

Control Center

Purpose

The Control Center is a multimedia module that enhances alarm awareness by providing operators with visual and audio cues about alarm activity and remote notification processes. Operators can hear, view, acknowledge, filter, and sort alarm activity for multiple WIN-911 systems. The Bypass feature can temporarily halt alarm notifications to allow for maintenance. The Announcer provides audio announcements of alarm events so operators on site can hear details without the need of a smart device.

Connectivity

The Control Center will by default be installed on the same server as the WIN-911 Dispatcher but may be installed on any network-accessible computer separately from the WIN-911 Dispatcher host. For more information about distributing across the network, please refer to the Network Considerations section. A single install of the Control Center can service multiple WIN-911 systems on a network.

Monitor

Ack Selected Alarms

Ack Alarms on Page

Default View

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Select	State	Most Recent Event	Tag Name	Tag Description	Condition Name	
<input type="checkbox"/>		4/21/2023 9:27:37 AM	Dawg	No value change has been received for this block within the specified timeout period.	Watchdog	No value change has been received
<input checked="" type="checkbox"/>		4/21/2023 9:27:00 AM	1.RAWFLOW	Raw Material Flow is	COS	
<input type="checkbox"/>		4/21/2023 9:28:49 AM	1.HOPPER2	Hopper Two is	RATE	

1 of 3 Events

This tool displays active alarm events in real-time, presented in a convenient format that allows the user to view, sort, and trace events.

Ack Selected Alarms

Acknowledge specifically selected alarm events. A confirmation dialog will appear with a text box for entering comments.

Ack Alarms on Page

Acknowledge all alarm events currently displayed in the view. A confirmation dialog will appear with a text box for entering comments.

View Selector: Default View/Bypassed Alarms/Custom Views

The monitor has two primary views that can be selected with the combo box: Default View and Bypassed Alarms View.




The Default View focuses on currently active alarm events and suppresses those that have been bypassed. The columns include Select, State, Most Recent Event, Tag Name, Tag Description, Condition Name, Condition Description, Value, Source, Notification Policy, Initial Date/Time.

The Bypassed Alarms view displays alarms that have been set to Bypass mode and suppress alarm activity that has not. See the Bypass section for more information. The columns include Select, Bypassed, Condition Description, Condition Name, Initial Date/Time, Most Recent Event, Tag Name, Tag Description, Condition Name, Condition Description, Value, Source, Notification Policy, Initial Date/Time.

Custom Views can be created, modified, saved, and deleted. Once a custom view is saved it appears in the View selector for future use.

The export button will create a .xlsx file with the alarms associated with the active view.

Display Area

Select	State	Most Recent Event	Tag Name	Tag Description	Condition Name	
<input type="checkbox"/>		4/21/2023 9:27:37 AM	Dawg	No value change has been received for this block within the specified timeout period.	Watchdog	No value change has been rece
<input checked="" type="checkbox"/>		4/21/2023 9:27:00 AM	1.RAWFLOW	Raw Material Flow is	COS	
<input type="checkbox"/>		4/21/2023 9:28:49 AM	1.HOPPER2	Hopper Two is	RATE	

The Monitor view is organized from the perspective of the alarm life cycle and catalogs events that result. The view can be sorted by column and filtered by selecting the filter icon to the right of the column header.

☐ Select All

☐ 4/21/2023 9:27:00 AM

☐ 4/21/2023 9:27:37 AM

☐ 4/21/2023 9:28:49 AM

Show rows with value that

Is equal to

Enter date

And

Is equal to

Enter date

Filter

Clear Filter

The above example shows the filtering tool for the Most Recent Event column.

Settings

Select the Setting cog to choose what information is included in the view.

Select

The Select option allows users to individually select alarm events for acknowledgment.

The default setting is on.

Ack Comment

The Ack Comment option displays the comments entered by the actor.

The default setting is off.

Acked By

The Ack By option displays the name of the actor.

