

# - Datasource Guide Supplement -

## **BROADCAST AND WATCH FUNCTIONS**

FOR RISKMAN VERSION 19.02

Last reviewed January 2020

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## PREFACE

This Supplementary User Guide is intended to provide additional information related to the InfoCentre Datasource Builder.

This document aims to provide examples of the various types of Broadcast and Watch Datasources that can be configured in RiskMan in order to provide filtered data in your Widget Groups.

When reviewing the examples of Datasources in this document, please keep the following points in mind:

- It is intended that this document is used in conjunction with the InfoCentre End User Guide & Datasource Builder Guide. This document provides examples of alert setup and configuration, whereas the Alerts Management Guide explains the actual functionality in-depth.
- The Datasource examples provided in this document were created in various system configurations. Every RiskMan client configures RiskMan differently, so while some of the fields, registers, or functionality shown in the examples may not match your own system, what is more important is understanding the concepts behind the functionality. You can then transplant the examples into your own system, being sure to make adjustments to fit your own datasets, system functionality, etc.
- Most of the examples in this document are centred on the Incident Register. This is because the Incident Register is far and away the most commonly used register by RiskMan clients. Again, the concepts that are used can be applied to basically any other register in RiskMan.
- For each example Datasource provided, we quite deliberately do not exhaustively show every single setting or piece of configuration. Doing so would likely make it more difficult to read, and many settings are consistent or are up to you to decide.
- RiskMan International wants to ensure when you are setting up InfoCentre Datasources that you “measure twice and cut once”. With that in mind, please do not hesitate to contact RiskMan Support if you have any questions about setting up an alert, or if you would like us to double-check the setup of an alert you have created before you switch it on.

Advised prerequisite knowledge:

**InfoCentre End User Guide**

**Datasource Builder Guide**

## INTRODUCTION

The InfoCentre Broadcast / Watch functions allows InfoCentre Widgets to send and receive data to each other.

The effect of this is that a user can click on an element in one Widget and the data in a different Widget will change, being filtered by the user's selection.

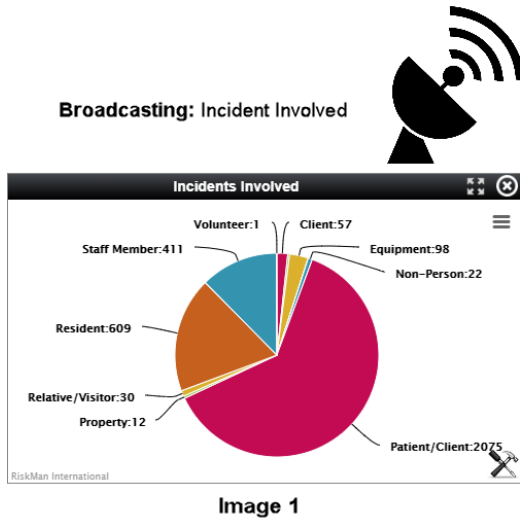
	<p>The Gauge Widget is displaying the total number of incidents (28) recorded and is watching Location (Site).</p> <p>The Bar chart is displaying Incidents by facility and is broadcasting Location (Site).</p>
	<p>If you click on the <b>Cabell Huntington</b> bar, which has 5 incidents, the Facility Widget will Broadcast the Cabell Huntington Location (Site) data as a filter to the Gauge that is watching.</p>
	<p>The Gauge will receive the Broadcast data and change to display only the number of incidents at the Cabell Huntington Location, being five.</p>
	<p>If you view the <b>Watch</b> tab under the Widgets Properties, you can see the Watch and Broadcast properties of each Widget.</p> <p>Note that the field being Broadcast is called <b>@@Site</b>, this is the database name for the field.</p>
	<p>The <b>System Broadcast Monitor (SBM)</b> is a default Datasource that is available to you for checking and resetting Broadcast data.</p> <ol style="list-style-type: none"> <li>1 The Widget is Broadcasting <b>Site</b></li> <li>2 The SBM shows the Key and Value</li> <li>3 Click <b>Clear All</b> to reset Widget data</li> </ol>

## BROADCAST / WATCH FUNCTIONS

### Basics

The Widget pictured (Image 1) is set to broadcast **Incident Involved** data to *any* other Widget that is watching for that information.

The Widget pictured (Image 2) is set to watch for **Incident Involved** data being broadcast by *any* other Widget.



#### Broadcast Function

A Widget set to **Broadcast** is sending out data to *all* other Widgets in the same InfoCentre group. However, only the Widgets set to **Watch** the data that is being **Broadcast** will receive that data and display the results.

A Widget set to **Broadcast** will send its broadcast data when a user clicks on an element in the chart or graph that relates to the data. Above the pie chart will broadcast when one of the active Group headings or segments are selected.

#### Watch Function

When a Widget is set to **Watch** for data, it will watch for data coming from *any* Widget that is **Broadcasting** the data that it is watching for. A Widget that is watching will only receive data from a Widget that is Broadcasting the *same* data that is being watched.

Once a Widget that is watching for data has received data, it will change its display to show the original data filtered by the data that was received.

#### Example (using the images above)

The Widget (Image 1) is displaying the total number of incidents by **Incident Involved**. This Widget is broadcasting the **Incident Involved** data. When any of the Incident Involved headings are clicked by a user the Widget will broadcast the data matching that selection.

##### Action:

The user clicks on the heading or pie segment **Patient/Client**. The pie chart will animate to show that segment moving away from the pie. The displayed data will not change. The **Patient/Client** data will be broadcast.

The Widget (Image 2) is displaying the total number of incidents (3326). This Widget is watching for **Incident Involved** data. When the Widget receives **Incident Involved** data from a broadcasting Widget it filters the total number of incidents by the **Incident Involved** data that was selected in the Broadcasting Widget.

##### Effect:

The data displayed by the gauge is filtered to match the data that was broadcast by the user's selection of **Patient/Client** in the pie chart. The gauge display will change from 3326 to **2075**

