver require this data array to exist. Research this manual for "IOVSFX_HMI" for more information.
IOVSFX:18 FYI System Reset Received	Arrays will be cleared.
IOVSFX:23 Err Sys message not found <%s>	*This error should not occur. *Do a diagnostic and contact support. A system event has occurred, and the event description is not recognized. This could arise from problems with a file called sysstring.ini – if it was absent or corrupted this error could occur. It could also occur if the panel has firmware which has new / different system strings. This error might occur if the panel is configured for one language and the gateway another.

Appendix I. Testing Using BACnet

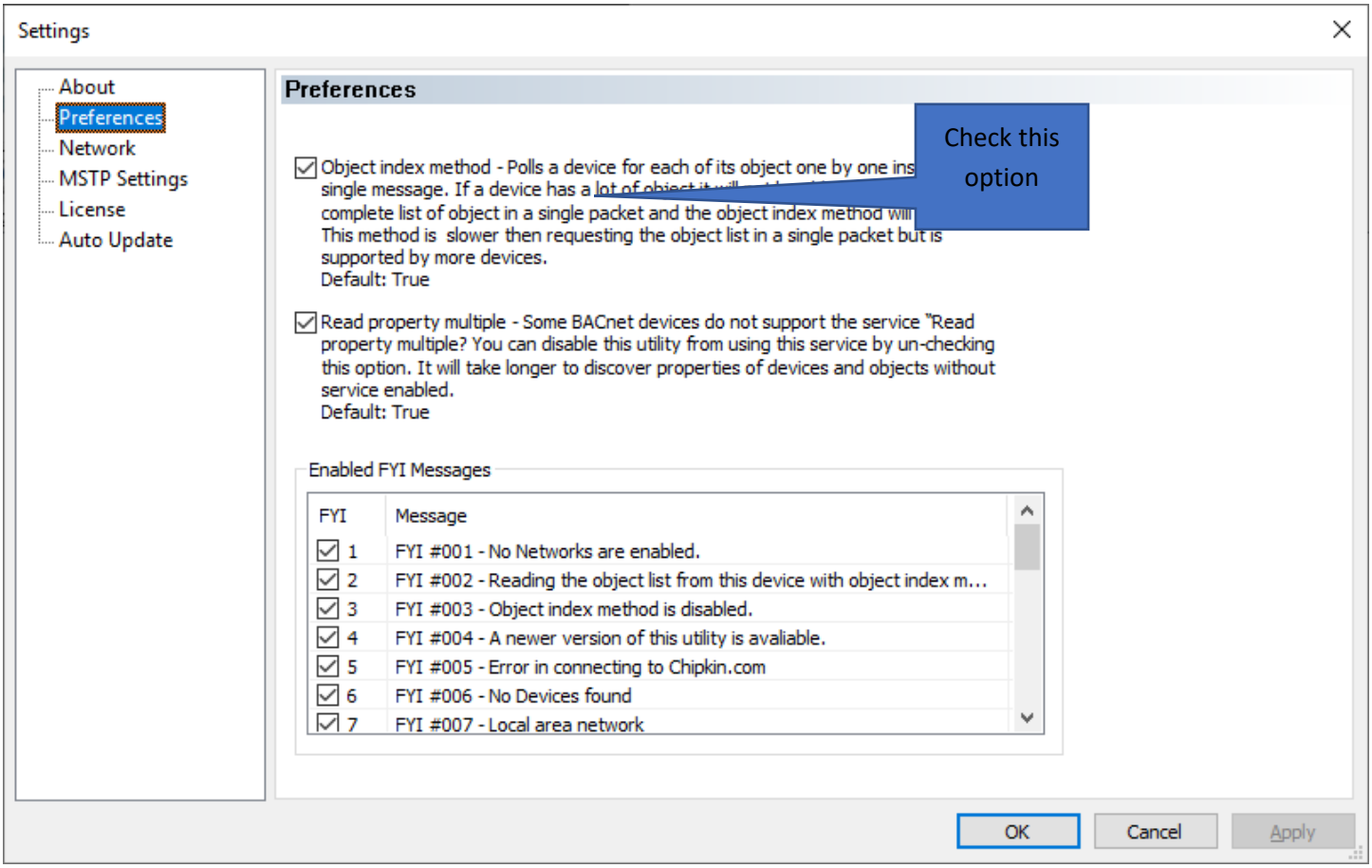
Download CAS BACnet Explorer from this page: https://store.chipkin.com/products/tools/cas-bacnet-explorer

Activate – Insert the Green key in your laptop (there is another better way to install permanently on your laptop)

