

EC-gfxProgram

Getting Started Guide

Connecting People with Intelligent Building Solutions

EC-gfxProgram Getting Started_UG_13_EN

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TABLE OF CONTENTS

CHAPTER 1

| |
 | |
 |
 | |
 |
 | . : | 3 |
|-----------------------|------|------|------|------|------|------|------|------|------|--|------|------|--|------|------|-----|---|
| About this User Guide |
 | |
 |
 | | |
 | . (| 4 |

CHAPTER 2

Getting Started on EC-Net for ECP & ECL Series Controllers	5
Pre-Configuration and Configuration Overview	6
Installing EC-gfxProgram	7
Installing the Distech Controls Distribution Files on the EC-BOS.	8
Installing a LONWORKS Network	11
Configuring the LONWORKS BcpLonNetwork	14
Setting the BcpLonNetwrok Properties	14
Adding the WizardService to the Station	16
Configuring the WizardService	18
Server Connections	23
Setting the WizardService Comm Config Properties	25
Organizing devices in Device Folders	28
Adding a Device to the Network Database	29
Commissioning the device	31
Commissioning the Device via the Service Pin	31
Commissioning the Device Manually	31
EC-Net Device Upload and Download	34
Device Upload	34
Device Download	34
Discovering an Existing Network	36
Matching Devices	40
Launching EC- <i>gf</i> xProgram	41
Running the EC- <i>gfx</i> Program Application	41
Running EC- <i>gfx</i> Program from your PC's Desktop	43
Launching EC-gfxProgram through an EC-BOS or EC-Net Pro	44
Launching the Scheduler Configuration Wizard (ECP Series)	45
Launching the Real-Time Clock Configuration Wizard (ECP Sereis Controllers)	46
Launching EC-gfxProgram from a Px Page using a LaunchButton Widget	48

CHAPTER 3

Getting Started on EC-Net for ECB and ECY Series Controllers	51
Pre-Configuration Checklist and Configuration Overview	52
Installing EC-gfxProgram	54
Installing the Distech Controls Distribution File on the EC-BOS	55
Adding the Wizard Service to the Station	58
Configuring the WizardService	30
Server Connections	32
Installing a Bcp BACnet Network	35
Installing the BACnet Communication Port(s)	38
Installing the BACnet MS/TP Communication Port	38
Installing the BACnet IP Port	71
Tuning the Proxy Point Policies	74
Organizing Controllers in the Device Folder	75
Creating Station Users	76
Configure the REST and Radius Services (for ECY Series controllers)	78
Configuring the REST Service	78
Configuring the Radius Service	33

Discovering BACnet Devices	86
Setting the Max Master and Max Info Frames on all MS/TP Devices (ECB Series)	91
Launching EC- <i>gfx</i> Program	94
Running the EC- <i>gfx</i> Program Application	94
Running EC-gfxProgram from the Desktop	95
Launching EC-gfxProgram through an EC-BOS or EC-Net Pro (ECB Series Controllers Or	ıly)
97	
Launching EC-gfxProgram from a Px Page Using a LaunchButton Widget (ECB Series Controll	lers
Only)	99

CHAPTER 4

Licensing the EC-Net Support Package for a Non-Distech Controls Brand Station	. 101
Support Package Licensing Applicability	102
Support Package Services Overview	103
Getting a License	105
Installing the License.	106
License Check.	107

CHAPTER 1 Introduction

This chapter introduces the Graphical Programming Interface of EC-*gfx*Program, summarizes its features, and provides an overview of the user guide.

Topics *About this User Guide*

About this User Guide

Purpose of this user guide	This user guide is intended to provide information and instruct a user to install and configure EC- <i>gfx</i> Program in the context of these controllers being man- aged by an LNS-based network management tool or EC-Net platform-based software. This guide is not designed to instruct the user on how to use the net- work management tool software or programmable controller itself and there- fore it is assumed that the user already has prior knowledge of said software and controllers.
Intended audience	This user guide is intended for system designers, integrators, and field techni- cians who have experience with control systems. It is recommended that any- one installing and configuring the devices specified in this user guide have prior training in the usage of these devices.

CHAPTER 2 Getting Started on EC-Net for ECP & ECL Series Controllers

This chapter provides a detailed explanation of how to configure an EC-BOS as a building controller with EC-Net installed on your PC. This includes installing the EC-*gfx*Program, adding a device to a network database, and launching EC-*gfx*Program.

Topics

Pre-Configuration and Configuration Overview Installing EC-gfxProgram Installing the Distech Controls Distribution Files on the EC-BOS Installing a LONWORKS Network Configuring the LONWORKS BcpLonNetwork Adding the WizardService to the Station Configuring the WizardService Organizing devices in Device Folders Adding a Device to the Network Database Commissioning the device EC-Net Device Upload and Download Discovering an Existing Network Matching Devices Launching EC-gfxProgram Launching EC-gfxProgram from a Px Page using a LaunchButton Widget

NOTE: For detailed information on connecting to the internal points of a controller, refer to *EC-Net Platform Support Package Features for ECP & ECL Series Controllers* in the <u>EC-gfxProgram User Guide</u>.

Pre-Configuration and Configuration Overview

	EC- lice	gfxProgram requires that the EC-BOS, EC-Net Pro, and EC-Net be nsed for version 3.5 or higher.
Pre- configuration steps	Bef laur allo	ore installing EC- <i>gfx</i> Program, adding a device to a network database, and nching EC- <i>gfx</i> Program, the following steps must first be carried out to w EC-Net to support the controllers:
	1.	Install EC-Net Pro on your computer.
	2.	Install the latest version of the Distech Controls EC-Net Support Package on your computer. The EC-Net Support Package installs many jar files required in EC-Net such as distechControls.jar , which contains the required services and Distech Controls devices. The latest Support Pack- age can be installed by using the Distech Controls SmartInstaller soft- ware, which can be downloaded from the Distech Controls website at <i>www.distech-controls.com</i> .
		If you are running EC-Net 4 and your Niagara license file has a brandID other than distech or distechEU , you will require a license to enable the WizardService, RestService, and RadiusService. See <i>Licensing the EC-Net Support Package for a Non-Distech Controls Brand Station</i> .
	3.	Connect to an EC-BOS or EC-Net Pro station. If the IP address is unknown for an EC-BOS, use the System Shell procedure in <i>Recovery</i> <i>Tips</i> in the EC-BOS <u>Install and Startup Guide</u> , which can be downloaded from the Distech Controls website at <u>www.distechcontrols.com</u> .
Configuration	The	following steps are detailed in procedures on the following pages.
Sleps	1.	Install EC- <i>gfx</i> Program.
	2.	Install the Distech Controls EC-BOS distribution file through the platform Distribution File Installer.
	3.	Connect to the station.
	4.	Install and configure the LONWORKS Network
	5.	Add the WizardService to the Station.
	6.	Configure the WizardService.
	7.	Add a device to the network database.
	8.	Commission the device.
	9.	Discover an existing network where one already exists (if necessary).
	10.	Match devices where the LONWORKS Network database is already estab- lished in EC-Net (if necessary).
	11.	Launch device wizards to run EC- <i>gf</i> xProgram.
	NO	TE: When first logging in to the platform, the default platform username is distech and the default password is controls .

Installing EC-gfxProgram

To program a controller, the EC-gfxProgram application must be installed. This application has its own setup file and requires its own installation. To install the EC-gfxProgram application:

- 1. Close any programs that are running on the PC.
- 2. Go to the Software Center, which can be downloaded from the Distech Controls website at *www.distech-controls.com*.
- 3. In the EC-gfxProgram tab, select Distech Controls EC-gfxProgram.

EC-NE	T R2 Platform UL-864 UUKL Miscel ECLYPSE Platform EC-NET AX Pla	laneous tform LNS Plat	form EC-gfxPr	ogram APB - N	XE XIF		
File N	Name	Information	Local Version	Latest Ver	File Size	File Details	^
Ap	plications						
\checkmark	Distech Controls EC-gfxProgram	Not installed		5.5.16154	49.8 MB	<u>View readme</u>	
	Distech Controls Xpressgfx Points	Not installed		1.3.16139	13.1 MB	View readme	
EC	B Series - DFF Files						
	Distech Controls ECB-103	Not installed		2.13.16138	253.4 kB	View readme	
	Distech Controls ECB-2x3	Not installed		2.13.16138	287.1 kB	View readme	
	Distech Controls ECB-3x0	Not installed		3.10.16138	370.4 kB	View readme	
	Distech Controls ECB-4x0	Not installed		3.10.16138	372.7 kB	View readme	
	Distech Controls ECB-4x3	Not installed		3.10.16138	372.7 kB	<u>View readme</u>	
	Distech Controls ECB-6x0	Not installed		3.10.16138	382.0 kB	View readme	
	Distech Controls ECB-VAV	Not installed		2.13.16138	297.6 kB	View readme	
	Distech Controls ECB-VAVN	Not installed		2.13.16138	256.1 kB	View readme	
	Distech Controls ECB-VAVS	Not installed		2.13.16138	264.1 kB	View readme	
	Distech Controls ECB-VAVSO	Not installed		2.13.16138	257.8 kB	View readme	
	Distech Controls ECB-VVTS	Not installed		2.13.16138	262.4 kB	View readme	
	Distech Controls ECB-PTU-107	Not installed		2.5.16138	280.3 kB	View readme	~
Total d	ownload size : 49.8 MB			Display mod	le:		
Aut	tomatically install files after download			Show all file	es		~

4. Run the Setup file and follow the installation instructions.

Installing the Distech Controls Distribution Files on the EC-BOS

Install the Distech Controls distribution file onto the EC-BOS to ensure all of therequired modules and files are correctly installed.

1. Expand the platform tree in the *Nav* side bar and double-click **Distribu**tion File Installer. This will open the *Distribution File Installer* in the View Pane.



 Click on Choose Directory at the bottom of the page and navigate to the location of the Support Package. These files are usually found in the /Niagara/EC-NET[Version#]/Distech Controls Files/ directory on the C:drive. Click OK.



3. Install the *DistechControls_EC-BOS* distribution file through the platform *Distribution File Installer*. Select the distribution file and click **Install**.



4. EC-Net will then inform you that any running station(s) must be closed in order to continue. Click **Finish**.

Ø Distribution File Installer	×
Distribution File Installer Stopping application(s)	
Running applications must be stopped before installation can proceed. Choose 'Finish' to stop the applications and perform the software installation.	
Back Next / Finish Cance	el

5. If any application needs to be stopped, allow the platform to stop them.

nstalling:			
🔵 Stop running a	pplication(s)	Running	
Install softwar	e	Not Started	
Restart applica	ition(s)	Not Started	
	C A rec the a	uest has been sent to stop all running applications. Please wait until applications have finished shutting down. This may take several minu	utes.

6. The *Installing Distribution* window will appear to display the progress of the distribution files installation. Click **Close** when done and allow some time for the EC-BOS to reboot.

🕌 Installing Distribution

Installing:							
Stop running application(s)	Success						
Install software	Success						
Reboot host	Success						
Installation complete.							
Wrote "/home/nlagara/sha: Wrote "/otmiagara/sha: Wrote "/otmiagara/sha: Wrote "/otmiagara/sha: Wrote "/otmiagara/sha: Wrote "/otmiagara/sha: Wrote "/otmiagara/sha: Wrote "/otmiagara/sha: Wrote "/otmiagara/sha: Wrote "/home/nlagara/sha: Wrote "/home/nla	red/Distech Controls red/Distech Controls	<pre>Files/bcsv2DefaultValues/EcpFua.b1". Files/bcsv2DefaultValues/EcpFua.b1". Files/bcsv2DefaultValues/EcpFuaGfx.b1". Files/bcsv2DefaultValues/EcpFuaGfx.b1". Files/bcsv2DefaultValues/Ecp203.b1". Files/bcsv2DefaultValues/Ecp203.b1". Files/bcsv2DefaultValues/Ecp203.b1". Files/bcsv2DefaultValues/Ecp203.b1". Files/bcsv2DefaultValues/Ecp401.b1". Files/bcsv2DefaultValues/Ecp401.b1". Files/bcsv2DefaultValues/Ecc401.b1". Files/bcsv2DefaultValues/Ecc401.b1". Files/bcsv2DefaultValues/Ecc401.b1". Files/bcsv2DefaultValues/Ecc401.b1". Files/bcsv2DefaultValues/Ecc401.b1". Files/bcsv2DefaultValues/Ecc401.b1". Files/bcsv2DefaultValues/Ecc401.b1". Files/bcsv2DefaultValues/Ecc401.b1". Files/bcsv2DefaultValues/Ecc401.b1". Files/bcsv2DefaultValues/Ecc401.b1". Files/bcsv2DefaultValues/Eccp10100.b1". Files/bcsv2DefaultValues/Eccp10100.b1". Files/bcsv2DefaultValues/Eccp10100.b1". Files/bcsv2DefaultValues/Eccp10100.b1". Files/bcsv2DefaultValues/Eccp10100.b1". Files/bcsv2DefaultValues/Ecc16006fx.b1". Files/bcsv2DefaultValues/EcC400.b1".</pre>					
	Ch	ase					

Installing a LONWORKS Network

In the following procedure, you add a **Bcp Lon Network** driver to the station to allow EC-*gfx*Program to connect to your devices.

- 1. Connect to the station on the EC-Net platform. Right-click the station and select Connect.
- NOTE: If this is the first time that the station is accessed, by default, the station will not be displayed. Click **File**→**Open**→**Open** Station (or press **Ctrl+Shift+O** from your keyboard) to open the *Open Station* window. Proceed to step 2.



2. Enter the required Username and Password to access the station.

authenti	cation X
Auth Logon	entication required for access
Realm	
Name	ip:10.2.60.71 foxs:
Scheme	Fox (n4digest)
Credentials	
Username	admin
	Change User
Password	•••••
🖌 Rememb	per these credentials
	OK Cancel

 Install the Bcp Lon Network: Double-click Drivers under Station > Config in the Nav tree for your station and click New.



4. From the Type to Add drop-down list, select Bcp Lon Network.



5. Add one (1) Bcp Lon Network in Number to Add. Click OK.

Image: Rew (Market State)	×
Type to Add Bcp Lon Network Number to Add 1	•
OK Cancel	

6. Accept the default settings: Click **OK**. The **Local Lon Device** driver is automatically created under the **Bcp Lon Network** in the Nav tree.

a New					×
Name	Туре		Enabled	d t	Ŧ
🖰 BcpLonNet	work Bcp Lon N	letwork	true		
Name	BcpLonNetwor	k			
📄 Туре	Bcp Lon Netw	ork		*	
) Enabled	true 🗸				
	ОК	Cancel	l		
river Manager					
ame	Туре	Status	Enabled	Fault Cau	use
NiagaraNetwork	Niagara Network	lok)	true		

尾 New 💉 Edit 🛛 🖏 Tagit

Configuring the LONWORKS BcpLonNetwork

Before adding devices to the LONWORKS Network it must be configured correctly. Set both the **WizardService Comm Config** properties (see *Setting the WizardService Comm Config Properties*) and the **BcpLonNetwork** properties as follows.

Setting the BcpLonNetwrok Properties

You can access the BcpLonNetwork driver's property sheet:

- From the Nav side bar, right-click **BcpLonNetwork**, select Views and then Property Sheet.
- From the Nav side bar, select **BcpLonNetwork**, click the *View Selector* and select Property Sheet.

1 .	Make sure	that the	Enabled	field is	checked	off as true.
------------	-----------	----------	---------	----------	---------	--------------

BcpLonNetwork		O Actions & Topics 📄 Slot Details
Display Name	Value	Commands
📔 Status	{ok}	
🗎 Enabled	✓ true	
📔 Fault Cause		
🕨 🖵 Health	Ok [29-Jun-16 11:06 AM EDT]	
Alarm Source Info	Alarm Source Info	
Monitor	Ping Monitor	0
🔻 🖳 Lon Comm Config	Lon Comm Config	
Device Name	LON1	
📔 Link Debug	false	
📔 Repeat Timer	Milli Sec96 🔹	
📔 Receive Timer	Milli Sec384 🔹	
Transmit Timer 👔	Milli Sec512 🔻	
📔 Retry Count	3	
Poll Service	Bcp Lon Poll Service	0
🗢 ≽ Lon Netmgmt	Bcp Lon Netmgmt	0
Domain Id	len=1:0)1
🗎 Authenticate	Galse	
Authentication Ke	y ff ff ff ff	ffff

- Expand the Lon Comm Config field. Ensure the Repeat Timer dropdown is set to Milli Sec96. Ensure the Receive Timer dropdown is set to Milli Sec384. Ensure the Transmit Timer dropdown is set to Milli Sec512. Ensure the Retry Count field is set to 3.
- **NOTE:** These settings will be automatically overwritten when the Auto Update option in the **WizardService** is set to *True*. See *Configuring the WizardService* and see *Setting the WizardService Comm Config Properties*.
- **3.** Expand the **Lon Netmgmt** field. Set the **Domain Id** field to a length of **1** and the ID to **01**.
- **NOTE:** If the configuration of the LONWORKS Network has already been made, then the Domain Id may be set to another number. Verify that the Domain Ids of the network and devices match. However, it is recommended that the Domain Id be set to a length of **1** and an ID of **01** whenever possible.
- 4. Click **Save** in the Property Sheet menu to accept the changes.

