ArchestrA Direct Connect

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ArchestrA Direct Connect

Introduction

ArchestrA Direct Connection

Introduction

The ArchestrA direct connection provides connectivity between WIN-911 and Wonderware's ArchestrA Application Server. Through the direct connection, WIN-911 receives alarm event information by subscribing to alarm events, rather than creating alarms from data points. This event subscription model allows for a single point of maintenance within ArchestrA with regard to alarm levels and types, as ArchestrA has sole responsibility for determining what is and is not in alarm. The connection also allows for acknowledgments to be passed back and forth seamlessly.

Alarming may be implemented in two different ways. The first and most straightforward method is to subscribe to ArchestrA alarms directly. In this scenario data is gathered from field equipment and other sources and used as input to objects within ArchestrA. Alarm conditions are then specified for those objects within ArchestrA and WIN-911 subscribes to those alarm events.

The second method is to use ArchestrA as a proxy for InTouch alarms. In this scenario, alarms are configured within InTouch and then an InTouch Proxy object is created within ArchestrA. WIN-911 is then provided with a reference to the proxy which then provides alarm events to WIN-911. It is important to understand the distinctions between these two alarm types before continuing. If you need more clarification regarding InTouch Proxy alarms and ArchestrA, consult your ArchestrA documentation.

Important Notes

- WIN-911 must be installed on a deployed ArchestrA platform.
- Requires a minimum version of Archestra 3.1 SP3 Patch 1
- Communication with the galaxy requires an MXAccess license. MXAccess is included as part of an InTouch 10 license. If you would like to install WIN-911 on a system that does not have a licensed copy of InTouch, download an MXAccess license from our website.
- While multiple ArchestrA connections can be defined within WIN-911, WIN-911 may only connect to the Galaxy deployed on the same platform.
- Should communication between WIN-911 and ArchestrA be lost, the connection will be reestablished when it becomes available again.
- Watchdog Timers are supported and must monitor a changing alarm, rather than a changing data value. For more information, see the section on Watchdog Timers.
- WIN-411 reporting, Bypass Data Pokes, and Alarm Suppression are not supported for the ArchestrA Direct Connection.
- · Alarm extensions are not supported.

Step by Step Overview

Follow these steps in order to connect to ArchestrA and receive alarms through your desired notification options.

- 1. Create a new configuration file in the WIN-911 Configurator.
- 2. Create a new data source definition for ArchestrA or your InTouch Proxy.
- 3. Import your alarm tags. If you wish to define tags manually, you must first create a group in which to place the tags.
- 4. Create a user within the phone book and assign him a notification method and duty schedule.
- 5. Associate that user with an alarm group by placing him in the Selected Name List of a Group.
- 6. Save your configuration and start the Scan and Alarm executable.

Note: This manual only covers the ArchestrA data source. For information concerning remote alarm notification, see the Configurator manual.

ArchestrA Data Source Definition

Data Source Definition

The Data Source Definition contains all of the settings required to connect to ArchestrA. Once created, alarm tags may be imported or manually defined to reference your ArchestrA Data Source definition. Open the ArchestrA Data Source Definition dialog by clicking the Data icon on the WIN-911 Configurator. Use the New and Edit buttons to create new connections or edit existing connections.

Archestra Direct Connect						
Access Name:						
ArchestrA						
ArchestrA User Account						
User Name:						
Password:	Password:					
NOTE: This user account is common to all ArchestrA Galaxy and InTouch Proxy data source connections.						
- Alarm Source						
	C InTouch Proxy					
Galaxy Settings	InTouch Proxy Settings					
InTouch Proxy Name:	Browse					
ОК	Cancel Help					

Access Name

The Access Name is a user defined name, used to represent a particular data source within WIN-911. Alarm tags are associated with data sources by referencing the Access Name of a Data Source.

ArchestrA User Account

If security is enabled within ArchestrA, WIN-911 must authenticate with the Galaxy in order to receive and acknowledge alarms. ArchestrA may be configured to authenticate users against Galaxy user logins, OS users, or OS groups.

When the security mode is set to "Galaxy," you must provide a valid user name and password here for the Galaxy. If the security mode is set to "OS Users" or "OS Groups" then WIN-911 must be run under a Windows user account that can log into the Galaxy to receive and acknowledge alarms. In this scenario, WIN-911 does not require a User Name and Password as the permissions assigned to the account that WIN-911 is running under determines the level access WIN-911 has to the Galaxy.