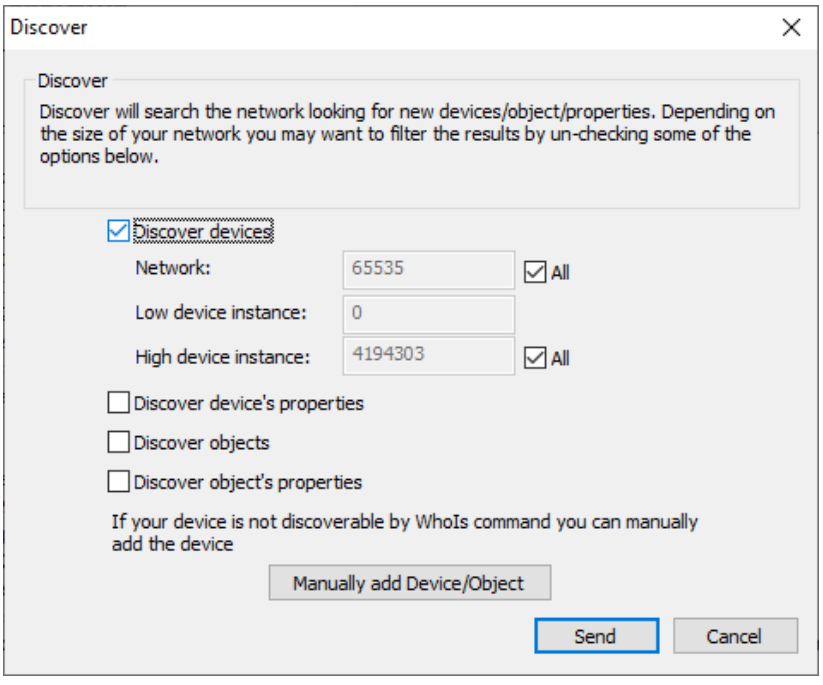
CHANGE SETTINGS – select your network card, turn on BACnet IP



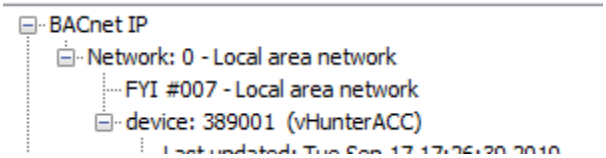
CHANGE SETTING – The object list index is too big to fit in one packet



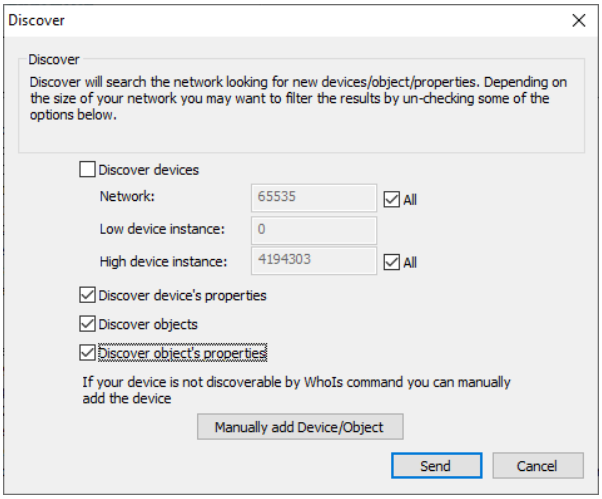
Do discovery – check devices box



You should get this.

