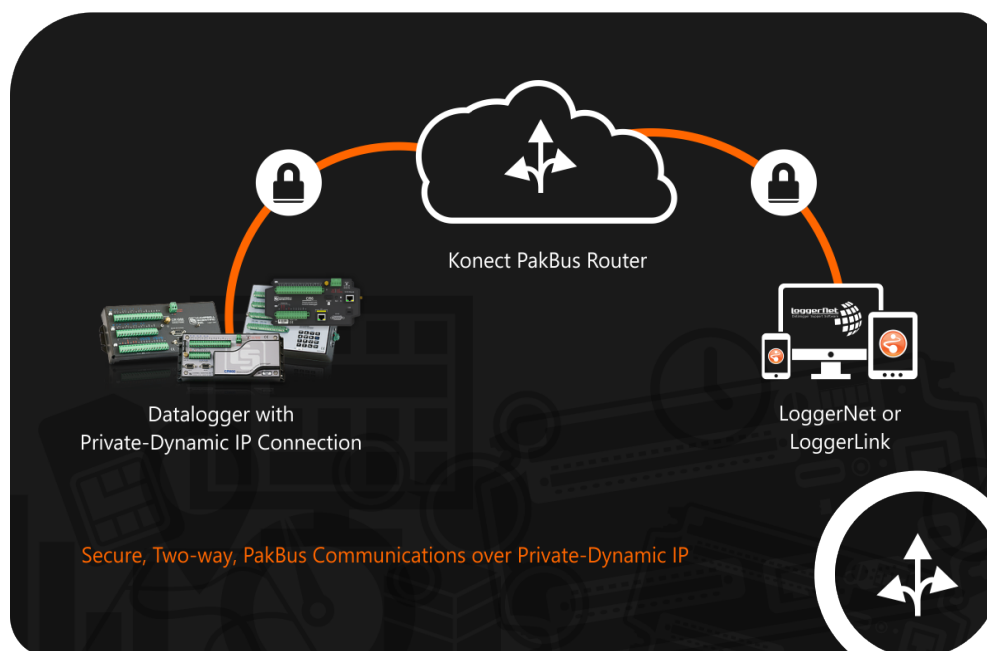




Complimentary **Konect** **PakBus[®]** **Router**

PakBus Routing Service



Guarantee

This equipment is guaranteed against defects in materials and workmanship. We will repair or replace products which prove to be defective during the guarantee period as detailed on your invoice, provided they are returned to us prepaid. The guarantee will not apply to:

- Equipment which has been modified or altered in any way without the written permission of Campbell Scientific
- Batteries
- Any product which has been subjected to misuse, neglect, acts of God or damage in transit.

Campbell Scientific will return guaranteed equipment by surface carrier prepaid. Campbell Scientific will not reimburse the claimant for costs incurred in removing and/or reinstalling equipment. This guarantee and the Company's obligation thereunder is in lieu of all other guarantees, expressed or implied, including those of suitability and fitness for a particular purpose. Campbell Scientific is not liable for consequential damage.

Please inform us before returning equipment and obtain a Repair Reference Number whether the repair is under guarantee or not. Please state the faults as clearly as possible, and if the product is out of the guarantee period it should be accompanied by a purchase order. Quotations for repairs can be given on request. It is the policy of Campbell Scientific to protect the health of its employees and provide a safe working environment, in support of this policy a "Declaration of Hazardous Material and Decontamination" form will be issued for completion.

When returning equipment, the Repair Reference Number must be clearly marked on the outside of the package. Complete the "Declaration of Hazardous Material and Decontamination" form and ensure a completed copy is returned with your goods. Please note your Repair may not be processed if you do not include a copy of this form and Campbell Scientific Ltd reserves the right to return goods at the customers' expense.

Note that goods sent air freight are subject to Customs clearance fees which Campbell Scientific will charge to customers. In many cases, these charges are greater than the cost of the repair.



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1. Introduction

Take advantage of the secure Konect PakBus®¹ Router for on-demand two-way access to your data logger. The Konect PakBus router is a cloud-based service that acts as a bridge between an internet-enabled data logger and LoggerNet or LoggerLink datalogger support software.

This guide will walk you through the steps to:

1. Set up the Konect PakBus Router.
2. Configure a data logger.
3. Set up LoggerNet.

2. Get started


Open a web browser and go to www.konectgds.com.

First-time users need to create a **free account**. After you submit your information, you will receive two emails up to five minutes apart. One email will contain a Passport ID and the other your Password. If emails are not received, check your email junk folder.



¹PakBus is a registered trademark of Campbell Scientific, Inc.


You will need the Konect PakBus Router redemption code that came on a card with the Campbell Scientific cellular module.



Konect
Data Services from Campbell Scientific









Safe, secure routing for access to your IP-connected datalogger

Important Information! Do not discard!
Activate a Complimentary PakBus® Router on Campbell Scientific's Konect PakBus Routing Service. See the Getting Started Guide at:
<http://campbellsci.com/start/pbrouter>








REDEMPTION CODE 

3. Set up Konect PakBus Router


1. Sign in to www.konectgds.com using your Passport ID and Password found in the two received emails. Once logged in, you will be at the Welcome page.



Welcome


 return to your home page
 notifications and messages
 favourites
 devices and services
 help
 your personal settings
 sign out

Get started by adding a device, system or service. Find the icon below on the command bar to the left and away you go...