## Uses of Broadcast / Watch

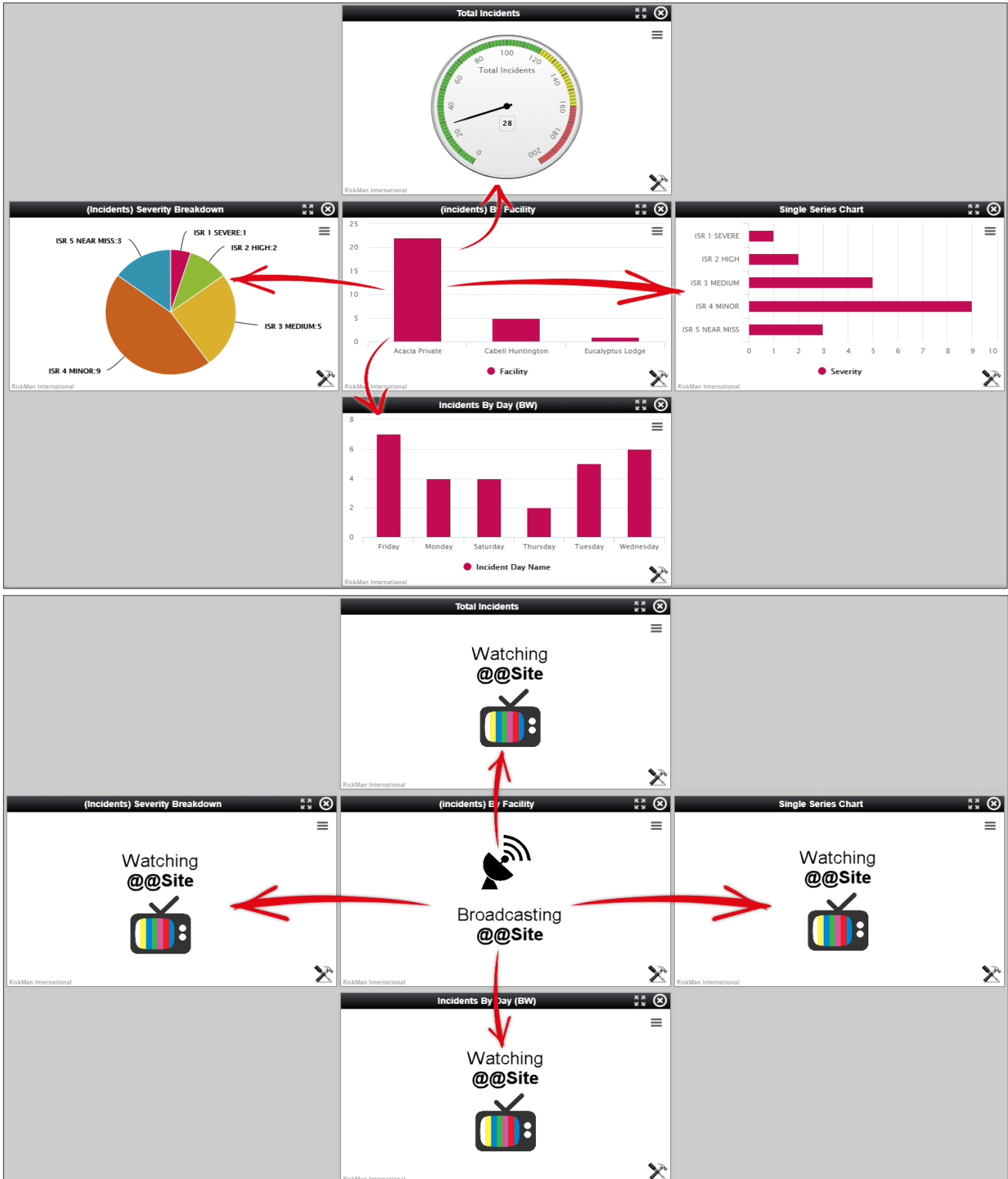
The Broadcast / Watch functions can be used to filter, clarify, focus, and visualise the data in your Riskman Registers.

A simple example of how Broadcast / Watch can focus in on data is pictured below. The **Total Incidents Widget** is **1** watching @@Site (Facility) and you can see this in the Widgets Properties under the Watch tab. The **(Incidents) By Facility Widget** is set to **2** Broadcast @@Site (Facility).

When the **3** Graph bar titled **Acacia Private** is clicked the **(Incidents) By Facility Widget** broadcasts the **Acacia Private** selection and the **Total Incidents Widget** picks up the **Acacia Private** selection and **4** changes its display to show only the count of incidents at the Acacia Private facility.

In the below example the Widget located in the centre of the group is Broadcasting @@Site (Facility) and the surrounding Widgets are Watching @@Site (Facility).

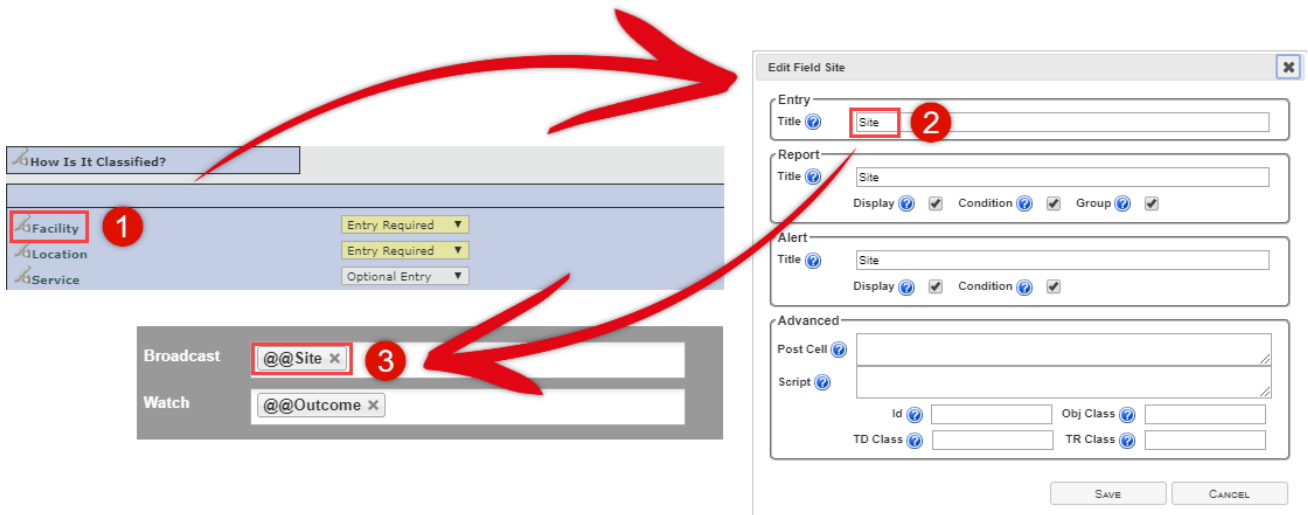
When the **Acacia Private** bar is selected in the centre Widget the surrounding Widgets change to display only data based on the **Acacia Private** filter that has been applied.



The example above shows one central Widget changing the data displayed in the four surrounding Widgets. The Watching Widgets will display only data for the Location that was selected in the Broadcasting Widget.

## Form Headings vs Database Field Names

You may have noticed that some of the fields in the Incident Form might have different names from the ones displayed in the Broadcast/Watch fields. When assigning data fields to Broadcast or Watch it is helpful to be familiar with the database field naming conventions in your system.



As shown above you can see that the field in the Template form with the heading **1 Facility** has the database ID name **2 Site**. This is the name that the InfoCentre Datasource Builder will see and use for the Broadcast/Watch conditions **3 @@Site**.



