ProAct Demand Response

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	ProAct Demand Response Service Specification

This document includes the procedures for activating the E2, Site Supervisor, E3 controllers for ProAct Demand Response (DR) web hosted service. These procedures are intended for Technicians who have completed ProAct Connect+ training. Note the procedures do not cover installation of hosted ProAct DR software. Contact your PSC manager for any questions concerning server access and URL address.



1. ProAct Demand Response Service Specification

1.1 Service Definition and Standard Features

ProAct Demand Response is a hosted web service providing customers and/or third party CSP's the ability to schedule, manage, and monitor Demand Response load shedding events across their enterprise stores.

Standard features:

- Fully web browser-based 24x7x365 hosted service.
- Supports TCP/IP connected E2, Site Supervisor, and E3 controllers.
- Integrates with E2, Site Supervisor, and E3's Demand Control Application allowing the shedding of HVAC, Lighting, Refrigeration, and other loads (single shed level only).
- · Shed event scheduling and management at Directory and Site levels.
- · Near real-time shed event monitoring.
- 3rd Party (for example, CSP) XML kWh pulse data feed.
- Supported EMS Systems: E2 2.72F01 and later.

Additional systems may be available. Contact Product Management for more information.

1.2 Service Activation

Service activation requires customer completion of the following steps:

- Completion of ProAct Services Site Activation form and Shed Schedule form.
- Pre-configured and confirmation of EMS TCP/IP/VPN communications connectivity (NOTE: Customer Domain Name and Time Server(s) IP or Names is required).
- Completion of Services Agreement Contract.

1.3 Service Level Deliverables

Web Hosted Service

This service includes the following deliverables:

- Web based 24x7x365 service hosted service (see Services Agreement for more SLA's).
- Service activation includes: Users and User Group configuration, Site setup and initial communications confirmation, E2, Site Supervisor, and E3 service activation, E2, Site Supervisor, and E3 applications configuration for shedding per supplied Shed Schedule form (*Note that service activation while technician is at site must be prearranged*).
- Server database daily backups and monthly E2, Site Supervisor, and E3 setpoint file backups.
- Energy data available for 3 years.
- Technical Support.

NOTE: Services do not include any required controllers, communication hardware, installation, or commissioning of hardware.

Disclaimer: Copeland is not responsible for any product loss, harm to people, or property. Due to unreliable nature of modern communications, there is no guarantee that product is always safe. These services are intended as added security only. Information subject to change without notice. Copeland standard Terms and Condition applies.

2. Set Demand Response User Group Privileges

Within the ProAct Demand Response web application, if user groups have not been previously configured, add the new group from the **Admin Tools** > **Group Manager** menu and set Demand Response user group privileges as shown below and click **Save**.

Group Configuration					Site	View Permissions
Group Name	Advanced Demo				(A di	rectory is not automatically expanded if all sites under it selected or no site under it se
Protocol Access Level	Advanced (300)	~				Cita Directoria
	· · · ·				×	
Controller Security						Demo
Bypass Controller Security						🗌 📩 100 Kennesaw
Protocol	Use	ername	Password			📝 📥 152 Lab
ComTrol Obix	copeland		•••••			IS4 Atlanta
D	USER		••••			
51	USER		••••			
E1 XML	USER		••••			
E2	ADVDEMO					
E2 XML	USER		••••			
E3	user		••••••			
Manual XML	USER		••••			
Reflecs Enhanced XML	USER		••••			
Site Supv	user					
TAC Xenta 401	USER		•••••			
XWEB Server 300/500	Admin					
XWEB Server 3000/5000	Admin					
XWEB Server EVO	Admin					
All Privileges All Privileges Add Application Backup CB Maintenance Collect Refrigerant Data Commission Demand Response		Privileges View Service Service Pro View My Se Edit Benchr Monitor Der	Assigned to this Group e Provider Exceptions vider tpoint Exceptions nark Setpoints nand Response			
Controller Logs and Stats	>	Send Shed	Command			
Create Precommissioning Setp	oint	Manage Sh	ed Commands	- H		
Delete Application Instance		Setpoint Re	solution Help Contents			

Figure 2-1- Setting Demand Response User Group Privileges

3. Add New Users

If users have not been previously configured, select **User Manager** from the **Admin Tools** > **User Manager** and then **Add New**. Obtain the user name and email from the **Admin Named User** field located in the ProAct Services Activation form. Configure user as follows, unless directed otherwise:

