IPReceiver and DC-09 Receiver for Manitou

May 2025

Contents

Overview

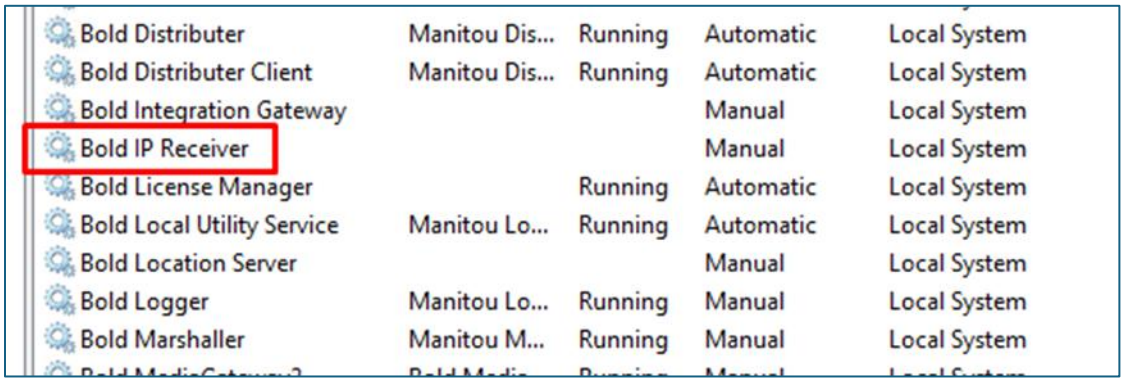
We updated the IPReceiver to handle DC-09 signalling. These changes require the installation of the IPReceiver; an update to Receiver Types; and new Event Mapping for SIA 2000.

Setup

These changes are included in version 2.1 patch 45. Install patch 45 and run the database migrations before continuing with this setup.

Service and File Setup

Verify if there is an existing IPReceiver service installed. This can be done by opening the Service Manager and looking for the Bold IP Receiver service.



If the service is preexisting, it is likely set to run from *C:\Program Files (x86)\Bold Technologies\Manitou*.

The old service must be removed before the new IPReceiver can be installed.

To remove the old service:

1. Open a Command Prompt as Administrator.
2. Type in CD then paste the path *C:\Program Files (x86)\Bold Technologies\Manitou* and press enter.
3. Type 'ipreceiver.exe -remove' (without the quotes) and press enter.
4. Refresh the Service Manager and verify that the service is no longer listed.

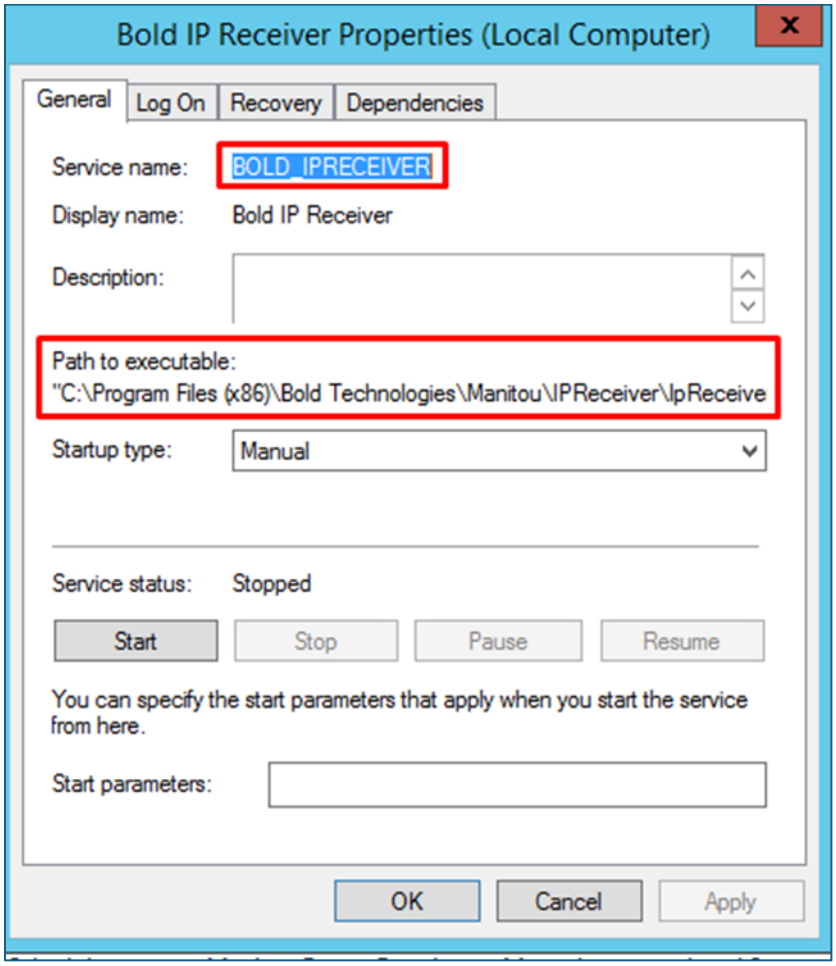
In the Manitou folder create a new folder named IPReceiver.

