



No: 25173 - 12/16 rev. 1

Outdoor Wireless Setup and Operations Guide



This guide provides detailed information on how to setup and run a Legrand Outdoor Wireless System. It assumes all components have already been installed. The software applications described in this guide reside within the 225CWS.

LOGGING IN

1. Once the 225CWS is powered, the WiFi led will turn green after a boot up. Once green the 225CWS will broadcast a WiFi network with an SSID the same as the first 2 sections of your Host ID. The Host ID can be located on the label of the device, or on the box the device came in.

SSID Example: 225CWS-C1234567890

The default WiFi SSID passphrase is the last 8 characters of your Host ID, and is case sensitive. Connect to this network with your computer.

Passphrase Example: ABCD1234

2. Using the Web browser of the computer (Google Chrome is recommended), connected the to the WiFi network, navigate to http://192.168.10.1. The InferStack login screen will appear.

Login Screen

Login ×	Biyan 🗕 🗆 🗙
← → C ☆ 192.168.10.1/auth/infer/login	직 🕈 ☆ 💻 🔀 ☰
👯 Apps ★ Bookmarks 🚺 my.legrand 🚺 Service Center 💽 Log in to Concur C 👔 Welcome To Niagar 🛅 Welcome! LinkedIn	» 🗀 Other bookmarks
InferStack	
Login to Infer	

 The default username: su Default Password: The last 8 characters of your host ID.

4. Once logged in, the Home screen appears, displaying the various available applications.

UPDATING THE FIRMWARE

1. After Logging In, the Home screen opens.

			Home	Screen			
Home - WattStopper	×					-0	iyan 🗕 🗆 🗙
← → C fi 🗅 1							ಕಿದೆ = 🔀 ≡
👯 Apps 🛧 Bookmarks	🕽 my.legrand	Service Center	Log in to Concur C	Welcome To Niagar	Welcome! Lin	nkedIn »	C Other bookmarks
			н	ome		WattStopper s	u Logout InferStack
	Folo	f(x) func		User	Debug	Ticp	
	(((adder	Connectors	Control	Equip	G Graphics	
	Historian	Job	Note	Report	Schedule	Weather	

- Before doing anything else, check the current version of firmware and any associated patches in the 225CWS. Select the small square button at the top left of the screen to open a pop-up menu which contains smaller versions of the same icons on the home page.
 - **NOTE:** Clicking this icon is the way to access the various apps when you are currently on a different app. From the pop-up window (shown below), you can click the icon for any app, or click the **Project Home** icon to return to the Home screen, shown above.
- In the pop-Up the current Build version is visible at the top right corner of this menu. The next step is the enter the Host app. This
 is the only method to get to the Host app—it is not accessible from the main screen. Click Host to continue.
 NOTE: Only users logging in as "su" can access the Host app.



Select the Host App

4. The Host screen opens with the Projects tab selected.

							nost P	the Line						
								Host					90	Lage
			Proj	ects	Sett	ings	Log	License	Updates	EULA	About			
tus	Display Name	Description	Rec Count	Creat	ed	Infer	Stack De	vice Caps					_	_
nw	WattStopper	InferStack Project	240	4-Sep	-2014	74								

Host App Project Tab

InferStock

5. Click the Updates tab, then click Upload Build.

Name Sta

Host App Updates Tab										
				Host					su Logout	InferStack
	Projects	Settings	Log	License	Updates	EULA	About			
		Manually up;	grade to a	atic updates: a new build ew patches:	Upload	Build)			

6. The Upload Build dialog opens. Click Choose File, select the location on your computer where the latest .zip file is located, and click Open. Then click Upload.

Upload Buil	d
Choose File) or drag files here	
inferstack-2.1.11.2a-ws.zip	Remove

- 7. Following the upload, a the 225 CWS will reboot. Following the reboot process, reconnect to the WiFi. **NOTE:** Contact Wattstopper Technical Support for information on the most recent version of the firmware.
- 8. If a patch update is required, repeat steps 1-4 to return to the **Updates** tab then click **Upload Patches**.

Host App Updates Tab											
	Host								su Logout	InferStack	
	Projects	Settings	Log	License	Updates	EULA	About				
		Manually up	grade to a	atic updates: a new build: iew patches	Upload	Build)				

9. The **Upload Patches** dialog opens. Click **Choose File**, select the location on your computer where the latest .pod file is located, and click **Open**. Then click **Upload**.

5

Upload Patches

Patches
Remove
Upload Cancel

10. Following the upload, a the 225 CWS will reboot. Following the reboot process, reconnect to the WiFi. NOTE: Contact Wattstopper technical cupport for information on the latest version of the firmware.

INSTALLING THE BASE SNAPSHOT

The base snapshot is the starting point for the database stored in the 225CWS.

1. From the Home Screen click the Folio icon.



2. The Folio screen opens with the Axon tab selected.

Folio App Axon Tab								
			Folio			WettStopper su Logout InferStack		
	Axon	Files	Snapshots	Trash	Debug			
>								
						Table Zinc 🖈 ★		
New Edt Dup Trash Meta								
empty								

3. Click the **Snapshots** tab, then Click **Upload**.

Folio App Snapshots Tab

			Folio			WattStopper	su Ligo	 InferStack
	Acon	Files	Snapshots	Trash	Debug			
Snapshot Upload Restore	Delete Compact							
Date	Size							

4. The **Upload Snapshot** dialog opens. Click **Choose File**,select the location on your computer where the latest ."WS Base Snapshot_XXXX.zip" file is located, and click **Open**. Then click **Upload**.

NOTE: Contact Wattstopper Technical Support for information on the most recent version of the 225CWS Builds.

Upload Snapshot

Upload Snapsho	¢.
Choose File) or drag files here	
WS Base Snapshot_1115.zip	Remove
	Upload Cancel

5. After uploading the snapshot, the file will appear in the widow. Click the file under the "Size" column to select it, then click Restore.

Folio App Snapshots Tab with File Uploaded

(0 * 0 b				Folio			Wattstopper su Logout InferStock
	•	kxon	Hiles	Snapshots	Trash	Debug	
Snapshot Upload Restore	Delete Compact						Snapshot bins 30 of 127 (58%)
Date	Size						
22-Oct-2015 Thu 9:46:08AM EDT	82KB						
		•					

 The Restore dialog opens. Be sure that the Perform snapshot of current state before restore checkbox is selected, then click OK. Following the restore, the 225CWS will reboot. Following the reboot process, reconnect to the WiFi and return to Home Screen.



CONFIGURING HOST SETTINGS

The Host app allows you to configure the network and wireless settings, and to set the date and time.

1. From the Home screen, select the small square button at the top left of the screen to open a pop-up menu.



2. Click **Host** to continue. This is the only method to get to the Host app—it is not accessible from the main screen. **NOTE:** Only users logging in as "su" can access the Host app.

	6					
n Project	Home (Host			2.1.11	
Foko	f(x) Func			O ebug	Telo	\$
((+)) Alem	Buikler	Lanneckers	Control	Equip	Graphics	Settings
Historian		Note	Report	Schedule	Weather	ametors
				(lac	ale (en-US)	erer.

Select the Host App

3. The Host screen opens with the Projects tab selected.

Host App Project Tab

									Host					w i Lága	ut	InferStack
				Pro	jects	Settin	gs	Lóg	License	Updates	EULA	About				
Name	Status	Display Name	Description	Rec Count	Creat	ted	Infers	tack De	vice Caps						_	
infer infer	⊘ rw	WattStopper	InferStack Project	240	4-Sep	≻2014	74									

4. Click the **Settings** tab. The **Settings** tab has several pages, accessed by clicking the menus on the left side of the screen. By default, the **Settings** tab opens on the **General** menu.

Host App Settings Tab - General Page

			Hoothipp	- oottin	ige ius	General	- ugo		 		
					Host					su Logo	n InferStack
		Projects	Settings	Log	License	Updates	EULA	About			
General Metwork Firewall Connections	SUPER USER (SI	U) Change Pa	ssword								
🚠 Modem 🗐 Disk Manager	HTTP SERVER Port:	80 Edit									
		5-Nov-2015 7:33:44 am Edit									
	Time Zone:	New_York Edit									
	POWER	Reboot	Shutdown)							
	BATTERY										

- 5. Click the top Edit button in the Date & Time section to open the Date & Time dialog. If you select the Manually set date and time option, you can change the settings if needed. If the 225CWS will remain connected to the Internet, you can select the Automatically set date and time option, if desired. Click OK.
- 6. If the currently selected time zone needs to be changed, click the **Edit** button in the **Date & Time** section, and modify the setting. If you change the time zone, you must reboot the 225CWS. After rebooting, repeat steps 1-4 to return to the **Settings** tab.

_	Date & Time
Automatically	set date and time
NTP Server 1:	pool.ntp.org
NTP Server 2:	
Manually set of Date: 2015-	date and time 11-05 Choose
Date: 2015-	

Date & Time

7. If you scroll down the **General** menu page, you will find a section for the **Battery**. If you ever receive a battery alarm, you should navigate back to this section. Click **Test** to perform diagnostics. Then, click **Details** to open the alarm log. Contact WattStopper Technical Support and submit the log.

Host App Settings Tab – General Page

					Host					su Logout	InferStack
		Projects	Settings	Log	License	Updates	EULA	About			
Connections Connections Modem Disk Manager	POWER	Reboot	Shutdown)							
E ber energe	Status: Charge: Last Checked:	100% 11 mins ago	Test								

8. Click the Network menu option to open the Network page.

Host App Settings Tab – Network Page

				Host					su Logout	InferStack
		Projects 2	Settings L	og License	Updates	EULA	About			
General Network	Edit: Network Wire	eless Tools:		race						
Errewall	UPLINK	No uplink four	nd							
Disk Manager	INTERFACES									
		WAN		LAN		Mod	em			
	Config:	DHCP		Static		PPP		1		
	IP Address:			192.168.10.1						
	Subnet Mask:			255.255.255.0						
	MAC Address:	d0:ff:50:8c:4d	j:fb	d0:ff:50:8c:4d	fc					
		Ethernet port	assigned to W	AN						
	WIRELESS									
	Enabled:	true								
	Network Name:	WattStopper V	Wireless Demo)						
	Channel:	1								
	Security:	WPA2								
	DNS									

- Click the Network button to the right of Edit to open the Network dialog. The WAN is the default for the Ethernet Port on the 225CWS. The LAN is the default port for the WiFi access. Either of these can be edited. If edited ensure that the remaining parameters are set correctly, based on the desired IP Configuration.
- 10. Select the Uplink Mode based on the desired method for connecting the 225CWS to the Internet.

The 225CWS operates in the same way as a conventional home router. The WAN (or Modem) interface provides the uplink into either the Internet or a wider area network. The LAN interface runs a local area network. The interface used to connect to the Internet is called the active uplink. There are 3 uplink options for the 225CWS:

- Auto use the best interface available
- WAN always use the wired ethernet WAN interface
- Modem always use the modem interface

For WAN and Modem, if the connection is unavailable for any reason, the device will be unable to reach external networks. For Auto, the wired ethernet WAN interface will always be preferred. If the system detects that the wired connection no longer has connectivity, it will automatically switch over the modem interface. When the system detects that connectivity over the wired connection is restored, the gateway will be automatically switched back over to the ethernet interface.