Login ID	First character of user's first name then last name
New Password	Same as Login ID

Insert first and last name, email address, and assign user to the appropriate user group and click Save.

er Configuration		Units		
ogin ID		English	Metric	Global
irst Name				
ast Name		Temperature	Fahrenheit (DF)	7
New Password (case sensitive)		Temp. Change	Delta Fahrenheit (DDF) 🗸	
-mail		Temp. Rate Change	degrees F/hour (DFH)	
iroup Name	Search group here	Pressure, Large	pound/sq in (PSI)	
Jser Expiration Type	Never Expired 🗸	Pressure, Small	in of water (INW)	-
		Velocity, Air	feet/minute (FPM)	
Preferences		Velocity, Liquid	gallons/minute (GPM)	
		Liquid Volume	gallons (GAL) 🗸	•
Show GS Screen Edit Tool		Volume Flow	cubic feet/minute (CFM)	
Enable Home Page		Current	amperes (A)	
Hide Nav Frame		Light	foot-candles (FTC)	-
Z Enable GS Screen Auto Log Off		Weight	pounds (LBS)	
		Enthalpy	Btu/lb 🗸	-

Figure 3-1 - Adding New User

4

4. Add New Sites

If the site is a new site, from the ProAct DR application (*NOTE: Contact manager for the web site address*), right-click on the tree and select **Configure** > **Add Site** at the directory tree level where the new site to be activated for ProAct DR service should reside (*NOTE: Customer name is the default level, unless otherwise specified by customer request*). Next, complete the site configuration information as provided in the activation form, including Name, Parent Directory, Country, City, State, and Time-zone.



Figure 4-1 - Adding Site

5. Add Control System (CS)

Right-click on the new site and select **Configure** > **Add Control System**. Select the **Protocol type** (**E2**, **E3 or Site Supervisor**), then input the Name (typically the controller model for example, E3 for E3's), IP Address of the gateway controller or device, and Port address (80 for E3 and Site Supervisor, 1025 for E2). Once completed, click **Save** and right-click on **CS** and select **Refresh Units**.

Site Directories		Site Directories / Demo / 152 Lab / Contro	System Configuration
🖃 🖿 Demo			
😟 👚 100 Kennes	aw	Control System Configur	ration
🖃 ╆ 152 Lab		control system configu	lation
152 Lab		Name	
Refrigeration Su	ummary	Protocol Type	E3 V
🗛 Building Summa	ary	Connection Type	
Other Summary	(IP Address	Validate IP Address
K Weather		Port	80
Views	Þ	Legacy Client Port	1025
Configure	Add Control System	Advisory Commissioning Port	3001
File	Edit Site	Obtain Controller Information Now	
	Delete Site		
Activities	Site Properties		
Advisories	•	Optional	Use this protocol user information for access to the devices at this Control System
Summary	•		
Setpoints	•		
Food Quality	•	Canad	Cauca
Energy	•		Save
CB Maintenance	2		
Refrigerant	•		
Reporting	•		
		1	



6. Set User Group Site View Permission

Once the site has been added, set the site view permission by selecting the **Group Manager** menu located under **Admin Tools** > **Group Manager**.

Site Directories / Admin Tools / Group Manager	Site Directories / Ad
Group Manager	Group Mana
C Reset Filters 💿 Add New	C Reset Filters
Group Name 🔺	Group Name 🔺
ADMIN	ADMIN
Advanced Demo	Advanced Demo

Figure 6-1 - Setting Site View Permission

Select the group name to edit and then select the new site or directory to allow the user group access as shown below.

NOTE: This step must be done after any new sites are added in order for user group to have access to the sites.

Name Adva col Access Level Adva iller Security ass Controller Security Protocol	anced Demo		(A directory is not automatically expanded if all sites under it selected or no site un Site Directories
rotocol Access Level Adva ontroller Security Bypass Controller Security Protocol	ranced (300) 🗸		Site Directories
ontroller Security Bypass Controller Security Protocol			
ontroller Security Bypass Controller Security Protocol			
Bypass Controller Security Protocol			
Protocol			100 Kennesaw
	Username	Password	
ComTrol Obix cop	peland		🔤 📝 🁚 154 Atlanta
USE	ER	••••	250 Desk
I USE	ER	••••	
E1 XML USE	ER	••••	
E2 ADV	VDEMO	••••	
E2 XML USE	ER	••••	
E3 use	er	•••••	
Manual XML USE	ER	••••	
Reflecs Enhanced XML USE	ER	•••	
Site Supv use	er.	••••	
FAC Xenta 401 USE	ER	••••	
KWEB Server 300/500 Adn	min	••••	
KWEB Server 3000/5000 Adn	min	••••	
WEB Server EVO Adn	min		

Figure 6-2 - Site Directories

7. Commission Demand Response

Once all the pre-configuration is completed, you can start with your Demand Response actions. Right-click on site and select **Energy** > **Commission Demand Response**, you will see an activity details screen for preparing to commission demand response.