The default setting is off.

Alarm Lifetime ID

The Alarm Lifetime ID is a unique GUID that is assigned to an individual alarm event. They are not normally edifying to the user but can be helpful during troubleshooting.

The default setting is off.

Area

The Area is an attribute that helps identify the alarm event. Not all data source include this attribute.

The default setting is off.

Bypass

The Bypass feature can temporarily halt alarm notifications to allow for maintenance. This option indicates whether that alarm event is currently in bypass mode.

The default setting is off.

Category

This attribute is determined by the data source and specifies the type of alarm event. Examples would be Hi Hi, Hi, Lo, LoLo, On, Off, Change of State (COS), Change from Normal, Watchdog, etc.

The default setting is off.

Condition Description

Elaboration of the alarm condition is provided with this text string.

The default setting is on.

Condition Name

This attribute is determined by the data source and specifies the type of alarm event. Examples would be HiHi, Hi, Lo, LoLo, On, Off, Change of State (COS), Change from Normal, Watchdog, etc.

The default setting is on.

Initial Date/Time

The time and date the alarm event initially became active.

The default setting is on.

Labels

Labels are color-coded attributes that WIN-911 assigns to alarm/data for organizational purposes.

The default setting is off.

Limit

The parameters that determine level (analog) alarm conditions.

The default setting is off.

Most Recent Event

Date and time of the most recent activity concerning the associated alarm event.

The default setting is on.

Native Severity

The Native Severity is the severity of the event as defined by the data source.

The default setting is off.

Notification Policy

The default setting is on.

Quality

This attribute defines the confidence level the data source has about the associated tag.

The default setting is off.

Severity

The Severity attribute is the urgency rating assigned to the alarm by WIN-911 (as contrasted with the Native Severity) and can affect the notification process.

The default setting is off.

Source

The specific data server from which the alarm event originates.

The default setting is on.

State

Active/Inactive, Acknowledged/Unacknowledged.

The default setting is on.

System

The WIN-911 System from which the alarm event is being monitored.

The default setting is off.

Tag Description

Elaboration on the associated tag or block that provides context to the user.

The default setting is on.

Tag Id

The data source's name for the associated tag/block.

The default setting is off.

Tag Name

WIN-911's name for the associated tag/block.

The default setting is on.

Units

The engineering units associated with the tag/block.

The default setting is off.

Value

The default setting is on.

Dashboards

Dashboards are highly customizable collections of widgets that present vital statistics and analysis of alarm activity in a convenient and intuitive format.

A dashboard is a table of cells arranged with a user-defined number of columns and rows. The dashboard must have a unique name and the user is free to create as many as their needs require.

The Default Dashboard appears the first time the Dashboards tab is selected and contains four widgets, New Alarms, Stale Alarms, Standing Alarms at End, and Current Alarm Counts.

Widgets are configurable objects that present data useful for gauging conditions in a production environment. Most widgets are square and fit into a single cell. Others are rectangular and fit into multiple cells.

Widgets

Above 1 Alarms/10 Min per operator

Displays the percentage of 10-minute intervals where more than 1 alarm per operator became initially active.

Alarm Floods

Displays the count of alarm flood occurrences. Alarm Flood is defined by 1 or more alarms per operator per 10 minutes until fewer than half remain.

Average Alarms Per Hour During Flood

Displays average alarms per hour during alarm floods. Alarm Flood is defined by 1 or more alarms per operator per 10 minutes until fewer than half remain.

Average Alarms Per Period

Displays the average alarm rate per period within the specified time range.

Avg Alarms/Hr Non-Flood

Average Alarms Per Hour Non-Flood

Chattering Alarms

Displays the count of alarms that reactivate before becoming acknowledged within the specified time range.

Current Alarm Counts

Displays current alarms by state.

Flood/Period %

Displays the percentage of 10-minute intervals that experienced alarm floods. Alarm Flood is defined by 1 or more alarms per operator per 10 minutes until fewer than half remain.