1

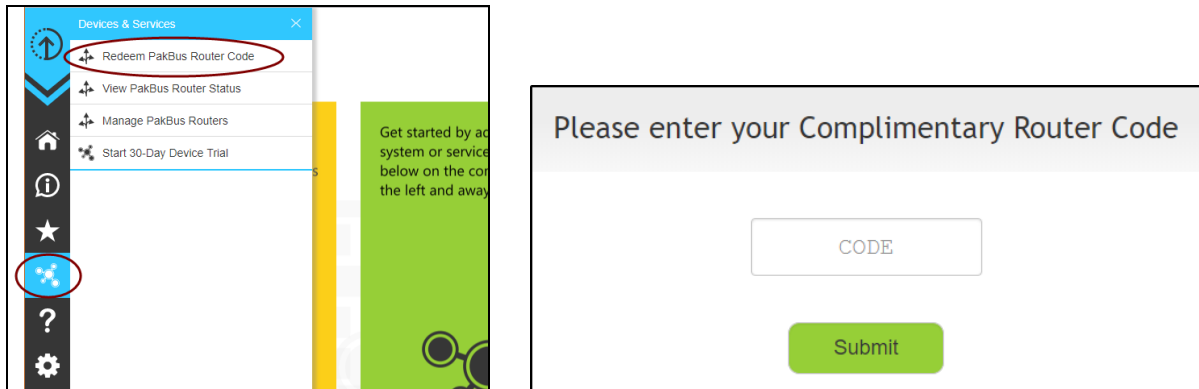
Introducing the CR1000X, an excellent choice for remote environmental applications, including weather stations, mesonet systems, wind profiling, air quality monitoring, hydrological systems, water quality monitoring, and hydrometeorological stations.



Click to find out more...

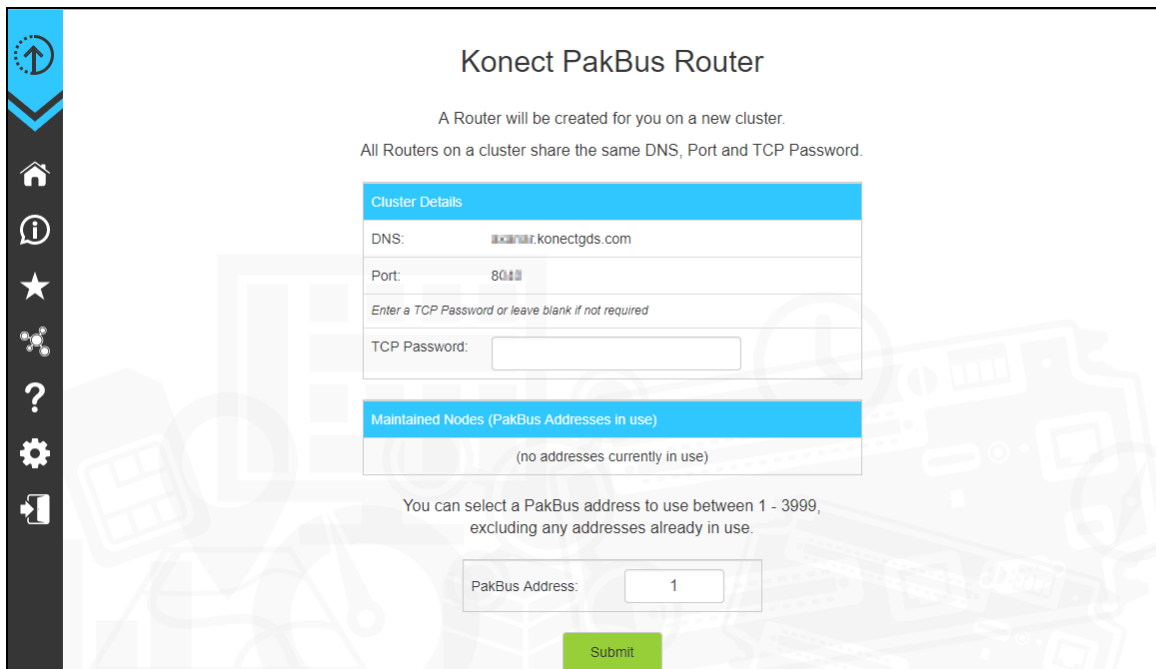
Remember you can get help at anytime whenever you see this symbol ?

- Click **devices and services**  on the command bar to the left and select **Redeem PakBus Router Code**. Enter your complimentary Router Code found on the included card with your cellular-enabled device and click **Submit**.



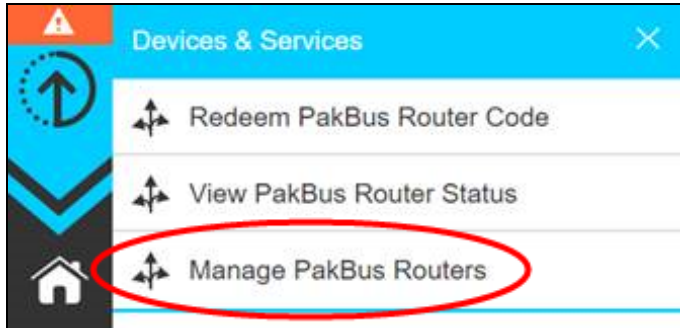
- The next screen shows the assigned **DNS** address and **Port** for the router. An optional **TCP Password** may be entered for additional security, and you must select a unique **PakBus Address** for your data logger.