Copy the new IPReceiver files into the newly created folder. The files are in Package 10. On initial setup the files will need to be manually copied. Once the files are in Manitou\IPReceiver the DistCommander

can be used to push new files. However, because the appsetting.json file has configuration information, the DistCommander will not push a new appsetting.json file so it does not overwrite configured data. It is best practice to back up previous files before upgrading.

To add the new service:

1. Open a Command Prompt as Administrator.
2. Type in CD; then paste the path *C:\Program Files (x86)\Bold Technologies\Manitou\IPReceiver*; and press enter.
3. Type 'ipreceiver.exe -install' (without the quotes) and press enter.
4. Refresh in the Service Manager and verify that the service shows.
5. Click on the properties of the service and verify that the **Service name** correctly shows as BOLD_IPRECEIVER and that the **Path to the executable** shows correctly.



IPReceiver appsettings.json Setup

Before adding the service to the MSM configuration, update the appsettings.json file in the IPReceiver folder.

Using the appsettings.json for configuration will give the ability to add more receiver types later, but for now it is just defaulted with the DC-09 configuration.

Open the appsettings.json file in notepad.

```
{
  "Logging": {
    "LogLevel": {
      "Default": "Information",
      "Microsoft": "Warning",
      "Microsoft.Hosting.Lifetime": "Information"
    }
  },
  "Plugins": {
    "AlarmProvider": "ManitouAlarmProvider.dll",
    "ReceiverProviders": [ "Dc09ReceiverProvider.dll" ],
    "LoggingProvider": "ManitouLoggerProvider.dll"
  },

  // Use this section if you're using the DC-09 receiver driver
  "DC-09": {
    "Routes": [
      {
        // If specified, will expect incoming messages on this route to be encrypted with this key.
        // Must be a 128, 192, or 256-bit hex string (32, 48, or 64 characters)
        // NOTE: AS THIS IS A KNOWN DEFAULT KEY, DO NOT USE THIS KEY.  BUILD A NEW KEY.
        "EncryptionKey": "12345678901234567890123456789012",
        // This is the UDP port upon which to listen for incoming signals for this route.
        "UdpListenPort": 6002,
        // Number of seconds between NULL line supervision signals.  Set to 0 to disable supervision.
        "SupervisionSeconds": 10,
        // Number of seconds to wait for a response to a supervision message before attempting a retry.
        "ResponseTimeoutSeconds": 5,
        // Number of retries to pursue before giving up on sending the signal.
        "FailRetryCount": 3,
        // If the panel responds DUH, should we retry the signal?
        "RetryDuh": false
      }
    ]
  },

  // Use this section if you're using the Manitou alarm driver
  "Manitou": {
    "FepPort":  5555
  }
}
```

NOTE: The default encryption key is not a valid encryption key. The encryption key would likely come from the Dealer who already has it programmed at the panel level.

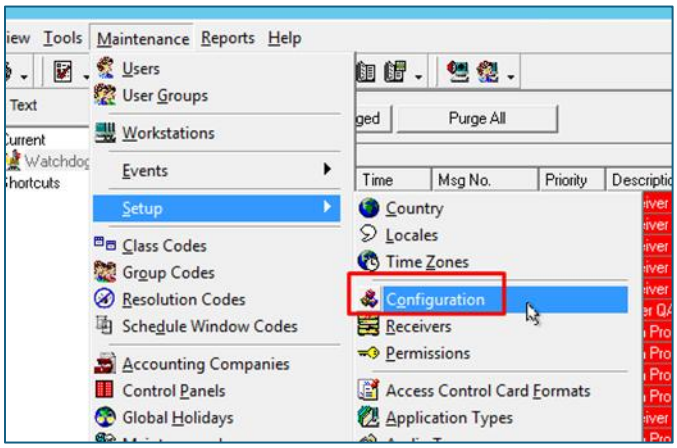
The defaulted UdpListenPort is 6002. This will need to be updated based on customer needs.