New Alarms

Displays the count of alarms that became initially active within the specified time range.

Peak Alarms Per 10 min

Displays which 10-minute interval had the maximum number of alarms that became initially active and the count.

Stale Alarms

Displays the count of alarms that were active for more than 24 hours within the specified time range.

Standing Alarms at End

Displays the count of alarms that became initially active within the specified time range and are still present.

Top 10 Contribution Per Period %

Displays the percentage of alarms from the top ten contributors (i.e., Tagname, ItemName) out of all alarms within the specified time range.

Top 10 Contributors

Displays the count of alarms that became initially active within the specified time range from each of the top 10 contributors.

Historical Logs

Search

Display Events From

4/20/2023 11:53 AM

 -

4/20/2023 1:53 PM

WIN-911 System Name

State

Most Recent Event

Alarm Point

Condition

Source Type

Source

Notification Policy

Initial Date/Time

localhost		4/20/2023 1:05:02 PM	1.RAWFLOW	COS	iFIX	iFIX	Notify All Contacts	4/20/2023 1:05:02 PM
localhost		4/20/2023 12:57:09 PM	Dawg	Watchdog	iFIX	iFIX	Notify All Contacts	4/20/2023 12:57:09 PM
localhost		4/20/2023 1:01:01 PM	1.LINEVAC	LO	iFIX	iFIX	Notify All Contacts	4/20/2023 1:01:01 PM

The Historical Logs view presents an archive of alarm activity bracketed between a specified period of time.

Settings

WIN-911 System Name

Default setting is on.

State

Active/Inactive, Acknowledged/Unacknowledged.

The default setting is on.

Most Recent Event

Date and time of the most recent activity concerning the associated alarm event.

The default setting is on.

Alarm Lifetime ID

The Alarm Lifetime ID is a unique GUID that is assigned to an individual alarm event. They are not normally edifying to the user but can be helpful during troubleshooting.

The default setting is off.

Notification Policy Instance Id

The default setting is off.

Suppressed

The default is off

Alarm Point

The default setting is on.

Condition

This attribute is determined by the data source and specifies the type of alarm event. Examples would be HiHi, Hi, Lo, LoLo, On, Off, Change of State (COS), Change from Normal, Watchdog, etc.

The default setting is on.

Source Type

The specific data server from which the alarm event originates.

The default setting is on.

Source

The specific data server from which the alarm event originates.

The default setting is on.