TIP:
Make note of this information for use in later steps.



- Click **Submit**.

5. To edit settings at a later date, click **devices and services**  on the command bar and select **Manage PakBus Routers**.



NOTE:


The **DNS** address and **Port** number, assigned when your account was setup, cannot be edited.


4. Configure data logger

The data logger setup depends on the type of cellular hardware you are using. Follow the instructions in the section that applies to your hardware configuration.

1. Data logger connected to a CELL200-series module
2. Data logger with an internal cellular module
3. Data logger connected to an RV50 modem

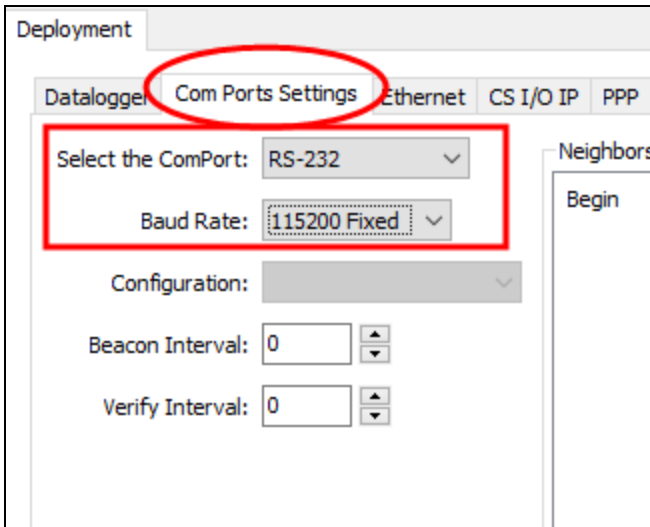
4.1 Data loggers connected to CELL200-series modules

1. Launch the Device Configuration Utility . All tabs are within the **Deployment** category. On the **Datalogger** tab, change the data logger **PakBus Address** and optional **PakBus/TCP Password** to match the values entered in the [Set up Konect PakBus Router](#) (p. 2) step.



The screenshot shows the 'Deployment' window with the 'Datalogger' tab selected. The 'Serial Number' is 1007, 'OS Version' is CR1000.Std.32.02, and 'Station Name' is 1007. The 'PakBus Address' is set to 101. The 'PakBus Security' section shows 'Security Code 1', 'Security Code 2', and 'Security Code 3' all set to 0. The 'PakBus Encryption Key' and 'PakBus Encryption Key Confirm' fields are empty. The 'PakBus/TCP Password' and 'Confirm PakBus/TCP Password' fields are highlighted with a red box.

2. On the **Com Ports Settings** tab, **Select the COMPort** where the module is connected; this is generally RS-232 or CS I/O. When connecting to the CS I/O port, the default address is SDC8. When connecting via RS-232, change the **Baud Rate** to **115200 Fixed**.



The screenshot shows the 'Deployment' window with the 'Com Ports Settings' tab selected. The 'Select the ComPort' dropdown is set to RS-232. The 'Baud Rate' dropdown is set to 115200 Fixed. The 'Configuration' dropdown is set to the default. The 'Beacon Interval' and 'Verify Interval' are both set to 0. The 'Neighbors' section is visible on the right with a 'Begin' button.

3. On the **PPP** tab select the **Config/Port Used** where the modem is connected. This is the same as was selected on the **Com Ports Settings** tab. Leave the **Modem Dial String** blank.


The screenshot shows the 'Deployment' window with the 'PPP' tab selected. The 'Config/Port Used' dropdown menu is set to 'RS-232'. The 'Modem Dial String' field is empty. The 'Modem Dial Response' field is set to 'CONNECT'. The 'DNS Server 1' and 'DNS Server 2' fields are both set to '0.0.0.0'. The 'User Name' and 'Password' fields are empty. The 'PPP Network Status' section displays the message: 'No default network. PPP is not configured.'

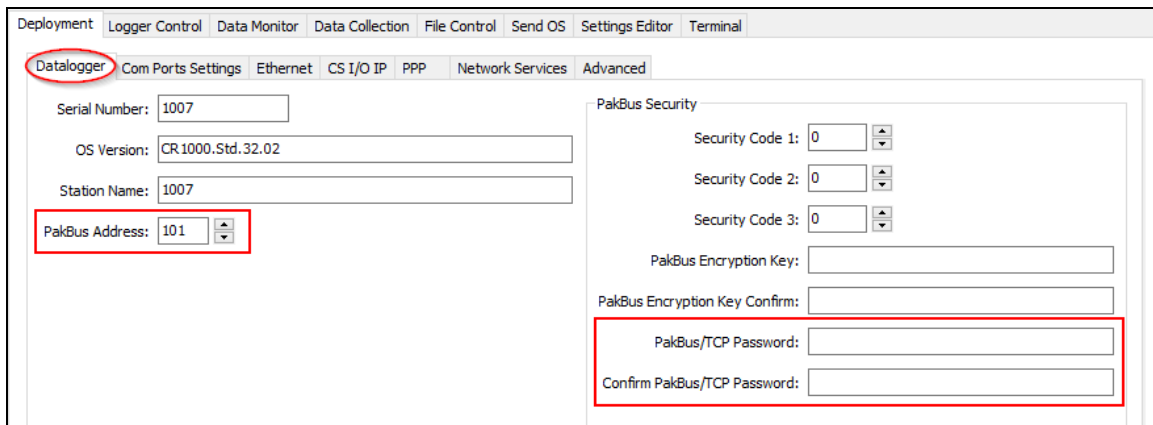
4. On the **Network Services** tab, in the **PakBus/TCP Clients** box, type the DNS address and Port number noted during the [Set up Konect PakBus Router](#) (p. 2) step.