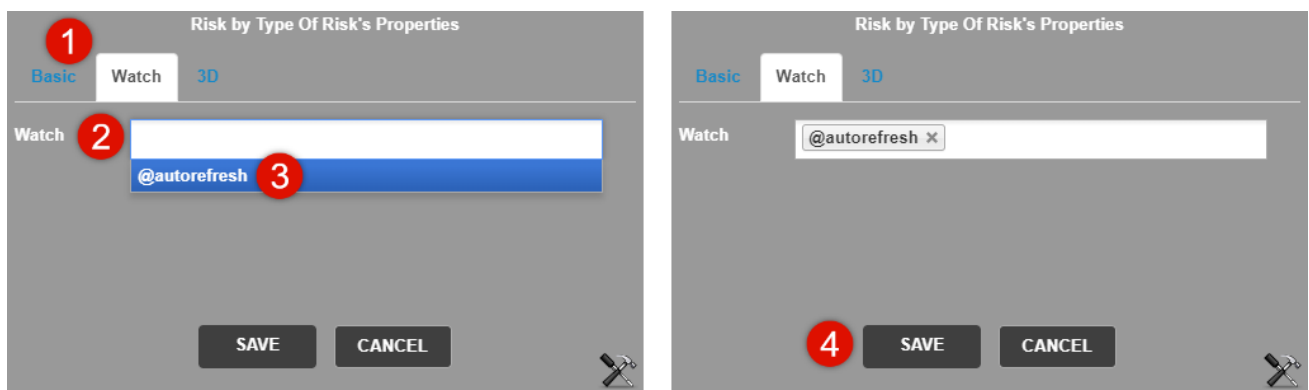
## WATCH

The Watch function allows you to set a condition where the Widget will receive any matching Broadcast condition and change its displayed data based on the received Broadcast data. You can assign multiple Watch conditions to a Widgets properties.

### Autorefresh

Autorefresh is a default Watch condition that is automatically loaded with most Widgets. Autorefresh automatically refreshes the Widgets Datasource every **five** minutes.

This function can be useful for Widgets that you want to update regularly and display new record data as it is added into the system. You can select the **@autorefresh** condition by displaying a Widgets Properties, **1** clicking on the Watch tab, then **2** click on the **Watch** field, select **3** **@autorefresh** from the dropdown list, and **4** save the changes. Once you have selected **@autorefresh** it will appear in the Watch field



The Widget will display a **wait spinner** every time it refreshes the data.

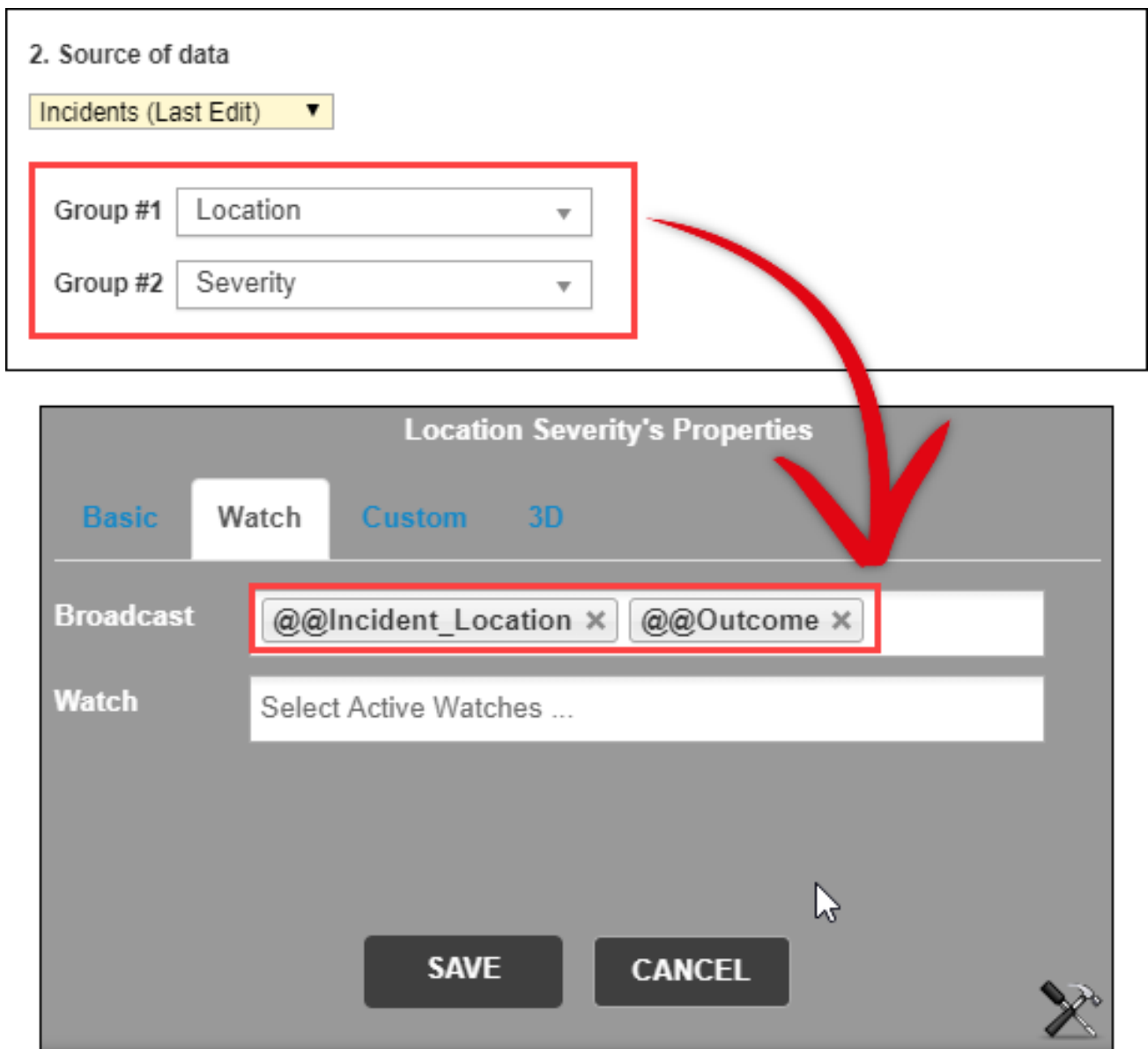


The Autorefresh Watch condition displays as **@autorefresh**.

## BROADCAST

The Broadcast function allows you to set a condition where a Widget is sending out data to any other Widget that has a matching Watch condition. A Watching Widget will change its displayed data based on the received Broadcast data. A Widgets Broadcast properties are based on the Group or Groups that you have selected for **Step 2** in the Datasource builder.

Below, the Groups that were chosen for the chart have been automatically added as the Widgets Broadcast conditions.