Connectivity for the WAN interface is determined by periodically pining the "Uplink Ping Address". If the device can successfully ping this address via the WAN interface, it is considered "up".

NOTE: Auto uplink mode requires a valid reachable IP address for the the system to properly switch interfaces based on connection status.

11. Click OK.

		Netwo	хк
	Uplink Mode:	Modem :	
Editi Network (Uplink Ping:	8.8.8.8	
UPLINK			test connectivity for the WAN uplink. A valid quired for Auto uplink mode to work property
	Ethemet port:	WAN :	
INTERFACES		WAN	LAN
Con	Config:	DHCP :	Static =
IP Ackin	IP Address:		192.168.10.1
Subnet Ma	Subnet Mask:		255.255.255.0
MAC Addn	Gateway:	102 169 1 1	
	Gateway.	192.168.1.1	
	DNS Nameserver 1:	192.168.1.1	
WIRELESS	DNS Nameserver 2:		
Enab			
Network Na	DHCP Server:	Enabled #	
Chan	Start Address:	192.168.10.20	
Secu			
			OK Cancel

12. To edit the Wireless WiFi SSID, click **Wireless** to open the **Wireless** dialog, enter the desired **Network Name** and **Passphrase** and select **OK**. You must re-connect to the 225CWS after the settings are saved.

Edit: Network Wa	eless Toolsi Etnemet port ass		
WIRELESS	_	Wireless	_
Networf Name Channel	Enabled: Network Name:	true : WattStopper Wireless Demo	
Security	Channel:	1 :	
DNS Nameservers	Passphrase: Confirm:		@ @
			OK Cancel

13. If the cellular option is included, click the **Modem** menu option on the left side of the screen. Ensure that the cellular antenna is connected and that all four green LEDs on the modem page are active. Then click **Provision**. This will set up the 225CWS 3G network. This step must be conducted in a Verizon "Home Network".

Network

14. To exit the Host app, click the rectangular button in the upper left corner and then click the Project name, You return to the Home screen.

NOTE: By default, the project name will be "Inferstack". You will name the project in the next step

Exiting the Host App InferStack Host **G** 54 Logeut Locale (en-US) Settings Log License Updates EULA About WattStopper **InferStack** Value Name Licensed To Bundled Host Id 225CW5-C14460008-A3853ACE InferStack Version 2.1.11 InferStack Home /opt/inferstack-2.1.11 New_York Timezone Uptime 23hr 21min 7sec 1.0.67.11 Fan Version Fan Platform linux-arm Os Version 3.4.43-WR5.0.1.11_standard 1.7.0_06 Java Version Java Vm Name Java HotSpot(TM) Embedded Client VM Java Vm Vendor Oracle Corporation 23.2-b09 Java Vm Version Java Home /opt/jre

CONFIGURING EXTENSIONS AND OTHER SETTINGS

The Settings app is where drivers and other extensions/apps can be added. It also includes basic settings, such as the project name.

1. From the Home Screen click the **Settings** icon.



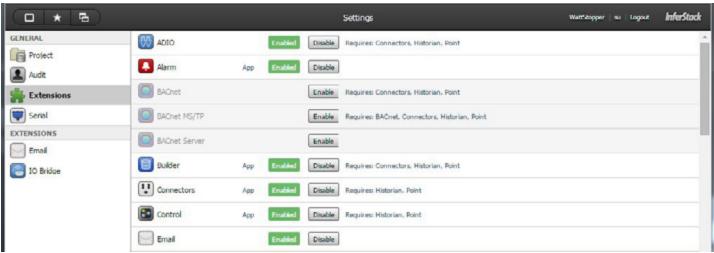
Home Screen

 The Settings app has several pages, accessed by clicking the menus on the left side of the screen. By default, the Settings app opens on the Project menu. Enter the desired name for your project in the Display Name field. This name will appear in the upper right corner of screen, to the left of the of user name (in the following example, the name is "WattStopper". Click Save.

Settings App – Project Page

		Settings	Watt'topper 94 Logout InferStack
GENERAL Project	🔓 Project		
Audit	Display Name	WattStopper	
Extensions	Description	InferStack Project	
EXTENSIONS	Default DateSpan	today	
Email Email Email	Site URI	http://acme.com/	

 Click the Extensions menu option. This page allows you to enable and disable various extensions. By default, a number of extensions are enabled. Check to be sure that Email, Graphics, Haystack, JennetIP, and Schedule are enabled, and click the appropriate Enable button(s) if they are not.



4. Click the **Audit** menu option. The Audit menu allows you to track certain changes made in the system. Check to make sure that **Action** and **Login** are enabled and click **Save**.

Settings App – Audit Page

		Settings	WattStopper	su Logout	InferStack
GENERAL Project	💄 Audi	t			
Audit	Action	✓ Log each time an action is invoked.			
Extensions	Commit	Log each time a diff is committed to the folio database.			
EXTENSIONS	Login	I Log each time a user logs into the REST HTTP API.			
Email		Save			

Settings App – Extensions Page

5. Click the Email menu option. The Email extension is used to send emails from the system to users. Enter the Host, Port, User Name (normally the same as the sending email address), Password, and From Address to enable this function. After this information is entered, click Test. In the pop-up screen, enter an email address to send a test message to and click Send to verify the email app is working properly.

Once receipt of the email is confirmed, click Save.

		Settings App – Email Page	
		Settings	WattStopper 92 Logout InferStack
GENERAL Project AudR	Email SMTP Server		
Extensions	Host	smtp.gmail.com	
Serial	Port	465	
Email	Username		
IO Bridge	Password		
	From Address	inferstack@example.com	
	Use SSL	8	j
		Save	

CONFIGURING CONNECTORS

The Connectors app displays a list of all wireless devices that can be discovered by the 225CWS. From this list of devices, you then select the specific devices that you want to control with this 225CWS. These devices will then be added to the network database in a later step.

- **NOTE:** A maximum of 150 devices can be controlled by a single 225CWS. With larger networks of devices, you must use more than one 225CWS, and then choose which devices are controlled by a specific 225CWS.
 - 1. From the Home Screen click the **Connectors** icon.



 The Connectors app has several pages, accessed by clicking the menus on the left side of the screen. Select Coordinator in the JennetIP section to display all wireless devices found on the network. This process will take 1 minute before devices begin showing up on the page.

Connectors App – Coordinator Page

							Connec	tors			Watt'stopper 94 Logout InferStock
M ADIO	R	leset	Details	Config)						
Connectors		ready	network	0.00		appId	panId	channel	nodes	uptime	
AVSTACK	0	false	true	0015:8d0	1:0046:8c3b	0x00000000	0x0002	26	1	38sec	
Connectors											
S JENNET		addr			lqi next						
Connectors	0		d00:0069:8		201	нор					
Coordinator											

3. The network parameters can be edited by clicking Config. Any changes made in this section will affect connectivity. The Default App ID of the wireless products is "0". To change the coordinator App ID, edit only the ending digits of the App ID, ensuring that the App ID remains 8 digits following the "x". For example, if the App ID needs to be changed to 4, change the ID to "0X0000004". Once the change is made and saved, you must click Reset.

	Config	
appId:	0x0000000	
panId:	0x0003	
channel:	26	
readyTime:	1min	
daspOpenFreq:	5sec	
daspConnectTimeout:	10sec	
daspReceiveTimeout:	90sec	
daspSendRetry:	5sec	
		OK Cancel

4. Once the devices are found, they are displayed on the page. Any device that is a "direct connect" to the 225CWS displays an lqi (Link Quality Indicator). Additionally, the desc column displays the number of descendants (also referred to as Children/Grandchildren) connected to that device. For the descendent devices, these two columns are blank, but instead the nextHop column indicates which other device that device is connected to.

Connectors App – Coordinator Page after Device Discovery

								Connector	5			WattStopper su Logout	InferStack
M ADIO	C	Reset)	Detai	ils)(Confi								
U Connectors		-	network	-		~		and the	panId	channel	meder		
AVSTACK							ah sa	appId					
U Connectors	0	true	true	001	5:8d00:	:0046:	8050	0x00000000	0x0000	20	74	1day 12hr 31min 21sec	
JENNET							_						
Connectors		addr			desc	lqi	next	Нор					
Pole_1	0	0015:8	8d00:0069:	9c9c	16	156							
	0	0015:8	8d00:0069:	9933	6	153							
Coordinator	- 0	0015:8	Bd00:0069:	9b5d	1	144							
SEDONA	0		8d00:0069:		-	162							
Connectors													
Kit Manifests	0	0015:8	8d00:0069:	9668	13	147							
Canal Street Str	0	0015:8	8d00:0069:	994f	17	120							
TUNING	0	0015:8	8d00:0069:	9bd6			0015	:8d00:0069:99	33				
Tuning Manager	0	0015:8	8d00:0069:	9c34			0015	:8d00:0069:9b	sd				
	0	0015:8	8d00:0069:	9824			0015	:8d00:0069:99	94f				

 The next step is to add the desired devices to the database for the 225CWS. Click Connectors in the JennetIP section, then click Discover. Any device on the wireless network that has not already been added to the database will appear in this window. Select one of the devices you want to add, then click Add.

Connectors	App –	Configure /	App ID
------------	-------	-------------	--------

Discover Devices

	Discover	
E	uri	
0	sox-jennet://mac/0015:8d00:0069:8c20	
		Add Cancel

6. The New dialog opens. Enter a name for the device in the dis field. This will be used for reference when viewing the devices in the network. Then click OK. You return to the Discover dialog. Repeat this process until all devices are added to the network. If a list of device IDs has been provided along with some type of naming reference has been provided, you can use that. For example, Pole_1, Pole_2, Pole_3, etc. If not, you can use any naming convention will work, provided you note the device ID.

	New	
dis:	Pole_01	
	sox-jennet://mac/0015:8d00:0069:8c20	
jennetConn:	4	
? Add T	Tags	OK Cancel

7. Once devices are added to the network, they will appear on **Connectors** page in the JennetIP section. The devices will either be in "fault" or "unknown" condition until control points have been added.