Timeline

☒ Auto Update

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System Name	Most Recent Event	Details	Notification Policy Instance Id
localhost	4/20/2023 1:05:14 PM	SMS Notification to Sid (+15126635114) for iFIX 1.RAWFLOW : COS Success	376d897f-ac79-4ffe-95b9-76fea7b4baf9
localhost	4/20/2023 1:05:02 PM	SMS Notification to Sid (+15126635114) for iFIX 1.RAWFLOW : COS Dispatching	376d897f-ac79-4ffe-95b9-76fea7b4baf9
localhost	4/20/2023 1:05:02 PM	iFIX 1.RAWFLOW : COS is Active and Unacked	376d897f-ac79-4ffe-95b9-76fea7b4baf9
localhost	4/20/2023 1:01:13 PM	SMS Notification to Sid (+15126635114) for iFIX 1.LINEVAC : LO Success	3722d40a-4ece-4b01-99d2-e4a727b9346d
localhost	4/20/2023 1:01:01 PM	SMS Notification to Sid (+15126635114) for iFIX 1.LINEVAC : LO Dispatching	3722d40a-4ece-4b01-99d2-e4a727b9346d
localhost	4/20/2023 1:01:01 PM	iFIX 1.LINEVAC : LO is Active and Unacked	3722d40a-4ece-4b01-99d2-e4a727b9346d
localhost	4/20/2023 12:57:09 PM	iFIX Dawg : Watchdog is Active and Unacked	d7554c0b-c694-41e2-ba50-78d76f78f7d4
localhost	4/20/2023 12:43:12 PM	SMS Notification to Sid (+15126635114) for iFIX 1.RAWFLOW : COS Success	2cc57a9a-b377-445c-8bfd-106b9f3441e1
localhost	4/20/2023 12:42:59 PM	SMS Notification to Sid (+15126635114) for iFIX 1.RAWFLOW : COS Dispatching	2cc57a9a-b377-445c-8bfd-106b9f3441e1
localhost	4/20/2023 12:42:59 PM	iFIX 1.RAWFLOW : COS is Inactive and Acked	2cc57a9a-b377-445c-8bfd-106b9f3441e1
localhost	4/20/2023 10:37:51 AM	SMS Notification to Sid (+15126635114) for iFIX 1.RAWFLOW : COS Success	2cc57a9a-b377-445c-8bfd-106b9f3441e1
localhost	4/20/2023 10:37:51 AM	SMS Notification to Sid (+15126635114) for iFIX 1.RAWFLOW : COS Dispatching	2cc57a9a-b377-445c-8bfd-106b9f3441e1
localhost	4/20/2023 10:37:51 AM	iFIX 1.RAWFLOW : COS is Active and Unacked	2cc57a9a-b377-445c-8bfd-106b9f3441e1
localhost	4/20/2023 10:37:22 AM	SMS Notification to Sid (+15126635114) for iFIX Dawg : Watchdog Success	8541e335-3654-439a-afbf-948557af6385
localhost	4/20/2023 10:37:16 AM	SMS Notification to Sid (+15126635114) for iFIX Dawg : Watchdog Dispatching	8541e335-3654-439a-afbf-948557af6385
localhost	4/20/2023 10:37:16 AM	iFIX Dawg : Watchdog is Active and Unacked	8541e335-3654-439a-afbf-948557af6385
localhost	4/20/2023 8:30:28 AM	SMS Notification to Sid (+15126635114) for iFIX Dawg : Watchdog Success	ef1396af-08b4-416b-b87b-13d2014d5f4d

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Announcer

The Announcer provides audio announcements of alarm events through a local sound device. Such output is typically routed to an external speaker, enabling operators on-site to hear details of the alarms that WIN-911 is monitoring. Output could also be routed to a plant announcement system or radio transponder. Multiple instances of the WIN-911 Announcer can be installed across the network to provide local audio output potentially against distinct subscriptions.

The announcer configuration includes four tabs (Subscription, Audio, Alarm Format, Say As) that must each be saved individually before the announcer can be used. Unsaved tabs have red badges to prompt the user.

Subscription

A subscription requires a dispatcher, Notification Policy, Message Prefix (optional) and Replay Interval to be specified. You may create as many subscriptions as you need by selecting the + Add Subscription button.

Dispatcher

Notification Policy

Message Prefix

Replay Interval

localhost

All Notification Policies

TTS

WAV

15 Minutes

+ Add Subscription

Select Alarm States to Announce

Dispatcher	Active Unacknowledge	Inactive Unacknowledge	Active Acknowledge	Inactive Acknowledge	Announce while in Standby mode
localhost	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Dispatcher

Then announcer module must connect to the WIN-911 System's dispatcher in order access alarm information. The location is resolved in the Configuration tab of the Control Center and presented here in the Dispatcher combo box.

Notification Policy

The alarms that are announced are determined by the Notification Policy associated with the alarm. By default, all alarms are announced with the selection of "All Notification Policies." To be more selective about the announced alarms, select a different Notification Policy using the combo box provided.

Message Prefix

If desired, you may specify an audio prefix to sound prior to alarm messages. These can help further identify and organize alarms. You can create multiple subscriptions, for example, to monitor different production lines. Thus, a prefix of "production line 1" would set apart the following alarm announcements from the other production lines.

Alternatively, you can play a sound (such as a horn) as a means of getting attention getting everyone's attention. Use the WAV selection to map the WAV file that contains the sound you would like to use.