## BUILDING BROADCAST / WATCH WIDGET SETS

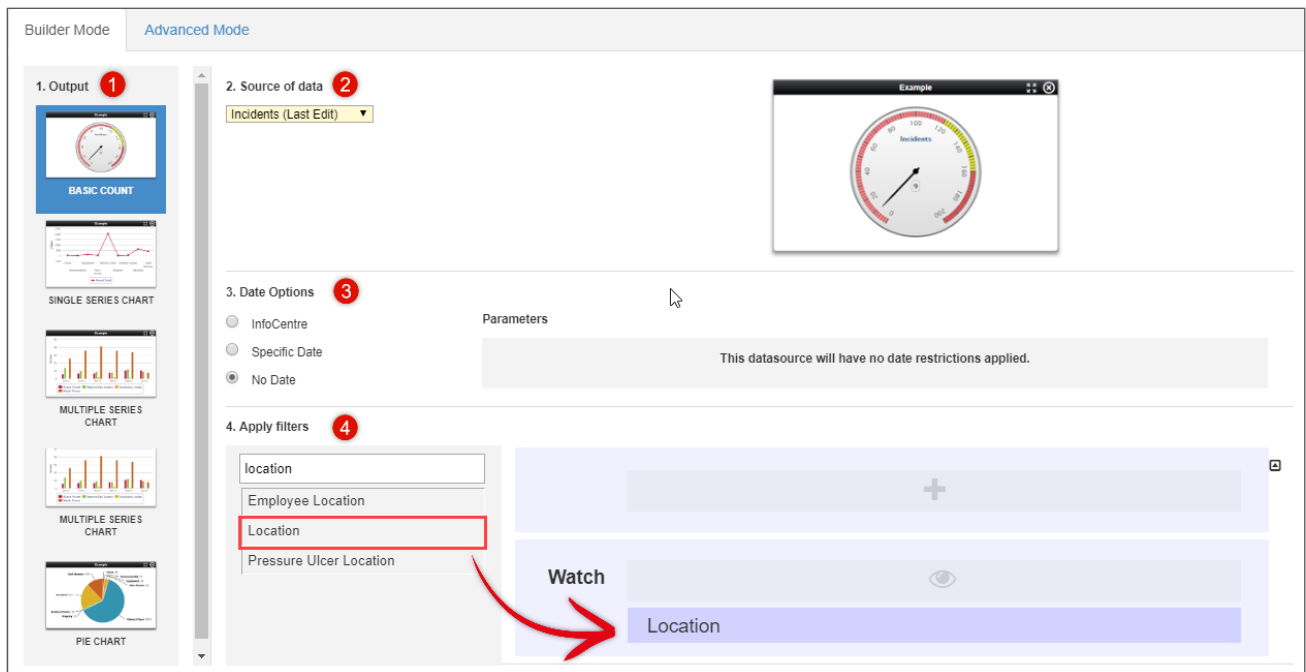
To create a pair of Widgets that use the **Broadcast** and **Watch** conditions do the following:

First, we need to build a Widget to Watch for a specific Value. Then we need to create a Widget that is Broadcasting the Value that the first Widget is Watching for.

### Build a Watch Widget

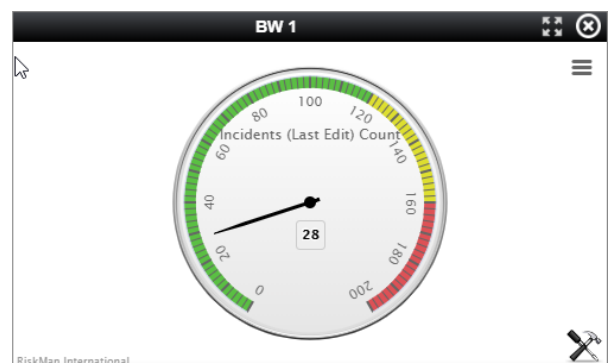
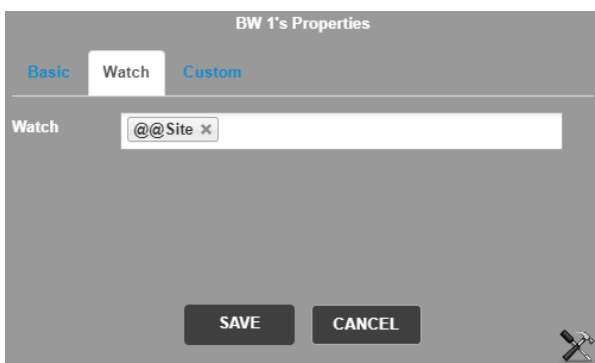
- 1 Select the Output (chart type) that you want to use as your Watch Widget
- 2 Choose the source of data, Incidents (Last Edit) for example
- 3 Set the Date Options
- 4 Type **Facility** in the Apply Filters search field and drag the Location field onto the Watch box

Click the **Build It!** button and add the Widget to a Widget Group



Now you can see the Widget in your Group, check the Watch Properties of your Widget by clicking on the **Tool** icon and note the name of the **Watch** Condition.

Watch = **@@Site** (This is the database ID name of the **Facility** field)



## Build a Broadcast Widget

- 1 Select the Output (chart type) that you want to use as your Broadcast Widget
- 2 Choose the source of data, Incidents (Last Edit) for this example
- 3 Select **Facility** for the Group
- 4 Set the Date Options

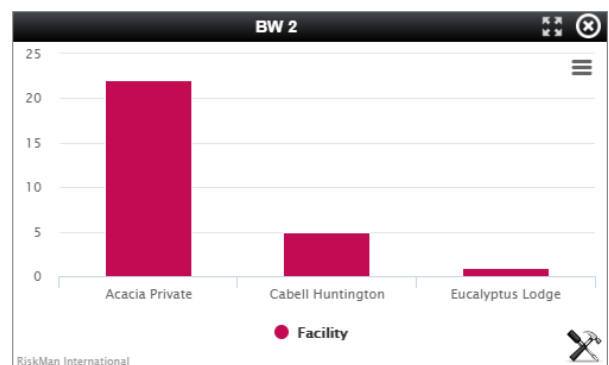
Click the **Build It!** Button and add the Widget to a Widget Group

The screenshot shows the 'Advanced Mode' of the widget builder. On the left, under '1. Output', four chart types are listed: 'BASIC COUNT', 'SINGLE SERIES CHART', 'MULTIPLE SERIES CHART', and 'PIE CHART'. The 'SINGLE SERIES CHART' is selected. In the center, '2. Source of data' is set to 'Incidents (Last Edit)'. Below it, 'Group #1' is set to 'Facility'. A red box highlights the 'Facility' dropdown, with a red arrow pointing to it and the text 'This is the Broadcast condition'. To the right, a preview window shows a line chart with a peak. Below that, '3. Date Options' has 'No Date' selected. '4. Apply filters' shows a list of filters with 'Watch' selected.

Now you can see the Widget in your Group check the Broadcast Properties of your Widget by clicking on the Tool icon and note the name of the Broadcast Condition.

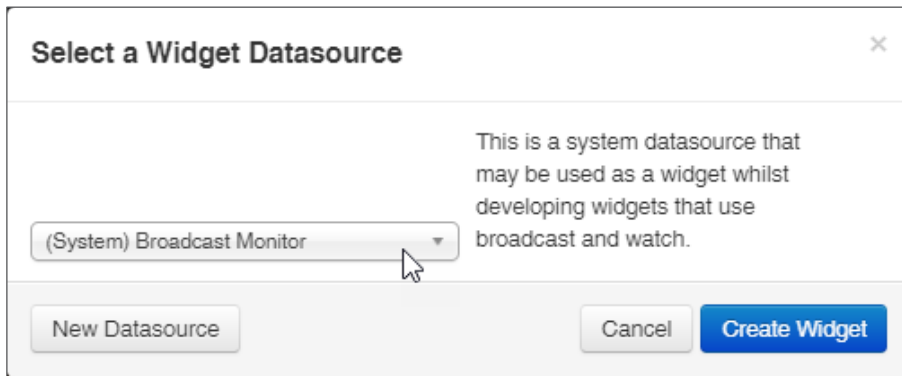
Broadcast = **@@Site** (This is the database ID name of the **Facility** field)

The screenshot shows the 'BW 2's Properties' dialog box. It has tabs for 'Basic', 'Watch', and '3D'. The 'Watch' tab is active. The 'Broadcast' field contains '@@Site'. The 'Watch' field contains 'Select Active Watches ...'. There are 'SAVE' and 'CANCEL' buttons at the bottom.