Adding the WizardService to the Station

The WizardService allows EC-*gfx*Program to connect to the EC-BOS. This step is optional: If the **WizardService** has not been installed as shown below, it will automatically be installed when you add a device to the station. However you will still need to configure the **WizardService** service as shown in *Configuring the WizardService*.

Optionally you can manually install the **WizardService** on the station as follows.

1. Click the Open Palette button in the Palette side bar to open the Open Palette selection window.



If the Palette side bar is not open in the Side Bar Pane, click $Windows \rightarrow Side$ Bars \rightarrow Palette to add the Palette side bar.

 Select distechControls from the Open Palette selection window and click OK. This will add the distechControls palette to your Palette side bar.

鑢 Open Palette		×
Select one or more palettes t	o open, or just start typing: Brow	se
Module	Description	t‡
box	Building Object eXchange Protocol	*
boxAnalyzer	Building Object eXchange Analyzer	-
ccn	CCN Driver	
chart	Chart API	
control	Niagara Control Module	
dashboard	Dashboards for Niagara	
distechControls		
docDeveloper	Niagara Software Developer Documentation	
driver	Niagara Driver Framework	
driverUpgrade	Niagara tool to support upgrades to new module	
		Ŧ
	OK Cancel	

3. Install the WizardService: Drag and drop the **WizardService** from the **distechControls** Palette into the Station's **Services** tree.



NOTE: The Services tree is found within the Config tree of the station.

4. Click OK to add the WizardService on the station.

🇊 Na	ime	×
?	NizardService	
	OK Cancel	

Configuring the WizardService

If the **WizardService** has not been installed, it will automatically be installed when you add a device to the station. However you will still need to configure the **WizardService** service as shown below.

The **WizardService** must be configured by defining parameters such as the communication port and/or the number of simultaneous connections. The *WizardService* property sheet can be accessed:

- From the Nav side bar, double-click **WizardService** in the *Services* tree of the station.
- From the Nav side bar, right-click WizardService, select Views and then Property Sheet.



Parameter	Description
Status (read only)	This field displays the status of the BCP Server. If the server is enabled (the Enabled field set to True), an {ok} status will be displayed. If the server is disabled (the Enabled field set to False), an {disabled} status will be displayed.
Fault Cause (read only)	If there is a problem with the WizardService , this field will list the possible cause of the problem.
Enabled	This field enables or disables the WizardService . Enable the server by setting this field to True. Likewise, the server can be disabled by setting this field to False.
Licensed	This is true when the WizardService is licenced on this station and is available. When using Distech Controls controllers with a Distech Controls EC-Net station, these services are available by default.
	If you are running EC-Net 4 and your Niagara license file has a brandID other than distech or distechEU , you will require a license to enable the WizardService , RestService, and RadiusService. See <i>Licensing the EC-Net Support Package for a Non-Distech Controls Brand Station</i> .
Port	Enter the port that the station is using to communicate with EC-Net here. The default port is 1931.
	If application specific or line by line LONWORKS devices are being accessed, the LonLegacy Tcp/IP port must also be configured.
Max Connections	This is the maximum number of connections (wizards) that can be simultaneously running. The default is 5.
Version (read only)	This field displays the current version of the Wizard Service communication protocol.
Min Version (read only)	The minimum required version of the Wizard Service communication protocol that is required for this service to operate.
Number Connections (read only)	Number of clients (wizards) currently running and using the WizardService . See Server Connections.
Server Connections	Sets the server connection parameters. See Server Connections. The
- Keep Alive Delay	number of supported connections is set in Max Connections .
- Load Manager	
- Connection	
Supported Field Bus	List the network types supported by the WizardService .
Bacnet Settings	Not applicable to LONWORKS controllers.
Lonworks Settings - TagUpdate Latency	Time during which device message tags are buffered before being sent to EC- <i>gfx</i> Program. The default is 500 msec.

Parameter	Description
Lonworks Settings	See Setting the WizardService Comm Config Properties.
- Comm Config	For supported controllers, the following settings are strongly recommended: Ensure the Repeat Timer dropdown is set to Milli Sec96 . Ensure the Receive Timer dropdown is set to Milli Sec384 . Ensure the Transmit Timer dropdown is set to Milli Sec512 . Ensure the Retry Count field is set to 3 .
	Sometimes, certain LONWORKS devices may process LONWORKS messages "slower than normal," resulting in errors when you do commissioning or binding operations – where the commission or bind reports as failed. You can confirm such problems by using the Lon Utilities Manager (afterwards) and running a verify report. The verify report will list the inconsistencies between the bindings on the devices, and the list of bindings that EC-Net's LON network management determines that they should have.
	Under these conditions, it may be necessary to raise the Transmit Timer setting upwards to Milli Sec1024 .
Lonworks Settings - Comm Config, Auto Update	If set to true , this pushes the Comm Config settings above to the Lon Comm Config on all LONWORKS BcpLonNetworks (see <i>Configuring the</i> <i>LONWORKS BcpLonNetwork</i>) when:
	The EC-BOS is rebooted
	 A wizard connection is made (see Launching EC-gfxProgram on page 53)
	The settings on this page are saved.
	If set to false , the settings of the individual LONWORKS BcpLonNetworks are preserved.
Lonworks Settings - Auto Build Nvs	If set to true , this auto-builds NVs when a device is added to the station. If set to false , this adds only the minimum NVs required to run EC- <i>gfx</i> Program.
	You can automatically create the NVs and CPs if necessary by using the Build function. To minimize EC-Net memory usage, it is important to remove unused points by using the Trim function. See <i>Linking, Building and Trimming LonWorks Component objects in EC-Net</i> in the <u>EC-gfxProgram User Guide</u> for how to use the Build and Trim functions.
Lonworks Settings - Auto Refresh Device Specific	If set to true , this enables values to be automatically read from the device when an nci proxy enters a subscribed state. This refreshes values in EC-Net, when the value is modified in the controller, for example, by a ComSensor.
Lonworks Settings - Device Specific Poll Frequency	This sets the LONWORKS network's tuning policies which affects the status of the driver's proxy points. Choose a poll frequency group to use for evaluating both <i>write requests</i> (e.g., to writable proxy points) as well as the acceptable "freshness" of <i>read requests</i> from polling (Slow, Normal, Fast).

Parameter	Description
Lonworks Settings	This controls LONMARK object layout on the property sheet for specific
- Wire Sheet Layout Settings	device types.
Lonworks Settings	If set to true , this postpones change type requests made by EC-
- Postpone Offline Nv Change Types	<i>gfx</i> Program while the device is offline. The change type is done when the device returns online and is in a commissioned state.
Lonworks Settings	If set to true , message tags are not used.
- Disable Client Add Msg Tags	If set to false , nodes can declare bi-directional message tags that can be used to both send and receive messages. If message tags bindings are used, the Lon Link Manager displays their status in a fashion similar to that used to display network variable bindings.
Lonworks Settings	If set to true , this maintains compatibility for controllers operating with LNS versions less than or equal to 3.0.
	If set to false , this accelerates nv change types.
Lonworks Settings	If set to true , a binding must use a binding link type.
- Force Binding Link Type	If set to false , a binding does not have to use a binding link type.
Lonworks Settings	Link type to use: Unknown, Standard, Reliable, Critical, Authenticated, or
- Binding Link Type	Poll Only.
Lonworks Settings	Number of LonWorks FTP protocol retries.
- Ftp Retries	
Lonworks Settings	Number of bytes per LonWorks FTP protocol packet.
- Ftp Segment Size	
Lonworks Settings	Network Variables category to exclude from the Data Recovery Service
- Mode Set Non Critical Nvs	management.
Wizard Settings	Numeric precision for floating point numbers displayed by the proxy
- Default Numeric Point Precision	points created with the Create Points device action.
Wizard Settings	Uses the EC- <i>gfx</i> Program block property description to be created as a
- Create Proxy Point Description	description property under proxy points created with the Create Points device action. This description can ultimately be used to provide descriptive information on a Px Graphic Page.
Installed Version	The currently installed WizardService version. This version number corresponds to the currently installed support package version.

Parameter	Description
License Manager	Shows the license status for the Distech Controls Support Package
- Wizard Service Licensed	services (WizardService, RestService, and RadiusService) on the current station. This is true when the service is licenced on this station and is available. When using Distech Controls controllers with a Distech
- Radius Service	Controls EC-Net station, these services are available by default.
Licensed	If you are running EC-Net 4 and your Niagara license file has a brandID
- Rest Service Licensed	other than distech or distechEU , you will require a license to enable the WizardService, RestService, and RadiusService. See <i>Licensing the EC-Net Support Package for a Non-Distech Controls Brand Station</i> .
WizardService_LonLeg acy	A Wizard service extension to manage the application-specific and line by line programmable LONWORKS controllers. See <i>WizardService</i> <i>LonLegacy</i> .
RestService	Not applicable to LONWORKS controllers.
RadiusService	Not applicable to LONWORKS controllers.
Refresh	Click to reset the fields to the last saved values of the WizardService .
Save	Click to save any changes made to the fields of the WizardService .

WizardService LonLegacy

If there is a LONWORKS service that was installed prior to version 3.2 on the Station, it will automatically be migrated under the *WizardService_LonLegacy* part of the property sheet where the previous configuration parameters are preserved.

 WizardService_LonLegacy 	Bcp Server
📄 Status	{ok}
📔 Fault Cause	
📔 Enabled	true 🗸
📔 Port	1930
Max Clients	5
📔 Temp Transmit Timer	Milli Sec512 -
📔 Client Path	C:\LonWorks\Apps\Bcs\bin\
📔 Version	2.7
Number Connections	0
🕨 🤺 Wizard Settings	Bcp Wizard Settings
🗎 Units	Metric -

Parameter	Description
Status (read only)	This field displays the status of the BCP Server. If the server is enabled (the Enabled field set to True), an {ok} status will be displayed. If the server is disabled (the Enabled field set to False), an {disabled} status will be displayed.

Parameter	Description
Fault Cause (read only)	If there is a problem with the WizardService , this field will list the possible cause of the problem.
Enabled	This field enables or disables the WizardService_LonLeagacy. Enable the server by setting this field to True . Likewise, the server can be disabled by setting this field to False .
Port	Set the port that the station is use to communicate with EC-Net. The default port is 1930.
Max Clients	This is the maximum number of clients (wizards) that can be simultaneously running. The default is 5.
Temp Transmit Timer	Sometimes, certain LONWORKS devices may process LONWORKS messages "slower than normal," resulting in errors when you do commissioning or binding operations – where the commission or bind reports as failed. You can confirm such problems by using the Lon Utilities Manager (afterwards) and running a verify report. The verify report will list the inconsistencies between the bindings on the devices, and the list of bindings that EC-Net's LON network management determines that they should have.
	Under these conditions, it may be necessary to raise the transmit timer setting upwards to Milli Sec1024 .
Client Path	This is the client path where the application to launch the EC-Net Wizards is found. It is recommended that this field not be modified.
Version (read only)	This field displays the current version of the legacy Wizard Service communication protocol.
Number Connections (read only)	Number of clients (wizards) currently running and using the WizardService.
Wizard Settings	Stubs container that allows the reuse of EC-Net categories for managing access rights to these applications.
Units	This field determines the default unit of measurement when a wizard is launched.

Server Connections

The server connection parameters can be viewed as shown below.

1	Server Connections (Bcp Ser	ver Connections)
	📔 Keep Alive Delay 👘 0002	4h 00m 00s 🛋 [10secs-+inf]
•	📔 Load Manager 👘 Load	Manager
	🗎 Enable	🔵 true 🗸
	📔 Full Load Delay	00000h 00m 40s 🚆 [0ms-+inf]
	📔 Full Load Threshold	100 % [0-100]
	Detected Overload	false
•	Connection1	@ 10.2.60.57:65401 : admin
	📔 Inet Address	10.2.60.57:65401
	📔 User Name	admin
	📔 Application Name	EC-gfaFrogram
	Authentication Type	Workbench
	Protocol Version	3.0
	📔 Login Time	30-Jun-2016 02:11 PM EDT
	📔 Last Transaction Time	30-Jun-2016 02:12 PM EDT
	📔 Tunnel Address	
	📔 Tunnel Port	

Parameter	Description	
Server Connections - Keep Alive Delay	Set the delay after which an idle connection is disconnected. This is calculated from the Last Transaction Time shown below in the connection.	
Server Connections - Load Manager	The load manager disrupts BACnet and LONWORKS EC- <i>gfx</i> Program debugging sessions for heavily loaded stations in order to avoid watchdog resets.	
	Enable: Enable the load manager.	
	Detected Overload becomes true when the platform CPU (%) remains above the Full load Threashold for a duration at least equal to the Full load delay .	
	EC- <i>gfx</i> Program debugging will be disrupted when the Detected Overload flag becomes true .	
	The flag is reset with the reset action available on the Load Manager : right-click Load Manager and select Reset .	

Parameter	Description
Server Connections	Inet Address: The Station name or IP address of the PC or Client
- Connection1	
- Connection2	User Name : The user name from the Workbench or EC- <i>gfx</i> Program used to connect to the EC-Net.
	Application Name: The name of the connected application.
	Authentication Type: How the application connected. Workbench or Digest (launch from desktop).
	Protocol Version: The bcp protocol version.
	Login Time: The time the connection was established.
	Last Transaction Time: The time of the last transaction.

Setting the WizardService Comm Config Properties

If Auto Update is set to True, the current Comm Config properties from the WizardService define the master LONWORKS network settings that will overwrite the Lon Comm Config settings of all BcpLonNetwork property sheets when:

- The EC-BOS is rebooted
- A wizard connection is made (see Launching EC-gfxProgram)
- The settings on this page are saved
- By right-clicking **Comm Config** and selecting **Actions** > **Update Networks**.

For a LONWORKS network to best be able to handle the traffic while configuring and debugging Distech Controls controllers, it is important to use the following settings: Ensure the **Repeat Timer** dropdown is set to **Milli Sec96**. Ensure the **Receive Timer** dropdown is set to **Milli Sec384**. Ensure the **Transmit Timer** dropdown is set to **Milli Sec512**. Ensure the **Retry Count** field is set to **3**. The **Comm Config** settings can be applied to all **BcpLonNetwork** property sheets by right-clicking **Comm Config** and selecting **Actions** > **Set To Default**.

Sometimes, certain LONWORKS devices may process LONWORKS messages "slower than normal," resulting in errors when you do commissioning or binding operations – where the commission or bind reports as failed. You can confirm such problems by using the Lon Utilities Manager (afterwards) and running a verify report. The verify report will list the inconsistencies between the bindings on the devices, and the list of bindings that EC-Net's LON network management determines that they should have.

Under these conditions, it may be necessary to raise the transmit timer setting (shown as **Temp Transmit Timer**) upwards to **Milli Sec1024**.

If the EC-BOS operates with one or more LONWORKS networks that have other requirements for the **Comm Config** setting, then it is very important to set **Auto Update** to **False**. This prevents the **Lon Comm Config** settings of all **BcpLonNetwork** property sheets from being overwritten when the EC-BOS reboots or when EC-*gfx*Program is started.

• Nav	Property Sheet					
🕒 🖸 🔀 🚫 My Network	Comm Config (Communication Config)					
 My Network My Host: INF-DSK-197.DistechControls.loc My Host: INF-DSK-197.DistechControls.loc Interpretation Station (Boiler_Room) Interpretation Alarm Config Services SackupService SackupService Server Connection: Server Connection: Server Connection: Bacnet Settings Chonworks Settings 	Image: Comm Config (Communication Config) Image: Repeat Timer Milli Sec96 Image: Repeat Timer Milli Sec34 Image: Transmit Timer Milli Sec512 Image: Repry Count Image: Repry Count Image: Auto Update Image: True					
🕨 🎦 Comm Config						
Wizard Settings						
Vizard Service_Lon						
RestService	💭 Refresh	ave				

You can access the Comm Config property sheet:

- From the Nav side bar, right-click Comm Config, select Views > Property Sheet.
- From the Nav side bar, select **Comm Config**, click the *View Selector* and select **Property Sheet**.
- 1. If all LONWORKS networks can use the same communication settings shown above, set **Auto Update** to **True**.

Otherwise set **Auto Update** to **False** and click **Save**. Skip to Setting the BcpLonNetwrok Properties.

- Right-click Comm Config and select Actions > Set To Default. This sets the appropriate values necessary for use with Distech Controls controllers.
- 3. Click Save to accept the changes.

•	🗱 Wizard Service			
	Server Connections			
	Bacnet Settings			
	Lonworks Settings			
	🔰 🕨 Comm Config – 🌒 –	16		
	🕨 📲 Wizard Settings	views	4	
	WizardService_LonLegacy	Actions	►	Set To Default
	RestService	New	Þ	Update Networks

Parameter	Description
Set To Default	This sets the default values recommended by Distech Controls for Repeat Timer , Receive Timer , Transmit Timer , and Retry Count .
Update Networks	This pushes the current Comm Config properties from the WizardService to overwrite the Lon Comm Config settings of all BcpLonNetwork property sheets.