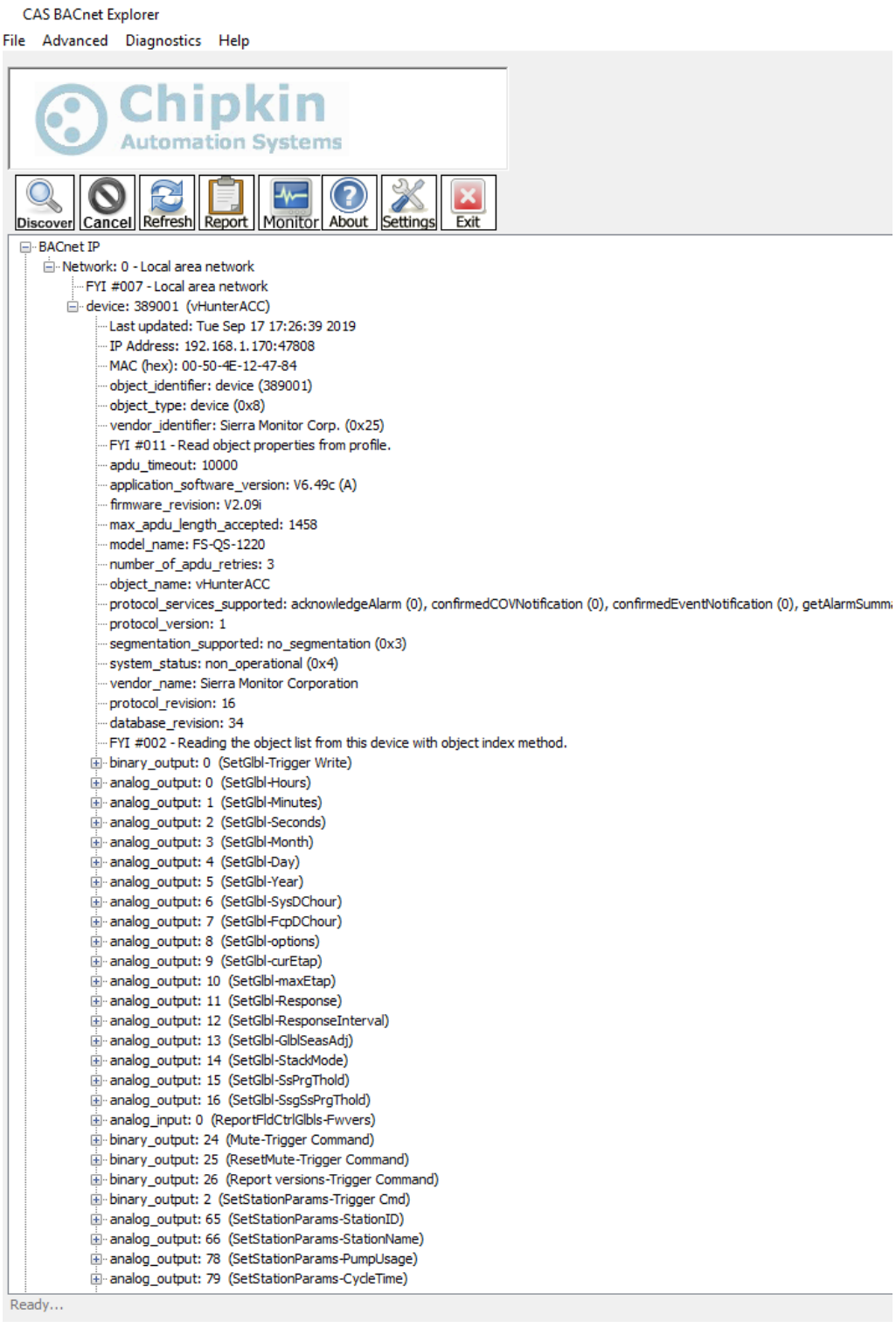


Once the device has been discovered, select it by clicking on the device 389001 , and right click to select DISCOVER again. This time check all the boxes to discover objects on the device.



Wait wait wait … takes a FEW MINUTES

You get the tree shown on the next page. Explore the tree or print a report.



Appendix J. Testing Using Modbus

Download MODBUS SCANNER test tool from this page: https://store.chipkin.com/products/tools/modbus-scanner-app