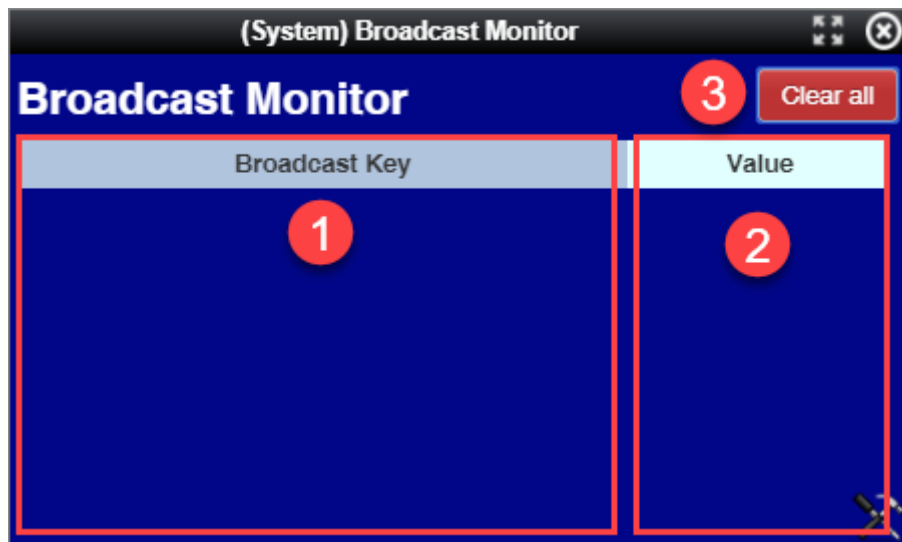
## The (System) Broadcast Monitor

The Broadcast Monitor is a Widget that monitors all broadcast data inside a specific Widget Group.



The Broadcast Monitor can be loaded into a Group from the Select a Widget Datasource menu. You can use the Monitor to test and clear Widgets with Watch conditions.

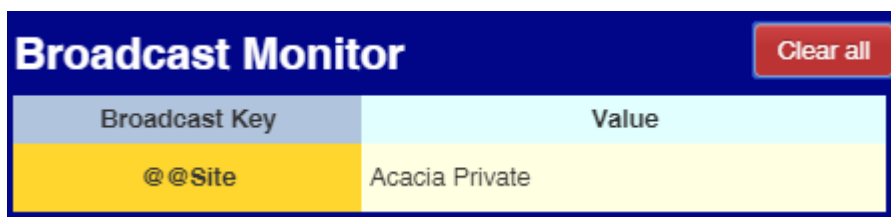
The Broadcast Monitor is a standard Widget and is included in the Datasource selector by default.



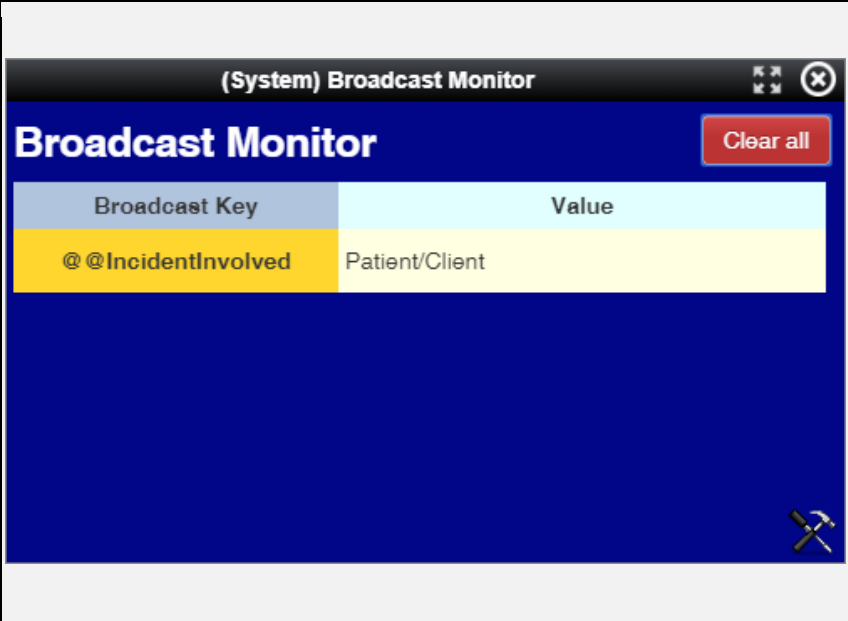
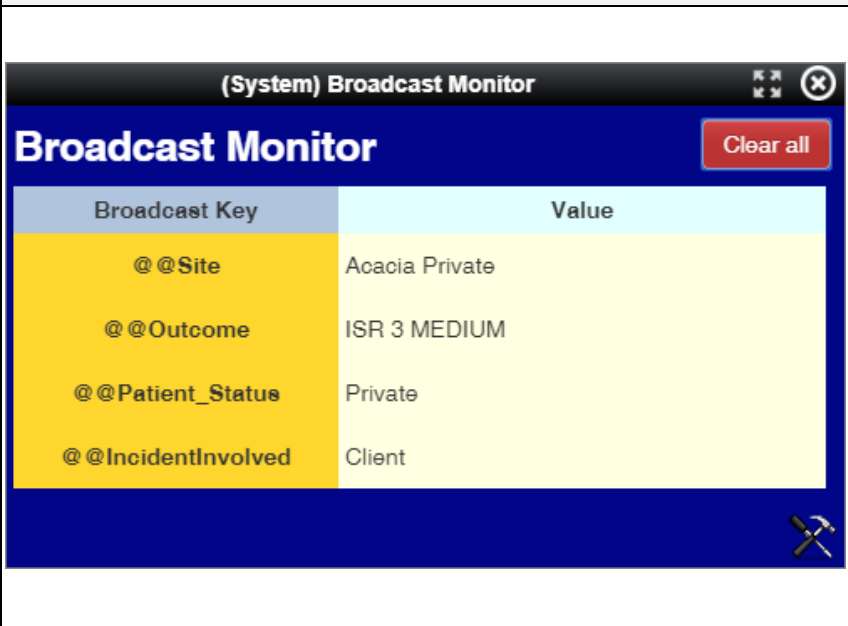
There are two columns of data displayed.

