

CentrAlert Crisis Driven Alert & Control

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About CentrAlert

- Established by Jeff Whattam in 1997.
- Created world's first site-wide Emergency Alert and Notification System for the U.S. Department of Energy.
- Systems on four continents.

• Professional Resume

50% of Top 10 U.S. Oil Refineries 50% of Top 10 U.S. Nuclear Operators

Oil/Gas

Phillips 66 Chalmette Refining Valero CITGO

Chemical

Sadara Chemical Company Dow Chemical PCS Nitrogen Tronox

F Power

Duke Energy Florida Power & Light Dominion Power Hanford Nuclear Site

III Government

NASA Warren Air Force Base City of Fort Worth, TX City of Memphis, TN





What is C-DAC?

Crisis-Driven Alert & Control (C-DAC) is an intelligent emergency alert and control system that directs personal communications to targeted recipients, coordinates mass notification using any device, and provides integrated controls to secure the environment and mitigate the effects of a crisis.

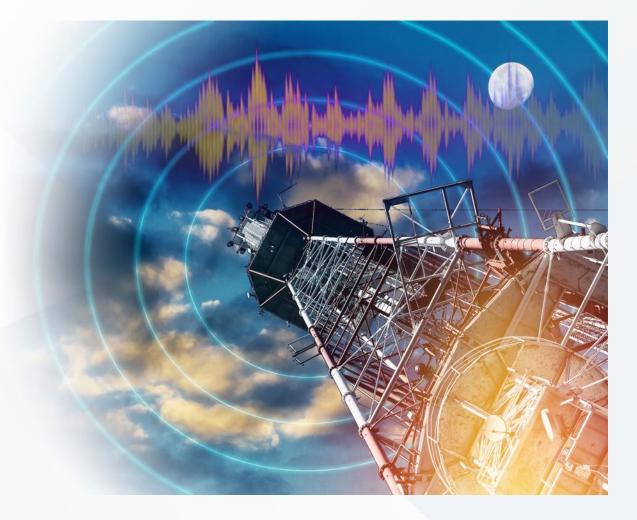
Operational Features

- Presence-based system that can work with or without the cloud
- Dual server capabilities with automatic failover
- Redundant communication pathways
- Extensive security measures like user authentication and secure communication algorithms
- Single or multi-operator activation
- Records all system data for reporting and review
- CAP and IPAWS certifications
- Fully customizable with a variety of hardware and software components available



C-DAC Hardware Options

- Advisor Alert Radio Compatible with numerous communication methods and protocols. Capable of providing an NOAA receiver coupled with a local receiver, allowing localized control of events.
- **Repeater Control Unit** Control geographically dispersed radio repeaters, both digital and analog in nature.
- **Director Input/Output Unit** The DIO allows individually addressable input/output control relays to either initiate an emergency event or act to control an emergency device.
- Emergency Signal System ESS includes visual alerting devices (strobes) and audio alerting devices (sirens) for use in high volume/noise areas or areas that require special alerting.
- **Director Remote Control Panel** The RCP is a customizable, easy-to-use, alternative activation method for C-DAC.
- Single/Dual Communications Link Provides simultaneous and redundant communication pathways (i.e. radio and TCP/IP, or primary/secondary radio channels) to meet any requirement.
- Single/Dual Communications Interface Allows conversion of existing sirens to IP communications, whether CentrAlert or third-party.
- Secure Communications Remote Terminal Unit SCRTU is a control board designed to function with geographically dispersed sirens and/or other emergency warning devices.



C-DAC Software Options

- Guardian User Interface The main portal for system operations, Guardians can be connected to coordinate system activity across a wide variety of users.
- SOS Siren Module Provides direct two-way controls with native Whelen protocols to any Whelen siren. Third-party sirens or devices can also be merged with the SOS module.
- Advisor Alert Radio Module Provides complete control for the AAR via the Guardian User Interface.
- **Repeater Module** Transmit data commands from C-DAC to the Repeater Control Unit or third-party device.
- **Director Input/Output Module** Provides complete control for the DIO via the Guardian User Interface.
- Emergency Audio Relay System (EARS) Module Send targeted messages to any radio receiver including LMR subscriber units, handheld tactical radios, emergency AM broadcast stations and Public Address systems.
- Mobile Guardian Access and activate your C-DAC actions from your phone for ease of use while on the go, with all activities logged for historical reporting.
- Premium Software Features Adaptive Intelligent Controls, NOW! Module, BuildAlert, Know NOW! App.