Add a task to scan the IP Address

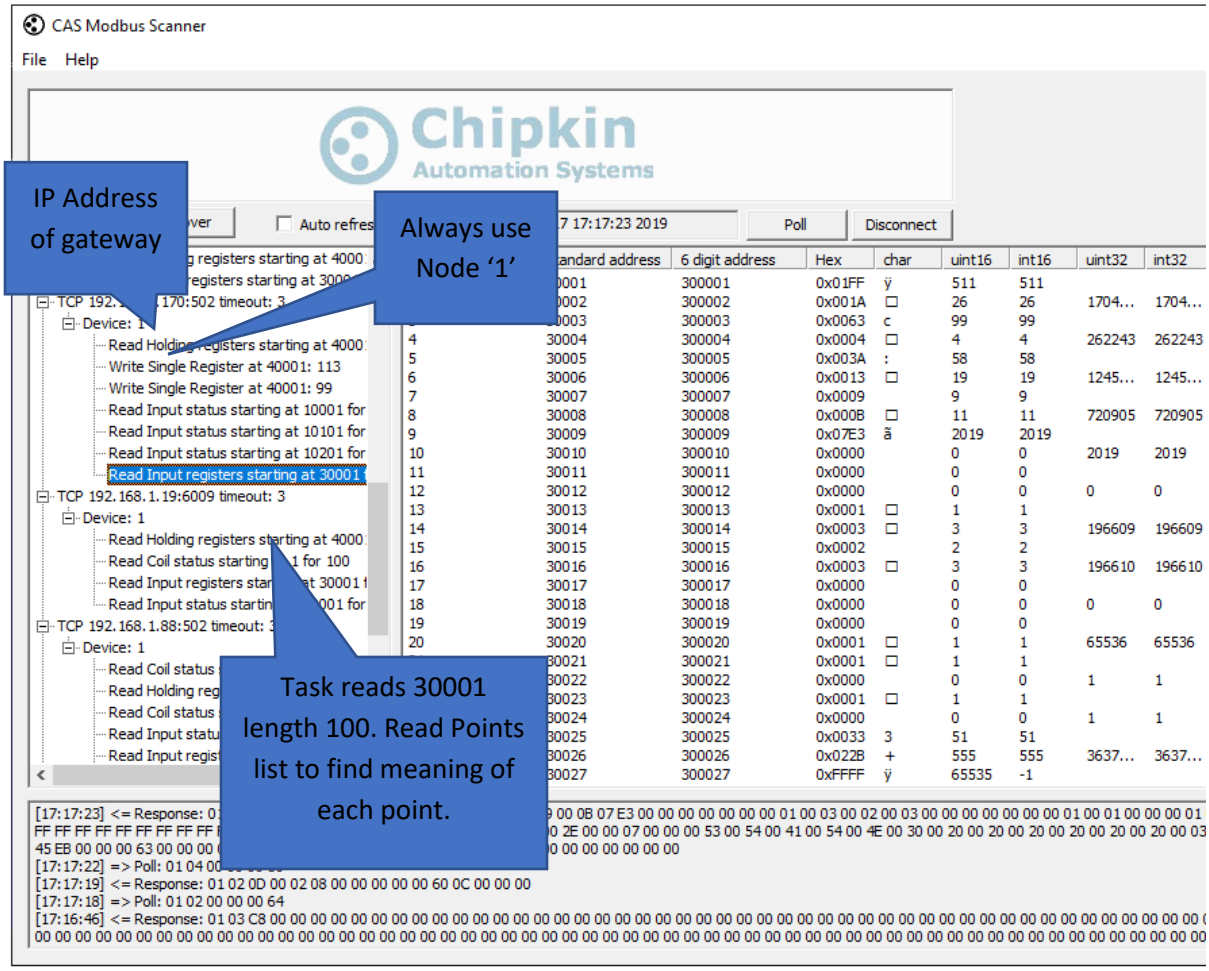
The NODE_ID = 1

Read Holding Registers 1-100

View the data

Use the XLSX points list to see which Modbus Address contains what data

Sample screen from the Modbus Scanner. Here it is reading 30001…. These correspond to Analog Inputs. To know the meaning of 30001,2,3…. You need to revert to the XLSX file. Modbus is dumb and 'meaning' cannot be found without a manual.



Appendix K. Server Object Data and Addressing – The Points List

Request or google the document = “FS-8705-47 IOVSFX – BACnet – Modbus – EIP – DNP3.xlsx”

The following is provided for ref only. It is not maintained.

Multistate	Value =	1	Normal	
	Value =	2	Alarm	
	Value =	3	Monitor	
	Value =	4	Supervisory	
	Value =	5	Trouble	
	Value =	0	Illegal Value for multistate	

DNP3 Group and address	EIP TAGNAME and offset	BACnet Mulitstate	Modbus Address		Loop	Device	Data	
30(0)	L00_Pri_Mult(0)	0	30001		0	0	Multistate	eg, 30001 = L0:D000 Multistate
30(1)	L00_Pri_Mult(1)	1	30002		0	1	Multistate	eg, 30002 = L0:D001 Multistate
30(2)	L00_Pri_Mult(2)	2	30003		0	2	Multistate	
etc	etc	etc	etc		etc	etc		
30(326)	L01_Pri_Mult(0)	1000	31001		1	0	Multistate	eg, 31001 = L1:D000 Multistate
30(327)	L01_Pri_Mult(1)	1001	31002		1	1	Multistate	eg, 31002 = L1:D001 Multistate
30(238)	L01_Pri_Mult(2)	1002	31003		1	2	Multistate	
etc	etc	etc	etc	etc		etc		
30(652)	L02_Pri_Mult(0)	2000	32001		2	0	Multistate	
30(653)	L02_Pri_Mult(1)	2001	32002		2	1	Multistate	eg. Mi(2001)=L2:D001 Multista
30(654)	L02_Pri_Mult(2)	2002	32003		2	2	Multistate	
etc	etc	etc	etc	etc		etc		
30(978)	L03_Pri_Mult(0)	3000	33001		3	0	Multistate	eg. DNP Grp30 Addr 0 == L3:D0
30(979)	L03_Pri_Mult(1)	3001	33002		3	1	Multistate	
30(980)	L03_Pri_Mult(2)	3002	33003		3	2	Multistate	
etc	etc	etc	etc	etc		etc		
30(1304)	L04_Pri_Mult(0)	4000	34001		4	0	Multistate	
30(1305)	L04_Pri_Mult(1)	4001	34002		4	1	Multistate	
30(1306)	L04_Pri_Mult(2)	4002	34003		4	2	Multistate	
etc	etc	etc	etc	etc		etc		

	EIP TAGNAME	BACnet				
	and offset	Mulitstate	Address	Zone #		Data
30(1630)	Zone_Pri_Mult(0)	100000	35001	0		Multistate
30(1631)	Zone_Pri_Mult(1)	100001	35002	1		Multistate
30(1632)	Zone_Pri_Mult(2)	100002	35003	2		Multistate
etc	etc	etc	etc	etc	etc	