- ❶ The **Broadcast Key** displays the Field Group that the Widget is broadcasting
- ❷ The **Value** displays the Group data that is being broadcast
- ❸ The **Clear all** button will clear the Broadcast Monitor data and reset all the Widgets that are broadcasting or that have received watched data

The example below shows that there is a Widget with the Group **Facility (@@Site)** that is broadcasting the Value **Acacia Private**



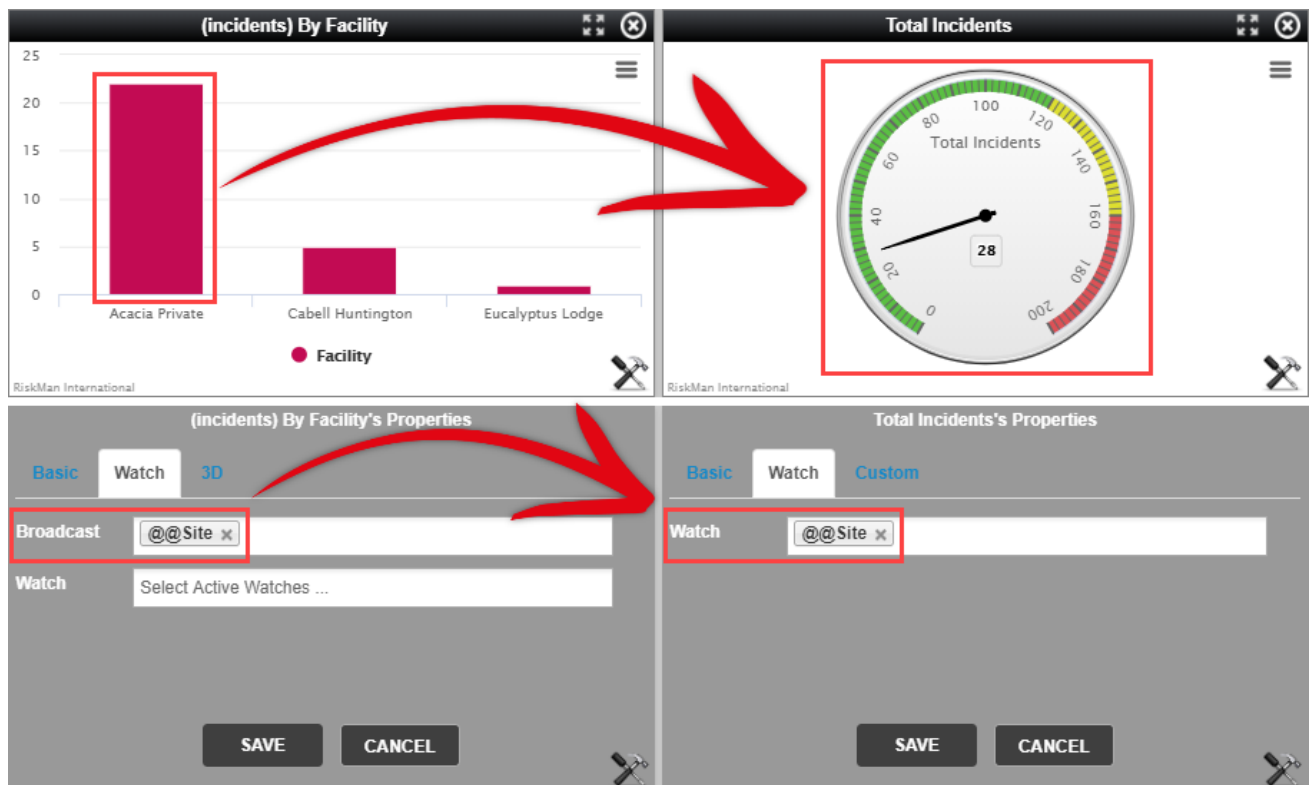
When you select a filter Value by clicking on an active element in a Widget, the filter will remain active until it has been replaced by another value that you click on or the **Clear all** button has been clicked to clear all Broadcasts.

 <p>(System) Broadcast Monitor</p> <p><b>Broadcast Monitor</b> <span>Clear all</span></p> <table border="1"> <thead> <tr> <th>Broadcast Key</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>@@IncidentInvolved</td> <td>Patient/Client</td> </tr> </tbody> </table>	Broadcast Key	Value	@@IncidentInvolved	Patient/Client	<p>The Broadcast Monitor is displaying a Value of <b>Patient/Client</b>.</p> <p>This informs you that all Widgets Watching <b>@@IncidentInvolved</b> will display only the values for <b>Patient/Client</b>.</p> <p>For example, a Widget displaying Severity and Watching for <b>@@IncidentInvolved</b> would only display the Severity of Patient/Client records.</p> <p>This filter will be active until it has either been changed by selecting another IncidentInvolved Value or the <b>Clear all</b> button is clicked.</p>						
Broadcast Key	Value										
@@IncidentInvolved	Patient/Client										
 <p>(System) Broadcast Monitor</p> <p><b>Broadcast Monitor</b> <span>Clear all</span></p> <table border="1"> <thead> <tr> <th>Broadcast Key</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>@@Site</td> <td>Acacia Private</td> </tr> <tr> <td>@@Outcome</td> <td>ISR 3 MEDIUM</td> </tr> <tr> <td>@@Patient_Status</td> <td>Private</td> </tr> <tr> <td>@@IncidentInvolved</td> <td>Client</td> </tr> </tbody> </table>	Broadcast Key	Value	@@Site	Acacia Private	@@Outcome	ISR 3 MEDIUM	@@Patient_Status	Private	@@IncidentInvolved	Client	<p>The Broadcast Monitor is displaying multiple Values of: <b>Site, Outcome, Patient_Status, IncidentInvolved</b>.</p> <p>This informs you that all Widgets Watching any of these Broadcast Keys will display the values for the Key that it is Watching.</p>
Broadcast Key	Value										
@@Site	Acacia Private										
@@Outcome	ISR 3 MEDIUM										
@@Patient_Status	Private										
@@IncidentInvolved	Client										

## Test the Broadcast/Watch Widgets

You will now have two Widgets on your Group stage. One Single Series Chart and one Gauge.

Have a look at the properties of these two Widgets as they sit side by side in the Group. Notice how the chart has a **Broadcast** condition and the Gauge has a **Watch** condition. When you click on a Bar in the Single Series Chart, the Widget will Broadcast the Acacia Private data. The Gauge will pick up the Acacia Private Broadcast and change its display to reflect only Acacia Private filtered data.



- 1 Click a Bar in the chart that you created
- 2 The Gauge will pick up the Broadcast data and update its display
- 3 The Gauge will display a new total based on the Acacia Private data in the system



This is an example of a simple Broadcast and Watch Widget group.

## Advanced Broadcast/Watch Widgets

You can have two Widgets Broadcast and Watch each other. In the example below you have a **Pie Chart** with **Severity** as the group and a single series **Bar Chart** with **Facility** as the group.

You can refer to the **Build A Watch Widget** section on **Page 9** for the Datasource Builder interface.

