Desktop Notification System 2.0

Installation and User Guide for a Windows Environment
Table of Contents

Overview .......................................................... 1
  Intended Audience ........................................... 1
  System Requirements ........................................ 1
  A Note on Usage .............................................. 1
  Getting Help ................................................... 2

Installing the Desktop Notification System ................... 3
  Download the Installation Files ......................... 3
  Install the Desktop Notification System with the Installer 4
  Perform a Silent Installation of the Desktop Notification System 7

Configuring the Desktop Notification System ................ 9
  Configure Policy Settings .................................... 9
  Determine SLP versus Static URL Settings ............... 11
  Configure Automatic Startup ............................... 12

Using the Desktop Notification System ....................... 13
  Uninstalling the Desktop Notification System .......... 18
  Troubleshooting ............................................. 19

Release Notes .................................................. 20

Acknowledgments ............................................... 21
Overview

The Desktop Notification System is a component in the Singlewire Software suite of products that allows desktops to receive and source InformaCast live, ad-hoc, text, audio, and text and audio broadcasts. The Desktop Notification System is comprised of:

- **A notification component.** This is the heart of the application; it starts up automatically upon user login and contacts the InformaCast server for registration. It then listens for InformaCast requests, be they broadcasts or captures, and displays/plays them when they are initiated.

- **An administrative component.** This management piece allows for the configuration of the notification window’s behavior and appearance. It is possible to specify the color, size, and logo display for broadcasts through a policy file.

Upon receiving an InformaCast request, the notification window will react and either display the proper interface for a sound capture through the desktop microphone or relay the audio for the InformaCast broadcast while displaying any associated text information.

Intended Audience

This user guide is written with two audiences in mind, the installers of the Desktop Notification System and its users.

There are also three versions of this manual: one for Windows environments, one for Mac environments, and one for Linux environments. Please make sure you have the right version by looking at the cover page, or by looking at the environment type printed at the bottom of every page.

Note: Pictures in this guide will depict the Windows format unless the Mac or Linux environments differ substantially in their look or procedure.

System Requirements

The Desktop Notification System requires administrative access for any of the following platforms:

- Windows XP (x86) Home and Professional editions
- Windows 7 (32-bit and 64-bit x86) all editions
- Windows Vista (32-bit and 64-bit x86) all editions

Note: Make sure you allow “Java.exe” and “Javaw.exe” through your firewall. Without these two executables, the Desktop Notification System will be unable to find InformaCast.

A Note on Usage

Specific fonts are used to represent specific kinds of information in this user guide. The fonts and their meanings are listed here:

- **Bold fonts** indicate the name of a button, text field, or other element with which you interact and any text that you must enter.
• *Italic fonts* indicate the name of an area or section on one of the Desktop Notification System’s pages.

• Angled brackets enclose text that varies with your specific environment, i.e. http:\<Your IP Address> means that you would enter your specific IP address instead of the brackets and what they enclose.

• *Blue* text indicates a hyperlink.

There are several kinds of notification boxes used in this guide.

• **Tip.** These offer advice or “best practices.”

• **Note.** These contain additional information, usually relevant in special cases.

• **Caution.** These contain information about a procedure that may reduce the performance of your system.

• **Warning.** These contain information about a procedure that can impair or disable your system.

### Getting Help

Before contacting technical support, check Singlewire’s Knowledge Base for a solution (http://www.singlewire.com/support_knowledgebase.html). If you still have questions, initiate a request for support on that same page. Please include:

• Account contact information

• Maintenance contract number

• Detailed description of problem

• Product name and version
Installing the Desktop Notification System

Before you can begin using the Desktop Notification System, you must download the installation files to your computer and install the Desktop Notification System onto your system. You will need access to the Internet to perform the installation.

**Note**

There are two ways to install the Desktop Notification System: using the installer (see “Install the Desktop Notification System with the Installer” on page 4) or performing a silent install (see “Perform a Silent Installation of the Desktop Notification System” on page 7).

Download the Installation Files

You will be given a link to the Desktop Notification System’s installation files. If you have not received this link, contact your system administrator.