ADIO OIDA	0	iscover)	New (Edt) (Dup) (Trash)	(Pog)	(Details)	(Enable)(Disable) (Close)	
U Connectors		dis	un	connStatus	connState	connl.rr	
S JENNET	0	Pole_01	sox-jennet://mac/0015:8d00:0069:8c20	Øok	open		
U Connectors	0	Pole_02	sox-jennet://mac/addr/	() fault	closed	sys::ParseErr: Invalid Int: 'addr'	
Pole_01	0	Pole_03	sox-jennet://mac/addr/	3 fault	closed	sys::ParseErr: Invalid Int: 'addr'	
Pole_02	0	Pole_04	sox-jennet://mac/addr/	🔾 fault	closed	sys::ParseErr: Invalid Int: 'addr'	
	0	Pole_05	sox-jennet://mac/addr/	🖸 fault	closed	sys::ParseErr: Invalid Int: 'addr'	
Pole_03	0	Pole_06	sox-jennet://mac/addr/	🔘 fault	closed	sys::ParseErr: Invalid Int: 'addr'	
Pole_04	0	Pole_07	sox-jennet://mac/addr/	🔘 fault	closed	sys::ParseErr: Invalid Int: 'addr'	
Pole_05	Θ	Pole_08	sox-jennet://mac/addr/	🕲 fault	closed	sys::ParseErr: Invalid Int: 'addr'	
Pole_06	0	Pole_09	sox-jennet://mac/addr/	🔘 fault	closed	sys::ParseErr: Invalid Int: 'addr'	
Pole_07	0	Pole_10	sox-jennet://mac/addr/	🔾 fault	closed	sys::ParseErr: Invalid Int: 'addr'	
	0	Pole_11	sox-jennet://mac/addr/	🖸 fault	closed	sys::ParseErr: Invalid Int: 'addr'	
Pole_08	0	Pole_12	sox-jennet://mac/addr/	🖸 fault	closed	sys::ParseErr: Invalid Int: 'addr'	
Pole_09	0	Pole_13	sox-jennet://mac/addr/	🔘 fault	closed	sys::ParseErr: Invalid Int: 'addr'	
Pole_10							
Pole_11							
Pole_12							
Pole 13							
Coordinator							
SEDONA							
Connectors							
Kit Manifests							
TUNING							

SETTING UP THE DATABASE

Use the Builder app to create the database within the 225CWS. It will contain the site and equipment information, as well as the control points.

1. From the Home Screen click the Builder icon.



 If the snapshot was successfully loaded, as described in the section "Installing the Base Snapshot" on page 6, the screen should appear as shown below. If a new site is being created, click Create > New Site.

Builder App – Starting with the Base Snapshot

	Builder	WettStopper w Logout InferStack
🕞 CREATE 🔹 🦸 ACTIONS 🔹 🗶 TOOLS	🔹 🛅 TEMPLATE 👻 📑 CONNECTORS 🗐 MESSAGES 🧯	Tg. Nav. Tree
AVAILABLE OBJECTS: 0		
► 盦 My Site		
	— Please Select an Object to View/	Edit its Properties —

 Select the site. The Essential Tags screen appears and the site information is visible. Edit the Site Name, Country, Address, City, State, Postal Code, and Time Zone according to your site details. Enter the Latitude and Longitude based on the site location. Be sure to hit the Enter key on the keyboard after each value.

NOTE: All Longitude values in North America have a "-".

If a site specific tag is required, a marker tag can be added by clicking the "+". A marker tag is a unique "identifier" that can be added to any site, equip or point.

Builder App – Editing Site Information

	Builder	WattStopper su Logout InferStack
CREATE V ACTIONS V X TOOLS	🔻 🛅 TEMPLATE 🔻 📑 CONNECTORS 🗐 MESSAG	ies 1 Is Nav. Tree
AVAILABLE OBJECTS:	* ESSENTIAL TAGS	1 🗙 🛛 💿 🛛
► 盦 My Site	SITE-NAME:	SITE IMAGE:
	My Site	
	SITE-AREA:	
		0.00 ft ¹ v
	COUNTRY:	
	United States	٠
	WEATHER:	Browse O
		sionsen 😜
	ADDRESS:	
	1111 My Street	
	CITY:	STATE:
	My City	Texas *
	POSTAL CODE:	TIME ZONE:
	12345	America/Chicago 👻
	LATITUDE:	LONGITUDE:
	33.02 None *	-96.70 None *
	MARKER TAGS	
	🔒 children 🔒 🎸 site	

4. In the left section of the screen, expand the site tree. A default equipment is present, "My Pole_001". This equipment already has default points assigned.

NOTE: You have the option of adding a new piece of equipment and using that to add points. To create a new piece of equipment, highlight the site, click Create > New Equip in My Site. Edit the Equip Name, Select the Is A Meter checkbox. Select Submeter from the drop-down below that checkbox. Click Browse for the Is a SubMeter Of field, then select the site from the pop-up and click Done. Add any additional marker tags, as desired. Finally, click the Create button at the bottom of the screen to save the equipment. Note that you will have to manually add points to this equipment, which is outside the scope of this document.

Duildor	Ann	Editing	Equipp	nont In	formation
Dulluer	App -	culting	Equipi	ilent il	formation

		Bu	ilder		WattSte	pper su Logout	InferSt	tack
Cocreate V / # Actions V / * Tools	TEMPL	ATE V SO	ONNECTORS	MESSAGES	1	14 N	iav. Tree	1
AVAILABLE OBJECTS: U		ESSENTIAL TAGS						
▼ 🏛 My Site	EQUIP NAME:							
► 🖳 My Pole_001	My Pole_001							
	DISPLAY-NAME	SCHEME:						
	My Site My Pol	e_001						
	🕑 IS A METE	R		METER-KIND:				
	Sub Meter		¥	ELEC. METER		¥		
	SITE REF:	My Site				I	Browse	0
	EQUIP REF:					1	Browse	0
	SUBMETER OF:	My Site				1	Browse	0
	MARKER	TAGS					+	
	A & equip	× nwt111	A meter	A children	A elec			
	PROPER	TY TAGS						_
	\times treePath			equip:/My Site/	/My Pole_001			
	× tz			Chicago				

- 5. To edit the sample points in the equipment provided, expand the first piece of equipment. Delete any points not to be used by selecting the point, then selecting **Actions > Delete**.
- 6. To globally edit the sample points to a new device added in the connectors app, select all the points under the equipment and select the Actions > Edit All.

Builder App - Edit All Points

	Builder	WattStopper su Logont InferStack
	▼ 🗂 TEMPLATE ▼ 📑 CONNECTORS 🖻 MESSAGES	5 1 Nav. Tree
AVAILABLE OB	V ESSENTIAL TAGS	
🔻 🏛 My Site	POINT NAME:	POINT-TYPE:
V B My Pole_0	Amps	a < p
Amps X DELETE Na	DISPLAY-NAME-SCHEME:	
DimmingLevel Na	My Site My Pole_001 Amps	
LoadStatus Fal.	E POINT-KIND	UNITS
OverrideOnOff N	Numeric	* A * Schedule: - *
TodaySR NaNm	Is Local Point	Connected Point
Today55 NaNa	Ed une cue value	IS WRITABLE
Volts Na		-
-		HIS COLLECT SCHEME
Na Na		(
	Collected	Every 15 min ¥
	less	more
	SITE REF: My Site	Browse O
	EQUIP REF: My Site My Pole_001	Browse O
	CONN REF: @1dbba915-b91829b2	Browse O
	CUR PATH: 8.CurrentRMS	•
	MARKER TAGS	

Point	Definition
Amps	Current/Amperage from the fixture
DimmingLevel	0-100%. Drives the 0-10V Driver
LoadStatus	Based on reading current from the fixture
OverrideOnOff	Override command to drive the on board relay on or off. Commands the fixture. (0=Auto, 1=ON, 2=OFF)
TodaySR	Sunrise time. Minutes after midnight calculation based on geographic coordinates of the site. Commands fixture Off.
TodaySS	Sunset time. Minutes after midnight calculation based on geographic coordinates of the site. Commands fixture On.
Volts	Voltage (RMS) from the load
Watts	Active Power/Wattage reading from the fixture

7. After selecting Edit All, scroll to the selection "JennetConnRef" and select the browse button.

Builder App - Edit Values for Multiple Points

		Builder	WattStopper su Logout InferStack
CREATE - ACTIONS - X TOOLS	TEMPLATE	S CONNECTORS	1 Ig Nav. Tree
AVAILABLE OBJECTS: 0	T ESSENTIAL TAG		
▼ m My Site	Edit Multiple	0	POINT-TYPE:
▼ 💂 My Pole_001	OBJECT ID:	n/a	a < p
Amps NaNA	× kind		
DimmingLevel NaNK	× JennetConnRef × type	Pole_01 Browse O	
LoadStatus False	× level	0.00 None v	UNITS
NaN	NEW LOGINIZ		T A T Schedule: T
TodaySR NaNnin	× treePath		cted Point
< TodaySS NaNmin	× siteRef	My Site Browse O	IS WRITABLE
Volts Nanv	× jennetCur		
Watts NaNW	× indent	0.00 None •	OLLECT SCHEME
-	× navName		y 15 min 💌
	× hisStatus	ok	
	× equipRef	My Site My Pole_001 Browse O	
	× disMacro	SequipRef SnavName	Browse O
			Browse O
		Cancel Apply	Browse O
	CUR PATH: 8.Current	RMS	*
	MARKER TAGS		

8. Select the "Connector" that you want to relativize the points to and select done. This will associate the points in the sample device to the connector chosen.

Builder App - Assign Device to Points

Edit	Multiple			Ø
OBJE	CT ID:			n/a
×	kind			
х	jennetConn	Ref	@1dbba915-b91829b Br	owse O
х	type		- SELECT ITEM -	
×	level	Pol	e_01	
×	dis	Pol	e_02	1
×	treePath	Pol	e_03	1
×	siteRef	Pol	e_04	1
×	jennetCu	Pol	e_05	1
×	indent	Pol	e_06	
×	navNam	Pol		
х	hisStatu	_		1
×	equipRef	Pol	e_08	
x	disMacro	Pol	e_09	1
		Pol	e_10	1 H
_		Pol	e_11	
UR	PATH:	Show ID		Done

9. Click the Refresh icon. The points will respond and update.

		Bu	ilder App - Refresh Equipm	nent						
(0 * 5)			Builder		WattStopper s	u l	agout	Int	ferSta	zck
Cocreate V / # Actions	• X TOOLS •	TEMPL	ATE 🔹 🚖 CONNECTORS	🖃 MESSAGES 🔰 🧯			7 <u>8</u> N	lav. T	ree	
AVAILABLE OBJECTS:	U		TAL TAGS			i	×	0	8	0
🔻 🏛 My Site		EQUIP NAME:								
V Role_001	0	My Pole_001								
Amps	0.01A	DISPLAY-NAME	SCHEME:							
DimmingLevel	NaN%	My Site My Pol	e_001		C					
loadStatus	False		R	METER-KIND:						
OverrideOnOff	0.00	Sub Meter	¥	ELEC. METER	٣					
式 TodaySR	463.00min	SITE REF:	My Site					lrows	_	
Today55	1,113.00min	EQUIP REF:				-		Srows		
Volts	120.51V	SUBMETER OF:	My Site			-		Brows		
Watts	0.63W	MARKER							+	

10. The points in the first device are now active. The next step is to "clone" the remaining devices in the network. This process will duplicate the first device and apply all settings to the remaining devices on the network.

To start, click the Connectors icon at the top. This will open the "Connectors" previously added on the right side of the screen.

NOTE: In a situation where multiple 225CWS controllers will be in close proximity, it is necessary to segregate the wireless networks. This is known as changing the App ID (panID) in both the 225CWS and the field devices. Because this must be done for all devices in the entire network, you will want to add the panID to the first device before cloning the network. See <u>"Changing the App ID (panID) for Multiple Networks" on page 44</u> for details.