The defaulted FEPPort is 5555. The is the port that you will assign to the SIA2 receiver later in the Supervisor Workstation FEP > Receivers setup. This port number will also need to be updated based on customer needs.

Save the changes to the appsettings.json file.

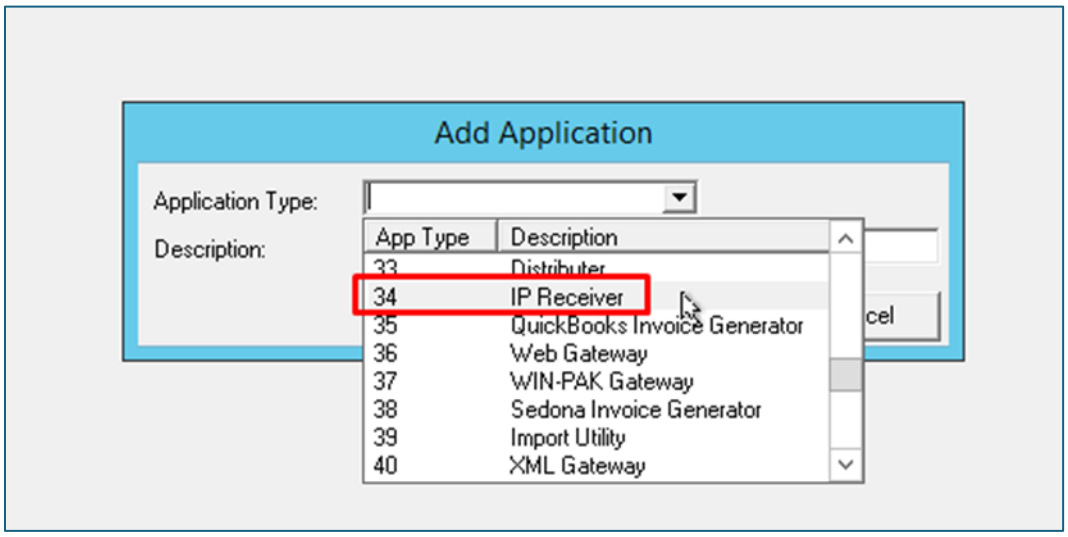
Supervisor Workstation MSM Configuration Setup

Open a Supervisor Workstation and navigate to Maintenance > Setup > Configuration.



Click Edit.

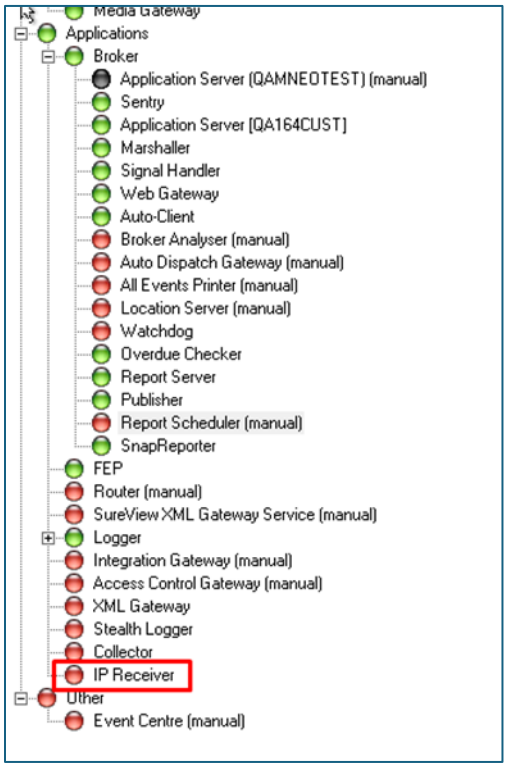
Click Applications under the server you are adding the service to and click the Add button. In the **Application Type** drop down, select the **App Type** 34 IP Receiver and click OK.



Select the machine where you would like the logger data to output to. The Broker connection and Logger is defaulted to localhost.

Save the changes.