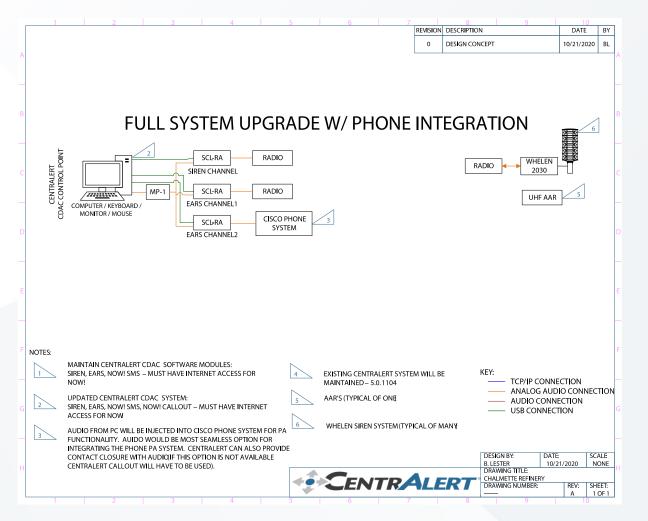


Crisis-Driven Alert & Control (C-DAC) Use Cases



Standalone C-DAC: Chalmette Refining

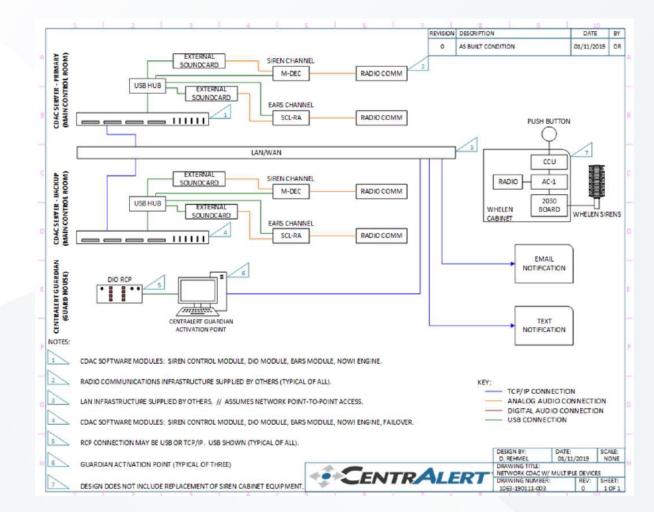
- Back in 2016, Chalmette Refining was outfitted with a **Standalone C-DAC** system, along with a few additional features.
- In the event of a fire, oil leak or gas release, this C-DAC system enables the operator to activate sirens using the **SOS Siren Controller**.
- The Operator can then use the **NOW! Module** to send messages to essential contacts via email and SMS.
- They can then utilize **Emergency Alert Radio System (EARS)** to broadcast emergency instructions over any company audio channel.
- In 2020, Chalmette requested a full system upgrade to incorporate a Cisco phone system integration.





Network C-DAC With Multiple Devices: Phillips 66

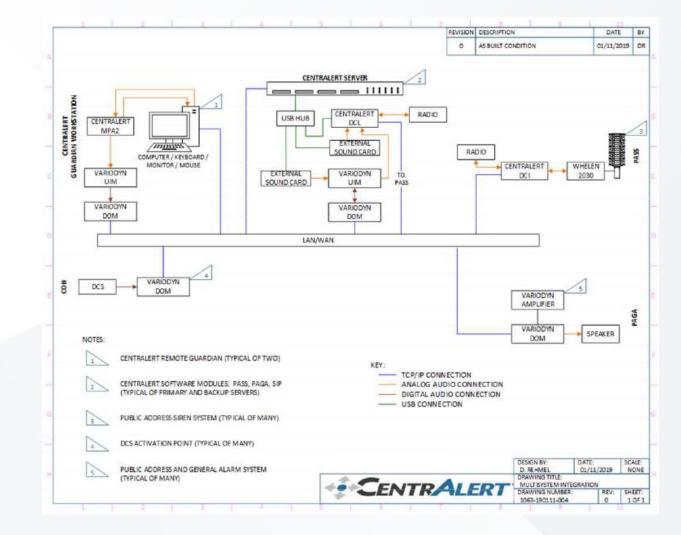
- Phillips 66 needed the ability to activate actions via pushbutton stations in the field while also being able to activate sirens at a separate facility. They also needed to be able to activate pre-scripted actions quickly and easily.
- CentrAlert installed a **Network C-DAC** with multiple activation points throughout the facility.
- CentrAlert also installed the **Emergency Audio Relay System (EARS)** to broadcast emergency instructions over any company audio channel.
- This system was then integrated with a nearby Chevron facility, allowing activation of their sirens from the Phillips 66 facility.
- Finally, CentrAlert's **BuildAlert** feature enabled dynamic creation of alert and notification messages.