	Builder		WattStopper su Logout InferStack
□ - + - * - □ - (≤)	= I	1 Nav. Tree	CONNECTORS 🛛 🔣 🛨
AVAILABLE OBJECTS:	* ESSENTIAL TAGS	1 × 0 ± 0	F Role_01
▼	EQUIP NAME:		Pole_02
▼ 🛃 My Pole_001 U	My Pole_001		Pole_03
Amps 9.01A	DISPLAY-NAME-SCHEME:		
DimmingLevel NaNK	My Site My Pole_001		Pole_04
loadStatus False	S A METER METER-KIND:		Pole_05
SoverrideOnOff 0.00	Sub Meter V ELEC. METER V		Pole_06
<pre>~ TodaySR 463.00min</pre>	SITE REF: My Site	Browse O	► 🛃 Pole_07
<pre> TodaySS 1,113.00min</pre>	EQUIP REF:	Browse O	Pole_08
Volts 120.63V	SUBMETER OF: My Site	Browse O	> Role_09
Watts 0.62W	MARKER TAGS		> R Pole_10
	🔒 🐗 equip 🗙 mwtl111 🔒 met	er 🔒 children	> R Pole_11
	A elec		▶
	PROPERTY TAGS		Pole_13
	× treePath equip:/My Site,	/My Pole_001	
	× tz Chicago		

Builder App - Select Connectors

11. Select the first piece of equipment. Click the **Clone Equipment** icon. From the Connectors section on the right, click and drag the connector used to make the first device in step 6, to the "Base URL" in the pop up window (in this example, "Pole_01").

Builder App - Assign Initial Device to Base URL

	Builder	WattStopper su Logout	InferStack
₲ • ∮ • ★ • □ •			XI
AVAILABLE OBJECTS:	U V ESSENTIAL TAGS		
👻 🏦 My Site	EQUIP NAME:	2	
🔻 💂 My Pole_001	My Pole_001	3	
Amps	0.4 Clone Options		
DimmingLevel	RACE LIDI		
LoadStatus	Fal TARGETS		
🚺 OverrideOnOff	0 Name Relative URL	6	
TodaySR	463.001 > 💽 Pole_0	7	
TodaySS 1	, 113.001 > 💽 Pole_0	8	
Volts	120.1 Pole_0	9	
Watts	0.1 ADD CUSTOM		
	<name> : «Relative URL>. O O</name>		
	Cancel Create Pole_1		

12. After the initial device has been added to the base URL, select all the remaining devices from Connectors section as a group and drag them to the window under the "Relative URL" section. Click **Create**.

Builder App - Clone Devices

			Builder		8				WattStopper su Logout	InferStack
Co • 4 • * • 6		🗉 i			Tg Na	w. Tre		CONNECTORS		× Z +
AVAILABLE OBJEGTS:	U	* ESSENTIA	LTAGS	1	*	0 E	0	Pole_01		
▼ 🏦 My Site		EQUIP NAME:					_	F Role_02		
▼ 💂 My Pole_001	U	My Pole_001					Π.	> Role_03		
Amps	0.€ C	lone Options						0		
DimmingLevel	N	ASE URL: @1dce1be	6-123ebe52				-	Pole_04		۲
loadStatus	Fal	erocero.	TARGETS					Pole_05		
CoverrideOnOff	Θ.	Name	Relative URL					Pole_06		
< TodaySR	463.006	Pole_13					1	> Role_07		
< Today55		Pole_12 Pole_11						> Role_08		
Volts	°	Pole_10								
Watts		Pole_09						Pole_09		
watts	0.45	Pole_08						Pole_10		
		Pole_07						Pole_11		
		Pole_06								
		Pole_05					_	Pole_12		
	×	Pole_04	ADD CUSTO					Pole_13		
		Name>	: «Relative URL»	M			0 4			
					_			-		
				Can	cel	C	reate			

13. Highlight the site in the left section of the screen, and click the Refresh icon to the right of the site name. The database will build the rest of the site automatically. This process associates each device to its correct relative points.

0 * 6	Builder		Wa	ttStopper su Logout InferStack
□。▼ ∮▼ ★▼ □▼ <mark>ड</mark>]	= <i>i</i>	1ª Nav. Tree	CONNECTORS	× / +
AVAILABLE OBJECTS: 0	* ESSENTIAL TAGS	1 X O R 0	Pole_01	
▼ m My Site	EQUIP NAME:		Pole_02	
► 및 Pole_01	Pole_01		Pole_03	
► 🔜 Pole_02	DISPLAY-NAME-SCHEME:		Pole_04	
► 🛃 Pole_03	My Site Pole_01			
► 🖳 Pole_04	S A METER METER-KIND:		Pole_05	
► 🛃 Pole_05	Sub Meter 👻 ELEC. METER 👻		Pole_06	
▶ 💂 Pole_06	SITE REF: My Site	Browse O	Pole_07	۲
► 📴 Pole_07	EQUIP REF:	Browse O	Pole_08	
► 🛃 Pole_08	SUBMETER OF: My Site	Browse O	> Role_09	
► 🛃 Pole_09	MARKER TAGS		Pole_10	
► 🛃 Pole_10	A children A elec A # eq	uip 🔒 meter		
► 😓 Pole_11	X nwtl111		► S Pole_11	
► 🖳 Pole_12			Pole_12	
▶ 📮 Pole_13	PROPERTY TAGS	۰	Pole_13	

14. Return to the Home screen, then reselect the **Connectors** App. You will see the devices begin to open one at a time. After a device has been opened and the points relativized, the connector status will change from "fault" to "ok". This process can take several minutes, depending on the device count.

Connectors App - Opening Newly Created Equipment Objects
--

ADIO	0	iscover)	New Edt Dup Trash	Ping	Details	Enable Disable Close	
U Connectors		dis	uri	connStatus	connState	connErr	_
JENNET	0	Pole_01	sox-jennet://mac/0015:8d00:0069:8c20	Ook	open		
U Connectors	0	Pole_02	sox-jennet://mac/addr/	🔘 fault	closed	sys::ParseErr: Invalid Int: 'addr'	
Pole_01	0	Pole_03	sox-jennet://mac/addr/	C) fault	closed	sys::ParseErr: Invalid Int: 'addr'	
Pole_02	0	Pole_04	sox-jennet://mac/addr/	🕲 fault	closed	sys::ParseErr: Invalid Int: 'addr'	
	Θ	Pole_05	sox-jennet://mac/addr/	🔘 fault	closed	sys::ParseErr: Invalid Int: 'addr'	
Pole_03	0	Pole_06	sox-jennet://mac/addr/	🔘 fault	closed	sys::ParseErr: Invalid Int: 'addr'	
Pole_04	0	Pole_07	sox-jennet://mac/addr/	🔘 fault	closed	sys::ParseErr: Invalid Int: 'addr'	
Pole_05	0	Pole_08	sox-jennet://mac/addr/	🖸 fault	closed	sys::ParseErr: Invalid Int: 'addr'	
Pole_06	0	Pole_09	sox-jennet://mac/addr/	3 fault	closed	sys::ParseErr: Invalid Int: 'addr'	
Pole_07	0	Pole_10	sox-jennet://mac/addr/	🔘 fault	closed	sys::ParseErr: Invalid Int: 'addr'	
	0	Pole_11	sox-jennet://mac/addr/	C) fault	closed	sys::ParseErr: Invalid Int: 'addr'	
Pole_08	0	Pole_12	sox-jennet://mac/addr/	🔇 fault	closed	sys::ParseErr: Invalid Int: 'addr'	
Pole_09	0	Pole_13	sox-jennet://mac/addr/	🖸 fault	closed	sys::ParseErr: Invalid Int: 'addr'	
Pole_10							
Pole_11							
Pole_12							
Pole_13							

15. After the points are relativized, the network should look like this.

			Com	ectors			WattStopper su	Logout	InferStack
ADIO		scover)	New Edit Dup Trash	(Ping) (Det	alls) (Er	nable Disable	Close		
Connectors		dis	uri	connStatus v	connState	connErr			
JENNET	0	Pole_01	sox-jennet://mac/0015:8d00:0069:9b8d	🕝 ok	open				
U Connectors	0	Pole_02	sox-jennet://mac/0015:8d00:0069:98cd	🕗 ok	open				
Pole_01	0	Pole_03	sox-jennet://mac/0015:8d00:0069:9b95	📀 ok	open				
Pole_02	0	Pole_04	sox-jennet://mac/0015:8d00:0069:9bbe	🕗 ok	open				
Pole_03	0	Pole_05	sox-jennet://mac/0015:8d00:0069:9b87	Øok	open				
Pole_04	0	Pole_06	sox-jennet://mac/0015:8d00:0069:98bc	🕗 ok	open				
Pole_05	0	Pole_07	sox-jennet://mac/0015:8d00:0069:9cb4	📀 ok	open				
Pole_06	0	Pole_08	sox-jennet://mac/0015:8d00:0069:9937	📀 ok	open				
	0	Pole_09	sox-jennet://mac/0015:8d00:0069:9b5d	🕗 ok	open				
Pole_07	0	Pole_10	sox-jennet://mac/0015:8d00:0069:9c34	Ø ok	open				
Pole_08	0	Pole_11	sox-jennet://mac/0015:8d00:0069:9382	🕗 ok	open				
Pole_09	0	Pole_12	sox-jennet://mac/0015:8d00:0069:98af	📀 ok	open				
Pole_10	0	Pole_13	sox-jennet://mac/0015:8d00:0069:98c7	Øok	open				
Pole_11									
Pole_12									
Pole_13									

Connectors App - All Objects Opened

CREATING SCHEDULES AND EVENTS

In the Schedule app, you create schedules and assign events to those schedules.

1. From the Home Screen click the **Schedule** icon.

Home Screen



2. As part of the snapshot, the schedules in the following screenshot are provided.

Schedule App – Default Schedules

	Schedule	WattStopper su Logout InferStack
🖒 NEW 🥒 EDIT 👻 🔍 SEARCH 💌 🍃 SCHEDULAI	BLES 🗙 TOOLS 👻 👔	1ª Nav. Tree
🗉 🔸 🗊 MASTER DIMMING ALL DAYS THE SAME — OK : 70		=
■ ► 🗊 MASTER DIMMING WEEKEND ALTERNATE — OK : 70		=
E + 🗇 WEEKEND OVERRIDEONOFF OK : NULL		=

- 3. To view or edit the schedule values, select the arrow by the schedule to open and view. To the right of the schedule name are three buttons: **Weekly**, **Events**, and **Points**. Click these buttons to change the display:
 - · Weekly Displays the events in a weekly/hourly format
 - · Events Allows you to view individual events in the schedule
 - Points Allows you to assign points to the schedule

Schedule App – Schedule Expanded

C.		1 -	0	$\mathbf{v} \models \mathbf{i}_{1}$	*	+ i			Te N	av. Tree
≣	• [2 MAST	ER DIMM	ING ALL DAY	S THE SA	ME OK : 70		WIX	V EVENTS	
SUN		1248	1	448	1		1294	4214	SPH.	1 124
MON	*	1248	1	444	4	AAN I.	12PH I	424	APM	1 126
TUE	*	1244	1	448	1	848	12091	429	80%	1. 124
WED	*	1248	-1	448	4	AAN 1	12PH I	421	APM	1 124
THU	*	1248	1	445	1	0.42	12PH	429	APH	1 124
FRI	*	1248	1	445	1	845	12091	429	SPH	1 124
SAT		1244		445	1	845	12PH I	424	100	1 124
=	• 6	D MAST	ER DIMM	ING WEEKEN	ID ALTER	NATE OK : 70				=
	• [WEEK	END OVER	RIDEONOFF	-OK :	NULL				-

4. To edit the values, double click any portion of the schedule. The right section of the screen changes to show editable parameters for the portion of the schedule you selected.