When you see this screen, the software is now attempting to communicate with controllers at the site to collect information about the current programming of the controllers as it relates to commissioning. This process may take several minutes.

COPELA	ND	▲ ² ² ω ≡	💥 🛄 English
C Refresh Active Po	ints 🔻 🔇 🖉	C Views Advisories Setpoints Food Quality CB Maintenance Site Conditions Energy Refrigerant Reporting File	
	ary	م مح مح محمد المحمد المحم المحمد المحمد	
Other Summary			
Meather .	~	Target : Site Demo > 152 Lab	
Views	4	Started 11/16/21 1/45 PM	
Configure	Þ	Duration 4 seconds	
File	•	barreenoo Un bemano Ilsar Sutam Administrator	
Activities	•	Ugas ujakan Auminautaur	
Advisories	4	Hide Details	
Setpoints	•	Connected Connected	
Food Quality	•	Connected arter 0 security User Access Operation - Asking Device for access level	
Energy Sand S CB Main Send S Refrigerant Reporting	s Shed Commands hed Command ssion Demand Response	User Access Operation - Access van Ardrevea Unit Inventory Operation - Getting Application Quantities Processed 99 features getting application type max instance count Point Value Ratrieval Op - Getting property value for 0 -th point Unit Inventory Operation - Complete Backing up date and time. Completed backing up date and time. Point Value Ratrieval Op - Getting property values for 0 -th point Point Value Ratrieval Op - The operation gets 6 values for total 6 points.	
		Cancel	

Figure 7-1 - Commission Demand Response

If the commissioning activity fails, note the details in the activity window and investigate the issue with your manager. Common failure causes and resolution steps are listed below:

Failure to connect to IP

- · Confirm IP address and port settings.
- · Confirm with IT that VPN is configured and up for customer's sites.
- · Contact manager for additional support.

Unsupported controller protocol type or firmware

- Confirm the supported protocol type is E2, E3, and Site Supervisor.
- Consult manager prior to performing controller firmware upgrade to the supported version.

Enable Demand Response		
Enable Verification		
Unit for Verification		•
Sensor to Collect Pulses (Physical AI)		•
Pulse Conversion Factor	0.001	kWh/Pulse
Planned Shed	50] kW
Primary Time Server Name	CNHKGECPIDMAP03.copeland.com	¥
Secondary Time Server Name	CNHKGECPIDMAP05.COPELAND.COM	*
Domain Name	COPELAND.ORG	•

Figure 7-2 - Commission Demand Response Dialog Box

Select the Enable Demand Response to enable the service.

The commissioning wizard automates the task of configuring the NTP client in controller. Correct configuration of the NTP client in controller is essential because if the NTP client in controller is not configured correctly, the time in controller may drift and this will cause demand response to malfunction. In the commissioning screen you must enter primary and secondary time server names as shown above.

Connect+ will pre-populate the drop-down lists for the primary and secondary domain servers as a convenience to you. You may however choose to type in free text.

If you are inside a corporate network, the drop-down list will include your primary and secondary domain controllers. If you have entered a value that has worked in the past for another site, the software will remember this value and include it in the list.

If commissioning is going to result in changing the local time of the controller by more than 5 minutes, you will receive a warning message. You may or may not wish to proceed at this point. Changing the local time in the controller can affect lighting and defrost schedules. You may decide that you need to adjust lighting and/or defrost schedules before proceeding. If commissioning is going to result in changing the local time of the controller by more than 5 minutes, below is an example of the warning that you will receive.