Consult with your ArchestrA documentation and your ArchestrA configuration to determine a valid user name and password.

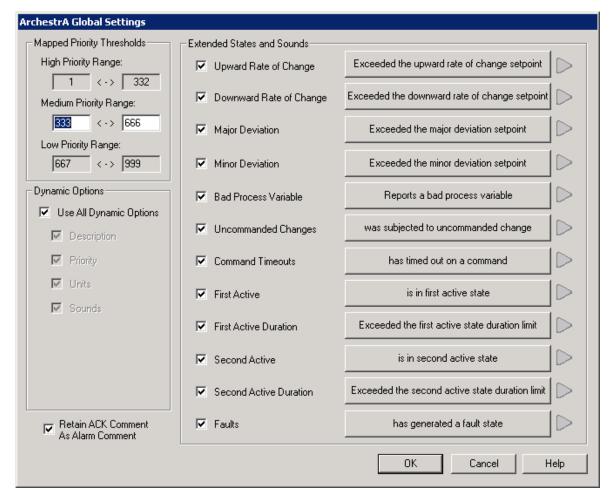
Alarm Source

The alarm source setting determines whether the alarms you will be configuring for this data source will be owned wholly be ArchestrA or if they are InTouch alarms proxied by ArchestrA. If you are configuring an InTouch Proxy connection, you must specify the name of the proxy in the InTouch Proxy Name field.

Please be sure that you understand the differences between these types of alarms before proceeding. Remember that although data may be routed through ArchestrA from InTouch to create ArchestrA alarms, these are not proxy alarms. Proxy alarms are *alarms* that are defined in InTouch and then proxied through ArchestrA. You may define as many InTouch proxy Data Sources as necessary. It is, however, impractical to create multiple Data Source definitions for Galaxy alarms, as WIN-911 may only connect to the single Galaxy deployed to the same platform.

ArchestrA Galaxy Settings

The ArchestrA Galaxy Settings dialog contains settings which govern the types of alarm events WIN-911 will subscribe to, as well as sound settings used for voice notifications and the local announcer. These settings are global to all ArchestrA Data Source definitions, meaning that editing these settings will change all ArchestrA data sources.



Mapped Priority Thresholds

ArchestrA's priority scheme ranges from 0-999 with 999 as the lowest priority. WIN-911 has three alarm priorities: low, medium and high. You may change which priority values map to which priorities within WIN-911 by editing the ranges here. By default, WIN-911 maps 1-332 to high, 333-666 to medium and 667-999 to low. Higher priority alarms take precedence over lower priority alarms for notification.

Dynamic Options

Once connected to ArchestrA, WIN-911 can obtain object information dynamically. This reduces the configuration overhead within WIN-911 and centralizes alarm configuration within ArchestrA itself. If you wish to override any of the dynamic settings, deselect it here and then manually define the alarm attribute in your WIN-911 alarm definition. Attributes which may be dynamically subscribed to are:

- Description
- Priority
- Units
- Sounds

Select "Use All Dynamic Options" to subscribe to all attributes.

When the Dynamic Sounds option is enabled, WIN-911 will retrieve the text for speech synthesis from ArchestrA when an alarm is triggered. This text is pulled from the object description field and the alarm message field for Galaxy alarms. The text for speech synthesis is pulled from the comment field in InTouch for proxy alarms. Alarm conditions for InTouch proxy alarms are not dynamically obtained and must be defined within WIN-911 manually or through an alarm import.

Extended States and Sounds

WIN-911 may subscribe to a variety of different alarm events which are issued by ArchestrA. You may subscribe and unsubscribe to them here. Consult with your ArchestrA documentation for a description of each of these. Deselect any option to unsubscribe from it, which disables alarming across the entire system for that type of alarm event.