Schedule	App -	Editing	Values
----------	-------	---------	--------

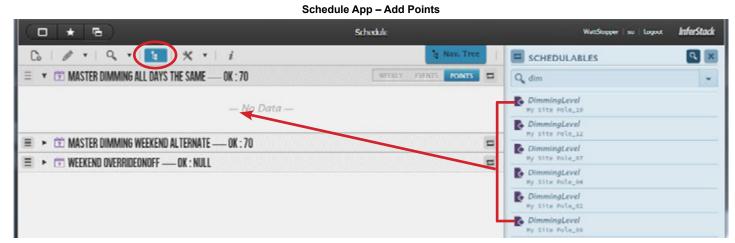
G	2	*	в)							Schedu	ile			WattStopper su Logout InferStack
Ca	-	1 -	0,	r h	*	• i						lg Nav. T	rec	* ESSENTIAL TAGS
Ξ	• 6	MASTE	R DIMMIN	G ALL DAY	S THE SAN	IE OK : 7	0				WEDKLY EVEN	TS POIN	15	EVENT-VALUE:
SUN		1248	1	448	i.	2.08	ſ.,	12PM	1	4PM	-	ares 1	1248	70.00 None *
MON		1244	1	443	1	6.65		12PM	i.	40%	-	area a	12AM	occurs:
TUE	*	1244	1	4.45	Ĩ.	EAM.		12PM	i.	4PM	-	open i	1248	Sun Mon Tue Wed
WED		1248	1	4.4.5	1	TAN .		12PM	ï.	4PM		apre 1	1245	Thu Fri Sat
THU		1240	1	445	4	0.05		12PM	1	4PH		arm i	1248	ALL DAY EVENT
FRI		1248	1	4.45	1	0.05		12PM	1	4PH	-	APR 1	1244	DAILY START TIME: DAILY END TIME:
SAT		1248	1.	448	1.	1.1.1		12PM	t.	408		area -	1248	05: 00 AM ¥ 10: 15 AM ¥
	• 6	MASTE	R DIMMIN	G WEEKEN	ID ALTERNA	TE OK :	70			1.000				MARKER TAGS
	• 6	WEEKE	ND OVERRI	DEONOFF	OK : N	JLL								A weekly
														PROPERTY TAGS
														Close

5. Click Points to add points to the schedule.

Schedule App – Select the Points Display

	Schedule	WattStopper su Logout InferStack
Conew dedit + Q search +	🖌 SCHEDULABLES 🗙 TOOLS 👻 🧯	1 Nav. Tree
\equiv \checkmark \boxdot master dimming all days the same	OK : 70	WEDRLY EVER POINTS
	— No Data —	
🗐 🕨 🗰 MASTER DIMMING WEEKEND ALTERNATE	OK:70	
🗐 🔸 🗇 WEEKEND OVERRIDEONOFF — OK : NULL		=

6. Click the Schedulables icon at the top of the screen to open the Schedulables section on the right. You can manually scroll through the points to add to the schedule or search for a particular type of point. For example, typing "dim" in the Search field displays the "DimmingLevel" point. Select individual points or group select all of the points and simply drag them to the schedule and release.



7. Once added to the schedule the points will be visible in the points window. The name of the schedule associated with each point will also appear by the points in the Schedulables window.

	Schedule	WattStopper Logout InferStack
□ # + Q + 1 ★ + <i>i</i>	a Nav. Tree	SCHEDULABLES
😑 💌 🛱 MASTER DIMMING ALL DAYS THE SAME —— OK : 70	WEEKLY EVENTS POINTS	Q, dim 👻
$\left[\times \middle My \text{ Site Pole_01 DimmingLevel} ight] \left[\times \middle My \text{ Site Pole_02 DimmingLevel} ight]$	× My Site Pole_03 DimmingLevel	OverrideOnOff MASTER DIMMING ALL DAYS THE SAME
× My Site Pole_04 DimmingLevel × My Site Pole_05 DimmingLevel	× My Site Pole_06 DimmingLevel	By Site Pole_83
X My Site Pole_07 DimmingLevel X My Site Pole_08 DimmingLevel	X My Site Pole_09 DimmingLevel	OVERTIGEOROOFF [MASTER DIMMING ALL DAYS THE SAME] NY SITE POLE
X My Site Pole_10 DimmingLevel	× My Site Pole_12 DimmingLevel	DimmingLevel MASTER DIMMING ALL DAYS THE SAME
× My Site Pole_13 DimmingLevel		By Site Pole_04
KOMASTER DIMMING WEEKEND ALTERNATE	E	By SITE Pole_05
E • 🔅 WEEKEND OVERRIDEONOFF — OK : NULL		B DimmingLevel Ny Site Pole_12 MASTER DIMMING ALL DAYS THE SAME
		OverrideOnOff MASTER DIMMING ALL DAYS THE SAME WASTER DIMMING ALL DAYS THE SAME
		By Site Pole_13
		B DimmingLevel Ry Site Pole_07 [MASTER DIMMING ALL DAYS THE SAME]
		B DimmingLevel Ny Site Pole_64 MASTER DIMMING ALL DAYS THE SAME
		Ny Site Pole_07 MASTER DIMMENC ALL DAYS THE SAME
		DimmingLevel MASTER DIMMING ALL DAYS THE SAME Site Pole_02

8. To create a new schedule, click **New** to open the Essential Tags section on the right. Complete the following fields:

- Schedule Name
- Schedule Type (for DimmingLevel and OverrideOnOff the schedule must be "Number")
- Default Value (this is optional)

If the schedule requires any marker tags (receiving values from a function), select the "+" in the **Marker Tag** section and add them Click **Create**.

Schedule App – Create a New Schedule

	* 5	Schedule	WattStopper su Logout	InferStack
C.	0 * Q * E X * I	12 Nav. Tree	* ESSENTIAL TAGS	
(E) +	跎 MASTER DIMMING ALL DAYS THE SAME OK : 100	=	SCHEDULE-NAME:	
	T MASTER DIMMING WEEKEND ALTERNATE	=	<schedule-name></schedule-name>	
	T WEEKEND OVERRIDEONOFF OK : NULL	=	SCHEDULE-TYPE:	
			BOOLEAN NUMBER STRING	ENUM
			DEFAULT VALUE:	
			TRUE FALSE	NULL
			MARKER TAGS	
			PROPERTY TAGS	•
			Cancel Creat	10

9. To set the time (or times) the schedule occurs, click and drag inside the schedule to highlight a time period for one day. Once completed, double click the highlighted time and the section to the right appears. Enter the values required for this schedule. Note that the time can be edited here as well. When complete, click Apply. **NOTE:** In the next step, you can apply this time period to multiple days.

Schedule App – Set a Time for a Schedule

C		*	6							Sched	ule				Watt	Stopper su Logout	InferStack
C		1 -	Q	1 1	*	• <i>i</i>						1	Nav. Tre	•	▼ ESSENTIAL TAG	s	×
															EVENT-VALUE:		
	► 🗊 MASTER DIMMING WEEKEND ALTERNATE — OK : 100 📼															75.	00 None 🔻
	• 0	D WEEKE	ND OVERRIG	DEONOFF -	— OK : NI	IL									OCCURS:		
≡	• 0	🗊 NEW —	— OK : NUL	1							WEEKLY	EVENTS	POINTS		Sun Mon	Tue	Wed
SUN	*	12AM	1	4.4.14	I.	BAM	1	12PM	I.	4PM	1	8.PM	1	12AM	Thu Fri	Sat	
MON	*	1248	1	4.48	1	8AM	1	12PM	ŗ.	408	1	8PH	1	12AM		LL DAY EVENT	
TUE	*	1248	1	4.08	1	I SAM	1	12PM		AUX.	1	1 1074	1	12AM	DAILY START TIME:	DAILY END T	IME:
WED	*	12AM	1	4.4.14	1	BAM	1	12PM	I.	4PM	1	8PH	1	12AM	02: 00 PM		00 PM +
THU	*	12AM	1	4.4.11	1	BAM	1	12PM	I.	4PM	1	6.PM	1	12AM	MARKER TAGS		۲
FRI	*	1248	1	4.48	1	8AM	1	12PM	1	40%	1	8PM	1	12AM	A weekly		
SAT	*	12AM	1	4.4.14	1	0.AM	1	12PM	1	4PM	÷.	0.PM	1	12AM	PROPERTY TA	55	
															Reset	A	pply

10. Once a particular day has been completed, click the double arrows icon to the right of the day name. A dialog pops-up, providing the option to apply that day to another Day, Weekdays only, or the Week. Make the selection and click Apply.

Schedule App – Apply a Time to Multiple Days

Ξ	+ (D NEW -	-OK : I	NULL												WEIKLY			-
				2.44	1		i.		i.	Apply Tuesday To	-	478	i.		1		1	1.0PM	1 1244
		11148		248	ù.	448	i .	LAN .	i.	Sunday		478	i -	679	-	100	î.		1 1248
	\sim	12248		248	3	4.02	1	6.00	i.	🗹 Monday	⊨		X.	108	e.	1077	1	2079	1 3249
WED	*	1248	Ľ.	248	1	448	1	6AM	1	🖌 Wednesday	K	4791	1	6298	Т.	1.079	1	1079	1 1248
THU		11248	C.	248	ũ.	4.05	1	6.68	ï	🗹 Thursday	1	479	i.	679	х.	1.078	i.	1079	1 3348
FRI		1248	с — <u>Г</u>	248	1	4.00	i.	CAM .	i.	🔂 Friday	£	479	ī	6278	1	1.0798	i.	1009	1 1244
		1248		2AM	1	448	I.	EAM.	ı.	Saturday Cancel Apply		479.	1	6278	1	1.07%	1	1079	1248

11. To create an Event within a schedule, click Events.

Schedule App – Select Events Display

	Schedule	WattStopper su Logent InferStack
🖒 NEW 🥒 EDIT 🔻 🔍 SEARCH 💌 🍃 SCHEDULABLES	X TOOLS V i	1: Nav. Tree
🚊 💌 🖾 MASTER DIMMING ALL DAYS THE SAME —— OK : 100		
	— No Data —	
■ ► 🗇 MASTER DIMMING WEEKEND ALTERNATE OK : 100		
E 🕨 🐨 WEEKEND OVERRIDEONOFF OK : NULL		=
😑 🕨 📅 NEW OK : NULL		=

12. Click the menu icon and select Create Event.

Schedule App – Create an Event

	Schedule	WattStopper su Logout InferStäck
🕞 NEW 🕜 EDIT 🔻 🛛 🔍 SEARCH	🔹 🗏 SCHEDULABLES 💥 TOOLS 💌 🛛 👔	1g Nav. Tree
Actions - Co CREATE EVENT	AME — OK : 100 — No Data —	WEDGLY EVENTS POINTS
🗏 🔸 🗇 MASTER DIMMING WEEKEND ALTER	RNATE —— OK : 100	=
🗏 🔸 🗇 WEEKEND OVERRIDEONOFF — OK :	: NULL	
🗏 🔸 🗇 NEW — OK : NULL		Ξ.