		BACnet				
		Mulitstate	Address	Annun #		Data
30(1830)	Annun_Pri_Mult(0)	200000	35101	0		Multistate
30(1831)	Annun_Pri_Mult(1)	200001	35102	1		Multistate
30(1832)	Annun_Pri_Mult(2)	200002	35103	2		Multistate
etc	etc	etc	etc	etc	etc	

		BACnet				
		Mulitstate	Address	System #		Data
30(2030)	Event_Pri_Mult(0)	300000	35201	0		Multistate
30(2031)	Event_Pri_Mult(1)	300001	35202	1		Multistate
30(2032)	Event_Pri_Mult(2)	300002	35203	2		Multistate
etc	etc	etc	etc	etc	etc	

	OffNormal	Value =	0	Point is normal
			1	Point is not it a normal state, could be alarm, Monitor, super, trbl.

DNP3 Group	EIP TAGNAME	BACnet	Modbus				
and address	and offset	BinaryInput	Address	Loop	Device	Data	
30(0)	L00_Pri_Bin(0)	0	10001	0	0	OffNormal	eg, Modbus 10001 = L0:D0
30(1)	L00_Pri_Bin(1)	1	10002	0	1	OffNormal	eg, Modbus 10002 = L0:D0
30(2)	L00_Pri_Bin(2)	2	10003	0	2	OffNormal	
etc	etc	etc	etc	etc	etc		
10(326)	L01_Pri_Bin(0)	1000	11001	1	0	OffNormal	eg, Modbus 11001 = L1:D0

10(327)	L01_Pri_Bin(1)	1001	11002	1	1	OffNormal	eg, Modbus 31002 = L1:D0
10(238)	L01_Pri_Bin(2)	1002	11003	1	2	OffNormal	
etc			etc				
10(652)	L02_Pri_Bin(0)	2000	12001	2	0	OffNormal	
10(653)	L02_Pri_Bin(1)	2001	12002	2	1	OffNormal	eg. BACnet Bi(2001)=L2:D0
10(654)	L02_Pri_Bin(2)	2002	12003	2	2	OffNormal	eg. DNP Grp10 Addre 2 ==
etc			etc				
10(978)	L03_Pri_Bin(0)	3000	13001	3	0	OffNormal	
10(979)	L03_Pri_Bin(1)	3001	13002	3	1	OffNormal	
10(980)	L03_Pri_Bin(2)	3002	13003	3	2	OffNormal	
etc			etc				
10(1304)	L04_Pri_Bin(0)	4000	14001	4	0	OffNormal	
10(1305)	L04_Pri_Bin(1)	4001	14002	4	1	OffNormal	
10(1306)	L04_Pri_Bin(2)	4002	14003	4	2	OffNormal	
etc	etc	etc	etc	etc	etc		

	EIP TAGNAME and offset	**BACnet Mulitstate**	**Modbus Address**	**Zone #**	**Data**	
10(1630)	Zone_Pri_Bin(0)	100000	15001	0	OffNormal	eg, Modbus 15043 = Zone
10(1631)	Zone_Pri_Bin(1)	100001	15002	1	OffNormal	
10(1632)	Zone_Pri_Bin(2)	100002	15003	2	OffNormal	
etc	etc	etc	etc	etc	etc	

		BACnet Mulitstate	**Modbus Address**	**Annun #**	**Data**	
10(1830)	Annun_Pri_Bin(0)	200000	15101	0	OffNormal	eg, Modbus 15104 = Annu
10(1831)	Annun_Pri_Bin(1)	200001	15102	1	OffNormal	
10(1832)	Annun_Pri_Bin(2)	200002	15103	2	OffNormal	
etc	etc	etc	etc	etc	etc	

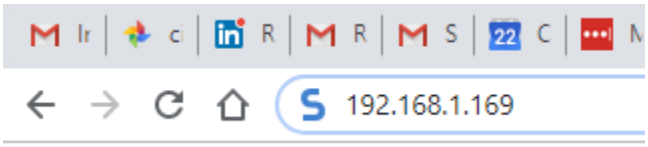
		BACnet Mulitstate	**Modbus Address**	**System #**	**Data**	
10(2030)	Event_Pri_Bin(0)	300000	15201	0	OffNormal	eg, Modbus 15243 = Sys E
10(2031)	Event_Pri_Bin(1)	300001	15202	1	OffNormal	eg. DNP Group 30 Offset 2
10(2032)	Event_Pri_Bin(2)	300002	15203	2	OffNormal	eg. EIP TAG (array)=Event_
etc	etc	etc	etc	etc	etc	