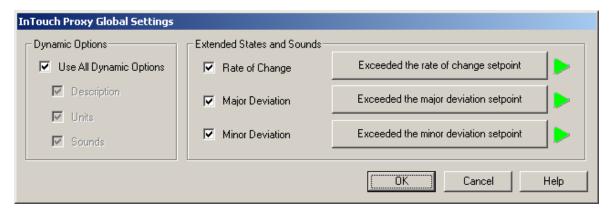
The local announcer and voice notification options will use the text beside any of the extended states listed here for voice synthesis. Click the button beside any option to edit the text for speech synthesis or to select a wave file to be played. You may also preview the voice synthesis by clicking the green play button.

Retain ACK Comment as Alarm Comment

When an alarm is acknowledged by WIN-911, it passes the method of acknowledgment and the user who made the acknowledgment to ArchestrA Galaxy by writing to the AckMsg field of your alarm. When using an InTouch alarm display, that AckMsg field is displayed in the alarm comment field. If you wish to disable this behavior, deselect this box.

InTouch Proxy Settings

Like the ArchestrA Galaxy Settings dialog, the InTouch Proxy Settings dialog contains settings which govern the types of alarm events WIN-911 will subscribe to as well as sound settings used for voice notifications and the local announcer. These settings are also global to all InTouch Proxies.



Dynamic Options

As with ArchestrA Galaxy alarms, WIN-911 is capable of dynamically setting alarm attributes based upon your InTouch proxy alarm attributes. Deselect any of these options in order to specify your own values from within WIN-911 in your alarm definitions.

- Description
- Units
- Sounds

Select "Use All Dynamic Options" to subscribe to all attributes.

Extended States and Sounds

InTouch tags may have Rate of Change, Major and Minor Deviation alarms associated with them in your InTouch tag database. Deselect any of these options to unsubscribe from a specific alarm event for all InTouch Proxies.

InTouch Proxy Name

When connecting to an InTouch Proxy within your ArchestrA Galaxy, you must specify the proxy's name. Click the browse button to browse your ArchestrA Galaxy for proxies. In order to browse your Galaxy, you must first specify a valid username and password in the ArchestrA User Account fields below.

Note: User names and passwords may not exceed 127 characters in length.

Importing Alarms from ArchestrA

Importing Alarms from ArchestrA

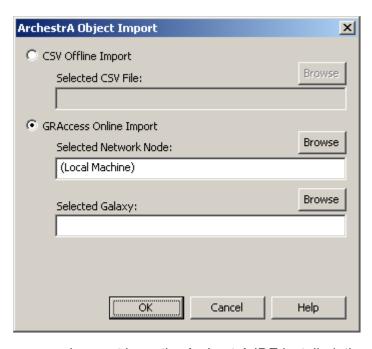
Once an ArchestrA data source is defined, tags can be imported which reference it. This is the most efficient method of creating tags in WIN-911, as it creates alarm groups within

WIN-911 and insures that the syntax used when defining tags is correct. Alternatively, you may manually create groups and alarm tags.



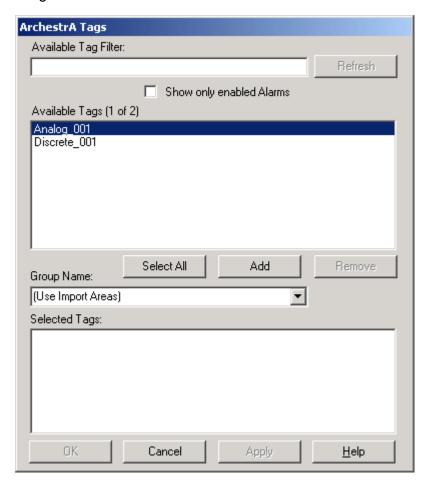
To begin the import process, select the ArchestrA Data Source Definition from the data source selection dialog and then click import. If you are importing alarms from an ArchestrA Galaxy and are on a platform with the ArchestrA IDE installed, you will be presented with the option of importing alarms from a CSV file or importing alarms directly from ArchestrA. If you will be importing from a CSV file, select the objects you would like to export from ArchestrA and export them to a CSV using the Galaxy Dump. Select the CSV in WIN-911 by first selecting CSV Offline Import and then use the browse button to locate your CSV file on the disk. Click OK to have WIN-911 read the CSV file. InTouch proxy alarms must be exported from InTouch with Wonderware's DBDump utility and then imported from the resulting CSV file. Each import is discussed below.

Importing ArchestrA Alarms



If the machine you are on does not have the ArchestrA IDE installed, then your only option will be to use the CSV import.