13. Create a custom event that will override the schedule during that period. The values can be added based on a "Range", "Rule" or "Week". Once the event has been edited, select "Create".

Schedule App – Edit Event Values

	Schedule	WattStopper su Logout InferStack
G # + 9, + 5 % + 1	1g Nav. Tree	▼ ESSENTIAL TAGS
≡ ▼ 🗊 MASTER DIMMING ALL DAYS THE SAME — OK : 100	WEEKLY EVENTS POINTS	EVENT-NAME:
		<event display="" name=""></event>
— No Data —		EVENT-VALUE:
		0.00 None +
🗏 🕨 🖾 MASTER DIMMING WEEKEND ALTERNATE OK : 100	=	BASED ON:
E > 😇 WEEKEND OVERRIDEONOFF OK : NULL		RANGE RULE WEEK
III ► 🗇 NEW OK : NULL	3	OCCURS EVERY YEAR
		START DATE: END DATE:
		Nov 05, 2015 + Nov 05, 2015 +
		ALL DAY EVENT
		DAILY START TIME: DAILY END TIME:
		08: 00 AM ¥ 05: 00 PM ¥
		MARKER TAGS
		PROPERTY TAGS
		Cancel Create

USING THE FOLIO APP

The Folio App is used to batch edit the database. Site, Equip and Points can be queried. Certain functions can be executed as well.

1. From the Home Screen click the **Folio** icon.



2. The Folio App opens on the Axon tab. In the Axon tab the all entries are entered to the right of the ">".

		Foli	o App – Ax	on Tab		
			Folio			WattStopper su Logout InferStack
	Axon	Files	Snapshots	Trash	Debug	
>						
						Table Zinc 🖈 🖈
New Edit Dup Trash Meta						
empty						

3. To search for all points in the database, type "point" and press the Enter. All points in the database will be visible. Any point can then be selected and edited.

C			-0110	App –	Disp	laying All F	-010	15		WattStope	ser su Lagaut //	ferStack
		txon	F	iles S	snapsl	hots Trasl	•	Debug				
ро	int										Table Zinc	* *
	ew Edit Dup Trash Meta											
	id	_	_	asbury	cmd	connStatus	cur	curErr	curStatus	curVal	disMacro	energ
8	1d28443b-81d3b554 X_Reggie's Bulit TotalMinutes	0					1	conn down	down		\$equipRef \$navName	
0	WattStopper Birmingham Office Asbury CurrentHours	0	0				1		ok	9	\$equipRef \$navName	
8	1d28443b-81d3b554 X_Reggle's Bulit PowerFactor	0					1	conn down	down		\$equipRef \$navName	
0	WattStopper Birmingham Office Green_Valley CurrentMinute	• •	0				1		ok	55	\$equipRef \$navName	
8	WattStopper Birmingham Office Sunview DimmingLevel	0	0		1		1		ok	70 %	\$equipRef \$navName	
8	WattStopper Birmingham Office Green_Valley LoadStatus	0					1		ok	false	\$equipRef \$navName	
8	WattStopper Birmingham Office Green_Valley Sunset	0	θ				1		ok	968min	\$equipRef \$navName	
Ð	WattStopper Birmingham Office Green_Valley Watts	0					1		ok	.588 W	\$equipRef \$navName	1
0	WattStopper Birmingham Office Sunview Sunset	0	0				1		ok	968min	\$equipRef \$navName	
8	1d28443b-81d3b554 X_Reggle's Bulit Sunrise	0	⊜				1	conn down	down		\$equipRef \$navName	
0	WattStopper Birmingham Office Asbury LoadStatus	0					1		ok	false	\$equipRef \$navName	
8	1d28443b-81d3b554 X_Reggle's Bulit CurrentMinutes	0	Θ				1	conn down	down		\$equipRef \$navName	
8	WattStopper Birmingham Office Asbury Volts	0					1		ok	122.664 V	\$equipRef \$navName	
8	WattStopper Birmingham Office Green_Valley CurrentHours	0	Θ				~		ok	9	\$equipRef \$navName	
8	WattStopper Birmingham Office Green_Valley PowerFactor	0					1		ok	.538 pf	\$equipRef \$navName	
	WattStopper Birmingham Office Green_Valley DimmingLevel	0	0		1		1		ok	70 %	\$equipRef \$navName	

4. To search for all equipment in the database, type "equip" and press Enter. All equipment in the database will be visible. Any piece of equipment can then be selected and edited.

Folio App – Displaying All Equipment

	0 * 0 %			Folio					WattStopper	w Logout InferStack
		٨	xon Files	Snapshots	Trash	Deb	ug			
>										
ea	ap.									Table Zinc 🖈 ★
-	ew Edit Dup Trash Met	D								
		children	connStatus	disMacro	elec	equip	meter	navName	nwti111	siteRef
	ew Edit Dup Trash Met	children	connStatus ok	disMacro \$siteRef \$navName		equip √	meter √	navName Sunview	nwti111	
	ew Edit Dup Trash Met id WattStopper Birmingham Office Sunview	children			1		meter √ √		nwti111 √ √	
-	ew Edit Dup Trash Met id WattStopper Birmingham Office Sunview	children		\$siteRef \$navName \$siteRef \$navName	5	1	meter ✓ ✓	Sunview	nwti111 √ √	WattStopper Birmingham Offi

5. Any site, equip or point that has a tag can be queried as well. In the following screenshot, "zone1" was queried and 3 pieces of equipment with that tag were displayed.

Folio App – Querying a Tag

5	□ ★ O ℡		F	iolio				WattStopper su Logout Infer	Stack
		Axon	Files Snap	shots	Trash C	Debug			
>									
zor	vel							Table Zinc 🖈	*
	ew Edit Dup Trash Meta								
	ew Edit Dup Trash Meta	connStatus	disMacro	elec	equip meter	navName	nwti111	siteRef	subm
0		connStatus ok	disMacro \$siteRef \$navName		equip meter √ √	navName Sunview	nwti111 √	siteRef WattStopper Birmingham Office 🔘	
000	M			1	equip meter √ √ √ √		nwti111 √ √		Watts

6. In the screenshot above, "watts" was queried and 4 points with that tag were displayed.

				Folio	App – Qı	erying	a Tag			
	0 * 0 %				Estopper Dirmingham	su Logout InferStack				
			Ax	on Files	Snapsh	ots Tr	rash Debug			
>										
wa	tts									Table Zinc 🖈 ★
0	kew Edit Dup Trash Meta				_					
_	м		cur	curErr	curStatus	curval	disMacro	energy	equipRef	
0	WattStopper Birmingham Office Green_Valley Watts	0	1		ok	.585 W	\$equipRef \$navName	1	WattStopper Bim	ningham Office Green_Valley (
0	WattStopper Birmingham Office Asbury Watts	0	~		ok	.605 W	\$equipRef \$navName	1	WattStopper Bim	hingham Office Asbury
0	1d28443b-81d3b554 X_Reggie's Bulit Watts	0	1	conn down	down		\$equipRef \$navName		1d28443b-81d3	554 X_Reggie's Bulit
0	WattStopper Birmingham Office Sunview Watts	0	1		ok	.583 W	\$equipRef \$navName	~	WattStopper Birn	ningham Office Sunview

 To add tags to a site, equip or point, following the query, select the object(s) and click Edit. To add a maker tag (name) click Add Tags. A dialog pops up. Enter the tag and click Add. In the following example, a zone2 tag is being added to 2 points. Once added, click OK.

cur:	~				
curStatus:	ok				
curVal:	0	No	Unit		
disMacro:	\$equipRef	snavName			
energy:	1				
equipRef:					
his:	~				
hisCollectInterval:	15	mir	1		
hisEnd:	5-No	v-2015 Thu	9:45:00AM	CST	
hisEndVal:	0	No	Unit		
hisId:					
hisSize:	0	No	Unit		
hisStart	29-10	n-2015 Mon	9-15-00AM	CDT	

8. The query tool can also be used to delete or "trash" items from a database. Select any item in the query and click the **Trash** button directly above the listed items. Once an item or items have been trashed it is always best to empty the trash folder once confident the items are no longer needed. To empty the trash, click the **Trash** tab at the top. Select the items and click **Empty**. If an item has been put in the trash by mistake, select that item and click **Restore** to move it out of the trash and back to the database.

						Axon	Files	Snapshots	Trash	Debug	
(Empty)	Restore)										
id	connState	connStatus	dis	jennetConn	trash	uri	_		mod		
Pole_1	open	ok	Pole_1	1	1	sox-jennet://	/mac/001	5:8d00:0069:8c2	5-Nov-2	2015 Thu 1:12:18PM UTC	

Folio App – Adding a Tag

RUNNING FUNCTIONS WITH THE JOB APP

- The Job App is used to run Functions at a scheduled time.
 - 1. From the Home Screen click the Folio icon.



2. Three Jobs are included in the Snapshot, scheduled to run at preset times. These times can be edited as required.

						Job A	Арр				
C		WattStopper su	Logout	InferStack							
					с	onfig	Log				
	iew Edit Dup	Trash (Run	nable) 🔘	isable		-				
	dis	job	jobSchedule	disabled	jobLastRuntime	jobLa	stStatus	jobLastTime			
•	Database Compact	folioCompact()	at 02:00:00					3-Dec-2015 Thu 2:00:04AM CST			
0	time sync	jennetSyncTime()	at 03:00:00		24.88sec	done	Ok	3-Dec-2015 Thu 3:00:33AM CST			
θ	Update Sunrise Sunset	updateSrss(0,0)	at 04:00:00		107 ms	done	Ok	3-Dec-2015 Thu 4:00:04AM CST			

3. To edit a job, select the job and click Edit. Modify the job parameters as needed and click OK.

			Edit		
dis:	Update	Sunrise/Sunset			
	jennetU	pdateSrss(0,0)			
job:					
jobSo	hedule:	 None Every 	Ihr		
jobSk	hedule:		1hr 01:00:00AM		
jobSk	hedule:	Every		None	
jobSo	hedule:	 Every Everday at 		None	

- 4. To create a new Job, click **New**. In the window, enter a job name in the **dis** field. Enter the function to run in the **job** field. Set the time or times to run the job in the **jobSchedule** section and click **OK**.
- 5. To manually run any job, select the job in the and click **Run**. After running the job, the status of the job can be monitored in the Log".
 - **NOTE:** The Sync Time job must be run after the NWTL-111 devices all display "OK" in the Connectors App. This will ensure the time in the internal clock is set. This is a requirement for the Sunrise/Sunset times to function properly. Running this job the first time could take up to an hour on a project with over 100 devices. After the Sync Time job is 100% complete the status will report "doneOk". (If an error is reported the status will return "doneErr".) After the Sync Time job is completed properly, the Update Sunrise/Sunset job must be run. This will publish the current Sunrise/Sunset time to the TodaySR and TodaySS points in the devices.