Multi-System Integration: Sadara Chemical Company

- Sadara required an emergency alert and notification system to coordinate their indoor Honeywell communication stations and their outdoor Whelen sirens.
- CentrAlert **unified the two systems** to control the indoor notification system while utilizing our standard siren control software to direct the outdoor system.
- CentrAlert integrated the system so it can be activated from virtually anywhere on site.
- Ability to initiate local alerts as well as site-wide alerts should the situation escalate.
- Features two servers that are constantly online to provide **automatic failover**.
- Redundant communication to the sirens through both Wi-Fi network and conventional radio.
- **Presence-based** so still functions regardless of Internet access.





Premium CentrAlert Software Components



Adaptive Intelligent Controls

Detect, Activate, Mitigate.

Automatically detect environmental factors and initiate protective actions manually or automatically from an external input device or data stream.

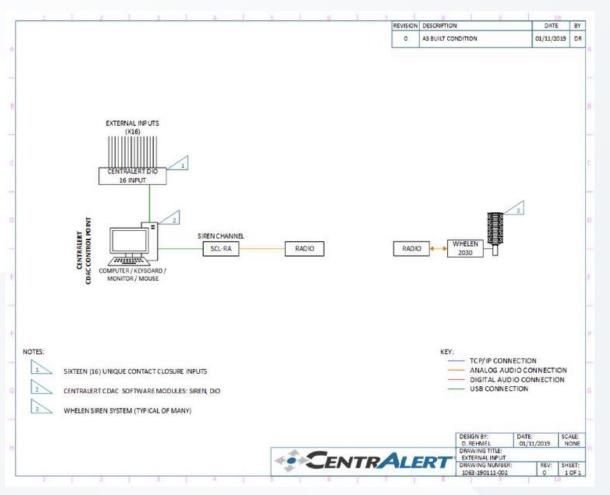
Application:

- Oil/gas leaks
- Dam breaches
- Active shooters
- Weather events

External Input Examples:

- CentrAlert Remote Control Panel (RCP)
- National Weather Service Feed (NWS)*
- Lightning Detection Equipment
- Common Alerting Protocol (CAP)/IPAWS Interface*
- Gas/Chemical (i.e. H₂S) Sensors
- Third-party applications

* TCP/IP inputs do not require additional hardware





NOW![™] Module

Right Message, Right People, Right Time.

- Delivers email, mobile pop-ups, computer pop-ups, text messages, social media updates and cell phone call-outs.
- Operator can target specific messages to specific recipients simultaneously.
 - E.g. In event of siren failure, a priority text message can be sent to appropriate maintenance staff.
- Selectable message priority levels.
 - Emergency, Caution, Informational.
- Active Directory interface for importing contact data.
- For some modules, message receipt acknowledgement is available to account for worker safety.
- Messages could be determined by geographical location or by recipients' roles.
 - E.g. First Responder, Hazmat team, EOC staff, general population.



CentrAlert C-DAC BuildAlert[™]

As Simple As Build, Review, Send.

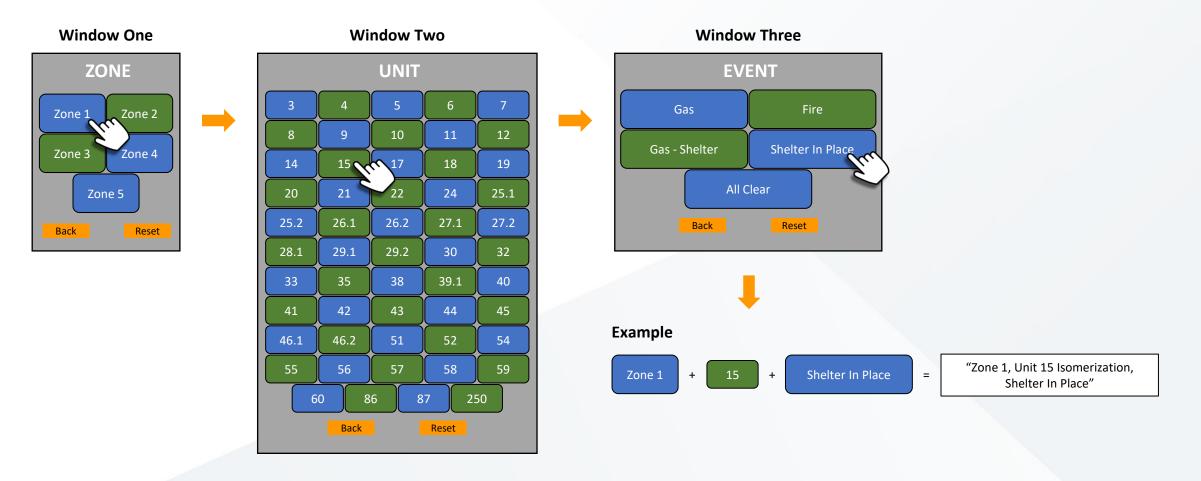
Create alerts on the fly with this notification builder, using current data to optimize crisis alert and control.