Enable Demand Response			
Enable Verification			
Unit for Verification	,	•	
Sensor to Collect Pulses (Physical A)	i) [·	 ✓	
Pulse Conversion Factor	0.01	kWh/Pulse	
Planned Shed	0.0] kw	
Unit Name	From	To	lefrost schedules.
Unit Name BX-400 1; HVAC/LTS	From 2021-11-10 15:43:02	To 2021-11-10 15:50:14	lefrost schedules.
Unit Name BX-400 1: HVAC/LTS Primary Time Server Name	From 2021-11-10 15:43:02 10.28.64.12	To 2021-11-10 15:50:14	lefrost schedules.
Unit Name BX-400 1: HVAC/LTS Primary Time Server Name Secondary Time Server Name	From 2021-11-10 15:43:02 10.28.64.12 10.28.64.12	To 2021-11-10 15:50:14	lefrost schedules.
Unit Name BX-400 1: HVAC/LTS Primary Time Server Name Secondary Time Server Name Domain Name	From 2021-11-10 15:43:02 10.28.64.12 10.28.64.12 COPELAND.COM	To 2021-11-10 15:50:14	lefrost schedules.



If the site is designated to have shed event monitoring (only E2 supports this function), select the **Enable Verification** and the unit and **AI sensor/pulse meter** to be used for verifying the shed events from the drop-down boxes. The **Pulse Conversion Factor** should be set to 0.001 kWh/pulse. If a sensor for the main meter pulses is not listed or defined, one will need to be created by the technician responsible for the programming of the E2. (Contact technical support for any questions).

After entering all required information, click the **OK** button. The system will start the activity to configure the controller and web application. This may take several minutes. During this process if the controller had never been commissioned for DR, new Flexible Combiners named with DEMANDRESPONSE will be added to each controller.

Right-click on Demand Response, then select Activities > Refresh Point List to obtain the point information.

RvR Recommendations Views Configure File Activities Advisories Refresh Point List Advisories Setpoints CB Maintenance ard) Refrigerant	4	Status		~	\odot	2
Views Configure File Activities Advisories Retrieve Logs Setpoints CB Maintenance ard) Refrigerant		RvR Recommendations				•
Configure File Activities Activities Refresh Point List Advisories Setpoints CB Maintenance Refrigerant		Views 🕨				
File Refresh Point List Activities Refrieve Logs Advisories Setup Setpoints Setup CB Maintenance Iard) Refrigerant ner		Configure				
Activities Refresh Point List Advisories Retrieve Logs Setpoints V CB Maintenance ard) Refrigerant ner		File 🕨				
Advisories Retrieve Logs Setpoints y Setup CB Maintenance Iard) Refrigerant ner		Activities	n R	Refresh Po	oint Lis	st
Setpoints CB Maintenance Refrigerant		Advisories	R	Retrieve L V Setup	.ogs	
CB Maintenance lard) Refrigerant ner		Setpoints		, .		
Refrigerant 🕨 ner		CB Maintenance		lard)		
		Refrigerant		ner		

Figure 7-4 - Refresh Point List

8. Configure Applications for Shedding

Applications are configured for shedding by mapping the Demand Response Flexible Combiner Digital Output 1 to the Primary Demand Shed property within the controller applications. A customer supplied Shed Schedule form (see screenshot below) list the applications to be configured for shedding. Configuration of shed applications can be completed through use of either the controller front panel, UltraSite, or Terminal Mode/Edit Application from Connect+. The ProAct DR web application method is demonstrated below.

Select Edit Application for the application to be configured for shedding.