Organizing devices in Device Folders

Use a device folder to group similar devices together (for example, by floor). Create these folders first and then add the controllers directly into the appropriate folder.

1. Double-click the **BcpLonNetwork** driver in the Nav Side Bar. This will display the LONWORKS Network database in the View Pane. Click **New** Folder.

🧊 Na	×	
?	1st_Floor	
	OK Cancel	

- 2. Name the new folder and click OK.
- 3. Double-click the folder to go into it.
- 4. When adding a controller, add it directly into the folder.

Adding a Device to the Network Database

NOTE: In order to add, configure, and/or monitor LONWORKS devices, there must be a LONWORKS Network already established in the station. See *Installing a LONWORKS Network* and *Configuring the LONWORKS BcpLonNetwork*.

Once the LONWORKS Network has been configured, devices can be added to the LONWORKS Network that is running from the EC-BOS station.

If the **WizardService** has not been installed, it will automatically be installed when you add a device to the station. However you will still need to configure the **WizardService** service. See *Configuring the WizardService*.

To add devices to the LONWORKS Network:

1. From the **distechControls** palette, install the device driver: Expand the *Drivers* folder and drag and drop the **BcpLonworksDevice** driver from the **distechControls** palette onto the **BcpLonNetwork** tree.



2. Give the device a descriptive name. Click **OK** to add the device driver on the station.



The driver will appear below **BcpLonNetwork** in both the Nav Side Bar and the View Pane. In the View Pane the device will be highlighted in yellow. This means that the device has yet to be commissioned.

3. Right-click the device and select [Device Model] and set the controller's model.



4. In the **Model Selector** popup, select the controller's model type from the list and click **OK**.

Model Selector	×
	•
Ok Cancel	

Wait for a *Build Success* message from EC-Net. When the controller's points are built, the Commission button becomes available in the BcpLonNetwork commissioning screen. See *Commissioning the device*.



Commissioning the device

Once a device has been added to the LONWORKS Network it must be commissioned. The device can be commissioned using two methods; via the device's service pin or by manually entering the device's Neuron ID number.

Commissioning the Device via the Service Pin

 Double-click BcpLonNetwork under the Station then select the device (highlighted in yellow) and click Commission. The Commission window will appear.

Database									2 objects
Name		Туре	Model	Exts	State	Subnet	Node	Fault Cause	Manufactur 🛱
📩 Local Lon Device	e	Local Lon Device		0	Config Online	1	127		tridium
🖀 BcpLonworksDe	evice	Bcp Lonworks Device	ECL_400	θ	Unknown	1	2		
Image: Commission X Neuron ID 00 00 00 Image: Commission Apply Cancel Service Pin									
New Folder New Edit Discover Cancel Add Match Commission Replace Quik Learn AppDownLoad									

2. Click Service Pin and then press the Service pin button on the device.

Wait for the **Lon Commission** progress bar to complete. The device is now ready to be configured. Notice that the state of the device changed from *Unknown to Config Online*.

- 3. Wait for a Lon Commission Success message from EC-Net.
- **4.** In the device's property sheet, the **Commissioned** property is **true**. This means the device is properly commissioned (domain, subnet, and node in the database are the same as those in the device).
- 5. Upload the transient (nvs) and persistent (ncis and cps) data from the device. See *Device Upload*.

Commissioning the Device Manually

To commission a device with its Neuron ID, the device must be online. When the network is offline, you can assign Neuron IDs to devices. When the network becomes online, continue with step 3.

 Right-click the BcpLonworksDevice either in the Nav Side Bar or in the View Pane, select Views > AX Property Sheet. This will open the device's property sheet in the View Pane.



2. Expand the **Device Data** tree and enter the device's Neuron ID number in the **Neuron ID** field. Click **Save** when finished.

Pr	roperty Sheet	
2	BcpLonworksDevice1 (E	3cp Lonworks Device)
	📔 Status	{down,alarm,unackedA
	📔 Enabled	🔵 true 🔽
	📔 Fault Cause	
Þ	🖵 Health	Fail [30-Jun-16 3:36 PM EDT] Neuron id is
Þ	🚺 Alarm Source Info	Alarm Source Info
T.	攝 Device Data	Device Data
L	📔 Neuron Id	00 00 00 00 00 00
	📔 Program Id	00 00 00 00 00 00 00 00
	📔 Node State	Unknown
	📔 Subnet Node Id	1/3
	📔 Location	

3. Once the network is available, go to the LONWORKS Network database (by double-clicking on the **BcpLonNetwork** entry in the Nav Side Bar). Select the device and click **Commission**.

Database									
Name	Туре	Model	Exts	State	Subnet	Node	₽		
📩 Local Lon Devic	e Local Lon Device		θ	Config Online	1	127			
🆀 600K_AHU	Bcp Lonworks Device		•	Config Online	1	3			
🗊 Commissi	ion	×							
Neuron ID 🚺	7 00 02 30 7b 00								
Apply	Apply Cancel Service Pin								
4									
🗈 New Folder 🚺 New 🖍 Edit 💏 Discover 🕒 Cancel 📀 Add						I			
Comm	Commission 🕅 Replace 🍖 Quik Learn 🛃 AppDownLoad								

4. In the **Commission** window, the device's Neuron ID number is shown in the **Neuron ID** field. Click **Apply**.

The device is now ready to be configured. Notice that the state of the device changed from *Unknown* to *Config Online*.

- 5. Wait for a *Lon Commission Success* message from EC-Net.
- 6. In the device's property sheet, the **Commissioned** property is **true**. This means the device is properly commissioned (domain, subnet, and node in the database are the same as those in the device).
- 7. Upload the transient (nvs) and persistent (ncis and cps) data from the device. See *Device Upload*.

EC-Net Device Upload and Download

Device Upload

Upload reads transient (nvs) and persistent (ncis and cps) data from the device and writes to the station's database (Lon device). This is necessary when adding a new device to the EC-Net database. Proceed as follows.

1. Right-click the device and select Actions > Upload.



2. An *Upload* dialog box allows you to select the type of data. Typically, you leave dialog parameters at their default settings (true)—recursive is always recommended. Click **OK**.

🗊 Upload	×
📔 Bcp Upload Parameters	
Recursive true	-
Dpload Transient 🕒 true	•
📔 Upload Persistent 🔵 true	-
📔 Allow Nv Type Change 🔵 true	-
OK Cancel	

NOTE: An **Upload** action is also available at the **BcpLonNetwork** level—with the same Upload dialog selections as shown in the figure above. This provides a "global upload" from all Lon devices.

Device Download

Download writes persistent data (ncis and cps) to the device from values in the station's database (Lon device). This is necessary when you add or modify blocks in your code that are available as network variables while the controller is offline. Proceed as follows.

1. Right-click the device and select Actions > Download.
| Database | | Launch Wizard
Nv Link Mark | | | | | 3 obje | ects |
|----------------|----------|-------------------------------|---|--------------|---------------|--------|--------|------|
| Name | | | | Exts | State | Subnet | Node | ₽. |
| 📩 Local Lon De | vice | | | θ | Config Online | 1 | 127 | |
| 🆀 400K_AHU | <u>.</u> | . Views | • | ⊕⊕ | Config Online | 1 | 2 | |
| 🖀 600К_АНО | • | Actions | • | Ping | | 1 | 3 | |
| | 45 | New | • | Uploa | ad | | | |
| | | | | <u>D</u> owr | iload 📐 | | | |

 A Download dialog box allows you to select recursive writes. Typically, you leave recursive at default (true), to write to all child data items. Use Download to restore nci and cp values to "known good" values, as previously saved in the station. Click OK.

🕡 Download	×
📔 Download Parameters	
📔 Recursive 🔵 true	-
OK Cancel	

NOTE: A **Download** action is also available at the **BcpLonNetwork** level with the same Download dialog selections as shown in the figure above. This provides a "global download" from all Lon devices.

Discovering an Existing Network

There are instances where a LONWORKS Network will be created in EC-Net at a site that already has one created. This requires that the existing network be "discovered" and then added to the LONWORKS Network being created in EC-Net.

 Double-click the BcpLonNetwork driver in the Nav Side Bar. This will display the LONWORKS Network database in the View Pane. Click Discover. The View Pane will become divided into two sections; one listing the LONWORKS Network database and the other listing all discovered devices.

📀 💏 Lon Dis	cover							S	luccess	>	×
Discovered										3 о	bjects
Device Name	State	Subnet	Node	Manu	ufacturer	Prog	gram Id		Neuro	on Id	Ę
ECL, VAVS		1	107			80 00	0 83 55 02	bf 04 02	07 00	0c 20 2	2 00
ECL_400		1	2			80 00) 83 04 0a	bf 04 01	07 00 (0c 30 4	2 00
ECL_800		1	3			80 00) 83 04 0a	bf 04 06	07 00 (02 30 7	ь оо
Database										10	objects
Name	Туре		Model	Exts	State		Subnet	Node	Fault C	ause	Ma ₽
📩 Local Lon D	evice Local Lo	n Device		θ	Config Onlir	ne 1	1	127			
4					_						
New Fo	lder 🛛 🚺 N	ew	🖋 Edit		Discover		Can	cel	(•) Ad	d	≻ м
1	Commission		Replace	2	늖 Quik Lea	arn	. .	AppDow	nLoad	I	

- If the controllers are discovered, skip to *step 12*. If the controllers are not discovered, the controllers may have been previously commissioned with another **Domain Id**. For example, ECC-VAVs and EC-Displays are factory commissioned with a **Domain Id Length = 6** and **Id = fb 58 b2 40 f1** 3f. The solution is to:
 - a. Change the Domain Id of the BcpLonNetwork to that of the controller.
 - **b.** Add the controller to the database.
 - c. If necessary, change the **Domain Id** of the **BcpLonNetwork** back to the original number (EC-Net updates the **Domain Id** of all devices in the database).
 - **d.** Commission the device to update the **Domain Id** of all devices in the database.
- 3. Press the Service Pin on the device. The device appears in the Discovered devices list. Note the device Name.
- 4. Right-click the **BcpLonNetwork** in the Nav Side Bar, select **Views** and then **Lon Utilities Manager**.



5. In the Device drop-down list, select the device that was found with the Service Pin. Set Command to Data Structs and SubCommand to Domain Table. Click Execute.

📀 🕺 Util Cmd	Success	≫	×
Results			
04-Jul-16 3:30:55 PM EDT			
Domain table for 1/2,80 00 83 04 0a bf 04 01	_		
Index Subnet Node Auth key Domain Len Domain Id	l		
0 1 2 ff ff ff ff ff 1 04 1 Not in use	-		
	-		
Device: 1/2,80 00 83 04 0a bf 04 01, 07 00 0c 80 00 83 04 0a bf 04		F	
Command: Data Structs SubCommand: Domain Table		Rec C	ute

- 6. If the domain length and domain ID are the same as the **BcpLonNetwork** properties, skip forward to *step 11*.
- 7. Note the Domain Length and Domain ID for this device.
- 8. Right-click the BcpLonNetwork in the Nav Side Bar, select Views and then AX Property Sheet.



9. Set the **Domain Length** and **Domain ID** to that of the Device.

Property Sheet							
🖰 BcpLonNetwork (Bcp Lo	on Network)						
🗎 Status	{ok}						
📔 Enabled	🔵 true 🔽						
📔 Fault Cause							
🕨 🖵 Health	Ok [04-Jul-16 3:39 PM EDT]						
Alarm Source Info	Alarm Source Info						
Monitor	Ping Monitor						
🕨 🚊 Lon Comm Config	Lon Comm Config						
Poll Service	Bcp Lon Poll Service						
🔻 ≽ Lon Netmgmt	Bcp Lon Netmgmt						
📔 Domain Id	Length: 1 - Id: 04						
🗎 Authenticate	🛑 false 🔽						
📔 Authentication K	ey ff ff ff ff ff ff						

- 10. Click Save.
- **11.** Double-click the **BcpLonNetwork** driver in the Nav Side Bar. This will display the LONWORKS Network database in the View Pane. Click **Discover**. The View Pane will become divided into two sections; one listing the LONWORKS Network database and the other listing all discovered devices.
- **12.** To add the discovered devices, select them, and click **Add**. The *Add* window will appear. Click **OK**.

🕼 Add									×
Name	Туре		State	Channel Id	Subnet	Node	Working Domain	Program Id	Neuron Id
a	Bcp Lonv	vorks Device		1	1	2		80 00 83 04 0a bf 04 01	07 00 0c 30
 Name Type State Channel I Subnet Node Working I Program Neuron Io Enabled Lon Xml I 	Id Domain Id d File	Bcp Lonwo Config Onlin 1 2 80 00 83 07 00 0c true Cannot edit	04 0a bf 04 30 42 00	01					
•									F
				ОК	Can	cel			



Multiple controllers can be added to the network at the same time. Hold the **Ctrl** key and select all the devices to be added to the network then click **Add**.

13. The discovered devices have been added to the LONWORKS Network database.

									Suc	cess ≫	×
										0 o	bjects
e Subnet Node M	lanufacturer	Progr	am Id Neuror	n Id							te
										4	obiosto
										4	objects
Туре	Model	Exts	State	Subnet	Node	Fault Cause	Manufacturer	Program Id	Neuron Id	Enabled	Loi 🛱
Local Lon Device		θ	Config Online	1	127		tridium	90 00 8e 01 03 80 00 03	00 d0 71 10 22 34	true	null
Bcp Lonworks Device	ECL_400	00	Config Online	1	2		Distech Controls	80 00 83 04 0a bf 04 01	07 00 0c 30 42 00	true	null
Bcp Lonworks Device	ECL_600	••	Config Online	1	3		Distech Controls	80 00 83 04 0a bf 04 06	07 00 02 30 7b 00	true	null
Bcp Lonworks Device	ECL_VAVS	00	Config Online	1	107		Distech Controls	80 00 83 55 02 bf 04 02	07 00 0c 20 22 00	true	null
											Þ
D N	ew Folder	L Du	New F	dit di	Disco	ver 🛛	Cancel (A)	dd 🔰 Match 🔻			
	curotaci		, v		a bise	-		au producin			
	1	Commi	ssion 🔊	Replace		Quik Learn	🛃 AppDown	Load			
	Type Local Lon Device Bcp Lonworks Device Bcp Lonworks Device	Subnet Node Manufacturer Type Model Local Lon Device ECL_400 Bcp Lonworks Device ECL_400 Bcp Lonworks Device ECL_VAVS ECL_WAVS ECL_WAVS ECL_VAVS E	Type Model Exts LocalLon Device Bcp Lonworks Device ECL_400 Bcp Lonworks Device ECL_400 Bcp Lonworks Device ECL_400 Bcp Lonworks Device ECL_400 Bcp Lonworks Device ECL_VAVS Bcp Lonworks Device ECL_VAVS Commit	Subnet Node Manufacturer Program Id Neuror Type Model Exts State Local Lon Device ELL_400 Exp Lonworks Device ECL_400 Exp Lonworks Device ECL_400 Exp Lonworks Device ECL_VAVS Config Online Exp Lonworks Device ECL_VAVS Config Online Exp Lonworks Device ECL_VAVS Commission	Subnet Node Manufacturer Program Id Neuron Id Type Model Exts State Subnet Local Lon Device Gonfig Online 1 Bep Lonworks Device ECL_400 Gonfig Online 1 Bep Lonworks Device ECL_400 Gonfig Online 1 Bep Lonworks Device ECL_400 Gonfig Online 1 Device ECL_400 Device E	Subnet Node Manufacturer Program Id Neuron Id Type Model Exts State Subnet Node Local Lon Device ELL_400 Bep Lonworks Device ECL_400 Be	E Subnet Node Manufacturer Program Id Neuron Id Type Model Exts State Subnet Node Fault Cause Local Lon Device CL_400 ⊕ Config Online 1 127 Bep Lonworks Device ECL_400 ⊕ Config Online 1 2 Bep Lonworks Device ECL_400 ⊕ Config Online 1 3 Bep Lonworks Device ECL_VAVS ⊕ Config Online 1 107 New Folder New Folder New Fedit Piscover Config Online 1 107 Commission Replace @ Quik Learn	z Subnet Node Manufacturer Program Id Neuron Id Type Model Exts State Subnet Node Fault Cause Manufacturer Local Lon Device ⊕ Config Online 1 127 tridium Bep Lonworks Device ECL_400 ⊕ © Config Online 1 2 Distech Controls Bep Lonworks Device ECL_500 ⊕ © Config Online 1 3 Distech Controls Bep Lonworks Device ECL_VAVS ⊕ © Config Online 1 3 Distech Controls Bep Lonworks Device ECL_VAVS ⊕ © Config Online 1 107 Distech Controls Bep Lonworks Device ECL_VAVS ⊕ © Config Online 1 107 Distech Controls Bep Lonworks Device ECL_VAVS ⊕ © Config Online 1 107 Distech Controls © New Folder ⊙ New ✓ Edit ♠ Discover ● Cancel ⊙ Ar	z Subnet Node Manufacturer Program Id Neuron Id Type Model Exts State Subnet Node Fault Cause Manufacturer Program Id Local Lon Device Bep Lonworks Device ECL_400 Bep Lonworks Device ECL_400 Bep Lonworks Device ECL_600 Bep Lonworks Device ECL_600 Bep Lonworks Device ECL_400 Bep Lonworks Device E	Suc 2 Subnet Node Manufacturer Program Id Neuron Id Type Model Exts State Subnet Node Fault Cause Manufacturer Program Id Neuron Id Local Lon Device Bep Lonworks Device ECL_400 Bep Lo	Success 0 o 2 Subnet Node Manufacturer Program Id Neuron Id Type Model Exts State Subnet Node Fault Cause Manufacturer Program Id Neuron Id Enabled Local Lon Device CL_400 ⊕ Config Online 1 127 tridium 9000 Be 0103 800 03 00 d0 71 1022 34 true Bep Lonworks Device ECL_400 ⊕ Config Online 1 22 bitech Controls 8000 83 00 83 04 0a bf 04 06 07 00 02.307 b0 true Bep Lonworks Device ECL_600 ⊕ Config Online 1 3 Distech Controls 80 00 83 50 2b f 04 02 07 00 02.20 0 true Bep Lonworks Device ECL_VAVS ⊕ Config Online 1 107 Distech Controls 80 00 83 55 02 bf 04 02 07 00 02.20 0 true E New Folder New Felit Discover Cancel ⊙ Add >> Match + Commission Replace Quik Learn AppDovenLoad

14. If necessary, set the **Domain Length** and **Domain ID** to the one you want all network devices to operate on. Right-click the **BcpLonNetwork** in the Nav Side Bar, select **Views** and then **AX Property Sheet**.