**Step 1**
Go to [http://www.singlewire.com/informacast-download](http://www.singlewire.com/informacast-download). If you’re already logged into Singlewire’s website, you’ll see the Singlewire InformaCast Support page. If you’re not logged in, you’ll need to log into the Singlewire website first or, if you don’t yet have a Singlewire account, you’ll have to create an account to access the Singlewire InformaCast Support page.

**Step 2**
Scroll down to the Download Singlewire Desktop Notification System (SDNS) section and click the Singlewire Desktop Notification System link.

**Step 3**
Click the installer file link for your environment.

**Step 4**
Click the Run button to begin the installation process from the Internet or click the Save button to save the download files to your computer.

**Tip**
The installation files are very large. In order to ensure a seamless installation, it is recommended that you save the download files to your computer and run them from there.

**Step 5**
If you clicked the Open button, the files will begin opening. This may take a few moments.

If you clicked the Save button, navigate to a location where you would like to save these download files and click the Save button. The download files will begin transferring to your computer. This may take a few moments depending on the speed of your Internet connection.
Install the Desktop Notification System with the Installer

Once you have the installation files, you can install the Desktop Notification System. The steps in this section show you how to install the Desktop Notification System on individual machines. If you’d like to perform a silent install (which is intended for multiple machines, but can be used for individual machines), see “Perform a Silent Installation of the Desktop Notification System” on page 7.

**Note**
If you are installing the Desktop Notification System in order to have it broadcast InformaCast messages, make sure that you have InformaCast configured for automatic registration before you begin the installation process. See “Configure the Desktop Notification System” in the InformaCast Installation and User Guide for more information.

**Step 1** Navigate to where you saved your download files and double click the `SinglewireDesktopNotificationsSystem.msi` file. The InstallShield Wizard appears.

**Step 2** Click the **Next** button. The License Agreement window appears.
Step 3  Click the **I accept the terms in the license agreement** radio button and click the **Next** button. The Destination Folder window appears.

![Destination Folder Window](image)

Step 4  Click the **Change** button to change the default installation location or click the **Next** button to accept the default location. The Configuration File Server Type window appears.

![Configuration File Server Type Window](image)

Step 5  Click the **SLP - Use SLP to discover the configuration file server** radio button. If multicast is configured correctly, SLP will automatically detect the InformaCast server—even if its IP address changes. For more information on SLP versus a static URL, see “Determine SLP versus Static URL Settings” on page 11.

**Note**  For InformaCast Virtual Appliance users, the Virtual Appliance automatically detects your IP address.

**Note**  For InformaCast on Windows users, SLP relies on InformaCastSpeaker.cfg, which must contain the correct IP address of your InformaCast server. InformaCastSpeaker.cfg file is located in C:\Program Files\Singlewire\InformaCast\webapp\resources.
**Step 6**  Click the **Next** button. The Ready to Install window appears.

![Ready to Install window](image1.png)

**Step 7**  Click the **Install** button. The installer begins installing the Desktop Notification System.

![Installing window](image2.png)

When the installer is finished, click the **Finish** button to exit the installer.

![Finish window](image3.png)

Once you log off and then onto a machine on which the Desktop Notification System has been installed, the Singlewire logo will appear in your system tray, which is in the lower right corner.

![System tray](image4.png)
Perform a Silent Installation of the Desktop Notification System

If you’d like to install the Desktop Notification System on multiple machines without being prompted for any information, you can perform a silent install, wherein you install the Desktop Notification System with pre-defined settings.

Note

If you are installing the Desktop Notification System in order to have it broadcast InformaCast messages, make sure that you have InformaCast configured for automatic registration before you begin the installation process. See “Configure the Desktop Notification System” in the InformaCast Installation and User Guide for more information.

The Desktop Notification System for the Microsoft Windows platform is installed using an MSI file (SinglewireDesktopNotificationsSystem.msi), which can be used to mass deploy the Desktop Notification System across many Windows machines using tools such as Microsoft Group Policy or Microsoft System Center Configuration Manager (SCCM).

Note

If you plan on using a silent install, you should have your own software distribution mechanism already in place. This section documents Singlewire’s MSI command line parameters, but it is your responsibility to determine how those parameters map into your environment. Singlewire Support is not responsible for help with your software distribution mechanism.