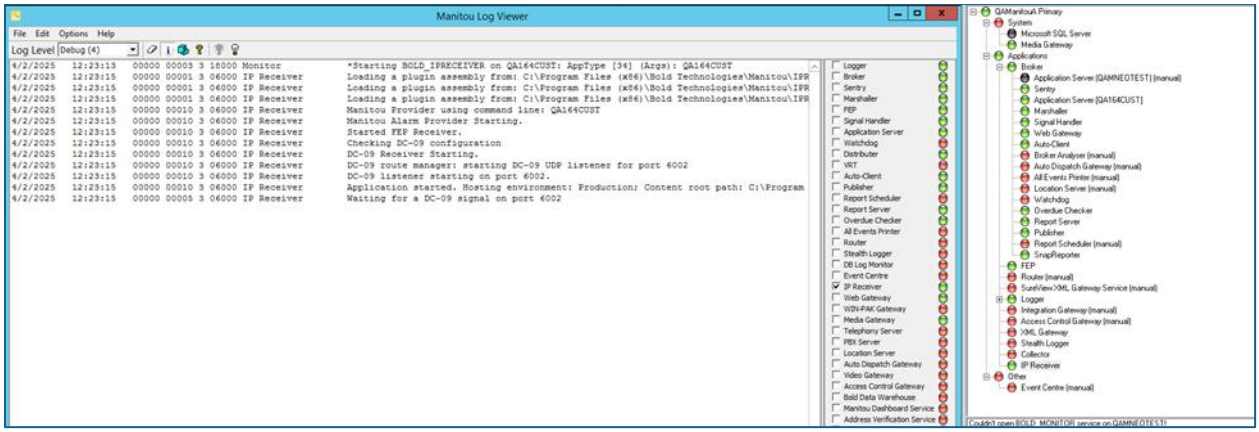
Open the MSM or refresh the MSM and verify that the IPReceiver shows and is red.



Open the Log Viewer and uncheck everything except for the Monitor and the IPReceiver.

In the MSM, right click and select Start to start the IPReceiver service.

The light in the MSM should go green and the logger data look like this:



SIA2 Receiver Setup

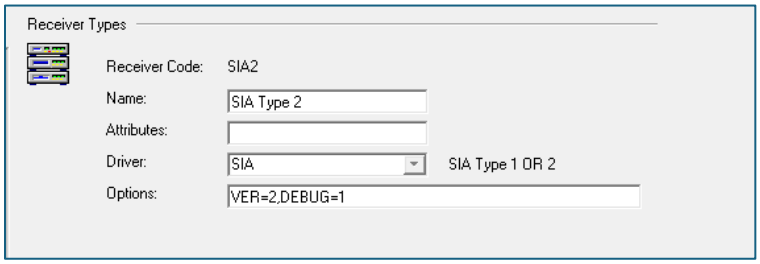
In the Supervisor Workstation navigate to Maintenance > Setup > Receiver Types.

The Database Migrations from patch 45 include two new Receiver Types: one for SIA1 and one for SIA2. The default options for both are VER=1 or VER=2 respectively.

Other options are as follows:

Option	Default	Description
VER	1	Version. Indicates the receiver type (i.e., 1, 2).
HB	1	Heartbeat. Indicates whether to expect receiver heartbeat (0 = No).
TS	1	Timestamp. Indicates whether to validate message timestamp.
USECRC	1	CRC. Indicates whether to validate message crc (0 = No).
CHKSEQ	0	Validate message sequence number (0 = No).
OPTSK	1	Silent Knight. Indicates the receiver type (i.e., 0, 1, 2)

For the DC-09 integration you will be using the SIA2 Receiver. The receiver setup will look something like this depending on the Options based on the customer needs.

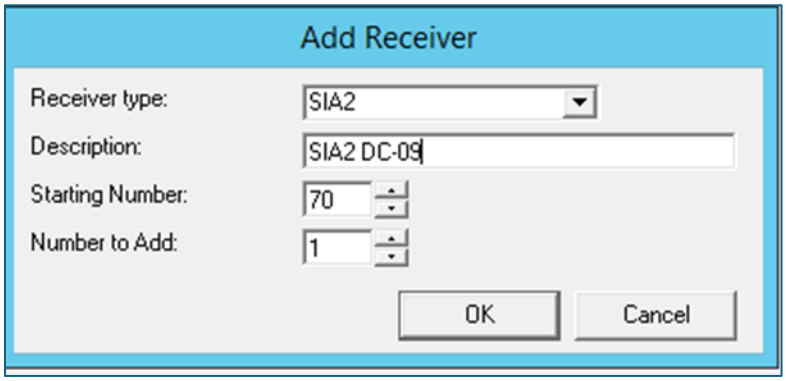


Save any changes that were made.