Replay Interval

By default, the WIN-911 Announcer will replay ongoing alarm messages every 15 minutes; this can be configured between 5 and 59 minutes or set to 0 if repetition is not desired.

Select Alarm States to Announce

For all Subscriptions, you may enable/disable the announcement of any of the four alarm states. If you are not interested in hearing alarms after they are acknowledged, simply disable the appropriate states.

By default, WIN-911 Announcer will remain silent if its target Dispatcher is in Standby Mode. This behavior is typically desired but can be modified here.

Upon review of these settings, click **Save** and continue to the next tab.

Audio

This section of the configuration allows you to specify which local audio device and TTS Voice should be used to announce alarms. If the local computer has more than one sound device, you may need to ensure that the correct device is selected. Use the preview button to play the editable text to the left of the button. If you are not hearing the audio preview, confirm speaker connectivity and the audio device selection. The preview can also be used to compare TTS Voices and options. To accept this configuration, click the Save button and continue to the next tab.

Audio Device

Speakers (High Definition Audio Device)

Speech Synthesis

Voice Selection

Microsoft David Desktop

Speaking Rate Offset

Volume

Use the following text to preview the voice

This is the WIN-911 Alarm Notification System.

Preview

Alarm Format

You can configure which alarm event details are announced and in what order using this section of the configuration. Use the Insert button to insert additional properties into your format; you'll notice that such properties are encapsulated in angle brackets signaling them as keywords for dynamic replacement. The format text is editable; you may wish to repeat a property value or insert static text describing the property to follow for clarity. If your data source provides more meaningful condition descriptions, you may wish to remove the tag description provided by default. You can preview your

format against a stand-in alarm event, but we recommend listening to test alarm from your SCADA system to fine-tune the format.

If you wish to display seconds or dates in your alarm properties related to time, use the provided control under the Insert button.

Format

Attention! <Tag Description/Name> <Condition Description/Name> was <Active State> and <Ack State> at <Event Time>.
Again, <Tag Description> was <Condition Name>.

Insert Alarm Property

Short Time ▾

Format Preview

Attention! wastewater tank #42 in the main facility the tank is below the safe level and requires attention was Active and Acknowledged at 12:53 PM.
Again, wastewater tank #42 in the main facility was below a safe level.

Preview



In the screenshot above, the format has been edited away from its defaults to provide another example using additional alarm properties.

SAMPLE FORMAT:

ATTENTION! <TAG DESCRIPTION> <CONDITION NAME> WAS <ACTIVE STATE> AND <ACK STATE> AT <EVENT TIME>.

AGAIN, <TAG DESCRIPTION> WAS <CONDITION NAME>.

Here the first element of the format is the static text “Attention!” followed by the description of the tag associated with the alarm event (<Tag Description> = “Wastewater tank #42 in the main facility”) and the name of the alarm condition on that tag (“below a safe level”). The format continues with the static text “was” and then incorporates the current active and acknowledgement state of the alarm. The time of the most recent alarm event in this alarm lifetime is inserted with the “Short Time” option, opting not to display seconds or the date. Finally, the tag and condition descriptors are repeated. This format would be applied to all alarm events announced by this instance of the WIN-911 Announcer, substituting the most current values for each alarm property.

Say As

This tab provides a convenient way to override the default pronunciation of the TTS engine for acronyms and nomenclature specific to your application. Many common defaults are provided for you. If you find that the TTS Voice pronounces something incorrectly, simply configure its pronunciation here. You can check the new pronunciation using the provided preview button.