USING THE HISTORIAN APP

The Historian app is where all histories are stored in the 225CWS. The 225CWS has 8GB of Flash Storage. At preset trending rates (15min for energy data and COV for command and status changes), there is more than 20 years of storage capacity on a 225CWS (based on maximum point load) before data is overwritten.

1. From the Home Screen click the **Folio** icon.



2. To access historical data, click Histories.

	Historian App	
Graphics - InferStack × 🖪 Historian - InferStack ×		
→ C ň D 166143.93158/proj/infentis#1c35ad68-c65c3eec		☆ <u>-</u>
1 * 0 %	Historian	Sectors (as) topol
	History	
derks	(* \$60.28406(-2014 *)	View Diat Octors N
bien bens ford Hole, LActiveForer: @ bien bens ford Hole, 2 ActiveForer: @ bien bens ford Hole, 2	de 3 Activehover 🖕 bian benis fool hele 4 Activehover 🌰 bian benis fool hele 3 Activehover	
an one seed some some some some some some		

- 3. Select the Site and the Equip column will populate with equipment for that site. Select the desired item in the Equip column and the Point column will populate. Double-click the point(s) that are desired. The selected points will be moved to the Selected column.
 - NOTE: To select multiple points at once, shift-click or control-click to select multiple items in the list, and then while still holding the Shift or Ctrl key, double-click on one of the items in the list.
 - **NOTE:** After selecting one item in the Equip column and adding points to the Selected column, you can go back and select a different item in the Equip column, then select the point(s). In this way you can get the histories of points for multiple piece of equipment at the same time. So for, example, you could view he Dimming Point for several pieces of equipment in one chart.
- 4. Click **OK** and the history chart will be displayed.

If you know the desired point names, you can search for them using the search window at the top right to expedite the query. Multiple points from multiple piece of equipment can be queried at the same time.

			Historian		WattStopper su Logout	InferStack
		History				
Histories f(x)		(Today	•	New Chart	Options Points	Aspects
SITE P	QUIP	POINT	Search	CLEAR		
	My Pok_001 ►	Amps DimmingLevel LoadStatus OverrideOnOff TodaySR TodaySS Volts Watts	My Site My Pole_001 DimmingL My Site My Pole_001 TodaySS			
				ок		

Historian App – Selecting Items to Display Their History

5. By default data is displayed in a chart view. To view the same data in a grid, change the **View** from Chart to Grid.



Historian App – Grid View

		Historian	Watt-stopper Hirmingham David Fox Logout InferStock
		History	
C	Histories f(x)	Yesterday	View Grid Options Points Aspects
	Timestamp	WattStopper Birmingham Office Green_Valley Watts	WattStopper Birmingham Office Green_Valley Volts
0	1-Dec-2015 Tue 11:45:00PM CST	74.585 W	122.946 V
0	2-Dec-2015 Wed 12:00:00AM CST	74.641 W	123.111 V
0	2-Dec-2015 Wed 12:15:00AM CST	45.035 W	123.378 V
0	2-Dec-2015 Wed 12:30:00AM CST	45.051 W	123.807 V
0	2-Dec-2015 Wed 12:45:00AM CST	45.057 W	123.402 V
0	2-Dec-2015 Wed 1:00:00AM CST	45.104 W	123.619 V

6. You can change the date or range of dates by clicking the Date Range button at the top. You can select an individual day, week, month, or year, or specify any date range. Once set, clicking the left or right arrows at the end of the button will toggle the chart progressively through the days, weeks, months or years.



Historian App – Change Date

 Sample rates can be changed on the Configure Histories screen. Click Options to open this dialog. Highlight one or more of the points, then click Interval to set the scale of the data included on the chart. Other options include choosing the type of chart, colors used in the chart, grouping, and type of calculation.

Historian App – Configure Histories

Ç									Historia	Historian WattStopper		WattStopper Birmingham David Fox Logout InferStoc	k
									Configure H	istories			
C	HISTORIES Color Chart Type Group Interval Fold Fold								h				
4	Histor	Y				Unit	Kind	Color	Chart Type	Group	Interval	Fold	1
	WattSt	opper B	Sirmingh	am Offic	ce Green_Valley Wa	tts W	Number	Auto	Auto	Auto	Auto	Auto	4
0	WattSt	opper B	Simingh	am Offic	ce Green_Valley Volt	ts V	Number	Auto	Auto	Auto	Auto	Auto	
0													

8. To export the history to a particular file type, click the Download icon, select the file type, and click **OK**. The report can also be emailed from the system in this window if the email extension has been set up.

	Historian	WattStopper Dirmingham su Logout InferStack
	History	
Histories f(x)	Export	Chart Options Points Aspects
200 W WattStopper Birmingham Office Asbury Wath • Wa	his-infer-20151105-1003 .pdf	
150 W	Excel	
100 W	150N	<u> </u>
50 W	PDF	
	SVG	
0 W WattStopper Birmingham Office Asbury Volts Wat	XML Zinc	
1241/	Page Size: Best Fit \$	
123 V MARY		Λ
122 V	OK Email Cancel	
	A AVIVI	ΥV

Historian App – Export File

VIEWING POINT DATA FOR A SPECIFIC PIECE OF EQUIPMENT

The Equip app is similar to the Historian app, but is focused on displaying data for a specific piece of equipment.

1. From the Home Screen click the **Equip** icon.



2. Click the "Equipment" button. A dialog similar to the one used in the Historian app opens. Note that this only has two columns, for **Site** and **Equip**. Select the **Site** to populate the **Equip** column, then double-click the particular piece of equipment desired.

Equip App

		Equip		WattStopper su Logout	InferStack
Equipment		Today	Options	Points Add Points	Aspects
		8			
STTE	ЕQUTP				
WattStopper Birmingh >	Asbury Green_Valley New Equip Sunview				
		OK Select an equipment			

3. The screen displays a series of charts displaying data on various points. As with the Historian app, you can change the date or date range by clicking the button at the top.



4. Click **Options** to determine whether or not to display the Weather chart. Note that the sunrise and sunset times are determined by the locations settings in the Essential Tags of the Builder App. See <u>"Setting Up the Database" on page 17</u> for details. Click **Points** to see a list of the point data shown in the charts. To add other charts to the screen, click **Add Points**. A dialog identical to the one in the Historian app opens and you can select the points to add.

ADDING GRAPHICS OF THE SITE AND EQUIPMENT

The Graphics App is where the customer GUI is located. Graphical representation of the Site and Equipment is provided. The Graphics are published to the 225CWS using a 3rd party software which requires training by the commissioning agent.

1. From the Home Screen click the **Graphics** icon.



2. Select the Site and a thumb nailed image appears. Click on the thumbnail image to view the site graphic.

Graphics App Controls Control

Graphics App – Equipment View



MANAGING USERS

The User app provides the ability to edit or create new users.

1. From the Home Screen click the User icon.



2. The snapshot provides a default admin and normal user as examples

User App

							User	WattStopper	su I	Logout	InferStack
New Edt Trash Add Guett App Permissions (Subscriptions)											
_	dis	usemanie	userAdmin	email	tz	Subscriptions	actionAccessFilter	appAccess	_		
0	Admin User	admin	1	admin@email.com	New_York		user_finCat<=6				
0	Normal User	user	1	user@email.com	New_York		user_finCat<=6	$settings, user, help, alarm, equip, graphic, his, job, note, schedule, \ldots$			

3. To edit a user, select the user and Click Edit.

Enable the Admin checkbox to add admin privileges, which is required for some apps.

The **tz** field allows you to select the time zone where the user is located. Click the current value to open a dialog and select the appropriate value. This value is used for correctly notating the time in emails sent to the user.

Wattstopper recommends all users be issued the "user_finCat<=6" actionAccessFilter. This filter is a "property tag" that limits the user's "action" in commands to only "manual override" and "manual auto". This removes all emergency and default command actions.

	Edit	
First Name:	Admin	*
Last Name:	User	-14
Username:	admin	
Email:	admin@email.com	
	☑ Admin	
Password:		Ť
	Show password	
	user: 🗸	
	tz: New_York	
action Access	Filter: user_finCat<=6	

4. To create a new user click "New" and then enter the user specific details in the window.

	User App– Create User
Loom New York	user_finCat<=6 New
First Name:	1
Last Name:	
Username: Email:	
Email:	nin
Password:	÷
Sho	/ password
user: √ tz: New_York	
? Add Tags	OK Cancel

- 5. To add the actionAccessFilter to a new user, click **Add Tags** and type the following in the window: actionAccessFilter:"user_finCat<=6".
- 6. Click Add.

First Name:	×.
	10
Last Name:	
Username:	
Email:	
Admin	
Password:	ť
Show password	
user: 🗸	
tz: New_York	
~	
? Add Tags	OK Cancel
actionAccessFilte	r:"user_finCat<=6"

User App– Add actionAccess Filter

7. After the user is created, you can limit which apps are available to that user by clicking **App Permissions**. Select or deselect specific apps and click **OK**.

NOTE: Certain apps are only accessible for users with the Admin privilege. If the user does not have that privilege, those apps will be disabled.

8. To delete a user, highlight the user and click **Trash**.

USING THE HELP APP

Selecting the Help App opens the embedded device users manual.

1. From the Home Screen click the **Help** icon.



2. Information for advance users is provided here.

Help App

InferStack ×			Biyan - 🗆 X
← → C A Di 192.168.10.1/doc/ H Apps ★ Bookmarks Di myJegrand Di Service Center	😋 Log in to Concur C	👖 Welcome To Niagar 🛅 Welcome! LinkedIn	Q ☆ 😐 🌄 ≡ » 🗀 Other bookmarks
InferStack			Î
Doc Index			
InferStack Documentation			
Getting Started	Manua	ls	
Device Setup Server Setup	InferStac	k	
Introduction to InferStack	docInferSt	ack InferStack documentation	
Device Platforms • 220/225 Series • 240/245 Series		Introduction – Architecture – Eolio – Fresco – Axon – Security – Web Uns – Watches – NavTrees – Actions – Localization – Axon Language – Axon Usage – Filter – Units – Fantom Api – Exts – Grids – Rest – Ops – Zinc – Trio – Csv – Json – XML – Modbus RTU – Troubleshooting – Tuning – Licensing – Axon Grammar – Changelog	
	docHost	InferStack platform documentation Server – Server Setup – Device – Device Setup – 220/225 Series – 240/245 Series	
	Fantom		
	docIntro	Overview and getting started with Fantom Fantom Readme – StartHere – Tour – WhyFantom – HelloWorld – Roadmap – Faq – License – Change Log	
	docLang	Language documentation Structure – Literals – Expressions – Statements –	

3. Scroll to "jennet" under the Extensions section for details on embedded functions specific to the jennet extension.

geo		Geolocation Extension	fandoc	Fandoc parser and DOM
graphic		Graphics	fanr	Fantom Repository Manager
greenButton	Analytics	Green Button function library	fansh	Interactive Fantom Shell
haystack		Haystack Connector Extension	flux	Flux: Core Application
his		Historian Extension	fluxText	Flux: Text Editor
hisKit	Analytics	Historian Analytics Kit Extension	fwt	Fantom Widget Toolkit
hvac		HVAC Extension	gfx	Graphics API
io		I/O Extension	inet	IP networking
ioBridge		IO Bridge Extension	obix	oBIX XML modeling and client and server REST
jennet		Jennet Extension	sql	Relational database access
lob		Job Extension	syntax	Syntax styling for programming languages
kpi	Analytics	KPI Extension	sys	Fantom system runtime
Idap	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	LDAP Extension	util	Utilities
lighting	Analytics	Lighting Extension	web	Standard weblet APIs for processing HTTP requests
math	/ that just	Math function library	webfwt	Web extensions to the FWT toolkit
modbus		Modbus Connector Extension	webmod	Standard library of WebMods
note		Note Extension	wisp	Wisp web Server
obix		oBIX Connector Extension	xml	XML Parser and Document Modeling
point		Point Extension		
prov		InferStack Provisioning Support		
report		Custom report extension		
schedule		Scheduling Extension		
sedona		Sedona Connector Extension		
snmp		SNMP Connector Extension		

CHANGING THE APP ID (PANID) FOR MULTIPLE NETWORKS

In a situation where multiple 225CWS controllers will be in close proximity, it is necessary to segregate the wireless networks. This is known as changing the App ID (panID) in both the 225CWS and the field devices.