Appendix L. Install new configuration or firmware

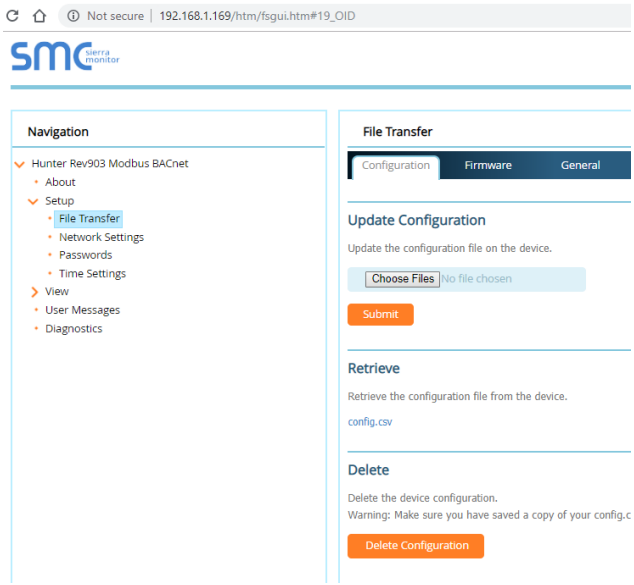
https://store.chipkin.com/support/chipkin-simplified-support

Install a new configuration file

1. Open browser

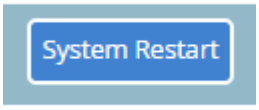


2. Type in IP Address of gateway



3. Navigate to Setup / File Transfer / Update Configuration

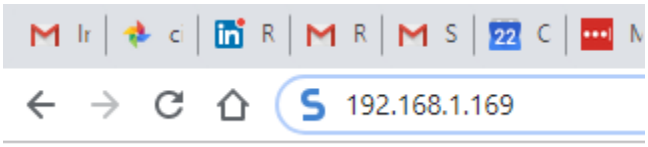
4. Choose the config file and then SUBMIT