4	Activ	ation Fo								
6	710010	acioni o	Demand Resp	onse Service	Shed Schedu	le				
7 8 9	Custome	er: Sample				Submitted Date:	10-Nov-21			
11 12 13 14 15	Instruction	s: List all applic and point, Sh off "Off", or sł	ations to be shed during a D led Mode, and estimated kW hifting the control logic "On"	lemand Respons / of load being sh setpoint higher fo	e event. Include a led. Shed mode c or cooling and lowe	pplication long name fror an be turning control logi r for heating mode.	n E2, board c for the load			
16	Store Nu	imber: 2389					LIM Charl			
17	Number	Store	F2 Application Name		Board and Point	Off. Stot Shift deals)	(est.)			
18	1	2389	Sales A		2.2	Off	4.4 kW			
19	2	2389	Case Lts		2.4	Off	9.8 kW			
20	3	2389	Wall Wash		4.3	Off	2.4 kW			
21	4	2389	50% Cans A		4.5	Off	5.5 kW			
22	5	2389	AH 1 Cool 1		1.1	5 degF Higher				
23	6	2389	AH 1 Cool 2		1.2	5 degF Higher		1		
24	7	2389	AHU 1 Run		1.5	5 degF Higher				
32 33 34 35		100 Kennesav 152 Lab E2 Test Ch BX-400	vi ng) 1: HVAC/LTS	General Setp	oints Inputs O	utputs HT/CL Setup (General Fan Ad	dv Fan Dehum Powe	r Fail/Emergency Alarms	Stpt Reset System
Ready		Air H	Handlers (AHUs)	T						
		⊕ [1	I-MAIN AHU	KW Load	0					
		<u>ط</u> ا	AHU1	Del Darman	d Durana la a					
		ш Ш с	3MI-SALES AREA	Pri Deman	5.0					
		E F	RTU-1 BAKERY	Sec Demar	nd Bump 0.0					
			RTU-2A PRODUCE	🐥 PRI DEMAI	VD SHED E2 Unit	04:DEMANDRESPONSE:DO1	~ [b 40 😪		
			RTU-2B PRODUCE	SEC DEMA	ND SHED NA		× [b 40 😪		
			RTU-3 KITCHEN		Pointer	Configuration [PRI DEMA	ND SHED]			
		₩ ∐ F	CIU-4 CONF RM							
		🖽 📑 Alar	m/Advisory Setup		Point	er				
		🖽 🔝 Ana	log Combiners		Area (Controller:	,	HVAC/LTS	~	
		🖽 🔝 Digi	tai combiners		Applic	ation Type:	F	Flexible Combiner	~	
		E Flex	ible Combiner		Applic	ation:		DEMANDREEDONGE	~	
		🖽 🔝 Gen	eral Setup				1	JEMANUKESPUNSE		
		🖽 📑 Glob	bal Data		Point:		ſ	001	~	
		Hea	t/Cool Control							
		HVA	IC Zones							
		🕀 📘 Ligh	ting Control					015		
		tt 🔲 Gen	erai Setup				Cancel	ок		
		🖽 🖬 Glob	bai Data							

Figure 8-1 - Application for Shedding

For AHU shedding, as in this example, select the **Power** tab, then select the **Pointer Setup** for the **Pri Demand Shed** and select the controller being configured, and then the application named **Flexible Combiner**, **Demand Response** and the output **DO1**. Next, set the **Pri Demand Bump** property to the specified number of degrees (5.00 in the screen above), as provided in the Shed Schedule form. Click **OK** to save the settings for both the **Pointer Setup** and **Edit Configuration** dialog boxes.

Repeat the same process when configuring a Lighting application as shown below; however, select the **Input** tab. No bump setpoint is required for lighting applications.

Demo	Site Directories / Demo	/ 152 Lab / E2 Test Chg / BX-400 1: HVAC	/LTS / Lighting Control / OUTSIDE LIGHTS	
懀 100 Kennesaw	Edit Applicati	on		
👚 152 Lab				
🖃 📇 E2 Test Chg				
🖃 🔜 BX-400 1: HVAC/LTS	Setup Light Level	Min On/Off Std Events Maint Ovr	Inputs Outputs Alarms System	
🕀 📘 Air Handlers (AHUs)				
🕀 📘 Alarm/Advisory Setup				
🕀 📔 Analog Combiners				
🕀 📘 Digital Combiners	· LOGIC IN	NA		
🕀 📔 Flexible Combiner	 USE ALT SCHIF 	NA		
🖽 📘 General Setup	BYPASS ON	NA	🔺 🖾 🖧 🌄 🚱	
🗄 📘 Global Data	BYPASS OFF	NA	🔺 🗓 🖧 📅 😪	
🗄 📘 Heat/Cool Control	ALL LIGHTS ON	E2 Unit04:GLOBAL DATA:ALL LIGHTS ON		
🕀 📘 HVAC Zones	PRI DEMAND SHE			
🖃 📘 Lighting Control			EQ Q VQ	
OUTSIDE LIGHTS	DAY SCHED IN	Pointer Configuration [PRI DEMAND) SHED]	
PARKING LOT		Pointer		
🕀 📘 SALES LIGHTS		Area Controller:	HVAC/LTS	×
H 📘 STOCK LIGHTS		Application Type:		
🕀 📘 Logging Groups		Application type:	Flexible Combiner	*
🕀 📘 Physical AI		Application:	DEMANDRESPONSE	*
🖭 📘 Physical AO		Point:	D01	*
🕒 📘 Physical DI				
			Cancel OK	
· · · <u> </u>				



Once all applications have been configured, users can schedule a shed event to verify all loads shed accordingly. If any failures occur during the scheduling of a shed event, consult your PSC manager.