+ Add

Delete Selected

Export

Import

<input type="checkbox"/>					
<input type="checkbox"/>	Say:	WIN-911	As:	Win Nine One One	<input type="checkbox"/> Match Case ▶
<input type="checkbox"/>	Say:	ALM	As:	alarm	<input type="checkbox"/> Match Case ▶
<input type="checkbox"/>	Say:	CFN	As:	change from normal	<input type="checkbox"/> Match Case ▶
<input type="checkbox"/>	Say:	COMM	As:	com	<input type="checkbox"/> Match Case ▶
<input type="checkbox"/>	Say:	COS	As:	change of state	<input type="checkbox"/> Match Case ▶
<input type="checkbox"/>	Say:	DEV	As:	deviation	<input type="checkbox"/> Match Case ▶
<input type="checkbox"/>	Say:	DSC	As:	discrete	<input type="checkbox"/> Match Case ▶
<input type="checkbox"/>	Say:	HI	As:	high	<input checked="" type="checkbox"/> Match Case ▶

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This portion of the configuration can be exported to CSV for external editing or transferred to another instance of the WIN-911 Announcer. The provided import button can then be used to replace all local definitions with those from the CSV file.

Announcer Runtime

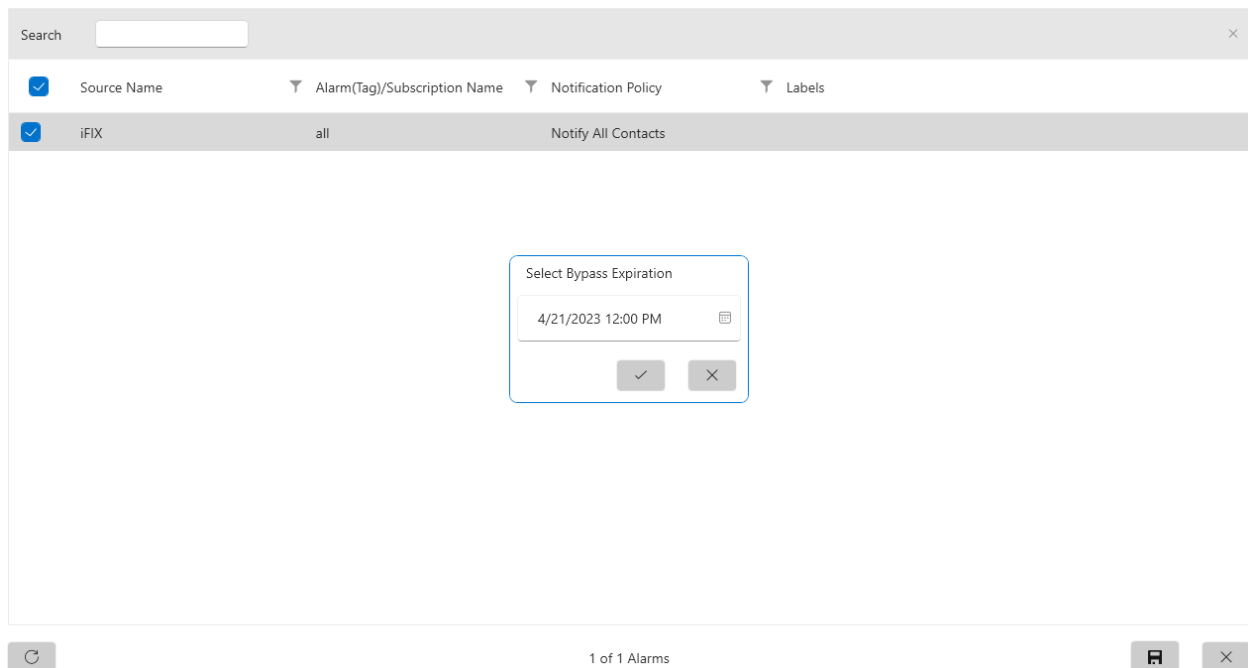
Once the Announcer is configured you may close the Control Center window to dismiss the Announcer to the system tray. You may exit and terminate the Announcer by right-clicking its icon in the system tray. Should you need to change the configuration, you may also bring up the configuration window through this menu or by starting the WIN-911 Announcer from the start menu.