Property Sheet	
🖰 BcpLonNetwork (Bcp Lo	on Network)
📔 Status	{ok}
📄 Enabled	🔵 true 🔍
📔 Fault Cause	
🕨 🖵 Health	Ok [04-Jul-16 3:59 PM EDT]
🕨 🚺 Alarm Source Info	Alarm Source Info
Monitor	Ping Monitor
🕨 員 Lon Comm Config	Lon Comm Config
Poll Service	Bcp Lon Poll Service
🔻 ≽ Lon Netmgmt	Bcp Lon Netmgmt
📔 Domain Id	Length: 1 - Id: 01
Muthenticate	🛑 false 🔍
📔 Authentication K	ey ff ff ff ff ff ff
Link Descriptors	Descriptor Table

NOTE: It is recommended that the Domain Id be set to a length of 1 and an id of 01 whenever possible.

15. Click Save.

16. Commission the devices. See *Commissioning the device*.

Matching Devices

There are instances when a site has an existing LONWORKS Network and there is a LONWORKS Network database already established in EC-Net for that site. In this instance it would be necessary to match the devices from the site to the devices in the LONWORKS Network database. To match devices:

- Double-click the BcpLonNetwork driver in the Nav Side Bar. This will display the LONWORKS Network database in the View Pane. Click Discover. The View Pane will become divided into two sections; one listing the LONWORKS Network database and the other listing all discovered devices.
- 2. Select the device from the *Discovered* section and the device it is to be matched to from the Database section and click **Match**.

🕗 💏 Lon Dis	cover											Suc	cess ≫	×
Discovered													2	objects
Device Name	State	Subnet	Node	Manut	facturer	Program Id		Neuror	n Id					(‡
ECL_400	Unconfigure	d 1	2	Distect	h Control	80 00 83 04 0a	bf 04 01	07 00 00	30 42 00					
ECL_600	Unconfigure	d 1	3	Distect	h Control	80 00 83 04 0a	bf 04 06	07 00 02	2 30 7b 00					
Database													3	obiects
Name	Туре		Мо	del	Exts	State	Subnet	Node	Fault Cause	Manufacturer	Program Id	Neuron Id	Enabled	Loi 🛱
📩 Local Lon D	evice Loca	Lon Device			θ	Config Online	1	127		tridium	90 00 8e 01 03 80 00 03	00 d0 71 10 22 34	true	null
ECL_VAVS	Bcp L	onworks Devi	ce ECL	_VAVS	•	Config Online	1	107		Distech Controls	80 00 83 55 02 bf 04 02	07 00 0c 20 22 00	true	null
ECL_400	Bcp L	onworks Devi	ce ECL	_400	θ	Unknown	1	2		Distech Controls	80 00 83 04 0a bf 04 01	00 00 00 00 00 00 00	true	null
4	📧 New Folder 🔒 New 🖋 Edit 🎽 Discover 🔳 Cancel 📀 Add >> Match								Þ					

AppDownLoad 📙 Replace

3. The Match window will appear. Click OK to match the devices.

🐗 Match								×
Name 1	Туре	State	Channel Id	Subnet	Node	Working Domain	Program Id	Neuron Id
🖀 . 🛛 E	Bcp Lonworks Devic	e ConfigOnline	1	1	2	0	80 00 83 04 0a bf 04 01	07 00 0c 30
Name Type State Channel Id Subnet Node Working Du Program Id Neuron Id Enabled Lon Xml Fi	Cannoted ConfigOr d 1 2 0 d 80 00 8 07 00 0 0 true ille Cannoted	it Iline 3 04 0a bf 04 c 30 42 00	01					
•								ŀ
			ОК	Can	cel			

The devices are now matched and added to the LONWORKS Network database.

Launching EC-gfxProgram

EC-*gfx*Program allows the user to program and/or configure an EC-*gfx*Program compatible device through the EC-Net platform.

NOTE: The EC-*gfx*Program application must be installed on the PC running EC-Net before it can be launched.

Use any of the following methods to open EC-gfxProgram:

- Running the EC-gfxProgram Application.
- Running EC-gfxProgram from your PC's Desktop (or from Microsoft Windows' All Programs).
- Launching EC-gfxProgram through an EC-BOS or EC-Net Pro.

EC-gfxProgram can also be launched from a Px Page. See Launching ECgfxProgram from a Px Page using a LaunchButton Widget.

NOTE: A device's EC-Net EC-gfxProgram application can only be used from one location at a time. For example, if one user at one PC has a particular EC-gfxProgram application open, another user at another PC cannot access that same EC-gfxProgram application.

Running the EC-gfxProgram Application

An EC-Net Wizard allows the user to program and/or configure an EC-*gfx*Program compatible device through the EC-Net platform. Those familiar with LNS networks would recognize these wizards as plug-ins. The look and functionality of the wizards are just like LNS Plug-ins. 1. Open EC-*gfx*Program by right-clicking the device in the Nav Side Bar, and selecting Launch Wizard. The EC-*gfx*Program splash screen appears.

🕹 🗹 បំ 🖻 🗟	; [} @ © ⊕ Q						- 🗆 ×
File Home	Drawing V	/iew Tools					📔 🛈 About
Copy U Cut U Paste	Undo 🕂 Duplica Redo 🚍 Selecta Delete 🗹 Auto I	ate ab All Find Replace Increment Object Object	Add Add Froje	Synchronize Work Offline	Stop	ages	^
Toolbox	4 х	New Programming Sheet	x			P	roperties 📮 🗙
Search in all toolbo. Distech Controls Comparator Constants & Custom	xxes via s via Variables via						PageSize Che size of the programming sheet.
Code Library	4 ×					P	roject Explorer 🛛 📮 🗙
		<				· · · ·	 My Project New Programming Sheet
Output 👎 🗙	Error List 🛛 🕂 🗙	Statistics 4 X	Resource Viewer	ą	X Search Results 4 X	Watch List 4	X Task Viewer 4 X
Validation done. ^ 2016-07-04 17:17:50 Build started 2016-07-04 17:17:50 Running post- build tasks 2016-07-04 17:17:50 Build succeeded	Message	Code space usage: 1 2 / 1 ^ RAM usage: / 500 eleme Compiled in: 0.000 secor Objects U Boolean Constant : 0 / 1 Boolean Value: 0 / 124 Calendar : 0 / 2 (0%) ComSensor : 0 / 12 (0%) Enum Constant : 0 / 62 / ¥	Hardware IOs Wireless In Refresh All Refresh Sel Number Nar Type Des	iected Gript Default Present Value Value Mode For	t t	Delete Go To Source Variable Name	Cancel Task Name

Running EC-gfxProgram from your PC's Desktop

Run EC-*gfx*Program from your PC's desktop (or from Microsoft Windows' All Programs) as follows.

1. Click / double click either EC-*gfx*Program icon in the Start menu (left) or on the desktop (right).



2. Enter the connection information to the building controller and click OK.

Connect To	o Server	? ×
ß	Server type: Lor Parameters	n AX v
5	Connection mode:	Direct connection \checkmark
	Server address:	localhost
	Server port:	1931
	Usemame:	admin
	Password:	
		OK Cancel

Parameter	Description
Server type	To connect to a LONWORKS network through EC-Net, set the Server type to Lon AX .
Connection Mode	Select Direct connection when the IP address of the EC-BOS or EC-Net Pro building controller is directly accessible from your PC (the address of which is set in Server address).
Server address	The building controller's (or Target Host's) IP address. If the IP address is unknown for an EC-BOS, use the System Shell procedure documented under Recovery Tips in the <u>EC-BOS Install and Startup Guide</u> . This document can be downloaded from the Distech Controls website at <i>www.distech-controls.com</i> .
Server port	By default, this is 1931 .
Username	Enter your username for the EC-Net station's (or Target Host's) Station.
Password	Enter your password for the EC-Net station's (or Target Host's) Station.

- 3. Click OK. The Select Devices window appears.
- 4. Select the device to open in EC-*gfx*Program and click **OK**.

Select Device		?	\times
▲ 유 10.2.60.71 ▷ 유 BcpLonNetwork			
0	K	Cance	

5. The device's EC-*gfx*Program code appears.

Launching EC-gfxProgram through an EC-BOS or EC-Net Pro

When logged in to an EC-BOS or EC-Net Pro station, launch EC-*gfx*Program as follows.

1. Double-click **BcpLonNetwork** in the tree and then click **Discover** to find the available devices on the network.

File Edit Search Bookmarks Tools	Window Manage	er Help							l	Q Quick Search	
] 🖿 – 💾 🛛	8 G 🕞 🗶	(i Ba	× 5	Ċ.	9 ⁴ .	0		• • > >	🗵 🍓 »
10.2.60.71 (Boiler_Room) : Station (Boiler_Room) : Co		: BcpLonNetwork								🖊 🛛 Bcp L	on Device Manager
- Nav	📀 💏 Lon Discover									Suc	:cess ≫ 🗙
🚽 🔿 🗵 🔇 My Network 🔹	Discovered										0 objects
V Stiller My Host: INF-DSK-197	Device Name State	e Subnet Node M	lanufacture	er Prog	ram Id Neuro	n Id					(¢
My File System											
My Modules											
 Distform 	Database										4 objects
Station (Boiler Doom)	Name	Туре	Model	Exts	State	Subnet	Node	Fault Cause	Manufacturer	Program Id	Neuron Id 🛛 🛱
	📩 Local Lon Device	Local Lon Device		θ	Config Online	1	127		tridium	90 00 8e 01 03 80 00 03	00 d0 71 10 22 34
Config	VAV107	Bcp Lonworks Device	ECL_VAVS	0	Config Online	1	107		Distech Controls	80 00 83 55 02 bf 04 02	07 00 0c 20 22 00
Gervices	a00K_AHU	Bcp Lonworks Device	ECL_400	•	Config Online	1	2		Distech Controls	80 00 83 04 0a bf 04 01	07 00 0c 30 42 00
Orivers	a 600K_AHU	Bcp Lonworks Device	ECL_600	••	Config Online	1	3		Distech Controls	80 00 83 04 0a bf 04 06	07 00 02 30 7b 00
NiagaraNetwork											
🔻 👩 BcpLonNetwork 🚽 📮											ſ
Local Lon Device	4										
VAV107		🔁 New Fold	ler 🔒	New	💉 Edit 🔤	Disco	ver	Cancel	🕀 Add	►> Match 👻	1
▶ 🚡 400K_AHU			A Commi	ission	Replace	.	Duikte	arn 📕 🗛	nnDownLoad		
▶ 600K_AHU			/ 201111		NT webiner						

- 2. The discovered devices for the network are listed.
- **3.** Launch the EC-*gfx*Program application by right-clicking the device and select **Launch Wizard**.

• Nav	O 💏 Lon Discover	
🚽 🔉 🔀 My Network	Discovered Launch Wizard	
	Device Name Stat Nv Link Mark er Program Id Neuron Id Nv Link From Nv Link To	
- 🗢 10.2.60.71 (Boiler_Room)	Database Views	
Zer Platform	Name Actions Exts State Subnet N	lode
Alarm	Local Lon Device New Device Config Online 1 12	27
Config	VAV107	07
Gervices		
Drivers	600K_AHU Make Template Gonfig Online 1 3	
NiagaraNetwork	C <u>u</u> t Ctrl+X	
👻 😁 BcpLonNetwork	<u>C</u> opy Ctrl+C	
Local Lon Device	4	

4. The device's EC-gfxProgram appears.

○ C C P R R A A C C C					- 🗆 ×
File Harris Device View	Tasla				About
Copy O Undo Duplicate % Cott © Redo Select All @ Paste @ Delete ✓ Auto Increm Clipboard Editing	Find Replace G Object Object Object	ynchronize Work Offline	Generate Debug Message Round Debug Values Clear Debug Values Debugging	25	· · · · · · · · · · · · · · · · · · ·
Toolbox 7 ×	w Programming Sheet 🗙			Pro	perties 4 X
Search in all toolboxes Distech Controls Comparators Constants & Variables Custom Cust				P2 Th sh	PageSize {Width=1100, ^ Zoom 100 geSize e size of the programming eet.
CodeLibrary 🕂 🗙				Pro	ject Explorer 🛛 📮 🗙
				4	My Project
<				× *	New Programming Sheet
Output 4 X Error List 4 X Statis	istics 4 × Resource Viewer	φ X	Search Results 🦊 🗙 🛛	Vatch List 🛛 🕂 🗴	Task Viewer 📮 🗙
Validation done. A Message Cod	de space usage: 12 / A Hardware IOs Wireless Inputs			Delete Go To Source	Cancel
17:17:50 Build Com	Musage: / 500 eleme Refresh All Refresh Selecter	d 🏺		 Variable Name 	Task Name
an texture 2016;47:704 17:17:50 baid tasks 2016;47:704 17:17:50 Baid tasks Cale 17:17:50 Buid Succeded v < > <		Default Present Mode Format Value Value Mode Format		د ›	< >>

Launching the Scheduler Configuration Wizard (ECP Series)

For controllers that support schedules, launch the scheduler wizard as follows:

1. Launch the Scheduler Configuration Wizard by right-clicking the device. Select **Wizards** and from the list select a **Schedule**.



2. To configure the Scheduler Configuration Wizard (for ECP Series controllers only), see *Scheduler Configuration Tool* in the <u>EC-gfxProgram User</u> <u>Guide</u>.

Launching the Real-Time Clock Configuration Wizard (ECP Sereis Controllers)

For controllers that have a real time clock, launch the RTC plug-in as follows:

1. Launch the Real-Time Clock Configuration Wizard by right-clicking the device. Select **Wizards** and from the list select **Rtc**.

1enu aylight Saving Time biect Manage	□ Finable Daylight Saving Time	Device Date/Time
bout	General	Date: //
	Offset: 60 minutes	Time:
	Start Time	Get System Time
	Time: 2:00	Get Device Time
	Day: SECOND V DAY_SUN V	
	Month: MARCH	Set Device Time
	End Time	Update Period
	Time: 2:00	60 seconds
	Day: FIRST V DAY_SUN V	
	Month: NOVEMBER -	

2. To configure the RTC Configuration Wizard (for ECP Series controllers only), see *Real Time Clock Configuration Tool* in the <u>EC-gfxProgram User</u> <u>Guide</u>.

Launching EC-gfxProgram from a Px Page using a LaunchButton Widget

By adding a LaunchButton widget to a Px Page, a user can launch any action found by right-clicking the device and selecting **Wizards**. This includes launching EC-*gfx*Program. The Px page must be displayed through one of the WbWeb profiles to work. Add a LaunchButton to a Px Page as follows:

1. Expand the *Widgets* folder and drag and drop the **LaunchButton** widget from the **distechControls** palette onto the Px Page.



- 2. Double click the Launch button on the Px Page to open the Properties window. Configure the button's look and behavior in the Image Button section.
- 3. Under the Bcp Command Binding, click ... in Ord.

▲ Bcp Comm	and Binding	×
ord	null	
degradeBehav	None	-42
commandInde	0	
	OK Cancel	

4. Select the device for the LaunchButton wizard action: select **Component Chooser** from the Ord dropdown list.



- 5. In the *Select Ord* window, select the device for the LaunchButton wizard action under **Drivers**, **BcpLonNetwork**. Set the type to **Slot**. Click **OK**.
- 6. Set the button behavior when the service is unavailable in **degradeBe**havior.
- 7. Set the Wizard to launch in the **commandIndex**. This number corresponds to the list of wizards shown when you right-click the device selected above for the LaunchButton wizard action and select **Wizards**.