- 1. From the Home screen, click the **Builder** icon. Select the site, then expand the first device to determine whether the panID is already added to the device. If it is not, click **Connectors** to open the Connectors section on the right.
- 2. Expand the first equipment device in the Connectors section to display the tree. Expand the **Service** folder, then the **plat** folder, to show the **panld** object. Click and drag the **panld** to the device in the left tree.
 - **NOTE:** Ideally this should be done prior to cloning the network, because this edit must be done to all the devices on the entire network. Therefore, once this point is added, proceed with the cloning process as described starting in step 10 of the section on Building the Database. See <u>page 21</u> for details.

Builder App – Changing the panID

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▼ 🏦 WattStopper Birmingham Office		POINT NAME: POINT-TYPE:	🖌 💽 Asbury
🔻 💂 Asbury		panid S	app
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- Amps	0.01A	WattStopper Birmingh	appName
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CurrentMinutes	16.00	Numeric v None V Schedule: v	hlbernationResetsSteadyState
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Volts	123.95V	SITE REF: WattStopper Birmin Browse	DateTim
Watts	0.GW	EQUIP REF: WattStopper Birming Browse	🕨 🚘 Paninfo
► 🖳 Green_Valley		CONN REF: Asbury Browse	🔻 🖻 plat
► 🛃 New Equip		CUR PATH: 2.panId	🗋 macAddr
► 🛃 Sunview		WRITE PATH: 2.panId	memAvailable
		MARKER TAGS	
		A writable A & sensor	minBeaconLqi
		A @ point A cur	o panid ()
			parentLqi
		PROPERTY TAGS	🗋 plat

3. The panID will now show up in the tree on the left.

Builder App - panID Added to the Device

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Co • 4 • X • 🗖	• 5	E i	1: Nav. Tree	CONNECTORS	× +
AVAILABLE OBJECTS:	U		1 🗙 🛦 🖾 🕸	🕨 🕨 🖾 BHam Segman	
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▼ 🖳 Asbury	0	panld	<u>a</u> < p	app	
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CurrentMinutes	27.00	Numeric v None	Schedule: v	hibernationResetsSteadyState	
DimmingLevel	100.00% @ 17	Is Local Point Co	nnected Point	🕨 🚞 program	
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nanid 🔁 panid	0.00 0 8	HAS HISTORY H	S COLLECT SCHEME	ChopanN	
PowerFactor	0.54pf	Synchronized *	very 15 min 👻	Chichanal	

4. Next, you will need to create a function to batch edit all panld points. Return to the Home screen and select the **Func** icon.

Home Screen



5. The Func (Functions) app displays a list of default functions included with the snapshot. Click **New** In the pop-up dialog, enter the name "panId" (

NOTE: Note: All functions in Axon are camel case. No spacing between words. First letter of first word is lower case and additional words are note with a first letter capitalized. Example: camelCaseSyntax

	Func WattStopper s	su (Logout InferStack
New	Save Edit Trash	?
Search S childrenCurVal dimAll overrideAll updateSrss updateSrssScheduleTest upgradeSedona	<pre>//readAll(equip).childrenCurVal().sort("navName") (equipList) => do</pre>	
	OK Cancel	

6. Paste the following function in the window, then click Save .:

```
(val) => do
readAll(point and jennetWrite == "2.panId").each p => do
pointOverride(p, val)
end
end
```

Func App – Add Code

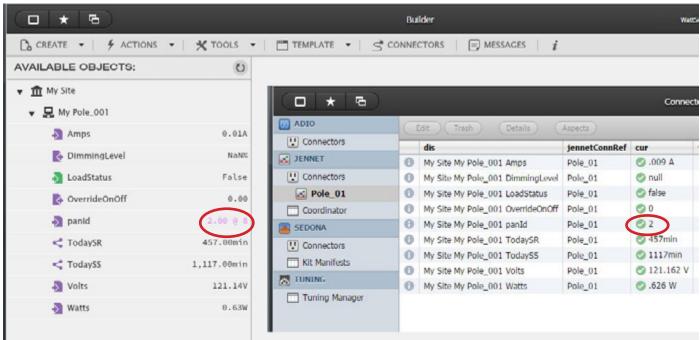


7. Next, navigate to the Folio app. On the execute line, type "panId(x)", where x" is the hexadecimal number desired for the new App ID/panId. (In the following example, panId "2" is used.) Run the command by pressing the Enter.

Folio App – Run Function											
(D * O B	Folio				w	diStopper	su Loge	aut li	nferSt	tack	
	Axon	Files	Trash	Debug							
> panId(2)											
								Table	Zinc	*	*
New Edit Dup Trash Meta											
amphy											

8. In both the Builder and Connectors App, you will see the panld has been changed to "2".

Results of Running the Function



9. Next, navigate to the Job app and create a new job as described in the section "Running Functions with the Job App" on page 33. Name the job "jennetSaveAll" and then in the job widow type "jennetSaveAll()" and click OK. NOTE: Do not schedule this job. This will run on command only. Once complete, select the job and click Run. After the job is complete, the network will require a reboot. Coordination with the customer may be required.

	_	_	New	_	-
dis:	jennetS	aveAll			
job:	jennetS	aveAll()			
jobSc	hedule:	 None Every Everday at 	1hr 12:00:00AM		
jobSc	hedule:			None	
jobSc	hedule:	 Every Everday at 		_	

10. After rebooting the NWTL devices, the coordinator appld will need to be changed. Navigate to the **Connectors** app. Select the **Coordinator** menu under JennetIP, then click **Config** and edit the appld to the new number (in our example, it is 0x00000002) and click **OK**.

NOTE: All appld values are hexadecimal.

M ADIO	Reset Details Config										
Connectors	-	ready	nctwo	rk add	r	appId		panId	channel	nodes	uptime
JENNET	0	false	true	001	5:8d00:0046:8c3b	0x00000	000	0x0002	26	0	10sec
Connectors											
Pole_01		ddr d	esc lgi	nextH				C	onfig		
Coordinator						10.22					
SEDONA						appId:	0x00	000002			
U Connectors						panId:	0x00	02			
🔲 Kit Manifests					d	hannel:	26				
TUNING					read	VTime:	1min				
Tuning Manager							_			_	
					daspOpe	mFreq:	5sec			_	
					daspConnectTi	meout:	10se	c			
					daspReceiveTi	meout:	90se	c			
					daspSen	dRetry:	5sec				
							a a c c c c				

11. After editing the appld, click **Reset** and then click Yes when prompted.

12. After the coordinator resets, the appld will change to the edited value. After 1 min, the devices with the new panID will appear.

FUNCTIONS FOR TESTING THE NETWORK

The following functions are useful for testing the network:

To test the override all:

- jennetOverrideAll(1,1hr) This will override the fixtures on for 1hr.
- jennetOverrideAll(2,1hr) This will override the fixtures off for 1hr.
- jennetOverrideAll(null) This will return the override command to the auto state.

To test the dim all:

- dimAll(50,1hr) This will dim the fixtures to 50% for 1hr.
- dimAll(75,1hr) This will dim the fixtures to 75% for 1hr.
- dimAll(null) This will return the dimming command to the auto state

To test an individual device:

To test an individual device, navigate to the Connectors app.

Select a connector to test. Both the OverrideOnOff and DimmingLevel points can be overridden using the small command button next to the write value.

Ensure you use the "Manual Set" to override the device. To test the On/Off command with the OverrideOnOff point, enter a value (0=auto, 1=On, 2=Off) and a duration and click **OK**. Always return the value back to "Manual Auto". To test the dimming command with the DimmingLevel point, enter a value (0-100) and a duration and click **OK**. Always return the value back to "Manual Auto".

NOTE: The write value should respond immediately. The curVal (current value) make take several seconds as the write commands are given a higher priority.

	Connec	Connectors					rStack
M ADIO	Edit Trash Details Aspects		0000000000		0.0.03		0.000
Connectors	dis	jennetConnRef	cur	write		his	con
AVSTACK	WattStopper Birmingham Office Asbury Amps	Asbury	A 600. 🔕	0		Collect 15min	
U Connectors	WattStopper Birmingham Office Asbury CurrentHours	Asbury	O 15	📀 null @ def	0	Collect 15min	
BHam Segman	WattStopper Birmingham Office Asbury CurrentMinutes	Asbury	O 17	🕗 null @ def	0	📀 collect 15min	
JENNET	WattStopper Birmingham Office Asbury DimmingLevel	Asbury	2 100 %	🕑 100 % @ def	Θ	Collect 15min, cov	
Connectors	WattStopper Birmingham Office Asbury LoadStatus	Asbury	false	0		Collect cov	
Asbury	WattStopper Birmingham Office Asbury OverrideOnOff	Asbury	0 📀	🕜 null @ def	P	Collect cou	
	WattStopper Birmingham Office Asbury panId	Asbury	00	@4@8		Emergency Set	
Green_Valley	WattStopper Birmingham Office Asbury PowerFactor	Asbury	.532 pf	0		Emergency Auto	
Sunview	WattStopper Birmingham Office Asbury Sunrise	Asbury	394min	394pm @ 8		Manual Set	
TEST: Mock-Up	WattStopper Birmingham Office Asbury Sunset	Asbury	994min	994min @ 8		Manual Auto Set Default	
Coordinator	WattStopper Birmingham Office Asbury Volts	Asbury	124.432 V	6		Set Null	
OBIX OBIX	WattStopper Birmingham Office Asbury Watts	Asbury	🕝 .603 W	0	5	Conoce some	
U Connectors	WattStopper Birmingham Office New Equip panId	Asbury	00	🔿 null @ def		0	
-							

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