Because of the flexibility needed to deploy silently without any user interface, the installer allows you to include parameters on the command line. These optional parameters are:

- **INSTALLDIR**. The directory where the application should be installed. The default value is `C:\Program Files\Singlewire\DesktopNotificationSystem`.
- **CFS_TYPE**. The configuration file server type, which designates where the Desktop Notification System should look for the speaker configuration file for registration to the InformaCast server (see the InformaCast Installation and User Guide for more information). The valid entries are:
  - `SLP`—Use SLP to automatically try to discover the InformaCast server.
  - `STATIC`—Use a static URL to identify the InformaCast server.
- **CFS_URL**. The full URL to the InformaCast server speaker configuration file. This field is required if `CFS_TYPE="STATIC"`.

For example, entering `msiexec /i "Singlewire DesktopNotificationSystem.msi" /qn` in the command line designates that there are no parameters included; the installation will proceed with the defaults, which include installing the application on `C:\Program Files\Singlewire\DesktopNotificationSystem` with a CFS type of SLP. In contrast, entering `msiexec
Installing the Desktop Notification System

/i "Singlewire DesktopNotificationSystem.msi" /qn INSTALLDIR="D:\Program Files\Singlewire\DesktopNotificationSystem" in the command line will install the application at D:\Program Files\Singlewire\DesktopNotificationSystem with a CFS type of SLP. Lastly, entering msiexec /i "Singlewire DesktopNotificationSystem.msi" /qn CFS_TYPE="STATIC" CFS_URL="http://172.34.567.89:8081/InformaCast/resources/" in the command line will install the application at the default location with the configuration file server pointed to an InformaCast server that is located at 172.34.567.89.

After mass deployment, once you log off and then onto a machine on which the Desktop Notification System has been installed, the Singlewire logo will appear in your system tray, which is in the lower right corner.

The Desktop Notification System is automatically added to your Windows Startup menu. It will not be available through your Start menu, but it will be accessible through your Windows System Tray.

You can run the MSI installer by clicking on it. By doing so, you will be presented with a series of windows that allow you to enter the required parameters. This is not intended for mass deployment of the application across multiple Windows machines, but rather for an individual machine. Please see “Install the Desktop Notification System with the Installer” on page 4 for steps on this process.

If your method of mass deployment does not allow for command line parameters, Singlewire recommends using the Microsoft Orca database editor to modify the Desktop Notification System MSI file. The Orca tool is contained in the Microsoft Windows SDK. Please refer to the Microsoft Orca/Installer support page for download and installation instructions. Once installed, open the Desktop Notification System MSI file in Orca and edit the parameters you wish to change. The INSTALLDIR parameter can be found in the Directory table, and both the CFS_TYPE and CFS_URL parameters can be found in the Property table. Once changes have been saved, you may then use the file for mass deployment.
Configuring the Desktop Notification System

Once you have installed the Desktop Notification System, you can begin configuring it to work with InformaCast. This involves customizing the notification window to your specifications and possibly changing the method used to retrieve the Desktop Notification System’s speaker configuration file.

Configure Policy Settings

Through the “SDNS_Policy.cfg” file, you can control the look of the desktop notification window that appears when a broadcast is received. This file can reside in one of two places:

- On the InformaCast server (and in the same folder) containing the “InformaCastSpeaker.cfg” file, which is usually located in C:\Program Files\Singlewire\InformaCast\webapp\resources (for Windows) and /usr/local/singlewire/InformaCast/web/resources (for the Virtual Appliance). If deployed here, all desktops will reference this file, thus creating a uniform look for all receiving desktops.

- On the actual desktop in the root directory of the application. If deployed here, the desktop will use this file for parameters related to the look. This will allow the individual desktop to choose the look of the broadcast windows, thus overriding the global settings.

In the “SDNS_Policy.cfg,” you can modify three parameters:

- **Screen size.** The size of the screen that is displayed when a broadcast is received. Valid values are: SMALL, MEDIUM, LARGE, or MAX.

- **Background.** The background displayed in the notification window. Each color has a unique background. Valid values are: DEFAULT, SYTEM (based on your OS’s theme), WHITE, BLUE, GREEN, YELLOW, RED, and RAINBOW.