For example, by right-clicking the device and selecting **Wizards**, the following options are shown (**EC_gfxProgram**, **Rtc**, **Scheduler 1**, and **Scheduler 2**). For the LaunchButton wizard to launch the first item (**EC_gfxProgram** (EC-*gfx*Program), set the **commandIndex** to **0**. To launch the second item (Rtc), set the **commandIndex** to **1**. To launch the third item (**Scheduler 1**), set the **commandIndex** to **2**. To launch the fourth item (**Scheduler 2**), set the **commandIndex** to **3**.





If there is only a **Launch Wizard** and no **Wizards** selection, there is only one wizard available for this device. Set the commandIndex to 0 to launch this wizard.

8. Click Save.

9. Click **I** to toggle the view/edit mode to View. Click the LaunchButton widget to test its behavior.

CHAPTER 3 Getting Started on EC-Net for ECB and ECY Series Controllers

This chapter provides a detailed explanation of how to configure an EC-BOS as a building controller with EC-Net installed on your PC. This includes installing EC-*gfx*Program, adding a device to a network database, and launching EC-*gfx*Program.

Topics

Pre-Configuration Checklist and Configuration Overview Installing EC-gfxProgram Installing the Distech Controls Distribution File on the EC-BOS Adding the Wizard Service to the Station Configuring the WizardService Installing a Bcp BACnet Network Installing the BACnet Communication Port(s) Tuning the Proxy Point Policies Organizing Controllers in the Device Folder Creating Station Users Configure the REST and Radius Services (for ECY Series controllers) Discovering BACnet Devices Setting the Max Master and Max Info Frames on all MS/TP Devices (ECB Series) Launching EC-gfxProgram Launching EC-gfxProgram from a Px Page Using a LaunchButton Widget (ECB Series Controllers Only)

Pre-Configuration Checklist and Configuration Overview

	EC· lice req ora	<i>-gfx</i> Program requires that the EC-BOS, EC-Net Pro, and EC-Net be nsed for version 3.5 or higher. Furthermore, ECY Series controllers uire that in Platform Administration, the Java Virtual Machine should be cle-jre-qnx-ppc .
Pre- Configuration Steps	Bef lauı allo	ore installing EC- <i>gfx</i> Program, adding a device to a network database, and nching EC- <i>gfx</i> Program, the following steps must first be carried out to w EC-Net to support the controllers:
	1.	Install EC-Net Pro on your computer.
	2.	Install the latest version of the Distech Controls EC-Net Support Package on your computer. The EC-Net Support Package installs many jar files required in EC-Net such as distechControls.jar , which contains the required services and Distech Controls devices. The latest Support Pack- age can be installed by using the Distech Controls SmartInstaller soft- ware. The Distech Controls SmartInstaller software can be downloaded from the Distech Controls website at <i>www.distech-controls.com</i> .
		If you are running EC-Net 4 and your Niagara license file has a brandID other than distech or distechEU , you will require a license to enable the WizardService, RestService, and RadiusService. See <i>Licensing the EC-Net Support Package for a Non-Distech Controls Brand Station</i> .
	3.	Connect to an EC-BOS or EC-Net Pro station. If the IP address is unknown for an EC-BOS, use the System Shell procedure documented under <i>Recovery Tips</i> in the <u>EC-BOS Install and Startup Guide</u> . This document can be downloaded from the Distech Controls website at <i>www.distech-controls.com</i> .
Configuration	The	e following steps are detailed in procedures on the following pages.
Steps	1.	Install EC- <i>gfx</i> Program.
	2.	Install the Distech Controls EC-BOS distribution file through the platform Distribution File Installer.
	3.	Add the WizardService to the station.
	4.	Configure the WizardService .
	5.	Add a BcpBACnet Network to the station.
	6.	Add a BACnet MS/TP Communication Port, a BACnet IP Communication Port, or both to the BcpBacnet Network.
	7.	Tune the proxy point Policies.
	8.	To support ECY Series controllers, configure the REST and Radius services.
	9.	Create device folders into which controllers will be organized.
	10.	Discover BACnet Devices.

- **11.** Set the Max Master and Max Info Frames on all MS/TP Devices.
- **12.** Launch device wizards to run EC-*gfx*Program.
- **NOTE:** When first logging in to the platform, the default platform username is **distech** and the default password is **controls**.

Installing EC-gfxProgram

To program a controller, the EC-*gfx*Program application must be installed. This application has its own setup file and requires its own installation. EC-*gfx*Program must be installed as follows:

- 1. Close any programs that are running on the PC.
- 2. Go to the Software Center, which can be downloaded from the Distech Controls website at *www.distech-controls.com*.
- 3. In the EC-gfxProgram tab, select Distech Controls EC-gfxProgram.

EC-NE	T R2 Platform UL-864 UUKL Miscel ECLYPSE Platform EC-NET AX Pla	llaneous tform LNS Plat	form EC-gfxPr	ogram APB - N	XE XIF		
File	lame	Information	Local Version	Latest Ver	File Size	File Details	^
Ap	plications Distech Controls EC-gfxProgram	Not installed		5.5.16154	49.8 MB	<u>View readme</u>	
	Distech Controls Xpressgfx Points	Not installed		1.3.16139	13.1 MB	<u>View readme</u>	
	Distech Controls ECB-103	Not installed		2.13.16138	253.4 kB	View readme	
	Distech Controls ECB-2x3 Distech Controls ECB-3x0	Not installed Not installed		2.13.16138 3.10.16138	287.1 kB 370.4 kB	<u>View readme</u> View readme	
	Distech Controls ECB-4x0	Not installed		3.10.16138	372.7 kB	View readme	
	Distech Controls ECB-6x0	Not installed		3.10.16138	382.0 kB	View readme	
	Distech Controls ECB-VAV Distech Controls ECB-VAVN	Not installed Not installed		2.13.16138 2.13.16138	297.6 kB 256.1 kB	<u>View readme</u> <u>View readme</u>	
	Distech Controls ECB-VAVS Distech Controls ECB-VAVSO	Not installed Not installed		2.13.16138 2.13.16138	264.1 kB 257.8 kB	<u>View readme</u> View readme	
	Distech Controls ECB-VVTS	Not installed		2.13.16138	262.4 kB	View readme	~
Total de	ownload size : 49.8 MB	CALC & STORED		Display mod	e:	VIEW (EQUIDE	
Aut	omatically install files after download			Show all file	es		~

- 4. Run the Setup file and follow the installation instructions.
- **NOTE:** When installing EC-*gfx*Program and your PC does not have the Bonjour service installed, a link to install the Bonjour service is provided. The Bonjour service must be installed on your PC to allow your PC to discover ECY Series controllers by their hostname.

Installing the Distech Controls Distribution File on the EC-BOS

Install the Distech Controls distribution file onto the EC-BOS to ensure all of the required modules and files are correctly installed.

1. Expand the platform tree in the Nav side bar and double-click **Distribu**tion File Installer. This will open the *Distribution File Installer* in the View Pane.



 Click on Choose Directory at the bottom of the page and navigate to the location of the Support Package. These files are usually found in the /Niagara/EC-NET[Version#]/Distech Controls Files/ directory on the C: drive. Click OK.



3. Install the *DistechControls_EC-BOS* distribution file through the platform *Distribution File Installer*. Select the distribution file and click **Install**.

/C:/Niagara/EC-Net4-	Controls Files]		
1 distribution files were found in directory "	w/8C-Met4-4.1.27.20/Datech C	ontrols File	"	
File	Version	Status	Description	₽
DetechControls_EC-805-4_14_1_34223_1.464	Datech Controls 4.1.36223.1	Modified	EC-805-4 distribution	
Choose Directory	▲ Cleaning ▲ Cor	version	🕙 Backups	Install

4. EC-Net will then inform you that any running station(s) must be closed in order to continue. Click **Finish**.

Ø Distribution File Installer	×
Distribution File Installer Stopping application(s)	
Running applications must be stopped before installation can proceed. Choose 'Finish' to stop the applications and perform the software installation.	
Back Next / Finish Cance	el –

5. If any application needs to be stopped, allow the platform to stop them.

Installing Distribut	ion		
Installing			
Stop running application(s)	Running		
Install software	Not Started		
Restart application(s)	Not Started		
Stoppin A req	g All Applications juest has been sent to stop all running applications. Please pplications have finished shutting down. This may take se <u>Abort</u>	X wait until everal minutes.	
	Cancel		

6. The *Installing Distribution* window will appear to display the progress of the distribution files installation. Click **Close** when done and allow some time for the EC-BOS to reboot.

lnstalling Distribution	×
Installing Distribution	
Installing: Stop running application(s) Success Installsoftware Success Reboot host Success Installation complet. Wrote "/home/niagara/shared/Distech Controls Files/bcsv2DefaultValues/EcpPtua.b1". Wrote "/home/niagara/shared/Distech Controls Files/bcsv2DefaultValues/EcpPtua.b1". Wrote "/home/niagara/shared/Distech Controls Files/bcsv2DefaultValues/EcpPtuaCt.b1". Wrote "/home/niagara/shared/Distech Controls Files/bcsv2DefaultValues/Ecp200.b1". Wrote "/home/niagara/shared/Distech Controls Files/bcsv2DefaultValues/Ecp2002.b1". Wrote "/home/niagara/shared/Distech Controls Files/bcsv2DefaultValues/Ecp203.b1". Wrote "/home/niagara/shared/Distech Controls Files/bcsv2DefaultValues/Ecp203.b1". Wrote "/home/niagara/shared/Distech Controls Files/bcsv2DefaultValues/Ecp403.b1". Wrote "/home/niagara/shared/Distech Controls Files/bcsv2DefaultValues/Ecc401.b1". Wrote "/home/niagara/shared/Distech Controls Files/bcsv2DefaultValues/Ecc401.b1". Wrote "/home/niagara/shared/Distech Controls Files/bcsv2DefaultValues/Ecc401.b1". Wrote "/home/niagara/shared/Distech Controls Files/bcsv2DefaultValues/Ecc401.b1". Wrote "/home/niagara/shared/Distech Controls Files/bcsv2DefaultValues/Ecu401.b1". Wrote "/home/niagara/shared/Distech Controls Files/bcsv2DefaultValues/Ecv401.b1". Wrote "/home/niagara/shared/Distech Controls Files/bcsv2DefaultValues/Ecv401.b1". Wrote "/home/niagara/shared/Distech Controls Files/bcsv2DefaultValues/Ecv401.b1". Wrote "/home/niagara/shared/Distech Controls Files/bcsv2DefaultValues/Ecc9Ecu401.b1". Wrote "/home/niagara/shared/Distech Controls Files/bcsv2DefaultValues/Ecc9Ecu401.b1". Wrote "/home/niagara/shared/Distech Controls Files/bcsv2DefaultValues/Ecc9E	*
FileStore::commitInstance commit complete Remote host rebooting. Installation complete.	Ŧ
Close	Þ

Adding the Wizard Service to the Station

Install the WizardService on the station to allow EC-*gfx*Program to connect to the EC-BOS.

- 1. Connect to the station on the EC-Net platform. Right-click the station and select **Connect**.
- **NOTE:** If this is the first time that the station is accessed, by default, the station will not be displayed. Click **File > Open > Open** Station (or by pressing **Ctrl+Shift+O** from your keyboard) to open the Open Station window. Proceed to step 2.
- 2. Enter the required Username and Password to access the station.
- 3. Click the **Open Palette** button in the Palette side bar to open the *Open Palette* selection window.

 Palette 	2
Open Palette	V
Open Palette	

- NOTE: If the Palette side bar is not open in the Side Bar Pane, click Windows > Side Bars > Palette to add the Palette side bar.
- 4. Select **distechControls** from the *Open Palette* selection window and click **OK**. This will add the **distechControls** palette to your Palette side bar.

elect one or more pale	ttes to open, or just start typing:	Browse
Module	Description	Ţ
box	Building Object eXchange Protocol	<u>+</u>
boxAnalyzer	Building Object eXchange Analyzer	
con	CCN Driver	
chart	Chart API	
control	Niagara Control Module	
dashboard	Dashboards for Niagara	
distechControls		
docDeveloper	Niagara Software Developer Documentation	
driver	Niagara Driver Framework	
driverUpgrade	Niagara tool to support upgrades to new module	
	FIDNLETID D.S	

5. Install the WizardService: Drag and drop the WizardService from the distechControls Palette into the Station's Services tree.

• Nav
😫 🖸 🔀 🚫 My Network 🔽
 My Host: INF-DSK-197.DistechControls.local 10.2.60.71 (Boiler_Room)
Platform
Station (Boiler_Room)
 Services Mizard Service Drive Apps
• Palette
🖿 🗙 🔊 🧴 🔽
- O Services
🕨 🔆 Wizard Service 🚽 🔍 🗧
Drivers

NOTE: The *Services* tree is found within the *Config* tree of the station.

6. Click OK to add the WizardService on the station.

🧊 Name			×
Nizar	dService		
	ОК	Cancel	

Configuring the WizardService

The WizardService must be configured by defining parameters such as the communication port and/or the number of simultaneous connections. The *WizardService* property sheet can be accessed:

- From the Nav side bar, double-click **WizardService** in the *Services* tree of the station.
- From the Nav side bar, right-click WizardService, select Views > Property Sheet.

X	Wiz	izardService (Bcp Service)				
		Status	{ok}			
	1	Fault Cause				
	ŗ,	Enabled	🔵 true 🔽			
	ŋ	Licensed	true			
		Port	1931			
		Max Connections	10			
	5	Version	3.7			
	5	Min Version	3.0			
	I)	Number Connections	0			
•	Ø	Server Connections	Bcp Server Connections			
		📔 Keep Alive Delay 👘 0002	24h 🔟 m 00s 🚆 [10secs-+inf]			
	•	📔 Load Manager 👘 Load	Manager			
		📔 Enable	🔵 true 🤜			
		📔 Full Load Delay	00000h 00m 40s 💐 [0ms-+inf]			
		📔 Full Load Threshold	100 % [0 - 100]			
		Detected Overload	false			
	1)	Supported Field Bus	Bacnet, Lonworks			
•	۲	Bacnet Settings	Bcp Service Bacnet Settings			
		📔 Temporary Apdu Timeou	ut 450 ms [0 - 5000]			
		📔 Bcp Device Def	332, IRC*; 332, RCB*; 364, ECB*; 364, ECY*			
		📔 Default Enable Writable I	Proxies 🛑 false 🗸			
		Differe Proxy Read Status	Flags 🛑 true 🔽			
Þ	ŋ,	Lonworks Settings	Bcp Service Lonworks Settings			
Þ	*	Wizard Settings	Bcp Wizard Settings			
	ŋ,	Installed Version	4.1.16243.1			
Þ	L)	License Manager	Bcp Service License Manager			
Þ	0	WizardService_LonLegacy	Bcp Server			
Þ	*	RestService	Rest Service			
Þ	1	RadiusService	Radius Service			

Parameter	Description	
Status (read only)	This field displays the status of the BCP Server. If the server is enabled (the Enabled field set to True), an {ok} status will be displayed. If the server is disabled (the Enabled field set to False), an {disabled} status will be displayed.	
Fault Cause (read only)	If there is a problem with the WizardService, this field will list the possible cause of the problem.	
Enabled	This field enables or disables the WizardService. Enable the server by setting this field to True . Likewise, the server can be disabled by setting this field to False .	
Licensed	This is true when the WizardService is licenced on this station and is available. When using Distech Controls controllers with a Distech Controls EC-Net station, these services are available by default.	
	If you are running EC-Net 4 and your Niagara license file has a brandID other than distech or distechEU , you will require a license to enable the WizardService, RestService, and RadiusService. See <i>Licensing the EC-Net Support Package for a Non-Distech Controls Brand Station</i> .	
Port	Set the port that the station is use to communicate with EC-Net. The default port is 1931.	
Max Connections	This is the maximum number of connections (wizards) that can be simultaneously running. The default is 5.	
Version (read only)	This field displays the current version of the Wizard Service communication protocol.	
Min Version (read only)	The minimum required version of the Wizard Service communication protocol that is required for this service to operate.	
Number Connections (read only)	Number of clients (wizards) currently running and using the WizardService. See <i>Server Connections</i> .	
Server Connections - Keep Alive Delay - Load Manager - Connection	Sets the server connection parameters. See <i>Server Connections</i> . The number of supported connections is set in Max Connections .	
Supported Field Bus	List the network types supported by the WizardService.	
Bacnet Settings	BACnet transaction timeout used by the wizards.	
- Temporary APDU Timeout		
Bacnet Settings - Bcp Device Def	This defines the device manufacturer's models which are recognized as a compatible BACnet device.	