- 1 Create the Output Pie Chart and the Bar Chart below
- 2 Give each Widget Datasource the correct **Watch** conditions (Builder mode settings below)

Pie Chart		Bar Chart	
Step 1) Output:	<b>Pie Chart</b>	Step 1) Output:	<b>Single Series Chart</b>
Step 2) Source of Data:	<b>Incidents (Last Edit)</b>	Step 2) Source of Data:	<b>Incidents (Last Edit)</b>
Group #1:	<b>Severity (@@Outcome)</b>	Group #1:	<b>Facility (@@Site)</b>
Step 3) Date Options:	<b>No Date</b>	Step 3) Date Options:	<b>No Date</b>
Step 4) Apply Filters:	<b>None</b>	Step 4) Apply Filters:	<b>None</b>
Watch:	<b>Facility (@@Site)</b>	Watch:	<b>Severity (@@Outcome)</b>

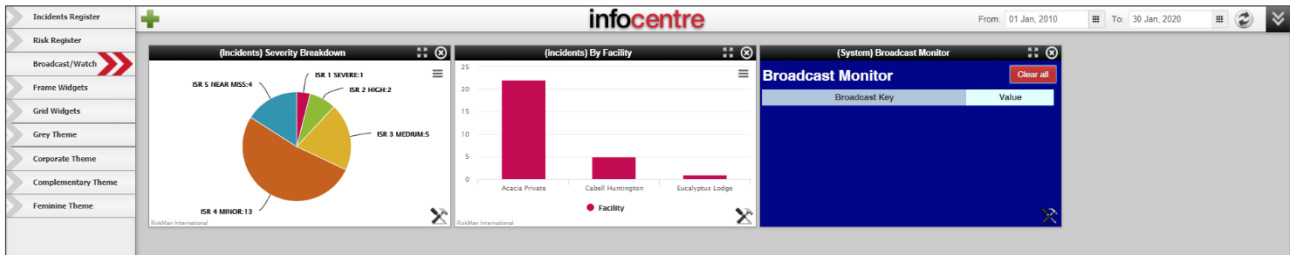
- 3 Once you have built the Widgets, check their Broadcast/Watch properties
- 4 Test the Widgets to confirm that the Broadcast/Watch functions are working

The image displays four screenshots from the RiskMan interface. The top-left shows a pie chart titled '(Incidents) Severity Breakdown' with segments for: ISR 5 NEAR MISS:3, ISR 1 SEVERE:1, ISR 2 HIGH:2, ISR 3 MEDIUM:5, and ISR 4 MINOR:8. The top-right shows a horizontal bar chart titled 'Advanced WB' with bars for 'Acacia Private' (value ~22), 'Cabell Huntington' (value ~5), and 'Eucalyptus Lodge' (value ~1). The bottom-left shows the 'Properties' for the pie chart, with 'Broadcast' set to '@@Outcome' and 'Watch' set to '@@Site'. The bottom-right shows the 'Properties' for the bar chart, with 'Broadcast' set to '@@Site' and 'Watch' set to '@@Outcome'. Both property windows have 'SAVE' and 'CANCEL' buttons.



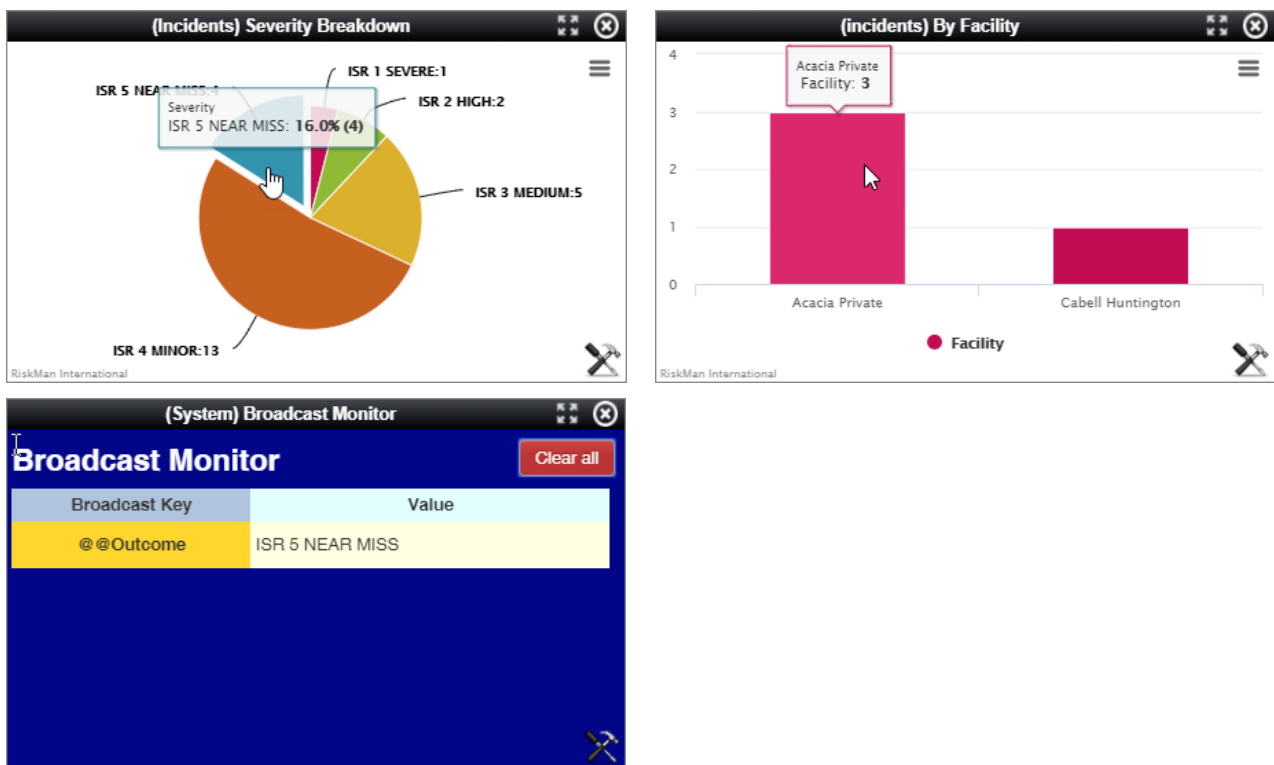
## Testing the Advanced Broadcast/Watch Conditions

In your Widget Group you should now have the two widgets that you built and the Broadcast Monitor placed within your group, as in the image below.



Now let's test them.

### Advanced Conditions Test 1



Click on one of the **Pie Chart** segments.

The Bar chart will refresh and display the total number of **ISR 5 Severity** incidents at all Facilities. In this example there are four. Three at Acacia Private and one at Cabell Huntington.