The screenshot shows the 'Deployment' window with the 'Network Services' tab selected. The 'PakBus/TCP Clients' section is visible. The 'Address' field is set to '192.168.1.1.konectgds.com' and the 'Port' field is set to '8080'. The 'Advanced' tab is also visible.

5. **Apply** to save your changes.

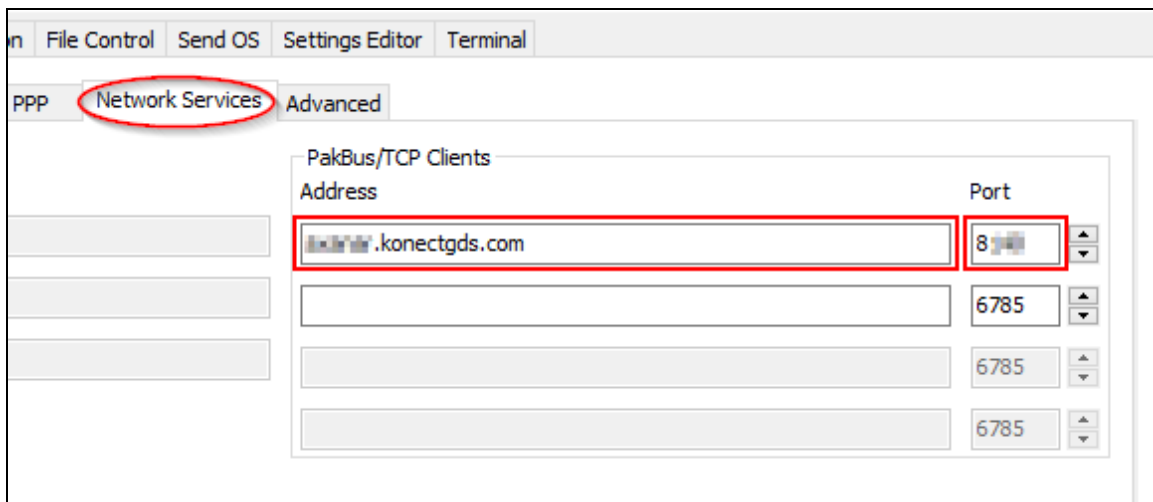
4.2 Data loggers with internal cellular modules (CR300-CELL200)

1. Launch the Device Configuration Utility . All tabs are within the **Deployment** category. On the **Datalogger** tab, change the data logger **PakBus Address** and optional **PakBus/TCP Password** to match the values entered in the [Set up Konect PakBus Router](#) (p. 2) step.



The screenshot shows the 'Datalogger' tab in the Device Configuration Utility. The 'Serial Number' is 1007, 'OS Version' is CR1000.Std.32.02, and 'Station Name' is 1007. The 'PakBus Address' is set to 101. The 'PakBus Security' section includes 'Security Code 1', 'Security Code 2', and 'Security Code 3', all set to 0. The 'PakBus Encryption Key' and 'PakBus Encryption Key Confirm' fields are empty. The 'PakBus/TCP Password' and 'Confirm PakBus/TCP Password' fields are also empty.


2. On the **Network Services** tab, in the **PakBus/TCP Clients** box, type the DNS address and Port number noted during the [Set up Konect PakBus Router](#) (p. 2) step.



The screenshot shows the 'Network Services' tab in the Device Configuration Utility. The 'PakBus/TCP Clients' section is visible, showing a table with columns for 'Address' and 'Port'. The first row has the address '192.168.1.1.konectgds.com' and port '8080'. The other three rows have the address field empty and the port set to '6785'.

3. **Apply** to save your changes.

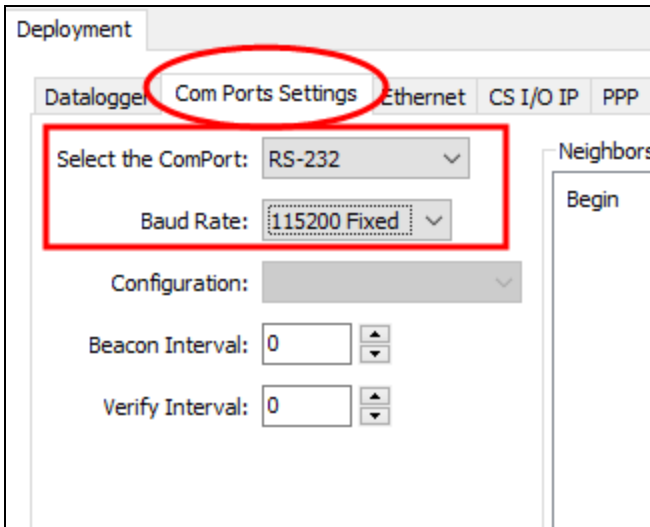
4.3 Data loggers connected to RV50 modems

1. Launch the Device Configuration Utility . All tabs are within the **Deployment** category. On the **Datalogger** tab, change the data logger **PakBus Address** and optional **PakBus/TCP Password** to match the values entered in the [Set up Konect PakBus Router](#) (p. 2) step.