Parameter	Description
Bacnet Settings - Default Enable Writable Proxies	Enable writable proxies when created with point manager.
Bacnet Settings - Force Proxy Read Status Flags	Read status flag for proxy points.
LonWorks Settings	Not applicable to BACnet controllers.
Wizard Settings - Default Numeric Point Precision	Numeric precision for floating point numbers displayed by the proxy points created with the Create Points device action.
Wizard Settings - Create Proxy Point Description	Uses the EC-gfxProgram block property description to be created as a description property under proxy points created with the Create Points device action. This description can ultimately be used to provide descriptive information on a Px Graphic Page.
Installed Version	The currently installed WizardService version. This version number corresponds to the currently installed support package version.
License Manager - Wizard Service Licensed - Radius Service	Shows the license status for the Distech Controls Support Package services (WizardService, RestService, and RadiusService) on the current station. This is true when the service is licenced on this station and is available. When using Distech Controls controllers with a Distech Controls EC-Net station, these services are available by default.
Licensed - Rest Service Licensed	If you are running EC-Net 4 and your Niagara license file has a brandID other than distech or distechEU , you will require a license to enable the WizardService, RestService, and RadiusService. See <i>Licensing the EC-Net Support Package for a Non-Distech Controls Brand Station</i> .
WizardService_LonLeg acy	Not applicable to BACnet controllers.
RestService	It may be necessary to configure these services to support advanced
RadiusService	Services (for ECY Series controllers).
Refresh	Click to reset the fields to the last saved values of the WizardService.
Save	Click to save any changes made to the fields of the WizardService.

Server Connections

The server connection parameters can be viewed as shown below.

Ð	Server Connections (Bo	p Serve	r Connecti	ons)	
	📔 Keep Alive Delay	00024h	00m 00s	🛋 [10secs - +in	f]
-	📔 Load Manager	Load Ma	anager		
	📔 Enable	[🔵 true	•	
	📔 Full Load Delay	[00000h 00)m 40s 🚆 [Om	s-+inf]
	📔 Full Load Thresh	old	100	96 [0 -	100]
	Detected Overlo	ad	🛑 false		
•	Connection1	EC-ghP	@	10.2.60.57:65	401 : admin
	📔 Inet Address		10.2.60	.57:65401	
	📔 User Name		admin		
	Application Nam	e	EC-gfa9	rogram	
	Authentication T	ype	Workben	ch	
	Protocol Version		3.0		
	📔 Login Time		30-Jun-	2016 02:11	PM EDT
	📔 Last Transaction	Time	30-Jun-	2016 02:12	PM EDT
	📔 Tunnel Address				
	Tunnel Port				

Parameter	Description
Server Connections - Keep Alive Delay	Set the delay after which an idle connection is disconnected. This is calculated from the Last Transaction Time shown below in the connection.
Server Connections - Load Manager	The load manager disrupts BACnet and LONWORKS EC- <i>gfx</i> Program debugging sessions for heavily loaded stations in order to avoid watchdog resets.
	Enable: Enable the load manager.
	Detected Overload becomes true when the platform CPU (%) remains above the Full load Threashold for a duration at least equal to the Full load delay .
	EC- <i>gfx</i> Program debugging will be disrupted when the Detected Overload flag becomes true .
	The flag is reset with the reset action available on the Load Manager : right-click Load Manager and select Reset .

Parameter	Description
Server Connections	Inet Address : The Station name or IP address of the PC or Client Application making this connection.
- Connection1 - Connection2	User Name : The user name from the Workbench or EC- <i>gfx</i> Program used to connect to the EC-Net.
	Application Name: The name of the connected application.
	Authentication Type: How the application connected. Workbench or Digest (launch from desktop).
	Protocol Version: The bcp protocol version.
	Login Time: The time the connection was established.
	Last Transaction Time: The time of the last transaction.

Installing a Bcp BACnet Network

In the following procedure, you will add a Bcp BACnet Network; assign the network number and Device ID for the BACnet IP network. It is useful to have an organized numbering scheme that makes it easier to keep track of a device's MAC Address, Instance Number, and Network Number that is assigned to it. See the <u>Network Guide</u> for an example of such a numbering Scheme.

- **NOTE:** The Bcp BACnet Network provides extended functionality to the standard BACnet Network for enhanced support for Distech Controls controllers in EC-Net. Third party BACnet devices can be added to the Bcp BACnet Network and used as they would in the standard BACnet Network.
- 1. Install the BACnet Network: Double-click **Drivers** in the **Nav** tree for your station and click **New**.



2. From the **Type to Add** drop-down list, select **Bcp Bacnet Network**. Add one (1) BACnet networks in **Number to Add**.

🐗 New	×
Type to Add 🕙 Bcp Bacnet Network	•
Number to Add 1	
OK Cancel	

3. Accept the default settings: Click OK.

Name		Туре	Enabled	R
🖰 BcpBacnet	tNetwork	Bcp Bacnet Network	true	
Name	BcpBac	netNetwork		
📄 Туре	Bcp Ba	cnet Network	-	
📄 Enabled	🔵 true	-		

 Double-click Local Device found under the BACnet driver and set the Device ID (shown as **Object ID**). This must be a unique number for this device in the entire BACnet network internetwork. The valid range is 0 to 4194302. Click **Save**.

File Edit Search Bookmarks Tools Window	Help	Q Quick Search
🔹 🕨 🖬 🖬 🖬 👘 🖓 🐻 🛄 🖬 🕇	▥▥▯ଢੑੑੑ & る ◻ ▫ × ヽ ↗	
10.2.60.71 (Boiler_Room) : Station (Boiler_Room) : Config : (vers : BcpBacnetNetwork : Local Device	🖍 🛛 AX Property Sheet 🔸
- Nav	Property Sheet Country Countr	A
 Inc.2.60.71 (Boiler_Room) Platform 	Image: Status {fault} Image: Status Invalid Object ID Image: Status device	
 Station (Boiler_Room) Alarm 	System Status Operational System Status Tridium	
Gonfig Gervices	Wendor Id 36 Model Name Niagara4 Station	
Onicia NiagaraNetwork OBCPBacnetNetwork	Im Firmware Revision 4.1.27.20 Application Software Version Distech Controls 4.1.1618 Acation Acation	52.1
Local Device Bacnet Comm	Description Local BACnet Device object Description Local Pachet Device object	ct
Monitor	Protocol Revision	÷

 If you have other devices to communicate with BACnet IP, for example, an ECY Series controller, expand Bacnet Comm in the Nav tree, and then double-click Network. Expand IP Port and set the Network Number (1 to 65534). Expand Link and set the Adapter and IP Device Type. Click Save.

For an EC-Net Pro, select the PC's Ethernet card to be used for the BACnet network. For an EC-BOS, select the **Onboard Ethernet Adaptor en0** when using the LAN1 (pri) LAN connector for this BACnet network connection and select the **Onboard Ethernet Adaptor en1** when using the LAN2 (sec) LAN connector for this BACnet network connection.

The IP Device Type options are as follows:

- **Standard**: Select this when connected to a LAN; however an Internet WAN connection (through an IP router) is not required for BACnet intranetworking.
- Foreign Device: Not applicable.

 Bbmd: Select this when connected to a LAN and an Internet WAN connection is required for BACnet intranetworking using BACnet/IP Broadcast Management Device protocol. This allows BACnet communications to pass through standard IP routers, along with proper routing configuration.

The **BACnet BBMD Address** is the internet network address when BBMD is enabled for remote connectivity. The valid rage is 1 to 65534.



 Enable the IP port: Expand Network and right-click IpPort, select Actions > Enable.



Installing the BACnet Communication Port(s)

BACnet communication ports need to be added to the BcpBacnet Network according to the type of BACnet controller you will be connecting to:

- For ECB Series controllers, add a BACnet MS/TP Communication Port. See *Installing the BACnet MS/TP Communication Port*.
- For ECY Series controllers, Configure the IP communication network port on the EC-BOS and add a BACnet IP Communication Port. See *Installing the BACnet IP Port*.

If both ECB Series controllers and ECY Series controllers are going to be used, add a BACnet MS/TP Communication Port and a BACnet IP Communication Port to the BcpBacnet Network.

Installing the BACnet MS/TP Communication Port

In the following procedure, you will assign the network number and MAC Address to the BACnet MS/TP network. It is useful to have an organized numbering scheme that makes it easier to keep track of a device's MAC Address, Instance Number, and Network Number that is assigned to it. See the <u>Network Guide</u> for an example of such a numbering scheme.

To communicate with BACnet MS/TP devices, install the BACnet MS/TP driver.

 Install the BACnet MS/TP port to the communication port of the BACnet Network: Expand NetworkPorts found under Drivers > Bacnet in the distechControls palette, and Drag and drop MstpPort from the Palette to the Network tree.



2. Give the BACnet MS/TP port a name and click OK.

🇊 Na	me	×
?	MstpPort	
	OK Cancel	

- **3.** Double-click the **MstpPort** in the tree and give this BACnet MS/TP network its unique **Network Number**.
- Expand Link and set the Port Name to COM1 or COM2 as labelled on the EC-BOS' nameplate), set the Baud Rate to Baud_38400 (recommended), set the Mstp Address to 0 (this is the MAC Address of the EC-BOS on the BACnet MS/TP network – it must be 0), set the Max Master, and click Save.
- **NOTE:** When commissioning a BACnet MS/TP Data Bus, it is useful to start with the **Max Master** set to 127 so as to be able to discover all devices connected to the data bus. Then, once all devices have been discovered and the MAC Addressing is finalized by eliminating any gaps in the address range, set the **Max Master** (maximum MAC Address) in the EC-BOS (Building Controller) to the highest Master device's MAC Address number to optimize the efficiency of the data bus. See Setting the Max Master and Max Info Frames on all MS/TP Devices (ECB Series).



 Enable the BACnet MS/TP port: Right-click MstpPort and select Actions > Enable.


Installing the BACnet IP Port

You must connect to the configuration Web interface of a new ECY Series controller to change its IP address according to your network planning documentation. See the <u>ECLYPSE User Guide</u> for more information.

In the following procedures, you will install the BACnet IP port and assign the network number to the BACnet IP network. It is useful to have an organized numbering scheme that makes it easier to keep track of a device's MAC Address, Instance Number, and Network Number that is assigned to it. See the <u>Network Guide</u> for an example of such a numbering scheme.

To communicate with BACnet IP devices, install the BACnet IP port.

 Install the BACnet IP port into the BACnet communications network: Expand NetworkPorts found under Drivers > Bacnet in the distech-Controls palette, and Drag and drop IpPort from the Palette to the Network tree.



2. Give the BACnet IP port a name and click **OK**.

🏿 🗱 Na	ime	×
?	IpPort	
	OK Cancel	

3. Double-click the **IpPort** in the tree and give this BACnet IP network its unique **Network Number**.

 Expand Link and set the Ethernet port to use in Adapter. If you connected the ECY Series controller(s) to the LAN2 Ethernet port, then select DM1.

- Nav	2	Property Sheet
 My Network Station (Boiler_Room) Alarm Config Config Services Config Services NiagaraNetwork BcpBacnetNetwork Local Device Bacnet Comm Client Server 		 Ip Port (Network Port) Network Number 364 Chick B/IP (10.2.60.71:0xBAC0) Standard Adapter dm0 Adapter 10.2.60.71 Ip Address 10.2.60.71 Udp Port 0xBAC0 Ip Device Type Standard Bbmd Address null Registration Lifetime +00000h 15m 00a dddeed Broadcast Distribution Table BDT: 0 entries Foreign Device Table Foreign Device Table Status {disabled}
 Image Transport Image Network 		Fault Cause Fault Cause BacnetMultiPoll
Router Table	_	Max Devices max
Ip Port		Fnabled false
MstpPort MstpPort	· ·	Port Id 1 Port Info Annex J IP

 Enable the BACnet IP port: Right-click IpPort and select Actions > Enable.



Tuning the Proxy Point Policies

By using the **Bcp Bacnet Network** driver, an EC-BOS or EC-Net Pro has Tuning Policies set by default to not write values in the controllers when the EC-BOS or EC-Net Pro starts up or reboots due to its use of the **BcpPolicy** tuning policy. This is the behavior most often required by users. The **BcpPolicy** tuning policy is used as the default policy during proxy point generation.

NOTE: Under certain circumstances, it may be necessary to write values to the controllers when the EC-BOS or EC-Net Pro startup or reboot. For a complete description the station's proxy point tuning policies for BACnet network devices, or to create exceptions for network variables that must be overwritten by the station, refer to the <u>EC-Net Drivers</u> <u>Guide</u>. See 'About Tuning Policies'.

Organizing Controllers in the Device Folder

Use a device folder to group similar devices together (for example, by floor). Create these folders first and then add the controllers directly into the appropriate folder.

 Double-click the BcpBacnetNetwork driver in the Nav Side Bar. This will display the BACnet Network database in the View Pane. Click New Folder.

🧊 Na	me	×
?	1st_Floor	
	OK Cancel	

- 2. Name the new folder and click OK.
- 3. Double-click the folder to go into it.
- 4. When adding a controller, add it directly into the folder.

Creating Station Users

User access rights ensure secure access to the BMS by authorized users only. In EC-Net users are managed under the UserService. The service pack adds the **Radius User Config** and **Mobile Web Profile** to each user's profile.

An EC-Net station can be used as a RADIUS server for one or more ECY Series controllers. This centralizes user access management to all ECY Series controllers across the BMS. This is configured under a user's profile in **RadiusConfig**.

Software applications are available that allow remote connection to connected controllers. This is configured under a user's profile in **Mobile Web Profile**.

Add users to the station and configure their profile as follows.

- Add all users to the station that will authenticate themselves when accessing an ECY Series controller. Double-click UserService under Station > Config > Services and click New.
- 2. Create a user with a username and password.
- 3. Click OK.
- 4. Double-click the new user.
- 5. Under Wizard Service Config, set Enable Write to false to prevent a user from writing to the controller from a mobile application. If this user is allowed to remotely change controller parameters, set Enable Write to true.
- To enable this user to authenticate themselves when accessing an ECY Series controller, set their access rights in RadiusConfig options. Click Save.

🕨 📔 RadiusConfig 🛛 🛛 🛛 Rest;

Parameter	Description
Admin	Allows user access to the ENVYSION studio and viewer. The user can also view and modify all configuration interface parameters and program the controller with EC-gfxProgram.
Operator	Allows user access to the ENVYSION interface in viewing mode as well as gives partial access to the ECLYPSE Web Configuration Interface. Certain configuration interface screens are unavailable such as User Management, Viewer Information, etc.
Viewer	Allows user access to the ENVYSION interface in Viewing mode. The user is not allowed to access the ECLYPSE Web Configuration Interface.

Parameter	Description
Rest	Allows a user to program an ECY Series controller with EC-gfxProgram.
	To program one or more ECY Series controllers with EC- <i>gf</i> xProgram through this EC-Net station:
	 A 'REST user' must be created such that this REST user's login and pass- word can be authenticated on those ECLYPSE controllers. This REST user must have the REST user access rights option enabled.
	2. The RestService must be configured on the EC-Net station with this REST user's login and password.
	See Configuring the REST Service for more information about this option.
	This user does not have access to the ECLYPSE Web Configuration Interface or ENVYSION.

Configure the REST and Radius Services (for ECY Series controllers)

From Service Pack V3.9, new REST and Radius services were added to the EC-Net Station under **Station > Config > Services > WizardService**. Both these services must be configured to support advanced ECY Series controller features.

Configuring the REST Service

The REST service allows EC-gfxProgram to pass-through an EC-Net station to communicate with ECY Series controllers. EC-gfxProgram connects to EC-Net through the WebService and EC-Net connects to an ECY Series controller through the RestService.

For this, all ECY Series controllers operating under EC-Net need to be configured in their ECLYPSE Web interface under **Server Settings** to use the corresponding settings for HTTP / HTTPS parameters set in the procedure below.

The RestService uses a 'REST user' credential (username and password) to connect to an ECY Series controller. This credential is required in the procedure below. As such, all ECY Series controllers must be configured in their ECLYPSE Web interface under **User Management** to be able to authenticate this REST user. If an ECY Series controller is using:

- This EC-Net station as its Remote Radius Server, then a new REST user profile needs to be created under Station > Config > Services > UserService of this station (see Adding a REST User to the UserService). This REST service user profile must have Rest enabled under RadiusConfig. In the ECY Series controller's Web Configuration Interface User Management screen, set it to use this EC-Net station as its RADIUS server for remote authentication. The ECY Series controller then authenticates the REST user login using this EC-Net station's Radius server.
- A remote RADIUS server to authenticate user access (another ECY Series controller or Microsoft Windows Domain Active Directory server for example), then a new REST user profile needs to be created on that RADIUS server. In the ECY Series controller's Web Configuration Interface **User Management** screen, set it to use this remote RADIUS server for authentication.
- Local user management, then a new REST user profile needs to be created on each ECY Series controller that EC-Net will be connecting to. In the ECY Series controller's Web Configuration Interface User Management screen, add a REST user to the Local User Management.

The **User Management** screen of each ECY Series controller must be individually configured.

Use an uncommon username for this service for the REST user's credential, such as **Rest67service** or **RestServiceUser29**, for example. Avoid the use of the default **admin** user, where this commonly-known username is one half of a username / password combination, the use of which would facilitate an attack. For both the WebService and RestService, it is strongly recommended to use HTTPS to encrypt communication channels to keep passwords secure by preventing eavesdropping.

If the RestService credential cannot be authenticated, a user can still launch EC-*gfx*Program, however the controller will be offline.