To import directly from ArchestrA use the GRAccess Online Import. Provide the name of the computer where the Galaxy Repository resides in the Selected Network Node field, then set the Selected Galaxy field to the name of the Galaxy you wish to import from. You may use the browse buttons to search for both of these pieces of information. In order to import alarms, the user name and password you configured in your data source definition must be valid. If they are not, you will be prompted for them. Click OK and WIN-911 will request a list of tags from ArchestrA.



After the Configurator has received the list of available tags, they will be presented to you in the tag selection dialog. Select the tags you would like to import and click add and then apply to import them. Use the Group Name drop down box to change the Group to which tags will be imported. You may import tags to several different groups. By default the Use Import Areas option will be selected. This will create a set of groups within WIN-911 that correspond to the areas in ArchestrA and place all alarms in the appropriate group.

Available Tag Filter

The available tag filter will filter the available tag list according to the text entered in it. Type any text in it, then click refresh and the available tag list will show only those alarms which contain that text.

Show Only Enabled Alarms

By default, the available tag list will make all analog and discrete devices available for import as alarms. These objects may or may not have alarming enabled. If you wish to import only those objects which are configured as alarms, enable the Show only enabled Alarms options and click refresh.

Unsupported alarm types and tags which are already defined within your WIN-911 configuration will not be listed in the list of available tags.

Importing InTouch Proxy Alarms

Proxy alarms are defined within InTouch and then fed to WIN-911 through ArchestrA. Export the alarms from InTouch using its DBDump utility. Select your Data Source definition from the Data Source selection dialog and click Import. You will then be presented with a tag selection dialog. It functions in the same manner as the ArchestrA tag selection dialog discussed previously.

After the Import

Once your alarm tags are imported, the only task left to complete is to setup remote alarm notifications for your alarm groups. You may review, edit or delete your WIN-911 tag definitions by opening the digital or analog alarm definitions from the Configurator.

Importing Tags Later On

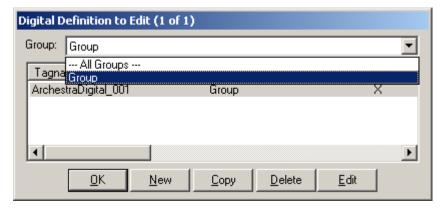
Should your ArchestrA Galaxy or InTouch Tagname dictionary grow, new tags may be imported from them. Simply repeat the steps outlined above. Existing tags will not be affected and the tag selection dialog will only present you with tags which are not currently defined within WIN-911.

ArchestrA Digital Definitions

ArchestrA Digital Definitions

Editing or Creating Digital Alarms

Click the Digital Definition icon on the Configurator to create or edit digital alarms. The digital alarm selection dialog will appear.

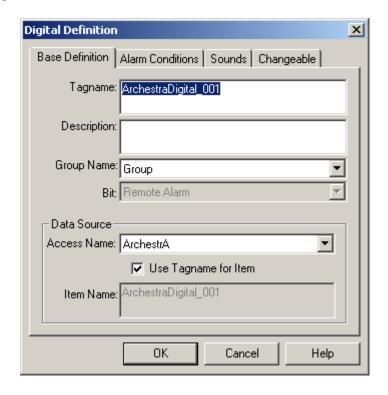


Use the drop down menu to select a Group to browse its alarms. Click the new or edit buttons to create or edit digital alarms.

Digital Definition

The Digital Definition dialog contains the alarm settings for a single digital alarm. Each of these settings is discussed below.

Base Definition



Tagname

The tagname is a human friendly alias of an individual alarm in ArchestrA or InTouch. It does not reference an ArchestrA alarm or InTouch tag. It is simply a pronounceable name used to identify alarms in WIN-911. If your object or InTouch tag has a friendly enough name, select the Use Tagname for Item option presented below. This option is selected by default for all tags created using the import feature.

Description

The Description field is used to provide more context for a particular alarm. By default, WIN-911 receives this information when an alarm event is received from ArchestrA. If you wish to edit this field you must deselect this <u>dynamic option</u> from within your ArchestrA data source definition.

Group Name

Each alarm must be associated with a group. Select the Group to which the alarm will be assigned by using the drop down box. Alarm notifications are processed on a per Group basis. See the Configurator manual for detailed information regarding groups and alarm notification.