In the Supervisor Workstation navigate to Maintenance > Setup > Receivers and click Edit.

Highlight the FEP under which the new receiver will be added and click Add.

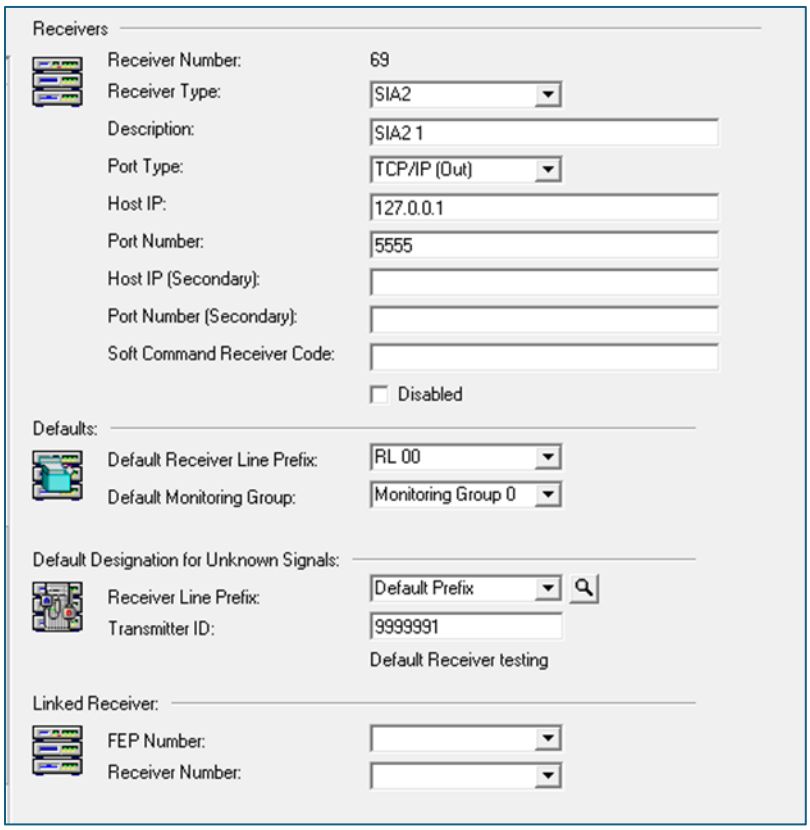
In the **Receiver type** select SIA2, add a **Description**, and then click OK.



In the **Port Type** dropdown, select *TCP/IP (Out)*.

Update the **Host IP** as localhost or the IP of where the FEP is running.

The **Port Number** must match what is in the appsettings.json for the FEPReceiver Port (FepPort).



Select the **Default Receiver Line Prefix** (based on the customer needs) and the **Default Monitoring Group**.

Complete the fields in the **Default Designation for Unknown Signals** section. Add any Receiver Line Prefixes based on the customer needs.

Save the changes.

Verify Connectivity

Open the Log Viewer with only the FEP and IPReceiver checked.

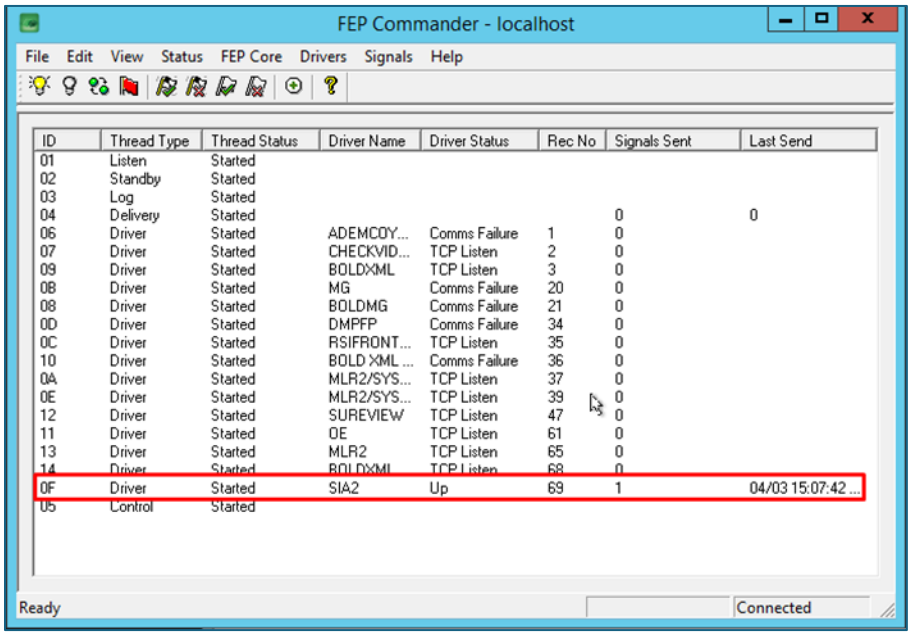
Open the FEP Commander.