Several applications including Lighting, Suction Groups, Condensers, and Air Handler applications have demand shed inputs that implement built-in demand shed behaviors. Consult a controller for the exact behavior of these.

9. Send Shed Command

Once the Commission Demand Response is completed, you can send the shed command to controller. Right-click the site and select **Send Shed Command**.

Setpoints	₽.
Food Quality	Fille
Energy <u>K</u> Manage S	hed Commands
CB Mair Send Shee	d Command
Refriger 👷 Run Dema	and Response
Site Cor \infty Configure	Demand Response

Figure 9-1 - Send Shed Command

Select a start and end date and time, then click Send Shed Command.

Activity Send Shed Command Item: :152 Lab Shed Start Date and Time: 11/10/21 Shed End Date and Time: 11/10/21	Schu Sheu Com
Item: 152 Lab Shed Start Date and Time: 11/10/21 3:40 PM V Shed End Date and Time: 11/10/21 4:40 PM V	Activity Send Shed Com
Shed Start Date and Time: 11/10/21 3:40 PM > Shed End Date and Time: 11/10/21 3:40 PM >	Item:
Shed End Date and Time: 11/10/21 🛛 4:40 PM 🗸	Shed Start Date and Time
	Shed End Date and Time

Figure 9-2 - Send Shed Command Option

If there are not any existing shed commands ahead of the command you sent that are already in the controller, you will see an activity details screen that displays the status of sending the shed command to the controller as depicted below:

	Send Shed Command In Progress 44%	
Target : Site	Demo > 152 Lab > E2 Test Chg	
Started	11/10/21 3:44 PM	
Duration	8 seconds	
StartMethod	On Demand	
User	System Administrator	
starting on Controlsystem 10,161.92,132		
	Cancel	

Figure 9-3 - Send Shed Command Status

When the activity is completed, you will see the message of the next step link. Click each link to go to the next step page.

Site Directories > Send Shed Command

Send Shed Command

Your shed command was sent. What would you like to do next? Manage shed commands for 152 Lab Monitor Demand Response for directory Demo Send more shed commands for 152 Lab.

Figure 9-4 - Send Shed Command Links

If there are existing shed commands and the current shed time has overlapped with the command you already sent, you will see a setup wizard and can choose the action you want.

Merge: Merge the overlapping shed times

Overwrite: Cancel the existing shed time and use the time that just entered.

Keep: Ignore the time that just entered and keep the existing shed time.

Activity Send Sh	ed Command				
You entered: Start Time:11/10/2 End Time:11/10/2(Shed Time Overla The times you hav	2021 2:48 AM 021 6:48 AM 1 p e chosen overlap wit	th shed times for at	least one existing	shed event, as sho	wn belov
Site	Existing Start	Existing End	Merged Start	Merged End	
E Group: 153 La	зb				
L 0100p. 152 La					
152 Lab	11/10/2021 3:	11/10/2021 4:	11/10/2021 3:	11/10/2021 6:	
152 Lab	11/10/2021 3: 11/10/2021	11/10/2021 4: 11/10/2021	11/10/2021 3: 11/10/2021	11/10/2021 6: 11/10/2021	·
152 Lab	11/10/2021 3: 11/10/2021	11/10/2021 4: 11/10/2021	11/10/2021 3: 11/10/2021	11/10/2021 6: 11/10/2021	

Figure 9-5 - Send Shed Command

Hover your mouse on the button for a preview of tips.





10. Manage Demand Response

After sending a shed command, you can right-click on the directory or site level, select **Energy** > **Manage Shed Commands** to view the shed command management.