Bit

This field is disabled for ArchestrA Data Sources.

Access Name

The Access Name references data sources within WIN-911. To reference an ArchestrA data source, and thus configure this alarm as an ArchestrA Galaxy or InTouch Proxy alarm, select the Access Name of an ArchestrA data source.

Use Tagname for Item

When this option is enabled, the Tagname is copied into Item Name field. If your ArchestrA object or InTouch Proxy alarm's name is descriptive enough, enable this option and set the Tagname field to the name of your alarm within ArchestrA.

Item Name

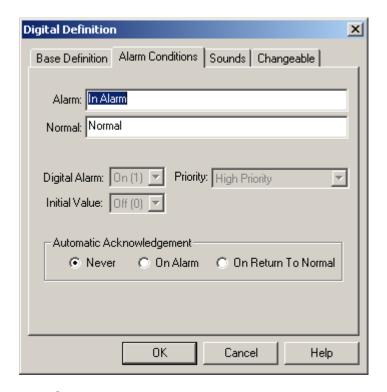
The Item Name references object name of your ArchestrA object. It is important that you supply the unique ArchestrA tagname here, if you are referencing a digital or analog device within ArchestrA. WIN-911 interprets all item names which contain a "." as field attributes. If you are referencing an analog or digital device which is contained by another object, do not use the contained name to reference the object within WIN-911.

If you are defining an InTouch Proxy alarm, there is no need to specify the name of the proxy. In fact, the following Item Name would not work:

"InTouchProxy_001.AlarmName," as WIN-911 already prefixes the proxy name to the Item Name causing the previous Item Name to effectively be

"InTouchProxy_001.InTouchProxy_001.AlarmName." Never specify the InTouch Proxy's name this way.

Alarm Conditions



Alarm and Normal Text Strings

The Alarm and Normal strings for ArchestrA alarms are defined within the Galaxy and do not need to be redefined here. If you do not wish to use ArchestrA's settings deselect the dynamic option for your ArchestrA Galaxy or InTouch Proxy Data Source.

Digital Alarm

Alarm states are managed within ArchestrA or the InTouch Proxy.

Initial Value

The initial value of alarms is managed within ArchestrA or the InTouch Proxy.

Priority

By default the priority of ArchestrA alarms is obtained at runtime. To override ArchestrA's priority settings, disable the dynamic priority option within your ArchestrA Data Source definition. The priority, at the time of import, filtered through WIN-911's priority mapping will be utilized.

The priority of InTouch Proxy alarms is not obtained dynamically. Priorities are set during the CSV import of tags. You may change the priority of InTouch Proxy alarms by making a selection from the priority combo box.

Automatic Acknowledgement

WIN-911 can automatically acknowledge alarms when the alarm meets certain conditions.

Never

Selecting this radio button will require a manual acknowledgement of the alarm.

On Alarm

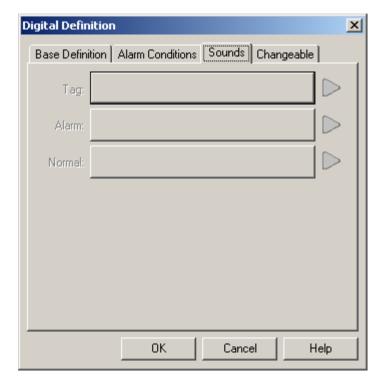
When this option is selected, all alarms are acknowledged by WIN-911 when they are received. This prevents all notifications from occurring, except the local announcer.

On Return to Normal

Select this option to have WIN-911 acknowledge an alarm when ArchestrA alerts it that the alarm has returned to normal. This will prevent notifications from being processed when an alarm returns to normal.

Sounds

The Sounds tab is used to manage the verbalization of alarms. By default the text used to synthesize speech is dynamically obtained at runtime from ArchestrA and the controls here are disabled. Disable the dynamic sound option within your ArchestrA data source to manually define all sounds.



Tag Sound

The Tag Sound field defines the text or wave file that will be played when announcing the name of an alarm. By default, the text used for speech synthesis is provided by ArchestrA. Disable the <u>dynamic sounds</u> option in your ArchestrA Data Source to manually configure this or any other alarm sound. When using dynamic sounds, the tag sound comes from the object description field in ArchestrA, from the .Desc or .ShortDesc field. The InTouch proxy tag sound is pulled from the tag's comment field.