The screenshot shows the 'Deployment' window with the 'Datalogger' tab selected. The 'Serial Number' is 1007, 'OS Version' is CR1000.Std.32.02, and 'Station Name' is 1007. The 'PakBus Address' is set to 101. The 'PakBus Security' section shows 'Security Code 1', 'Security Code 2', and 'Security Code 3' all set to 0. The 'PakBus Encryption Key' and 'PakBus Encryption Key Confirm' fields are empty. The 'PakBus/TCP Password' and 'Confirm PakBus/TCP Password' fields are also empty.

2. On the **Com Ports Settings** tab, **Select the COMPort** where the module is connected; this is generally RS-232 or CS I/O. When connecting to the CS I/O port, the default address is SDC8. When connecting via RS-232, change the **Baud Rate** to **115200 Fixed**.



The screenshot shows the 'Deployment' window with the 'Com Ports Settings' tab selected. The 'Select the ComPort' dropdown is set to RS-232. The 'Baud Rate' dropdown is set to 115200 Fixed. The 'Configuration' dropdown is set to the default. The 'Beacon Interval' and 'Verify Interval' are both set to 0.

3. On the **PPP** tab select the **Config/Port Used** where the modem is connected. This is the same as was selected on the **Com Ports Settings** tab. Set **Modem Dial String** to AT\APPP.

The screenshot shows the 'Deployment' window with the 'PPP' tab selected. The 'Config/Port Used' dropdown is set to 'RS-232'. The 'Modem Dial String' is set to 'AT\APPP'. The 'Modem Dial Response' is set to 'CONNECT'. The 'DNS Server 1' and 'DNS Server 2' are both set to '0.0.0.0'. The 'User Name' and 'Password' fields are empty. The 'PPP Network Status' section shows 'No default network. PPP is not configured.'

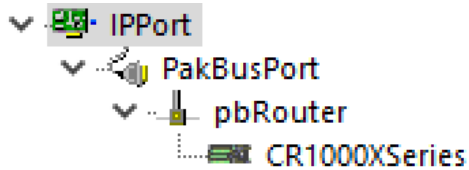
4. On the **Network Services** tab, in the **PakBus/TCP Clients** box, type the DNS address and Port number noted during the [Set up Konect PakBus Router](#) (p. 2) step.

The screenshot shows the 'Deployment' window with the 'Network Services' tab selected. The 'PakBus/TCP Clients' section is visible. The 'Address' field is set to '192.168.1.1.konectgds.com' and the 'Port' field is set to '8080'. There are three other rows in the table, each with an empty 'Address' field and a 'Port' field set to '6785'.

5. **Apply** to save your changes.

5. Set up LoggerNet

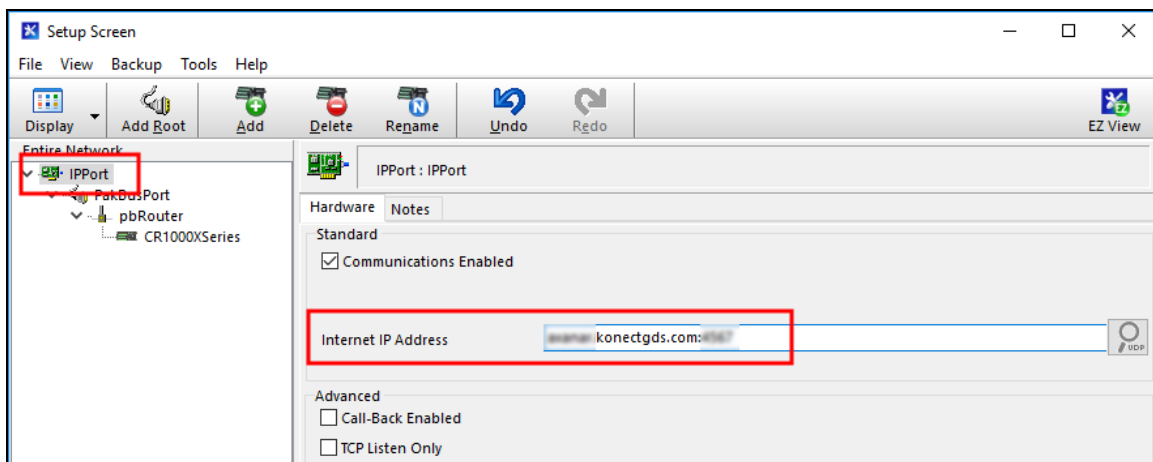
1. In the Standard View of LoggerNet Setup , add an **IPPort** > **PakBusPort** > **pbRouter**, and data logger.