Food Quality Image Shed Commands Energy Manage Shed Commands CB Main Send Shed Command Refrigerant Commission Demand Response
Reporting >

Figure 10-1 - Manage Shed Command

You can utilize this to quickly view the site shed time and find sites that failed to communicate and did not receive the command.

lanage Shed Cor	nmands			
Site	Start	End	Communication Status	Action
Group: 152 Lab			🔀 Car	ncel
152 Lab	11/10/2021 3:54 PM EST	11/10/2021 4:54 PM EST	OK. Completed	🗙 Cancel
1 site in group.	11/10/2021 3:54 PM EST	11/10/2021 4:54 PM EST		
Group: :154 Atlanta			🔀 Car	ncel
154 Atlanta	11/10/2021 4:20 PM EST	11/10/2021 5:20 PM EST	Queued. Partially Completed	🗙 Cancel
1 site in group.	11/10/2021 4:20 PM EST	11/10/2021 5:20 PM EST		

Figure 10-2 - Manage Shed Command

If Connect+ fails to communicate with a site to send a shed command, Connect+ will continue to retry the command to failed sites for the life of the event. The software implements this retry cycle on a 5-minute interval. The Manage Shed page will update if the communication status of a site changes as a result of this retry mechanism.

You can also cancel the events in this page by clicking the **Cancel** icon for each event or group. After canceling, Connect+ will communicate with the controller and clear the command in the controller.

This is a useful feature because if the power company ends the event early, you can resume normal operations, or if a particular store manager is reporting incidents about the impact of an event, you can cancel the event for this store.

11. Monitor Demand Response

User could access the Demand Response Monitor data grid via web browser to view:

- Real-time event statuses.
- · Past and upcoming shed event schedules.
- · Amount of power shed per site.
- Directory summary data.

As mentioned in *Section 7 - Commission Demand Response*, user should enable **Enable Verification** checkbox and configure the properties in Commission Demand Response page, then right-click on directory level and select **Energy** > **Monitor Demand Response**.



Figure 11-1 - Monitor Demand Response

OPELAND	📌 🖉 🏠	8 ≡						* = En	glish		
efresh 🛛 Active Points 💉 🔇 🥝	Views Adv	isories S	etpoints Food Qualit	y CB Maintenance	Energy Refrigera	nt Reporting	File				
Directories	∱∞∮										
North B 🏠 Site 3	Site Directories > Demo > Monitor Demand Response										
	Demand Resp	onse M	onitor	es Shedi 0.070 MW	00 85	0 m 0.1					
Grad E2 Grad Grad Grad Grad Grad Grad Grad Grad	Demand Respon	e Monitor	Meas Perce Direc	ures aned 0.016 MW nt of Goal 23.334% tony	Measured Sh	ed (MW)					
	Directory	Ste	Start	End	Last Updated	Status	% of Goal	Measured Shed	Planned Shed		
	Directory North										
		Ste 3	08/30/2021 10:21 PM EDT	08/30/2021 11:21 PM EDT	08/30/2021 10:44 PM EDT	in Shed	17.38%	0.69 KW	50.00 KVV		
	North	(1 Site)	08/30/20/21 10:21 PM EDT	08/30/202111:21 PM EDT	08/30/20/21 10:44 PM EDT	In Shed	17.38%	0.009 MW	0.050 MW		
	Directory South	Ste 1	08/30/2021 10:21 PM EDT	08/30/202111:21 PM EDT	08/30/2021 10:44 PM EDT	in Shed	76.44%	7.64 KW	10.00 kW		
		Ste 2	08/30/2021 10:21 PM EDT	08/30/202111:21 PM EDT	08/30/2021 10:45 PM EDT	Verification Disabl]	10.00 kVV		
	South	(2 Sites)	08/30/2021 10:21 PM EDT	08/30/2021 11:21 PM EDT	08/30/2021 10:45 PM EDT	Partial	01.22%	0.008 MW	0.020 MW		

Figure 11-2 - Demand Response Monitor

In this page, you could see a total Planned Shed, Measured Shed, Percent of Goal of the selected directory. A dial that also gives you an intuitive view of Percent of Goal. If the percent of goal is less than 33%, the dial pointer will display in red area, if the percent of goal is between 33% and 66%, it will show in yellow area, and the pointer will display in green if the goal is more than 66%.

The table will show Planned Shed, Measured Shed, and Percent of Goal of each site under the directory. The color that displays for the (percent) % of Goal has the same meaning as the dial.

Currently, Monitor Demand Response is only available for E2.

12. Communications Test Scheduling

To ensure communications between the Connect+ and controller, you can configure a nightly communications test schedule within the Schedule Manager for all activated sites using the **Refresh Point List** schedule type.

NOTE: Contact your IT Department and Manager to confirm no schedule conflicts with any server nightly maintenance tasks.