Alarm & Normal Sound

These fields determine the text or wave file which will be used when announcing the state of an alarm. When the <u>dynamic sounds</u> option is enabled, these sounds are provided by ArchestrA. Galaxy alarm sounds are pulled from the object's description and the alarm message field (.DescAttrName). Proxy alarm and normal sounds are not dynamically retrieved from ArchestrA and must be defined within WIN-911 through an import or be manually defined. Dynamic Sounds must be turned off to manually define alarm sounds.

Note: If a Digital Alarm Prefix sound is defined, under Common Sounds, it will be prefixed to the Alarm Sound.

Changeable

This feature is not supported for ArchestrA data sources.

ArchestrA Analog Definitions

ArchestrA Analog Definitions

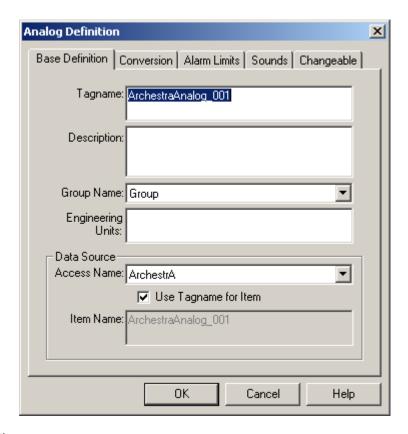
Define Analog Alarms to monitor analog alarms within ArchestrA or non-discrete InTouch Proxy alarms.

Note: Analog alarms are not permitted in Lite Mode.

Analog Definition

Analog alarms are very similar to digital alarms. Settings which are identical to both analog and digital alarms will not be mentioned here so as to avoid any unnecessary repetition. It is recommended that you read the section on <u>digital alarms</u>, if you have not already, before proceeding any further.

Base Definition



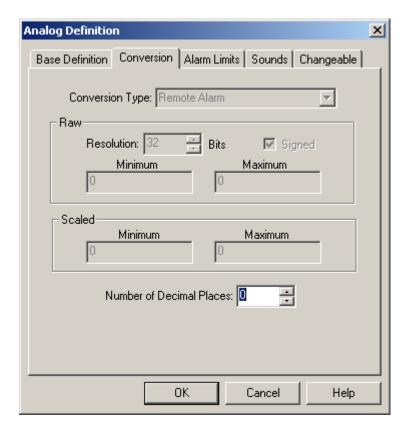
Engineering Units

Engineering units are provided by ArchestrA when an alarm event is received. If you would like to manually define your engineering units, disable the <u>Units Dynamic Option</u> in your Data Source Definition, and then define it here.

Note: The text placed here is used to generate the sound for engineering units if voice synthesis is enabled.

Conversion

Because most of these settings are defined within ArchestrA or InTouch, they are disabled here with the exception of Number of Decimal Places.

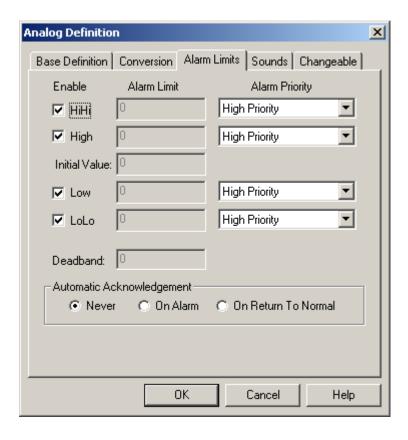


Number of Decimal Places

WIN-911 supports 32 bit signed integers and 32 bit floating point values. A 32 bit integer is the default data type. For floating point numbers set the number of decimal places to something other than zero.

Alarm Limits

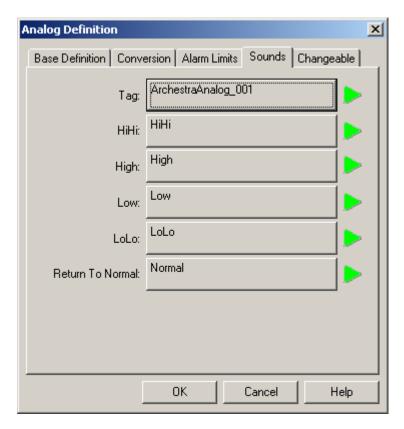
WIN-911 may subscribe to Hi, HiHi, Low, and LoLo alarm events for analog alarms. Deselect any of these fields to unsubscribe from a specific event and thus disable that alarm. Alarm limits are configured within ArchestrA or InTouch and as such they are disabled here.