- **Custom image.** A custom image you provide that will be placed in the right-hand side of the banner area. The Desktop Notification System will scale the image so it fits in the designated area, and the image must be of the formats .gif, .jpeg, or .png and reside on the server from which the Desktop Notification System pulls its speaker configuration file (and in the same folder).

- **Banner Text.** The text that will display in the banner area of every notification window. You can display your name or any other text to help users identify the origin of each message. If this parameter is missing in the policy file, the default banner text will display (e.g. Singlewire Desktop Notification System). The default banner text will always be displayed in non-notification windows regardless of the contents of the policy file (examples of non-notification windows are Event Log and About).

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**Note**

In older versions of the Desktop Notification System, the “SDNS_Policy.cfg” file was called “BerbeeDNSys_Policy.cfg.” This file name will still work with newer versions of the Desktop Notification System.

---

**Step 1**

Stop the Desktop Notification System by right clicking the Singlewire icon in your system tray and selecting **Shutdown & Exit** from your system tray.
**Step 2** Open the “SDNS_Policy.cfg” file with Notepad or a similar text editor.

![SDNS_Policy.cfg example](image)

**Step 3** Make your changes:

- To change the screen size, replace the default **MEDIUM** with **SMALL**, **LARGE**, or **MAX** in the line:

  ```xml
  <ScreenSize>MEDIUM</ScreenSize>
  ```

- To change the background, replace the default **BLUE** with **DEFAULT**, **SYSTEM**, **WHITE**, **GREEN**, **YELLOW**, **RED**, or **RAINBOW** in the line:

  ```xml
  <Background>BLUE</Background>
  ```

- To add an image that will be displayed in the notification window, replace the default `humoctodance.gif` in `<CustomImage>humoctodance.gif</CustomImage>` with an image file of your own and move the `-->` to directly follow `Custom image file`. When you’re finished, your XML should look like the following example:

  ```xml
  <!-- Custom image file-->
  <CustomImage>humoctodance.gif</CustomImage>
  ```

  Ensure that this image resides on the server (and in the same folder) from which the desktop pulls its speaker configuration file. The custom image will apply to notification windows only, where it will be placed on the right side of the banner area. The image will be automatically scaled to fit in that area.

  **Note** Image file names cannot contain spaces.

- To change the banner's text, replace **Emergency Alert** with your desired text in the following line:

  ```xml
  <BannerText>Emergency Alert</BannerText>
  ```

**Step 4** Save your changes and restart the Desktop Notification System by logging off your user account and logging back on.
Determine SLP versus Static URL Settings

Through the “Spel.properties” file that resides in the root directory of the application, you can control which method is used to retrieve the Desktop Notification System’s speaker configuration file: SLP or a static URL.

SLP is the more seamless option of the two, but if multicast isn’t configured correctly on the network, the Desktop Notification System will not work properly.

**Note**
Before changing these and any other parameters within the “Spel.properties” file, please contact Singlewire Support.

**Step 1** Stop the Desktop Notification System by right clicking the Singlewire icon in the system tray and selecting **Shutdown and Exit Desktop Notification System** from your system tray.

**Step 2** Open the “Spel.properties” file with Notepad or a similar text editor. This file usually resides in C:\Program Files\Singlewire\DesktopNotificationSystem.

```properties
# The properties below are used by the Endpoint. The names of these properties are defined as constant fields in
# the com.brbex.spel.SpelEnvironment class.
#
# The type of CFS locations to use. If omitted, the default value of SLP will be assumed.
# endpoint.configuration.locator.type=SLP
# endpoint.configuration.locator.type=STATIC
#
# The STATIC configuration features whose use is specified above will use this URL for
# retrieving endpoint configurations.
# example http://172.30.229.187:8081/InformaCast/resources/
#
# The type of HTTP clients endpoints should use. If omitted, the default value of Apache
# will be assumed. The allowed values of this property are defined in the
# com.brbex.spel.HttpClientType enum.
# endpoint.http.client.type=Apache
#
# The type of HTTP servers endpoints should use. If omitted, the default value of
# Apache will be assumed. The allowed values of this property are defined in the
# com.brbex.spel.HttpServerType enum.
# endpoint.http.server.type=Apache
#
# These properties are specific to the Desktop Agent.
#
# The port number to assign to the Endpoint
# endpoint.port.number=0000
#
# The hardware address to assign to the Endpoint
# endpoint.hardware.address=00:16:04:6c:5
#
# The IP address to use for starting the Endpoint
# endpoint.ip.address=172.30.229.65
```