- Dynamic creation of alert and notification messages.
- Selectable button interface for quick-and-easy use.
- CentrAlert C-DAC automatically builds the desired message based upon Operator selections.

	Z01	NE 1		ZONE 2				ZONE 3				EVENTS	
RT/CCB	P66 MOB	Steam Plant 1	Unit 6 South	Rail Car Rack	Unit 3	Unit 4	Unit 5,6,8	Steam Plant 2	Unit 7	Unit 10 A.B.C	Unit 10 D & 18	Sound Test	
Unit 25	Unit 26.1	Unit 26.2	Unit 27	Unit 9	Unit 43	Unit 44	Unit 45	Unit 11	Unit 12	Unit 14	Unit 15,17,19	Cancel	
Unit 28	Unit 29.1	Unit 29.2	Unit 38	Unit 46	Unit 68 Ammonia Tank	Unit 68 Refinery Tank Farm		Unit 20	Unit 21	Unit 22	Unit 24	All Clear	
Unit 39	Unit 52	Unit 250	Unit 250 Ammonia Tank					Unit 35				Emergency Alarm w PA	
	ZO	IE 4		ZONE 5				ZONE 6				Maintenance Commencing	
CPC M.O.B	Unit 33			Sweeny Tank Farm				Steam Plant 2	Unit 7	Unit 10 A.B.C	Unit 10 D & 18	Maintenance Completed	
								Unit 11	Unit 12	Unit 14	Unit 15,17,19	Live Public Address	
								Unit 20	Unit 21	Unit 22	Unit 24	Fire	
								Unit 35				Gas	
	ZO	IE 7										Shelter in Place	
Off Site oke Pile	Unit 47	Unit 48	Unit 77									Silent Test	
Unit 78	Unit 87 (SIT Yerd)												



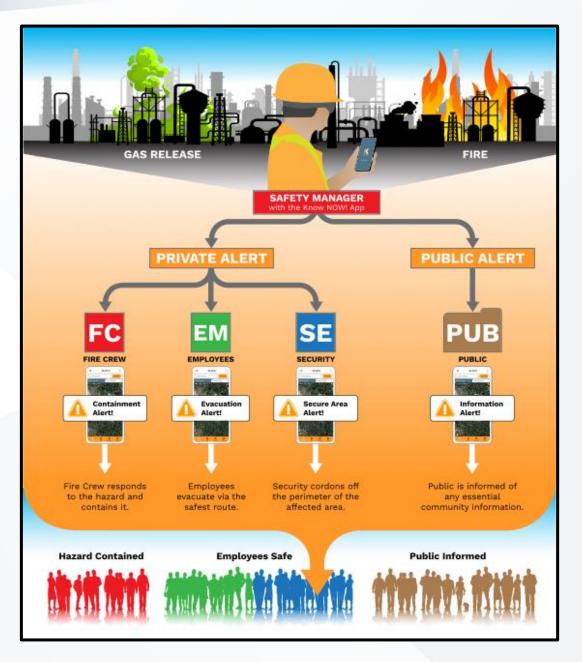
CentrAlert BuildAlert[™] – Build the Alert



The Know NOW! App

When You Need to Know, You Need to Know NOW!

- Send Public Alerts (to any local App user) and Private Alerts (to Operator-generated groups) so that clarity can be provided in any emergency scenario.
- Alerts appear as push notifications on the recipient's phone with the ability to add maps and other resources to give context to the alert.
- In the case of a fire, Know NOW! allows the Operator to send Private Alerts to the fire team (to contain the fire), to regular facility employees (with an evacuation plan) and to the security team (to cordon off the affected area).
- Know NOW! can then be utilized to send a Public Alert to inform App users in the area about the event, along with the mitigation steps taken.





CentrAlert C-DAC Demo



Additional CentrAlert Services

Design and Support Services

- Design Drawings
 - Design
 - Documentation
 - Installation
 - Custom Applications
- Technical Support Agreement
 - 24/7 Software Support
 - System Maintenance Checks
 - Priority Issue Resolution
 - Online Software Training Videos
 - Online Training Simulator
 - Service and Upgrade Discounts