Bypass

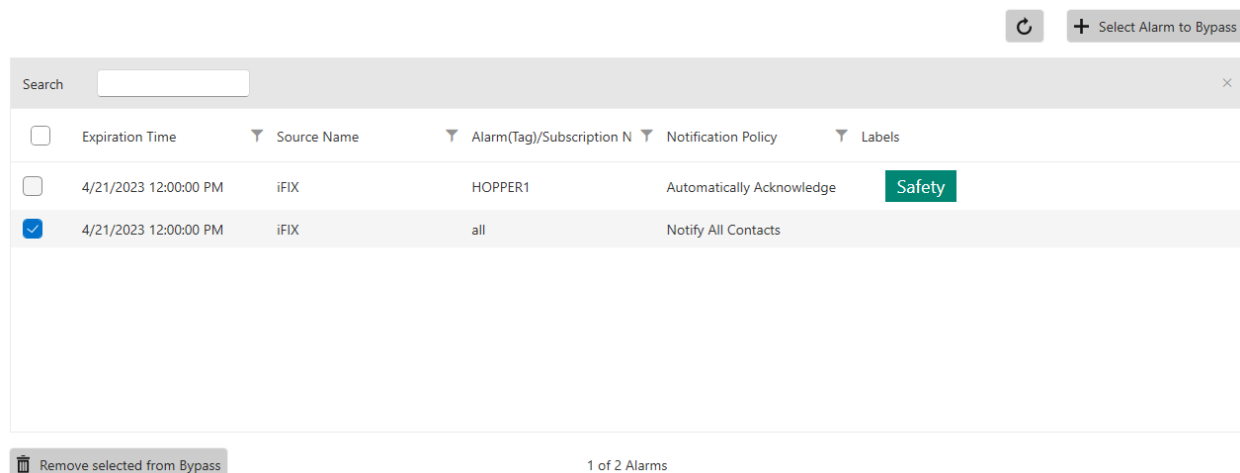
Alarms can be removed from and returned to the active callout list without having to take WIN-911 offline and modify its configuration in any way. The bypass will be in session for a stated period of time and then returned to the active callout list.

+ Select Alarm to Bypass

Use this button to define a bypass condition with the dialog that appears.



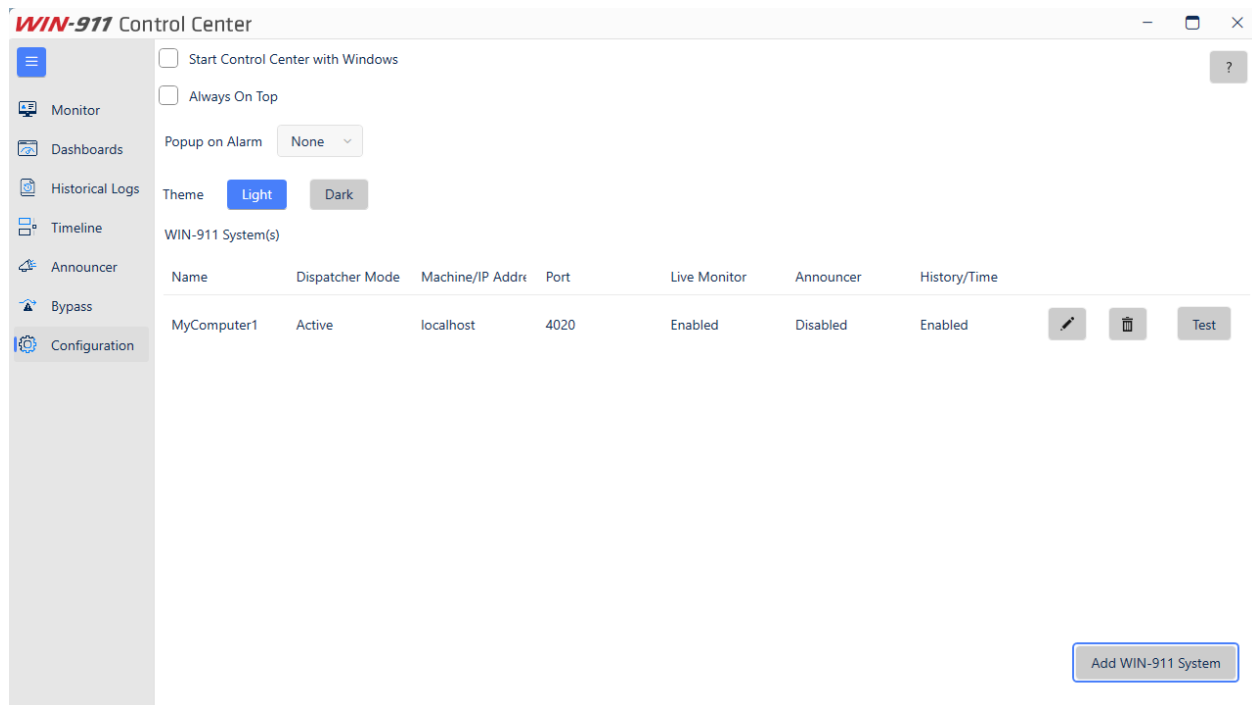
All alarms or subscriptions should appear. Select the desired alarm and then set the expiration date/time to complete the process. Once the bypass take effect, alarm events will continue as normal but WIN-911 will not conduct any remote notifications. When the bypass expires, remote notifications will resume.