Name schedule for each site as follows:

URGENT! Demand Response Comm. Test Failed

COPELAND	<mark>.</mark>		
💭 Refresh 🛛 Active Points 🗸 😵 🧭	C Views Advisories Setpoints CB Maintenance Refrigerant File		
Site Directories	Site Directories / Activities / Schedule Manager Schedule Manager All schedules are based on the server's time zone: (GMT -05:00) Eastern Standard Time - America/New_York (EST) Run Now: Run Now: Constraints Enabled: C	Schedule Manager Schedule Manager All schedules are based on the server's time zone: (GMT -05:00) Eastern Standard Time - America/New_York (EST) (DST) Run Now Run On Schedule Details Inabled: URGENTI Demand Response Comm Type: Refresh Point List V	
	Schedule Every Day At 6:00 AM - (GMT -05:00) Eastern Standard Time - America/New_York (EST) (DST) Run Once Interval Based Calendar Based Start Date/Time: I1/09/21 Cov DM End Date/Time: Date of Month		
	Every Day Days of Week Days of Honth Hours 01 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	All	Clear
	Minutes 0 5 10 15 20 25 30 35 40 45 50 55	All	Clear

Figure 12-1 - Schedule Manager Screen

Select site directory as one of the site's E2 Demand Response Flexible Combiners, as shown below. Assign **On Unsuccessful** notifications to all named users and PSC responsible.

COPELAND	🚣 🕫 📾 😑
💭 Refresh 🛛 Active Points 🗸 🔞 🥝	Views Advisories Setpoints CB Maintenance Refrigerant File
Site Directories	Notification
🖽 ╆ 152 Lab	Email Format: Html
🕀 🁚 154 Atlanta	Users Additional Email Addresses (comma separated)
9 👚 250 Desk	ENGAdmin (Engineering Admin) Via email AClark (Audrey Clark) Via email administrator (System Administrator) Via email Advanced.Services (Advanced Services) Via email advidemo (Advance Demo) Via amail
	Contiguration Site Directories Demo Dem
	Image: Lines Cong Image

Figure 12-2 - Notification Screen

13. Backup Scheduling

Configure a Backup schedule within Schedule Manager for all activated sites by reselecting the directory or site(s). Select email notification on unsuccessful attempts, as shown below.

NOTE: Contact your IT Department or manager to confirm no schedule conflicts with any server nightly maintenance tasks.

Pafrash Active Deints	Views Advisories Setpoints CB Maintenance Refrigerant File		
ite Directories	Site Directories / Activities / Schedule Manager		
) 👚 100 Kennesav 1 12 Lab 1 12 Lab 1 14 Atlanta 2 12 250 Desk	Schedule Manager All schedules are based on the server's time zone: (GMT -05:00) Eastern Standard Time - America/New_York (EST) (DST) O Run Now © Run On Schedule		
	Details Enabled: Name: DR Backup Type: Backup V		
	Schedule On the 1st Of Every Month At 4:00 AM - (GMT -05:00) Eastern Standard Time - America/New_York (E Run Once Interval Based Calendar Based Start Date/Time: 11/09/21 Store M	ST) (DST)	
	Every Day Days of Week Days of Month Months Innuan/Entrian/March/Angl May June July/August Centember October November December	All	Clear
		All	Cloar
	Hours 01 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	All	Clear
	Minutes 0 5 10 15 20 25 30 35 40 45 50 55	All	Clear
	Notification On Success On Unsuccessful		
	Configuration		

Figure 13-1 - Backup Scheduling

14. Communication Failure Investigation

Upon receipt of a DR communication test fail email as shown in the sample below, the following steps should be taken to determine if the problem is on Copeland's network side or the customers.



Figure 14-1 - Schedule Activity Details Screen

Communication Failure Investigation Procedures

- 1. Attempt a Refresh Units job on the failed site in the DR web application.
- 2. If the job shows Completed, notify all recipients on failure notice email of resolution.
- 3. If the job fails, perform Refresh Units on another site to test VPN.
- 4. If the other site is successful, notify all recipients on the failure notice email that the Copeland side VPN test was successful, and the problem may be on the customer's network side or with a component at the store.
- 5. If the other site is unsuccessful, notify all recipients on the failure notice email that the problem may be on the Copeland network side and the problem is currently being addressed. Provide a status update email within the next hour.
 - a. Escalate problem to Copeland IT Help Desk as Emergency.

Visit our website at copeland.com/en-us/products/controls-monitoring-systems for the latest technical documentation and updates. For Technical Support call 833-409-7505 or email ColdChain.TechnicalServices@Copeland.com



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