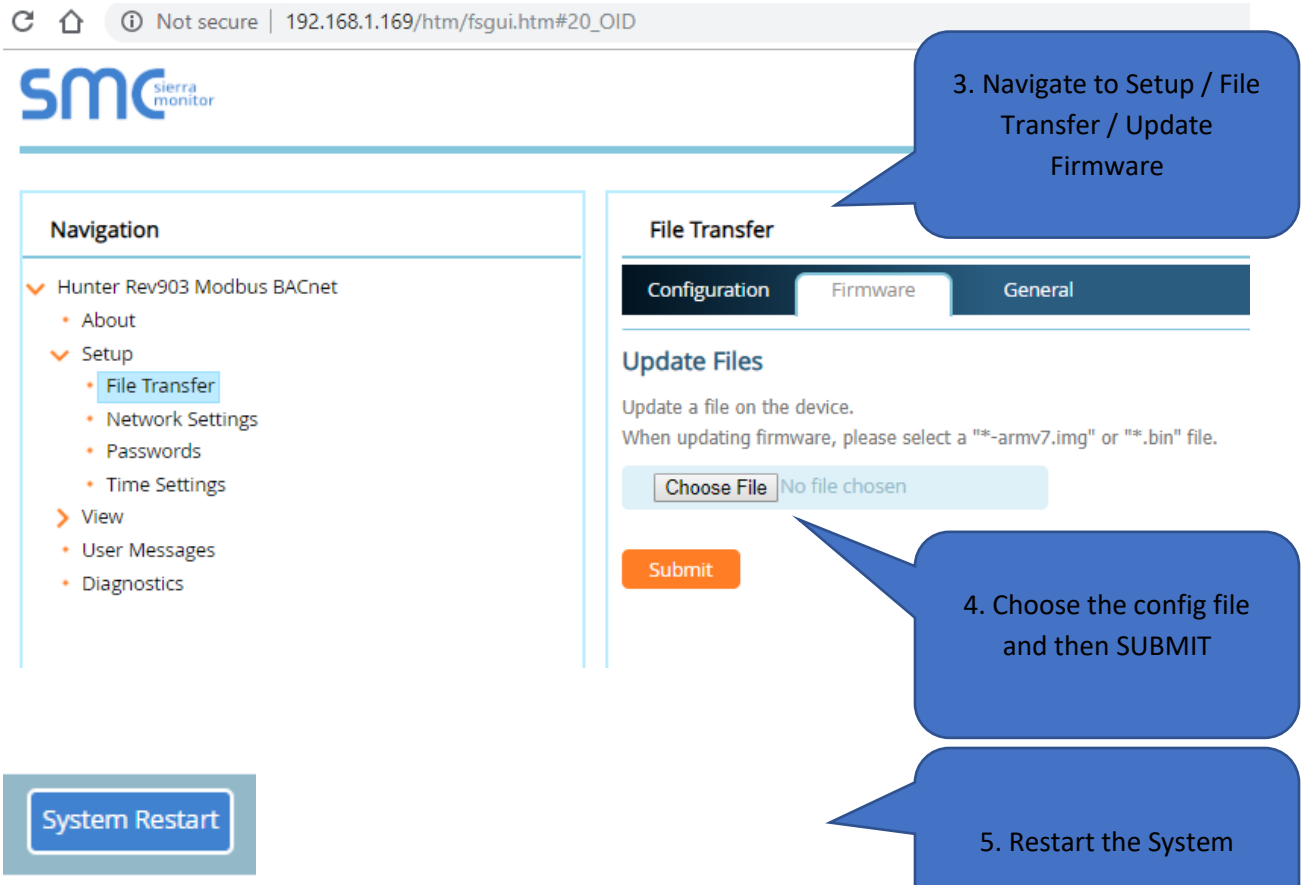
5. Restart the System

Install new firmware

1. Open browser



2. Type in IP Address

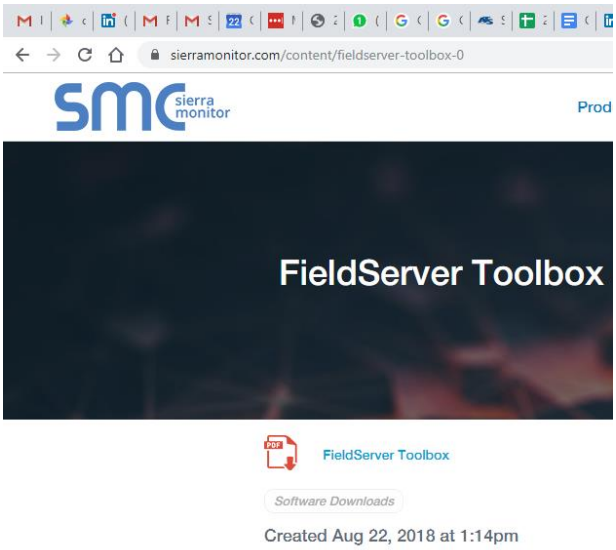


3. Navigate to Setup / File Transfer / Update Firmware

4. Choose the config file and then SUBMIT

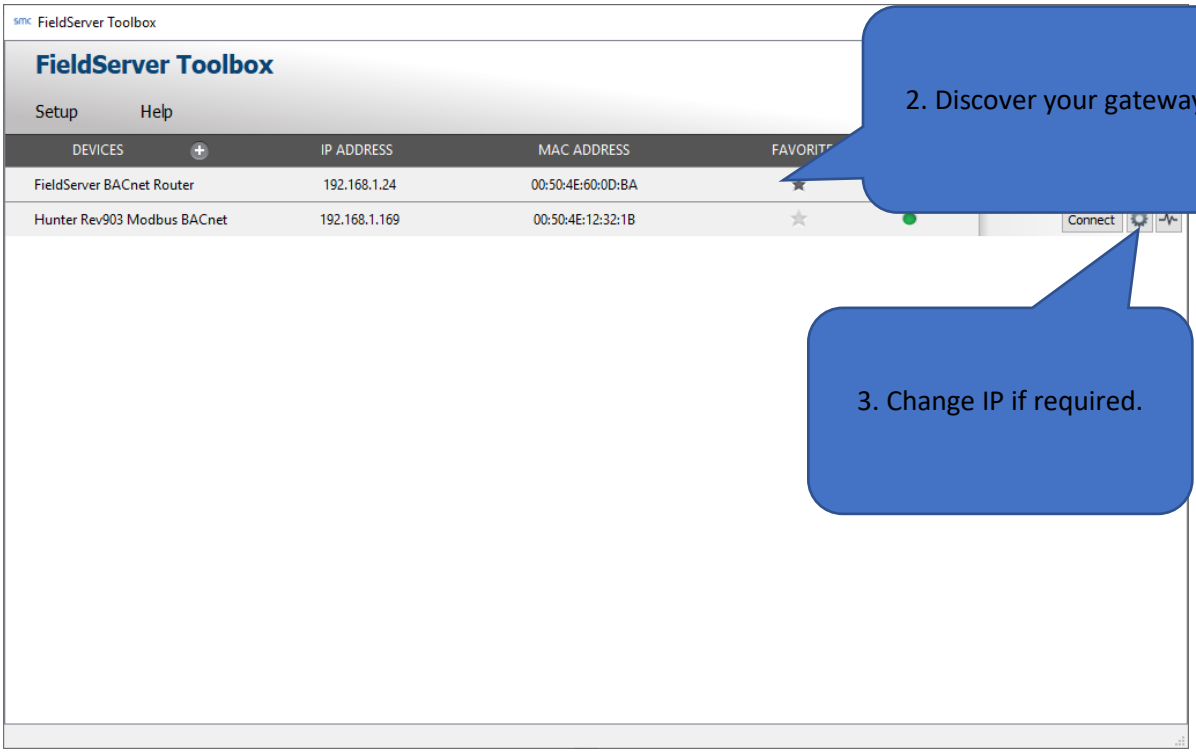
5. Restart the System

Find your gateway



1. Download and Install

   Google "FieldServer Toolbox" with the quotation marks.