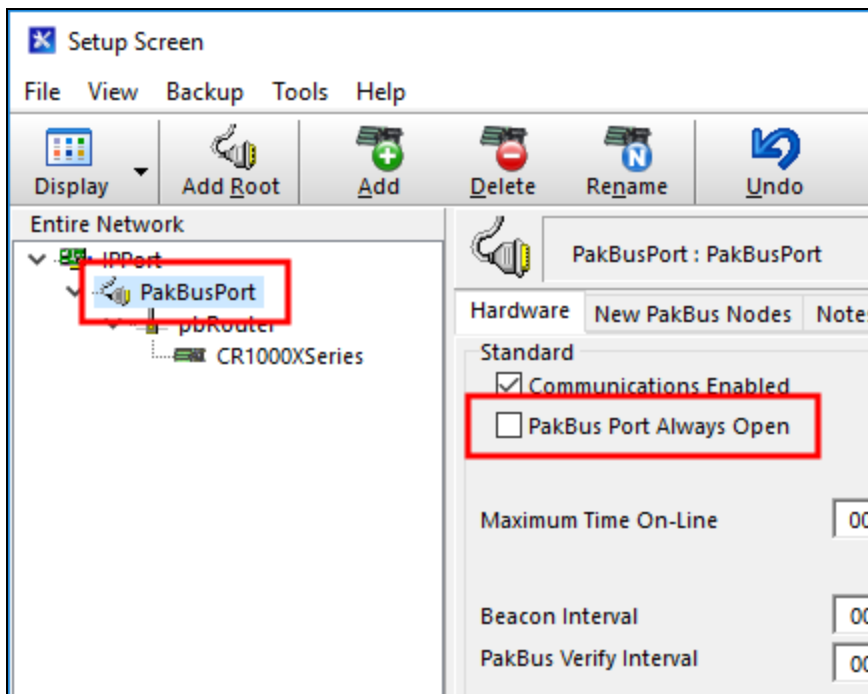
2. On the **IPPort Hardware** tab, select the **Internet IP Address** field. Enter the Konect PakBus Router DNS address and Port number separated by a colon as noted during the [Set up Konect PakBus Router](#) (p. 2).

NOTE:

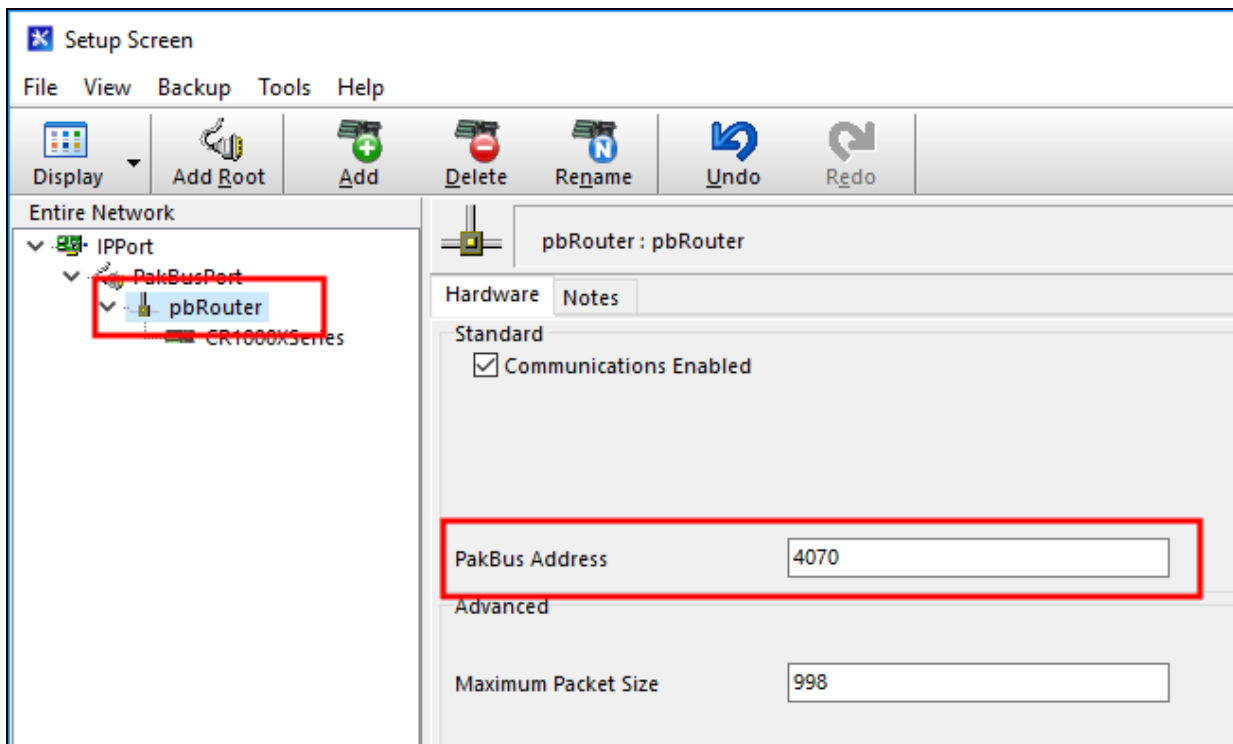
Address format: dddd.konectgds.com:pppp



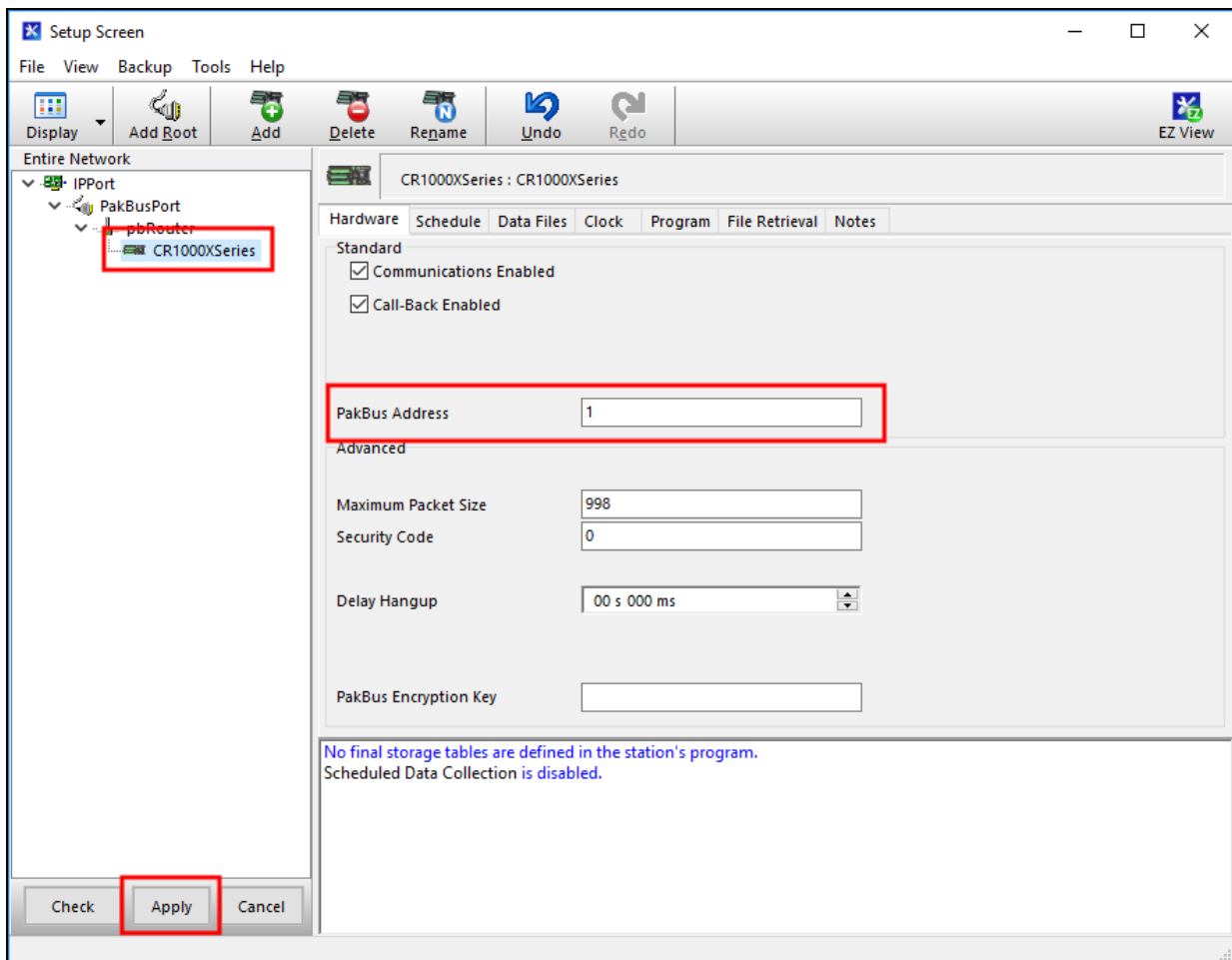
3. Leave the default settings for the **PakBusPort**. **PakBus Port Always Open**; it should not be checked. If you set an optional **TCP Password**, enter it on the **PakBusPort Hardware** tab.



4. Select **pbRouter** from the Entire Network. On the **Hardware** tab, enter **4070** in the **PakBus Address** box.



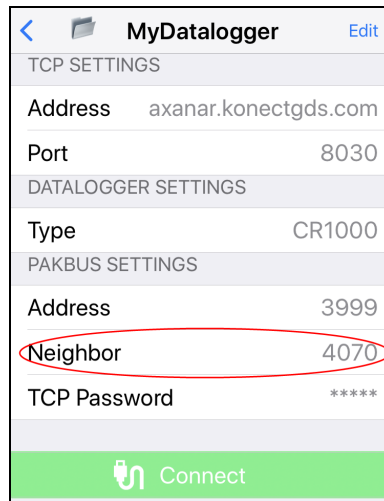
- On the data logger **Hardware** tab, enter the **PakBus Address** chosen during the [Set up Konect PakBus Router](#) (p. 2) step.



- Apply** to save your changes.
- Apply power to the data logger and cellular module. On the **Clock** tab, **Check Clocks**. When communications are successful, the **Station Date/Time** field will update.

6. Set up LoggerLink (optional)

LoggerLink mobile apps are another way to connect to your data logger through the Konect PakBus Router. When using LoggerLink the **PakBus Neighbor** setting must be set to **4070**.