**Step 3** Replace SLP with **STATIC** in the following line to switch from using SLP to find your speaker configuration file to a static URL:

```
endpoint.configuration.locator.type=SLP
```

**Step 4** Enter your static URL’s IP address in the line:

```
static.configuration.url=http://<IP address of your server>:8081/InformaCast/resources/
```
Note

Only replace the IP address itself, i.e. in the example above, you’d replace `<IP address of your server>` with your IP address and the rest of the path would remain the same.

**Step 5**

Save your changes and restart the Desktop Notification System by navigating to where you installed the Desktop Notification System (by default, this is `C:\Program Files\Singlewire\DesktopNotificationSystem`) and double clicking the `Start_DNSys.exe` file.

---

**Configure Automatic Startup**

By default, the Desktop Notification System installer will install the application so that when a user logs in, the application will automatically start. The installer places a shortcut to the Desktop Notification System startup file in `C:\Documents and Settings\All Users\Start Menu\Programs\Startup`. 

---
Using the Desktop Notification System

Singlewire’s Desktop Notification System is a system tray application, meaning that it has a minimal user interface and all of its commands are available by right clicking on the Singlewire icon in the system tray:

- **About.** View your version information and a short introduction to the software. Click the X button to exit this window.

- **Start Desktop Notification System.** Restart the Desktop Notification System after disabling it.

- **Stop Desktop Notification System.** Stop the Desktop Notification System from receiving text or audio messages. The service remains running, it just won’t receive messages. Click the Yes button in the dialog box to stop the Desktop Notification System.
• **Status Information.** View a webpage that contains your endpoint details, such as your hardware and IP addresses, port number, etc.; gateway details; supported audio formats; and current status.
• **Event Log.** View a report of how the Desktop Notification System has been running, i.e. any starts or stops in the service, configurations that have been retrieved, etc. Click the X button to exit this window.

![Event Log](image)

• **Shutdown & Exit.** Close and exit the Desktop Notification System. If you perform this command, you will not receive any text or audio messages again until you log off and back on again.

![Shutdown Exit](image)
Depending on your personal settings and the type of broadcast that has been initiated, when a text and/or audio broadcast is sent out to your desktops, you will see a window similar to the following:

The message that was broadcast to this Desktop Notification System machine is a Text and Pre-recorded audio message that has both the Short and Long Text fields and the Confirmation tab completed.

Clicking the Details button will reveal any additional information that isn’t included in the initial broadcast’s Short Text field:

If there is no Details button, it means that the Long Text field of the message that was sent is empty.
If your broadcast contains audio, you can click the Mute Audio or Stop Audio buttons to mute/stop the audio from playing, but leave the notification window up on your screen.
Clicking the **Respond** button will reveal any confirmation information and follow-up instructions (if they exist):

![Desktop Notification System](image)

If there is no **Respond** button, the **Confirmation** tab of the message that was sent was not chosen as an option.

Click the **X** button to stop any audio from playing and close the notification window.

---

**Tip**
For information on creating broadcasts that will display through the Desktop Notification System, please see your “InformaCast Installation and User Guide.”

Aside from creating broadcasts that will display in the notification window of the Desktop Notification System, you can also record audio that will be used in an InformaCast message.

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**Tip**
For further information on recording audio from the Desktop Notification System, please see your “InformaCast Installation and User Guide.”
Once you have your message set up, the notification window of the Desktop Notification System will look similar to the following:

![Notification Window](image)

The Audio Capture Request window has the following functionality:

- Click the **Start** button to begin recording from the desktop where the Desktop Notification System is installed.
- Click the **Pause** button to pause your recording.
- Click the **Done** button when you are done recording.
- Click the **Cancel** button to exit the Audio Capture Request window.