Adding a REST User to the UserService If this EC-Net station is going to be used as the remote RADIUS server to one or more ECY Series controllers, then a new REST user profile needs to be added.

- 1. Double-click UserService under Station > Config > Services.
- 2. Click New.

📔 Type to add	baja:User 🔻
📔 Number to add	1
	-

3.	Set '	1 in	Number	to Add.	Click	OK.
----	-------	-------------	--------	---------	-------	-----

Name	Full Name	Enabled	Expiration	Lock Out	Roles	Allow Concurrent Session	
Rest67service	Rest67service	true	Never	false		true	
📔 Name		Rest6	7service				
📔 Full Nam	e	Rest6	7service				
Enabled		⊘ true					
Expiratio	'n	Nev	ver Expires 🔍 Exp	oires On Fri Jul	08 2016	11:59:59 PM •	
Roles		adn	nin				
Allow Co	ncurrent Sessions	🗷 true	e				
Network	User	□ fals	□ false				
📔 Prototype Name							
📔 Languag	e						
📔 Authenti	cation Scheme Na	me Diges	DigestScheme •				
💌 📔 Authenti	cator	Passw	ord Authenticat	or			
Passw	ord	Password		Cor	firm •••••	••	
🗢 🔍 Passw	ord Config	User Pass	word Configurat	tion			
Pas:	sword History						
Ford	e Reset At Next Lo	gin	✓ true				
🗎 Expi	iration	(Never Expires	Expires On F	ri Jul 08 2016	11:59:59 PM	
📔 Email							
Cell Phot	ne Number						

- 4. Create a REST user with an uncommon username.
- 5. Create a strong password for the REST user profile.
- 6. Clear Force Password Reset.
- 7. Click OK.
- 8. Right-click the REST user profile and select View > Property Sheet.

•	O UserService		
	🕨 🍐 User Prototypes		
	🕨 🍐 admin		
	🕨 🍐 BACnet		
	🕨 🍐 Rest67servi 🗨 🗎	/iews 🕨	AX Property Sheet
Þ	AuthenticationSer	Actions F	<u>W</u> ire Sheet
Þ	DebugService	Now	Property Sheet
Þ	BoxService		Category Sheet

9. Under Wizard Service Config, clear Enable Write.

10. Enable only the Rest option in RadiusConfig options. <

Configuring the REST Service Connection

The RestService needs to be able to connect to an ECY Series controller as a user. To allow a secure connection between EC-*gfx*Program and EC-Net, HTTPS needs to be enabled in the WebService. Configure these connections as follows.

1. Configure the **RestService** under **Station > Config > Services > Wiz**ardService.

🙀 RestService (Rest Service)	
📔 Status	{ok}
📔 Fault Cause	
📔 Enabled	🔵 true 🔍
📔 Servlet Name	api
📔 Licensed	true
📔 Version	1.0
📔 User Name	
Password	•••••
📔 Http Port	80
🗎 Https Port	443
📔 Https Enabled	🔵 true 🔽
📔 Socket Timeout	30000 ms [0 - max]
Connection Timeout	2000 ms [0 - max]
📔 Nb Rest Devices	0
📔 Nb Rest Devices Poll Ok	0
Polling Devices	false

Parameter	Description
Status	This field displays the status of the RestService Server. If the server is enabled (the Enabled field set to True), an {ok} status will be displayed. If the server is disabled (the Enabled field set to False), an {disabled} status will be displayed.
Fault Cause	If there is a problem with the RestService, this field will list the possible cause of the problem.
Enabled	This field enables or disables the RestService. Enable the RestService server by setting this field to True . Likewise, the server can be disabled by setting this field to False .
Licensed	This is true when the RestService is licenced on this station and is available. For more information about support pack licensing, see <i>Licensing the EC-Net</i> <i>Support Package for a Non-Distech Controls Brand Station</i> .
Servlet Name	The RestService servlet name.
Version	This field displays the current version of the RestService communication protocol.

Parameter	Description
User Name	The username that REST service will use to logon to an ECY Series controller. The ECY Series controller must be able to authenticate this REST user either locally or through a remote RADIUS server.
Password	This is the REST user password.
Http Port	The ECY Series controller device port number for the unencrypted REST service when Https Enabled is set to false.
	The same value must be copied to the Port Number parameter (under Use HTTP) in the Server Setting screen of the ECY Series Web configuration interface.
Https Port	The ECY Series controller device port number for the encrypted REST service when Https Enabled is set to true.
	The same value must be copied to the Port Number parameter (under Use HTTPS) in the Server Setting screen of the ECY Series Web configuration interface.
Https Enabled	Selects if communications with the REST service is to be encrypted or not. This changes which port number the service will be available on as set above.
	If set to false , disable Use HTTPS and enable Use HTTP in the Server Setting screen of the ECY Series Web configuration interface.
	If set to true , enable Use HTTPS and disable Use HTTP in the Server Setting screen of the ECY Series Web configuration interface. This is the preferred setting.
Socket Timeout	Timeout while waiting for a response for a transaction with the ECY Series controller.
Connection Timeout	Timeout while establishing a REST connection with the ECY Series controller.
Nb Rest Devices	This shows the number of ECY Series controllers connected to the REST service.
Nb Rest Devices Poll Ok	When you click Save to save changes to a parameter, Polling Devices becomes true ; this shows the connection progress of ECY Series controllers connected to the REST service. The number of Nb Rest Devices Poll Ok should equal the number of Nb Rest Devices once Polling Devices returns to false .
Polling Devices	When you change the User Name / Password, Polling Devices becomes true as it searches for ECY Series controllers to connect to the REST service.

- 2. Click OK.
- 3. In the WebService, set Https Enabled to true. Click Save. If this is unavailable, ensure that the platCrypto service is installed in the Software Manager.

Configuring the Radius Service

A RADIUS server uses a challenge/response mechanism to authenticate a user's logon credentials (username and password). When one or more ECY Series controllers subscribe to a RADIUS server, this RADIUS server provides centralized user management to control which users have access to any of these ECY Series controllers.

The RadiusService on an EC-Net station is a RADIUS server that relies on user profiles created in the station's UserService to authenticate a user's logon credentials. From Service Pack V3.9, new options have been added to UserService to control user access rights to one or more ECY Series controllers. To add and configure EC-Net station users, see *Creating Station Users*.

The RadiusService is compatible with ECY Series controllers only; authentication requests from other devices systematically receive an 'access denied' response.

All ECY Series controllers that are going to use this EC-Net station as a RADIUS server need to be configured in their ECLYPSE Web interface under **User Management** to use this EC-Net station as their RADIUS server. Both the RadiusService and all subscribed ECY Series controllers use a common shared key that is used to encrypt and decrypt passwords to prevent eavesdropping.

💡 RadiusService (Radius Servic	ce)	
) Status	{ok}	
📔 Fault Cause		
📔 Enabled	🔵 true 🗸	
📔 Licensed	🔵 true	
📔 Shared Key		
📔 Auth Port	1812	[1-65535]
🗎 Acc Port	1813	[1-65535]
) Socket Timeout	10000	ms [1 - max]
📔 Duplicate Interval	30000	ms [1 - max]
📔 Max Failure	10	[1 - max]
) Lockout Duration	120	s [1 - max]
) Only Database Devices	🛑 false 🗸 🗸	

1. Configure the RadiusServer settings under Station > Config> Services > WizardService.

Parameter	Description
Status	This field displays the status of the RadiusService Server. If the server is enabled (the Enabled field set to True), an {ok} status will be displayed. If the server is disabled (the Enabled field set to False), an {disabled} status will be displayed.

Parameter	Description
Fault Cause	If there is a problem with the RadiusService, this field will list the possible cause of the problem.
Enabled	This field enables or disables the RadiusService. Enable the RadiusService server by setting this field to True. Likewise, the server can be disabled by setting this field to False.
Licensed	This is true when the RadiusService is licenced on this station and is available. For more information about support pack licensing, see <i>Licensing the EC-Net Support Package for a Non-Distech Controls Brand Station</i> .
Shared Key	This is an encryption key that devices use to encrypt and decrypt user authentication credentials that are sent between devices. The shared key should be a long string of up 32 alphanumeric characters and symbols that would be difficult to guess. For example, he^sg3iq6pg2*gqw@89hsm,wz[
	The same value must be copied to the Shared Key parameter in the User Management screen of the ECY Series Web configuration interface.
Auth Port	The Radius server authentication request port number. The default is 1812.
	The same value must be copied to the Authentication Port parameter in the User Management screen of the ECY Series Web configuration interface.
Acc Port	The Radius server accounting request port number. The default is 1813.The same value must be copied to the Accounting Port parameter in the User Management screen of the ECY Series Web configuration interface.
Socket Timeout	Leave this at its default value.
Duplicate Interval	Leave this at its default value.
Max Failure	The number of requests a client (an IP address) can make for authentication of credentials that fail after which the client is locked out from making any authentication of credential requests (the response is always fail) for a period set in Lockout Duration .
Lockout Duration	Once a client has made too many failed authentication of credentials requests, this sets the time delay that must expire before the RADIUS server will once again try to authenticate a credential request from that client.
	NOTE: The objective of the Max Failure and Lockout Duration settings are to help prevent a dictionary attack on the RADIUS server to discover username / password combinations that can then be used to login to devices throughout the network.

Parameter	Description
Only Database Devices	Set to true so that only ECY Series controllers currently listed in this EC-Net / EC-BOS database are allowed to use the RADIUS service.
	NOTE: This filters out authentication of credential requests from non-ECY Series controller IP addresses to help prevent an attack on the RADIUS server to discover username / password combinations that can then be used to login to devices throughout the network.
	For more information about the database, see Discovering BACnet Devices on page 102.
	Set to false when devices other than ECY Series controllers are using this RADIUS service.

2. Click Save.

Discovering BACnet Devices

Set each ECB Series controller's MAC address before connecting it to the BACnet MS/TP network. To do so, refer to the controller's hardware installation guide (this is usually done by setting DIP switches on the controller or through a communicating sensor).

Set each ECY Series controller's IP address before connecting it to the BACnet IP network. To do so, refer to the <u>ECLYPSE User Guide</u> or to the controller's hardware installation guide.

Once the BACnet Network(s) have been established, devices can start to be added to the BACnet Networks that are running from the EC-BOS station. In the following procedure, you will discover the BACnet controllers and assign them their device IDs (instance number) that will identify the individual controllers across the BACnet intranetwork which is necessary when sharing network points.

It is useful to have an organized numbering scheme that makes it easier to keep track of a device's MAC Address (ECB Series controllers), Instance Number, and Network Number that is assigned to it. See the <u>Network Guide</u> for an example of such a numbering scheme.

1. Double-click **BcpBacnetNetwork** in the tree and then click **Discover** to find the available BACnet devices on the network.

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- Nav 📑		≫ ≍
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Station (Boiler_Room)	Device Name Device ID Netwk MAC Addr Vendor	Model Objects 🕫
🜲 Alarm		
Config		
O Drivers		
🕨 🔭 NiagaraNetwork	Database	0 objects
OBcpBacnetNetwork	Name Exts Device ID Status Netwk MAC Addr	Vendor Model Firmware Rev App SW Version
🖿 🗙 🖻 🧯 🔽		
▼ ◯ Services	New Folder 🚺 New 💉 Edit	Discover Cancel 💮 Add >>> Match
VizardService	(b) TSynch	A DeviceID
	1	

2. Select the network on which you want to discover devices. Select a network you have enabled, for example, 364. Click **OK**.

Configure Device Discovery	×
📔 Device Discovery Config	
Device Low Limit	0
Device High Limit	4194302
Networks	Send Global? Select All Clear All ✓ 364 821
📔 Wait Response Time	10 s
	OK Cancel

3. The discovered devices for the network are listed.

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 Station (Boiler_Room) 	Device Name	Device ID	Netwk	MAC Addr	Vendor	Model	Objects	₽
🜲 Alarm	ace_200	device:821002	364	2	Distech Controls, Inc.	ECB_203	18	
 Config 	ECB_MAY	device:821003	364	4	Datech Controls, Inc.	ECB_VAV	169	
Gervices	CB_300	device:364043	364	43	Distech Controls, Inc.	ECB_300	26	
 Orivers MiagaraNetwork 	Database							0 objects
🤝 😁 BcpBacnetNetwork	Name Exts	Device ID Sta	tus Net	twk MAC A	ddr Vendor Mode	l Firmware	Rev App SW	Version 🛤
- Palette								
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▼ ◯ Services	New Fo	Nuder 🛃 N	ew	Edit	Discover	Caricel	Add	Match
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- Search Bookmarks Tools Window Manager Help File Edit QQ ÷., ▲ ▶ X 1 0 D >> Bacnet Discover Devices × Nav Success 📎 Discovered 3 objects • С 🔀 🔇 My Network Device Name Device ID Netwk MAC Addr Vendor Model Objects ₽. Station (Boiler_Room) ECB_200 18 Alarm device:821002 364 2 100 ECB_203 2 4 43 Config CR. NRV device:821003 364 ECB_VAV... 169 Services device:364043 364 ECB., 300 43 ECB_300 26 Orivers Database 0 objects 🖰 NiagaraNetwork BcpBacnetNetwork Name Exts Device ID Status Netwk MAC Addr Vendor Model Firmware Rev App SW Version Ę 7 Palette x 🤉 New Folder New 🖉 Edit 🛛 📫 Discover Cancel 🔁 Add >> Match <u>.</u> Services 🕒 TSynch 💧 DeviceID Wizard Service
- 4. Add the device to this station. Select the device and click Add.

- 5. Set the Name for this device.
- 6. For EC-*gfx*Program compatible devices, set the **Type** to **Bcp Bacnet Device**. This is required to enable the EC-*gfx*Program wizard.
- 7. The MAC Address is automatically read from the controller.

🗱 Add							×
Name Type	Device ID	Netwk	MAC Addr	Enabled	Use Cov	Max Cov Subscriptions	₽.
🚡 Lobby_VA [\] Bcp Bacnet Devi	ce device:821003	364	4	true	true	8	
Name	Lobby_VAV						
📄 Туре	Bcp Bacnet De	vice 🗸					
Device ID	device	- 8	21003				
📔 Netwk	364	[0 - 65	535]				
📔 MAC Addr	4						
📔 Enabled	🔵 true 🔍 🗸						
📔 Use Cov	🔵 true 🔍 🗸	🔵 true 🤝					
Max Cov Subscriptions	8						
		ОК	Cance	t			

8. Do not set the **Device ID** at this point. Click **OK**. The device is added to the Database.

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- Nav	2	🖉 🥕 Bacnet	Discover Devices						Su	ccess ≫	×
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🐥 Alarm		ECB_200	device:821002	364	2	Datech Controls	Ling.	ECB_203	18		
 Config 		ECE_MAY	device:821003	364	4	Datech Controls	Lint.	ECB_VAV	169		
Services		ECB_300	device:364043	364	43	Datech Controls	, inc.	ECB_300	26		- 1
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4		音 Lobby_VAV	8080	de 💮	evice:821003	{ok} 364	4 -	• =			
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▼ Services	-	New Fo	older 🛛 🔂 N	ew	💉 Edit	n Discover		Cancel	🕀 Add	🍃 ≻ Ma	tch
WizardService	-				C TSyr	nch 🔥 Dev	iceID	1 1			_
											0

9. Select the device in the Database list and click **DeviceID**.

- 10. A Change Device ID popup appears. Click Yes.
- **11.** Set the Device ID to **device** and set the Device ID according to your network planning. This must be a unique number for this device in the entire BACnet network internetwork. The valid rage is 0 to 4194302. Optionally, set the **Name** for the device. Click **OK**.

🌾 DevicelD			×
Name	Туре	Device ID	₽
🖀 Lobby_VAV	Bcp Bacnet Device	device:821003	
Name Type Device ID	Lobby_VAV Cannotedit device	▼ 821003	
1	ок	Cancel	

12. A Change Device ID popup appears. Click OK.

Once an ECY Series controller is discovered and added to the Station, find the **Rest Status** status in the controller's Property Sheet. The status should be **OK** if the REST connection is working with the proper credentials.



13. Launch the EC-*gfx*Program wizard by right-clicking the device and select Launch Wizard.

Setting the Max Master and Max Info Frames on all MS/TP Devices (ECB Series)

This procedure is for ECB Series controllers and MS/TP devices connected to an MS/TP network only.

Once all devices have been discovered and the MAC Addressing is finalized by eliminating any gaps in the address range, set the **Max Master** (maximum MAC Address) in the EC-BOS (Building Controller) to the highest Master device's MAC Address number to optimize the efficiency of the data bus as follows.

NOTE: Masters are devices that can initiate communications on the BACnet MS/TP bus. These devices can only have a MAC Address in the 0-127 range.

The **Max Master** and **Max Info Frames** are parameters used to optimize a BACnet MS/TP Data Bus. This is set in the Bus Master (EC-Net Building Controller) for the MS/TP port of the Bus Master and for each BACnet MS/TP device connected on that port.