MyDatalogger	
TCP SETTINGS	
Address	axanar.konectgds.com
Port	8030
DATALOGGER SETTINGS	
Type	CR1000
PAKBUS SETTINGS	
Address	3999
Neighbor	4070
TCP Password	*****
Connect	

See the help in LoggerLink or <https://www.campbellsci.eu/loggerlink> for more information. Or, watch a video about using LoggerLink  <https://www.campbellsci.eu/videos/loggerlink-software-an-introduction>.

7. Maintenance and troubleshooting

7.1 Review

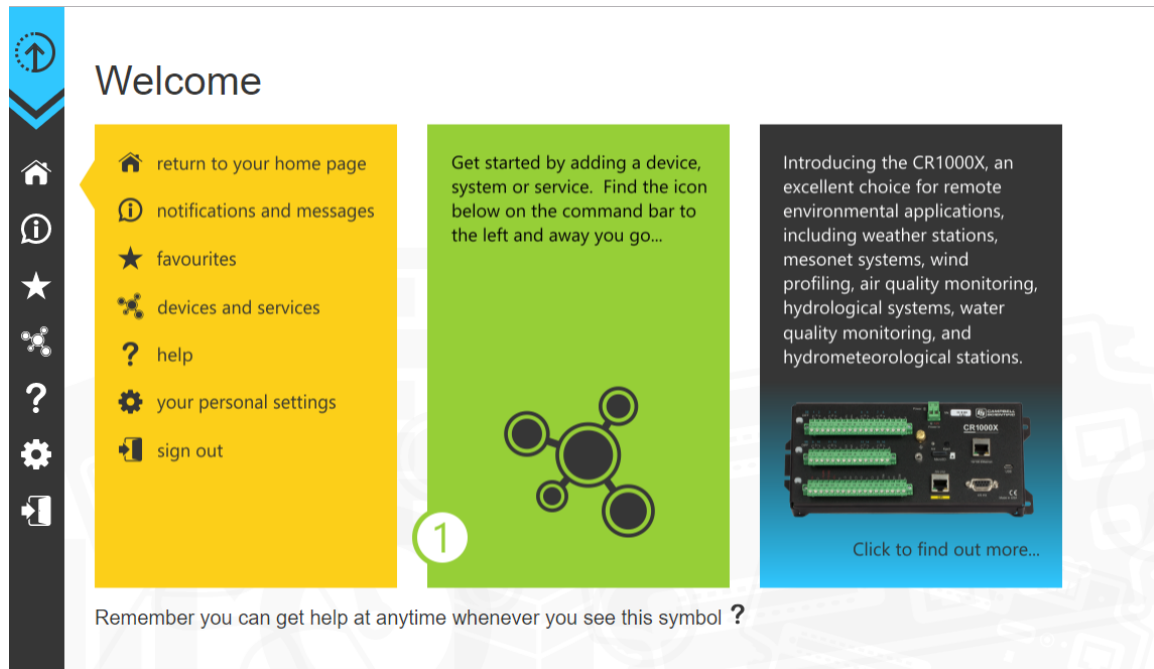
1. You have created a free KonectGDS account. In this account, a complimentary Konect PakBus Router Code was redeemed and a router set up.
2. The data logger was configured to use the information received during the Konect PakBus Router setup. The data logger now maintains a connection with the Konect PakBus Router.

3. LoggerNet has been configured with information received during the Konect PakBus Router setup. LoggerNet can now connect through the Konect PakBus Router to the data logger.

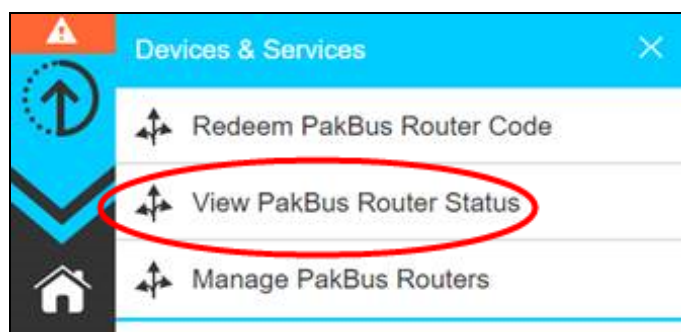
7.2 Status

Check the connection status between the data logger and Konect PakBus Router.

1. Sign in to www.konectgds.com using your Passport ID and Password.



2. Click **devices and services**  on the command bar and select **View PakBus Router Status**.



3. The next screen shows the **DNS**, **Port**, and assigned **PakBus** addresses. Click **Show Status**.

PakBus Router Status

Click on 'Show Status' to view the status of your PakBus Router network.

Cluster					
DNS:	axanar.konectgds.com				
Port:	8060				
Maintained Nodes (PakBus Addresses in use)					
389	1022	1098	2183	2211	2625

Show Status

The status of the PakBus Router network is shown at the point in time the data is requested.

4. A **Connected** status indicates that the data logger has successfully established a connection to the Konect PakBus Router.

NOTE:

This does not indicate the communication status with LoggerNet.

PakBus Router Network

Network status checked at 17 Dec 2018 17:17:07 utc

Address	Connection
389	● Connected
1022	● Not Connected
1098	● Not Connected
2183	● Not Connected

Close

5. To troubleshoot a **Not Connected** status:

- Verify the data logger and module have adequate power.
- Verify the module is connected to the Internet.
- Verify settings in the data logger are as described in [Configure data logger](#) (p. 4).

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