### Uninstalling the Desktop Notification System

Once you've installed the Desktop Notification System, you may need to uninstall it at a later date.

**Note**

If the Desktop Notification System is installed in Silent mode, the uninstaller will also be run in Silent mode.

Use the standard Windows process to remove the Singlewire Desktop Notification System.

**Step 1** Go to **Start** | **Settings** | **Control Panel** | **Add or Remove Programs**.

**Step 2** Select **Singlewire Desktop Notification System**.

**Step 3** Follow the prompts to remove the application.

**Step 4** Check the directory where the application was originally installed after the uninstaller has finished. You may need to remove any remaining files and/or directories manually.
Troubleshooting

Problems with installation or network configurations can affect how the Desktop Notification System works. Many times, you can correct these problems yourself with a little detective work.

Problem Your speaker reboots every few minutes, your speaker never registers with InformaCast, or your speaker clock never displays the time.

Solution SLP isn’t configured properly or, in the case of the first two speaker issues, the “InformaCastSpeaker.cfg” file is not correct or detected.

To correct the SLP problem, you can do one of three things:

• Contact your router’s manufacturer and discuss correctly configuring multicast on your network
• Remove the current installation of the Desktop Notification System and reinstall, selecting the I’ll provide a URL radio button on the Server Configuration Discovery installation window
• Modify the “Spel.properties” file on every machine that has the Desktop Notification System installed on it, replacing SLP with STATIC in the following line:

   endpoint.configuration.locator.type=SLP

To correct the “InformaCastSpeaker.cfg” file problem, your solution depends on your platform:

• For InformaCast Virtual Appliance users, the Virtual Appliance automatically detects your IP address.
• For InformaCast Windows users, ensure that the file is in the Resources folder (usually in C:\Program Files\Singlewire\DesktopNotificationSystem) and has the “.cfg” extension. If it does, open the “InformaCastSpeaker.cfg” file using a text editor like Notepad and check that the IP address specified in the file is correct and current. If the IP address is incorrect, change it, save the configuration file, and restart the Desktop Notification System. If the file has been deleted, contact Singlewire Support.
Release Notes

The following sections contain the release notes for the Desktop Notification System.

What’s New in the Desktop Notification System 2.0?

- **Message Confirmation Support.** The Singlewire Desktop Notification System now works with InformaCast’s message confirmation functionality, allowing you to confirm messages through your desktop. V2.0 works with any InformaCast version we currently support, but message confirmation functionality will only be available when the Desktop Notification System is used with InformaCast v8.1 or later.

- **New User Interface.** All of the Desktop Notification System’s windows have a new look. The user interface can still be customized just as in the previous version, and all user interface customizations from the previous version will still work in this version.

- **New Feature for Policy File.** The format of the policy file used for customizing the user interface has an additional parameter that determines what text will be displayed in the banner area of every notification window. You can use this parameter to display your name or any other text to help users identify the origin of each message. If this parameter is missing in the policy file, the default banner text (e.g. Singlewire Desktop Notification System) will display. The default banner text will always be displayed in non-notification windows regardless of the contents of the policy file (examples of non-notification windows are Event Log and About).

- **New Windows Installation Process.** The Singlewire Desktop Notification System for the Microsoft Windows platform is now installed using an MSI file, which can be used to run on a single machine, or to mass deploy the application across many Windows machines using tools such as Microsoft Group Policy or Microsoft SCCM.

What’s New in the Desktop Notification System 1.1.1

Small documentation changes have been made to bring the Desktop Notification System’s documentation in line with new formatting standards.

What’s New in the Desktop Notification System 1.1

The Desktop Notification System’s graphical user interface has been updated to reflect the change from Berbee to Singlewire, and previously, when invalid configuration information was entered into the Spel.properties file, the application would not close properly. This has been fixed.

What’s New in the Desktop Notification System 1.0.1

The documentation for the Desktop Notification System has been improved to include more in-depth instructions concerning the Desktop Notification System on the Mac and Linux platforms.
Acknowledgments

Without the following products and software, the Desktop Notification System wouldn't be the revolutionary application that it is.

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Apache Http Components HttpClient v4.0 beta 2

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JDOM v1.0 beta 8

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JSpeex v0.9.7

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