Right click on the IPReceiver in the MSM and start the IPReceiver service.

Watch the Log Viewer for any errors. The logger output should look something like this:

```
FEP                 *FEP Call: Load Driver
FEP                 *FEP Driver Thread Starting - SIA
FEP                 *Loading FEP Driver [SIA.fep].
FEP                 *SIA2 (RecNo 69):  startup parameter VER [2]
FEP                 *SIA driver starting in Type 2 mode (DC-07)
FEP                 *StartDriver entry point in DLL
FEP                 *SIA2 Receiver 69 [FEP 1] - Connection Established
FEP                 *Driver Thread Loaded - SIA2
FEP                 *    SIA2:  1┐69┐0┐DNIS┐03042025┐155854┐SIA2┐00┐┐000000000
FEP                 *Connection With Receiver Established: 69 (SIA2)
FEP                 *FEP sent another 0001 signals - invited 2000 (00000011)
```

In the FEP Commander verify that the driver for SIA2 shows as Started and that the status is Up.

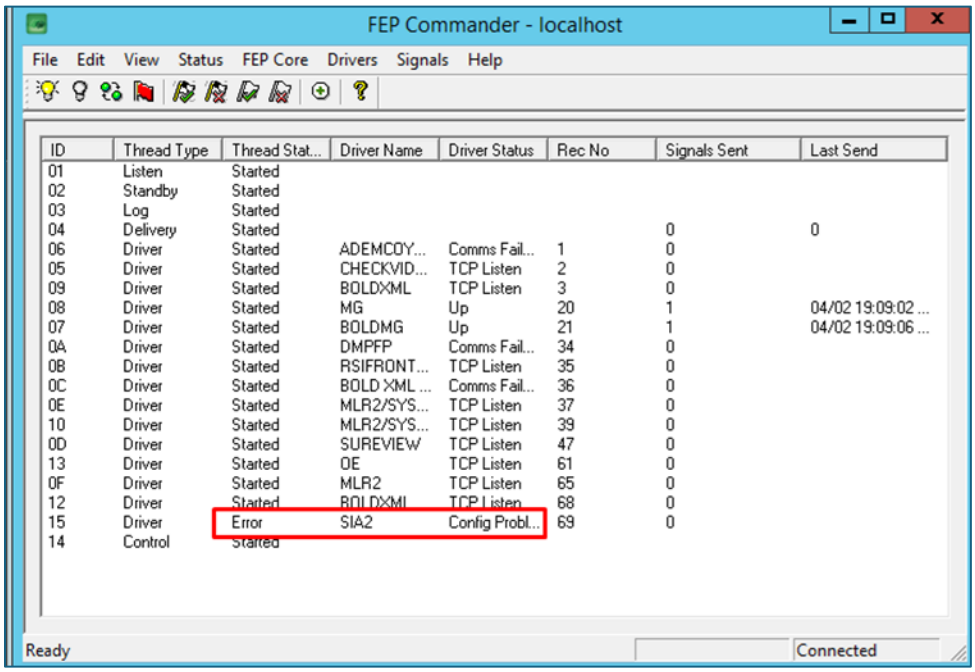


General Information

Note: Currently IPReceiver only uses UDP, not TCP.

The maximum Event Code length that is accepted is two characters. If an event code is longer than two characters it will still process the signal, however it will only use the first two characters.

If Error shows as the status of the Driver in the FEPCommander:



The possible issues are that the Port is not set correctly to TCP/IP Out or that the port is in use by something else.