If you wish to return a bypassed alarm to the callout list before its scheduled expiration, select the alarm and use the button at the bottom left.

Configuration

By default, the Control Center is preconfigured to monitor the local WIN-911 system. If the installation is part of a distributed system and does not host a WIN-911 Dispatcher locally, the local connection will need to be deleted.



Start Control Center with Windows

Control Center will start automatically with the operating system when this option is selected.

The default selection is disabled.

Always on Top

Control Center will appear on the top of all other applications when this option is selected.

The default selection is disabled.

Popup on Alarm

Control Center will popup from a minimized condition based on: 1) any change in alarm conditions, 2) only for new unacknowledged alarms, or 3) not popup unless manually selected by the operator.

The default selection is None.

Theme

Use this selector to set a Light or Dark theme for the Control Center.

The default selection is Light.

Adding WIN-911 Systems to Control Center

Select the Add WIN-911 System button at the bottom right of the Configuration tab.

WIN-911 System Name

The name of the system to which this connection will subscribe. The name can be anything so long as it is unique, but it is recommended that something meaningful like a location or production line be assigned.

Hot Backup Relation

In the event your system is set as a redundant pair the user will have to specify which system is the primary and which is secondary.

The default selection is None.

If “Secondary” is selected the Primary System selector will appear and only include primary systems that are not already paired.

Enable Live Alarm Monitoring

This selection will send alarm activity from the designated WIN-911 System to the Monitor for the purpose of presenting the operator with a real-time summary of active alarm conditions.

Enable Historical/Timeline View

This selection will send alarm activity from the designated WIN-911 System to the Historical Logs and Timeline for the purpose of presenting the operator with tools to examine previous and ongoing alarm and alarm notification activity.

Enable Announcer

This selection will cause alarm events from the designated WIN-911 System to be verbally announced using an audio device. See the Announcer section for more details.

WIN-911 Navigation Machine/IP Address

Enter the machine name or IP address of the WIN-911 System’s Dispatcher to which the Control Center will subscribe.

Port

The port number the WIN-911 system’s Dispatcher is using.

Network Considerations

If you are targeting remote WIN-911 Dispatchers, you will need to verify that your DNS can resolve each WIN-911 Dispatcher hostname or set up accessible static IP addresses. You must also configure your firewall to permit communications for the Control Center to the WIN-911 Dispatchers (TCP ports).

Finally, you will need to use the SCU to trust the certificate of both the WIN-911 System and the Control Center.