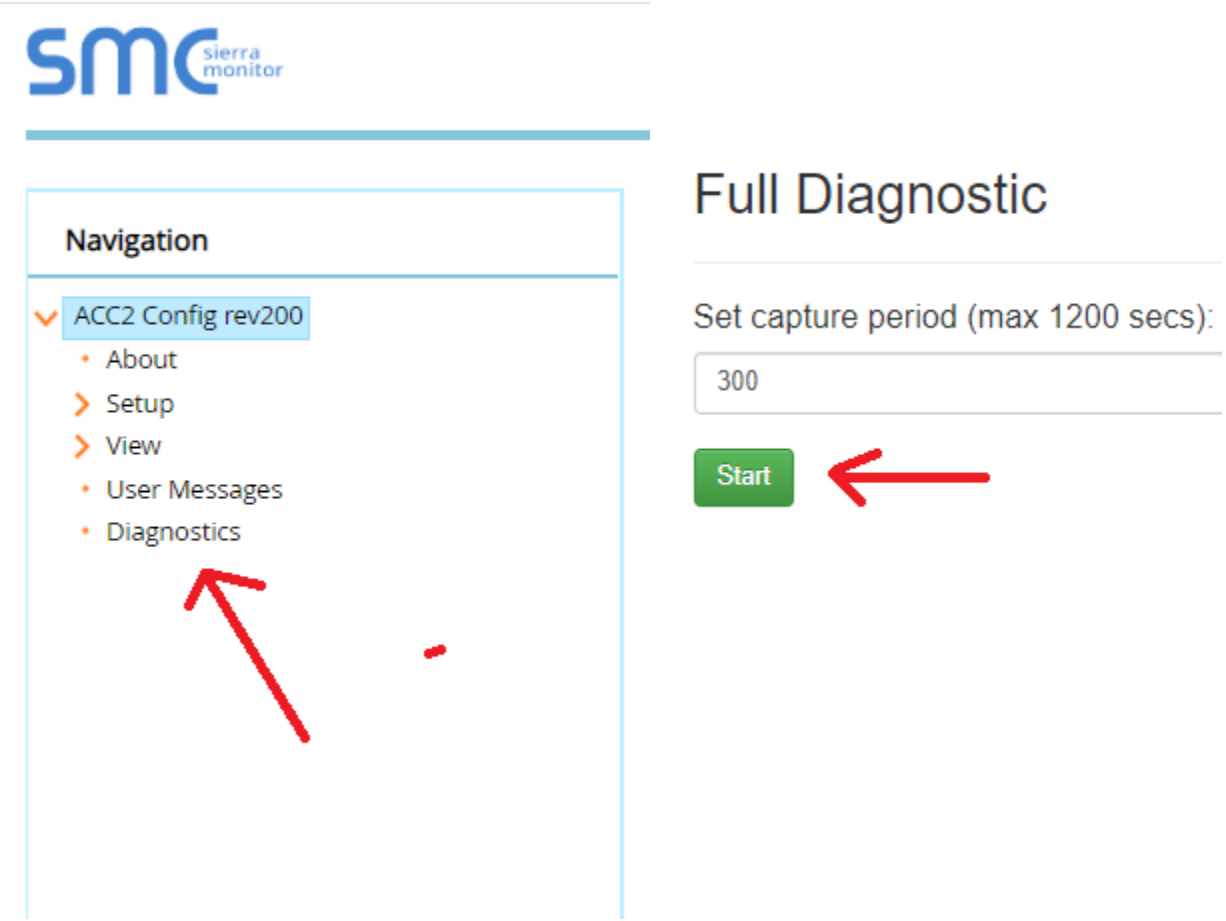


2. Discover your gateway

3. Change IP if required.

Reporting a Problem / Getting an answer

Help us help you by providing the data we need to resolve your issue. This process gives us the files we need, all the data from the Data Arrays as well as capturing message.



Start the log – wait for 1 minute – now repeat the action that caused the problem – if its not too hard, do it more than once – wait for the log to end. Send or share the log file. We will need a description of the problem.

Using the Legacy Tool – Ruinet

Google “Chipkin ruinet download” with the quote marks

Ruinet -i1.2.3.4 -u0 -lconfig.csv

1. Config - Download config.csv from the current folder on the computer to the gateway.

Ruinet -i1.2.3.4 -u1 -lconfig.csv

2. Config - Transfer config from gateway to computer

Ruinet -i1.2.3.4 -u0 -labc.csv

3. Config - From the local folder on the computer, take the file abc.csv and send it to the gateway as config.csv

Ruinet -i1.2.3.4 -u0 -lfserver.bin

4. Firmware - From the local folder on the computer, take the firmware

Ruinet -i1.2.3.4 -b

5. Restart the gateway – gives effect to new config or firmware.