A *Configure MS/TP Devices* tool is available to automate this task. This is only available in the WbWeb profile. This tool:

- Can only be used with a live database during commissioning. If you add more devices to the data bus, you must run this tool again.
- Automatically calculates the value for the **Max Master** by finding the highest Master device MAC Address on the connected BACnet MS/TP data bus **plus 1**.
- Sets the **Max Master** for all master devices including the Bus Master (EC-BOS).
- Sets the **Max Info Frames** for all master devices excluding the Bus Master (EC-BOS).

In EC-Net, set the **Max Info Frames** to 20, as this is a device that will make more requests for service from other devices on the network. In general, according to the way a device is programmed, the **Max Info Frames** may have to be set to a higher value than for other devices. For example, when Roof Top Unit Controllers are used with VAV controllers that use *gfx*Applications code, they should also have their **Max Info Frames** set to a higher value such as 5, as Roof Top Unit Controllers poll VAV controllers for information.

Set the Max Master and Max Info Frames as follows.

1. Right-click the Link node in the Nav tree and select Ms/Tp Configuration.

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10 : Sta : Config : Drivers :	BcpBacnetNetwork :	Bacnet Comm : Network	: MstpPort : Link	🖌 🛛 AX Property Sheet 👻
 Nav Nav Station (Boiler_Room) Alarm Config Config Services Drivers Services Drivers Eccal Device Bacnet Comm Client Server Client Server Network Router Ta 	BepBachetwetwork Pro Image: Construction Image: Construction Views Actions Mew Edit Tags Make Template Cut Copy Paste	bachetcomm retwork pperty Sheet ink (Bacnet Mstp Link Layer) Port Name Baud Rate Mstp Address laster fo Frames port Extended Frames port Extended Frames	 MstpPort . Link COM1 Baud_38400 ▼ 0 [0 - 127] 126 [0 - 127] 126 [0 - 127] 20 [1 - 100] false ▼ 	
✓ MstpPort	Paste Special	0	Refresh Save	×

2. The network must be live; the **Status** shown in **Configure Ms/Tp devices** window must be **{ok}**.



3. A confirmation message is shown.

4. Set the **Max Info Frames** to 20 for the Bus Master (EC-Net) as shown in the screen below.

File Edit Search Bookmarks Tools Windo	w Help	Q Quick Search
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10 : Sta : Config : Drivers : BcpBacnetNetwork	:Bacnet Comm : Network : I	AstpPort : Link 🖍 AX Property Sheet 🗸
• Nav	Property Sheet	
🚽 😋 🔀 🕅 My Network	Link (Bacnet Mstp Link Layer)	
Station (Boiler Room)	l Port Name Co	
Alarm	Baud Rate	aud_38400
Config	Mstp Address 0	[0-127]
Gervices	I Max Master 1	
Drivers	Max Info Frames 2	0 [1-100]
NiagaraNetwork	l Support Extended Frames	false 🗸
BcpBacnetNetwork		
Local Device		
Client		
Server		
Transport		
👻 📔 Network		
Router Table		
🕨 📔 lp Port		
🚬 📔 MstpPort		
Link	C Ref	resh Save

Launching EC-gfxProgram

EC-*gfx*Program allows the user to program and/or configure an EC-*gfx*Program compatible device through the EC-Net platform.

Use any of the following methods to open EC-*gfx*Program:

- Running the EC-gfxProgram application.
- Running EC-gfxProgram from your PC's desktop (or from All Programs).
- Launching EC-gfxProgram through an EC-BOS or EC-Net Pro interface (ECB Series controller only).
- **NOTE:** When connected to an ECY Series controller through EC-Net or EC-BOS, when you save your EC-*gfx*Program project, it is saved in both the EC-Net / EC-BOS station and in the controller itself. If you then directly connect to an ECY Series controller with EC-*gfx*Program using the REST connection method, and save the EC-*gfx*Program project to the controller, later when you again connect to the controller through the EC-Net / EC-BOS station, there will be a mismatch between the EC-*gfx*Program project code versions. Whenever there is a mismatch between the EC-*gfx*Program project code version in the controller and the version in the EC-Net / EC-BOS station, a pop-up window allows you to choose which project code versions to your PC's hard disk.

Running the EC-gfxProgram Application

An EC-Net Wizard allows the user to program and/or configure an EC-*gfx*Program compatible device through the EC-Net platform. 1. Open EC-*gfx*Program by right-clicking the device in the Nav Side Bar, and selecting **Launch Wizard**. The EC-*gfx*Program splash screen appears.

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Running EC-gfxProgram from the Desktop

Run EC-*gfx*Program from your PC's desktop (or from Microsoft Windows' *All Programs*).

1. Click / double click either EC-*gfx*Program icon in the Start menu (left) or on the desktop (right).



2. Enter the connection information to the building controller and click OK.

Connect To	Server	? ×
R	Server type: B/	ACnet AX ~
Cr	Connection mode:	Direct connection
	Server address:	localhost
	Server port:	1931
	Usemame:	admin
	Password:	
		OK Cancel

Parameter	Description
Server type	To connect to an ECB Series or ECY Series controller through EC-Net, set the Server type to BACnet AX .
Connection Mode	Select Direct connection when the IP address of the EC-BOS or EC-Net Pro building controller is directly accessible from your PC (the address of which is set in Server address).
Server address	The building controller's (or Target Host's) IP address. If the IP address is unknown for an EC-BOS, use the System Shell procedure documented under Recovery Tips in the <u>EC-BOS Install and Startup Guide</u> . This document can be downloaded from the Distech Controls website at <u>www.distech-controls.com</u> .
Server port	By default, this is 1931 for ECB Series controllers, 80 for an HTTP connection to ECY Series controllers, and, 443 for an HTTPS connection to ECY Series controllers.
Username	Enter your username for the EC-Net station's (or Target Host's) Station.
Password	Enter your password for the EC-Net station's (or Target Host's) Station.

3. Click **OK**. The *Select Devices* window appears.

4. Select the device to open in EC-*gfx*Program and click **OK**.

Select Device	?	×
 IO.2.60.71 BcpBacnetNetwork RTU1 VAV1 VAV2 VAV3 VAV4 VAV5 VAV6 		
0	K (Cancel

5. The device's EC-*gfx*Program code appears.

Launching EC-gfxProgram through an EC-BOS or EC-Net Pro (ECB Series Controllers Only)

When logged in to an EC-BOS or EC-Net Pro station, launch EC-*gfx*Program as follows.

- 1. Discover the devices on the BACnet network. See *Discovering BACnet Devices*.
- **2.** Launch the EC-*gfx*Program application by right-clicking the device and select **Launch Wizard**.

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🗸 😹 Station (Boiler Room)	Device Name	Device ID	Netwk	MAC Addr	Vendor		Model	Objects			₽,
🚊 Alarm	ECB_203	device:821002	364	2	Distech Controls	s, Inc.	ECB_203	18			
 Gonfig 	ECB_VAV	Launch Wi	zard	2	Distech Controls	s, Inc.	ECB_VAV	169			
Services	ECB_300	o <u>V</u> iews		►	Distech Controls	s, Inc.	ECB_300	26			
	Database	<u>A</u> ctions		۱.						1 obje	ects
O BcpBacnetNetwork	Name	<u>N</u> ew		•	Status Netwi	k MA	C Addr Ve	endor Mo	del Fir	mware R	}∈ 1₽
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3. EC-*gfx*Program opens for the device.

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started Compiled in: 0.000 secon	- dat Hante
2016-07-09 T2:17:50 Boolean Crosstot: 0 / 1 Number Nar Type Descript Value Va	
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Calendar: 0 / 2 (0%)	
17:17:50 Build ComSensor : 0 / 12 (0%	
Frum Constant: 0 /62 /	> < >

Launching EC-gfxProgram from a Px Page Using a LaunchButton Widget (ECB Series Controllers Only)

By adding a LaunchButton widget to a Px Page, a user can launch any action found by right-clicking the device and selecting **Wizards**. This includes launching EC-*gfx*Program. The Px page must be displayed through one of the WbWeb profiles to work. Add a LaunchButton to a Px Page as follows:

1. Expand the *Widgets* folder and drag and drop the LaunchButton widget from the distechControls palette onto the Px Page.



- Double click the Launch button on the Px Page to open the Properties window. Configure the button's look and behavior in the Image Button section.
- 3. Under the Bcp Command Binding, click ... in Ord.
- 4. Select the device for the LaunchButton wizard action: select **Component Chooser** from the Ord dropdown list.



- In the Select Ord window, select the device for the LaunchButton wizard action under Drivers, BcpBacnetNetwork. Set the type to Slot. Click OK.
- 6. Set the button behavior when the service is unavailable in degradeBehavior.

7. Set the Wizard to launch in the **commandIndex**. This number corresponds to the list of wizards shown when you right-click the device selected above for the LaunchButton wizard action and select **Wizards**.

If there is only Launch Wizard and no Wizards selection, there is only one wizard available for this device. Set the commandIndex to 0 to launch this wizard.



- 8. Click Save.
- **9.** Click **I** to toggle the view/edit mode to View. Click the LaunchButton widget to test its behavior.

CHAPTER 4 Licensing the EC-Net Support Package for a Non-Distech Controls Brand Station

This chapter details how to license the Distech Controls Support Package for use on a non-Distech Controls brand station. Licensing for a non-Distech Controls brand station enables the following three support package services: WizardService, RestService, and RadiusService. For example, the Wizard-Service is used to launch EC-*gfx*Program as well as other wizards, create the proxy points, and allow the points to access the devices. Licensing is unnecessary when using Distech Controls controllers with Distech Controls EC-Net stations.

Topics

Support Package Licensing Applicability Support Package Services Overview Getting a License Installing the License License Check

Support Package Licensing Applicability

If you are running EC-Net 4 and your Niagara license file has a brandID other than **distech** or **distechEU**, you will require a license to enable the Wizard-Service, RestService, and RadiusService.

To verify your brandID, open the License Manager within the Platform.



If you are using a Distech Controls EC-Net[™] 4 Supervisor or an EC-BOS-8, the Niagara license brandID will be **distech** or **distechEU**. If this is the case, the three support package services will not require a license and will operate without any other intervention.

Support Package Services Overview

Licensing applies to the following three support package services: WizardService, RestService, and RadiusService. When the service is licensed, the status is shown as **true** in the **Licensed** property of each service.

WizardService Overview

The WizardService is used to launch EC-*gfx*Program as well as other wizards, create the proxy points and allow the points to access the devices.

W	izardService (Bcp Service)	
Ŋ	Status	{ok}
Ŋ	Fault Cause	
Ŋ	Enabled	🔵 true 🔍
ŋ	Licensed	true
Ŋ	Port	1931
l)	Max Connections	10
l)	Version	3.7
Ŋ	Min Version	3.0
Ŋ	Number Connections	0
• 💰	Server Connections	Bcp Server Connections
	📔 Keep Alive Delay 🛛 🖸	0024h 🔟m 00s 🚆 [10secs-+inf]
	📔 Load Manager 👘 Lo	oad Manager
	📔 Enable	🔵 true 🔽
	📔 Full Load Delay	00000h 00m 40s 🗮 [0ms-+inf]
	📔 Full Load Threshol	ld 100 % [0-100]
	Detected Overload	false
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- (Bacnet Settings	Bcp Service Bacnet Settings
	📔 Temporary Apdu Time	eout 450 ms [0 - 5000]
	Device Def	332, IRC*; 332, RCB*; 364, ECB*; 364, ECY*
	📔 Default Enable Writab	le Proxies 🥚 false 👻
	Force Proxy Read Stat	tus Flags 🕒 true 🔽
	Lonworks Settings	Bcp Service Lonworks Settings
- 4	Wizard Settings	Bcp Wizard Settings
ŋ	Installed Version	4.1.16243.1
	License Manager	Bcp Service License Manager
	WizardService_LonLegacy	y Bcp Server
	RestService	Rest Service

RestService Overview

The RestService allows the RESTful API to run over HTTP requests and to run EC-*gfx*Program for ECLYPSE^M.

🙀 RestService (Rest Service)	
📔 Status	{ok}
📔 Fault Cause	
📔 Enabled	🔵 true 👻
Servlet Name	api
📔 Licensed	true
📔 Version	1.0
📔 User Name	
Password	•••••
Http Port	80
📔 Https Port	443
📔 Https Enabled	🔵 true 🗸
📔 Socket Timeout	30000 ms [0 - max]
Connection Timeout	2000 ms [0 - max]
Nb Rest Devices	0
📔 Nb Rest Devices Poll Ok	0
Polling Devices	🛑 false

RadiusServiceThe RadiusService allows the RADIUS networking protocol to manageOverviewauthentication requests from ECLYPSE devices.

💡 RadiusService (Radius Servic	e)	
📔 Status	{ok}	
📔 Fault Cause		
📔 Enabled	🔵 true 🗸	
Licensed	🔵 true	
📔 Shared Key		
📔 Auth Port	1812	[1-65535]
📔 Acc Port	1813	[1-65535]
📔 Socket Timeout	10000	ms [1 - max]
📔 Duplicate Interval	30000	ms [1 - max]
📔 Max Failure	10	[1 - max]
📔 Lockout Duration	120	s [1 - max]
📔 Only Database Devices	🛑 false 🔍 🗸	

Getting a License

If you require a license, contact Distech Controls customer service to purchase and license your support package. You will need to provide your **HostID** found in the WizardService, as shown below.

	Wiza	ardService (Bcp Service)	
	0	Status	{ok}
	0	Fault Cause	
	0	Enabled	🔘 true 💌
_	0	Licensed	false
	0	Port	1931
	0	Max Connections	10
	0	Version	3.7
	0	Min Version	3.0
	0	Number Connections	0
Þ	0	Server Connections	Bcp Server Connections
	0	Supported Field Bus	Bacnet, Lonworks
Þ	0	Bacnet Settings	Bcp Service Bacnet Settings
Þ	0	Lonworks Settings	Bcp Service Lonworks Settings
Þ	*	Wizard Settings	Bcp Wizard Settings
	0	Installed Version	4.0.16209.2
Ŧ	0	Licence Manager	Ben Can ins Lineans Managar
		Host Id	SPACKAGE-E260333C-E95B-5892-9C54-A731FDD
		Negara Host Id	Win-8CD6-3711-68D4-8F90
		Processing	() false
		Last Count Update Time	27-Jul-2016 05:13 PM EDT
		C Last Server Lindate Time	27-3-1-2016 05:13 PM EDT
		Wizard Service Licensed	() false
		Radius Service Licensed	6 false
		Rest Service Licensed	6 false
		O Device Count	
		Point Count	0
		O Device Limit	0
		Point Limit	0

If your support package is unlicensed, the status of the services will be shown as **false** (as shown above).

When ordering a license, the license must be chosen according to the available device packs. Once you have purchased a license, a zip file containing the license file will be sent to you by Distech Controls' customer service.

For more information regarding the available device packs, refer to the Distech Controls price list or SmartStore.

Installing the License

There are two ways to install a license file; either with the WizardService through an Internet connection (online) or with the Import command through the WizardService License Manager (offline).

With an Internet Connection

1. Update the license through the WizardService: Right-click on **WizardService** and select **Actions > Update License**. The licensing server is then contacted through the Internet and the license is automatically updated.



Without an Internet Connection

1. A zip file containing the license file will be sent to you by Distech Controls when an order is placed. To import the license file, right-click on the Wiz-ardService License Manager property and select Import License.

Þ	Server Conr	nections	Bop Server	Connections
	O Supported F	ield Bus	Rannet	Lonworks
Þ	Bacnet Se	Import License		acnet Settings
Þ	 Lonworks 	Views		onworks Settings
Þ	🚓 Wizard Se	Actions	the states	ettings
	Installed *	Name		1.2
Ŧ	License M	Tech .		cense Manager
	Host	Edit Tags		E-E260333C-E95B-5892-9C54-
	🔘 Naga 🕻	Make Template		6-3711-68D4-8F90
	O Proce	Out	Ctrl+X	
	O Last (Copy	Ctrl+C	2016 04:32 PM EDT
	C Last:	Paste	Ctrl+V	2016 04:32 PM EDT
	🔘 Wizar 🅤	Paste Special		
	O Rade	Duplicate	Cbi+D	5

2. Locate and select the license file you wish to import and click OK.

traise.	8.7		
Hin Version	8.0		
Number Connections	0		
2	Import License	8	
Browne		E	
Srovet .	OK Casol		
Brown	OK General		
Browni Browni Maard Brown Lannad	OK Canol		
	OK Cencil © Mir © Mar © Mar		
Noved Device Licensed Redu Service Licensed Retri Service Licensed Device Caut	Standard		
Novel Device Connect Novel Device Connect Reduct Service Licensed Ret Service Licensed Device Count Device Count Neut Count	OK Cancel		

The licensing status is updated after importing the file.
License Check

The licensing is automatically checked at station boot, every hour and every time a device or proxy point is added. There are no automatic licensing checks when devices or proxy points are removed.

You can also manually trigger a licensing check, with the "update license" action. You can also manually refresh after removing resources to update the device/proxy point count if needed.

If the count limitations of the points or devices are exceeded, the three services are disabled and a notification window is also displayed in EC-Net 4 Pro.



EC-gfxProgram Getting Started_UG_13_EN