Deadband

Deadbands are configured within ArchestrA or InTouch and as a result this option is disabled here.

Sounds



A specific sound can be configured for each of the alarm limits, which are listed in the image above. When using Dynamic Sounds, the text used for speech synthesis is pulled from the object description and alarm message fields. InTouch proxy alarms use the tag's comment field. The alarm condition field must be specified manually or be imported during an alarm import.

Changeable

ArchestrA alarms cannot be a part of 411 reports and this tab is disabled.

ArchestrA Watchdog Timers

ArchestrA Watchdog Timers

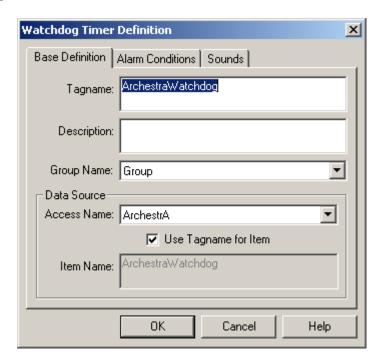
The connectivity of mission critical application must be verifiable. WIN-911 implements Watchdog Timers to do just that. ArchestrA Watchdog Timers monitor a changing alarm event. If no alarm event is passed to WIN-911 after a period of time the Watchdog Timer Alarm is triggered. WIN-911 requires a Discrete Device alarm or discrete alarm from your InTouch Proxy in order to create Watchdog Timers.

Click the red clock icon to create or edit Watchdog Timers. The selection dialog functions identically to the alarm selection dialogs discussed earlier.

Watchdog Timer Definition

Watchdog Timers have several configurable attributes. Due to their similarity to other alarm types, identical settings are omitted from this discussion. See the section covering <u>digital alarms</u> for topics that are not discussed here.

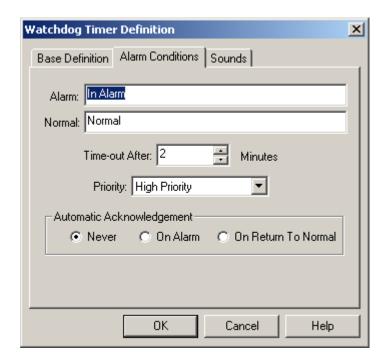
Base Definition



Item Name

The Item Name must refer to an ArchestrA Discrete Device with alarming enabled or a discrete InTouch Proxy alarm. The alarm which you are referencing should continuously cycle in and out of alarm to demonstrate ArchestrA's presence.

Alarm Conditions



Alarm and Normal

The Alarm and Normal text are used to display the alarm in the Alarm Monitor Window and for text based notification methods as well.

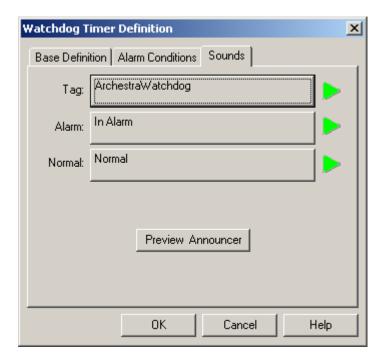
Time-out After ___ Minutes

This is the period of inactivity that must elapse before the Watchdog Timer Alarm is triggered. After an update from ArchestrA is received regarding the Watchdog Timer tag, the counter is reset. If an update regarding the Watchdog is received after the alarm has already been triggered, it will return to normal.

Priority

There are three Priority levels for alarms within WIN-911: High, Medium, and Low. When processing remote notifications, higher priority alarms trump lower priority alarms in call out precedence. Select the priority you wish to assign to your Watchdog Timer from the drop down box.

Sounds



Tag, Alarm, and Normal Sounds

Like other alarms, the sounds configured here are used to vocalize the tagname and alarm states. Click the sound button to set the text which will be used for voice synthesis or to select a .wav file to be played.

Preview Announcer

Click this button to preview the alarm sounds.