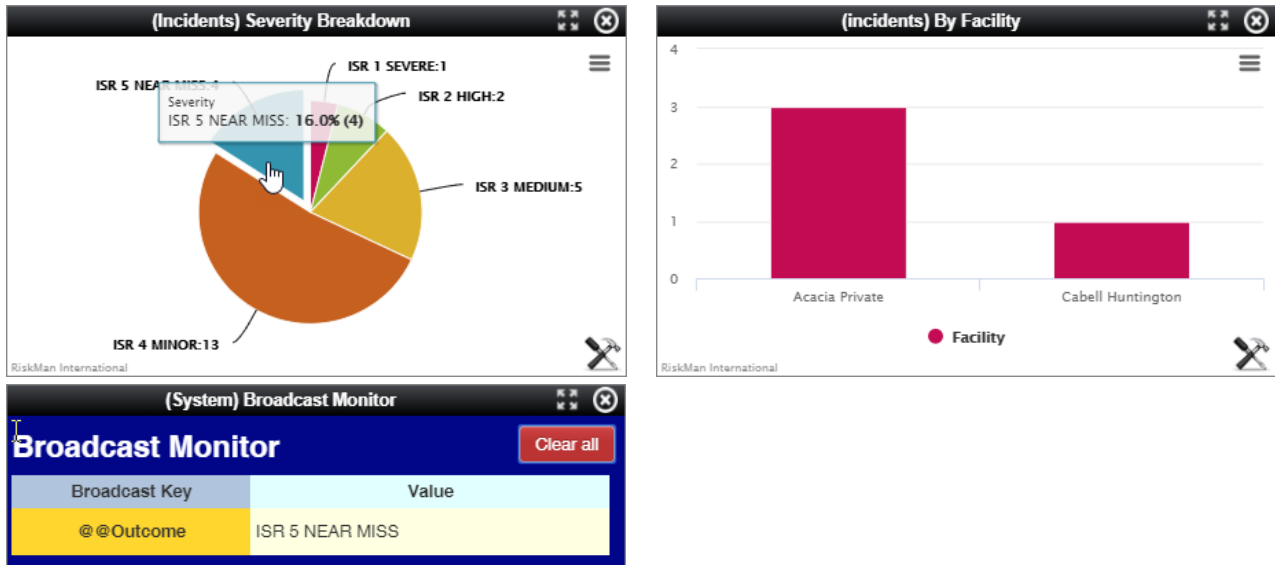
You can see that the Broadcast Monitor is displaying the details of all broadcasts in the Group. In this example **ISR 5 NEAR MISS** is being broadcast.

To reset the Widgets and clear the Broadcast data click on the **Clear all** button.

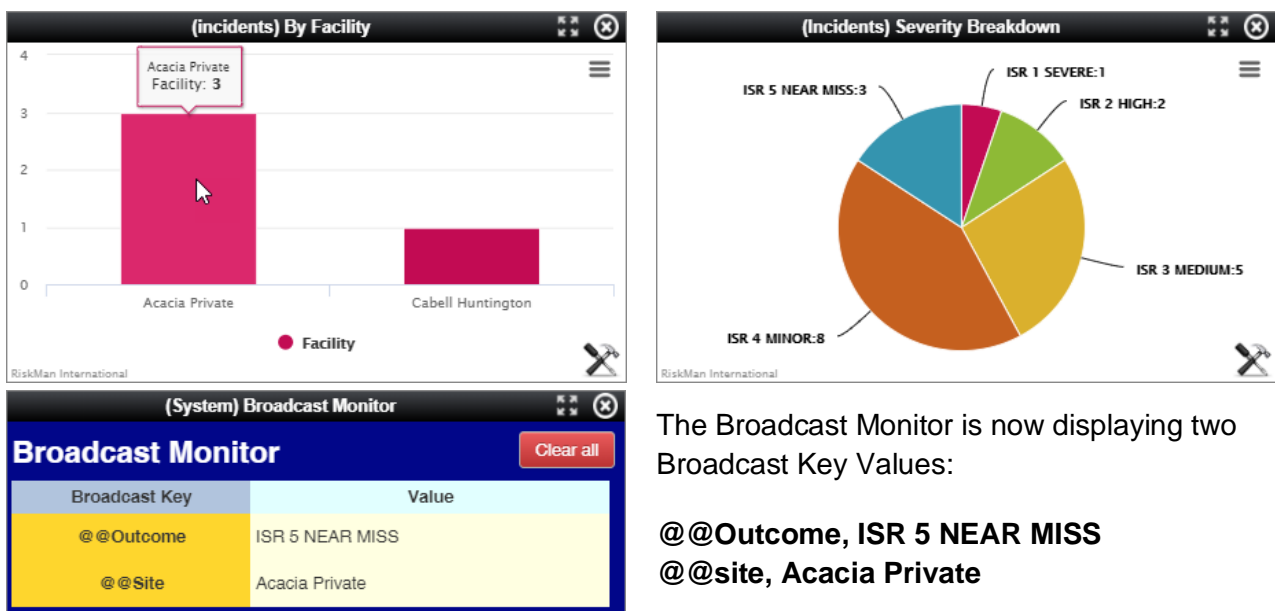
### Advanced Conditions Test 2

Now let's test how you can filter the data in the Broadcast and Watch Widgets.

**Step 1:** If we click on the ISR 5 NEAR MISS Pie Chart segment the Bar chart changes to display the two Facilities that have ISR 5 NEAR MISS incidents.



**Step 2:** Now if we click on the **Acacia Private** bar in the Facility Chart the Pie Chart will change to display ALL incidents at Acacia Private by their ISR Severity. Notice that the ISR 5 NEAR MISS now says three.



The Broadcast Monitor is now displaying two Broadcast Key Values:

- @@Outcome, ISR 5 NEAR MISS**
- @@site, Acacia Private**

Look at the Broadcast Monitor; The first Value (ISR 5 NEAR MISS) is being displayed by the Bar Chart. Only Acacia Private and Cabell Huntington have ISR 5 incidents to display.

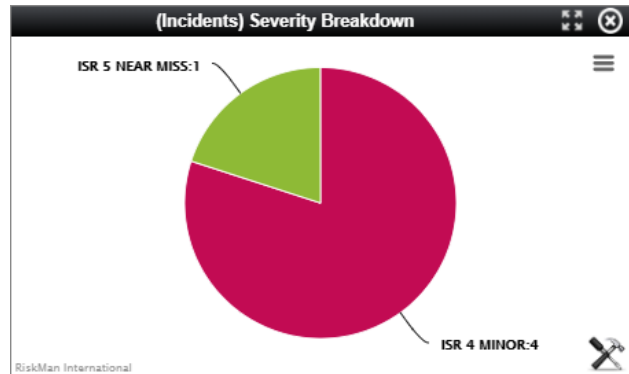
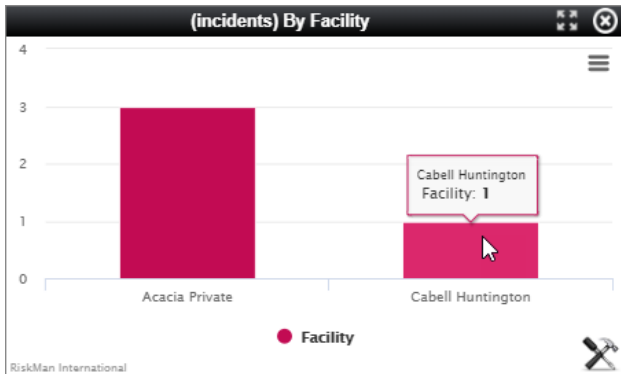
The second Value (Acacia Private) is being displayed by the Pie Chart.

When we clicked on the Pie segment we set the first Value. Then when we clicked on the Bar we set the second Value.

Both values are being broadcast. Any Widget watching either of those Values will change accordingly and display the filtered Value.

Now let's test how you can further filter the data in the Broadcast and Watch set of Widgets.

**Step 3:** If we click on a different Bar Chart segment, the Pie chart will change again to display the Severity data for the Facility that we have selected. By Clicking on the Cabell Huntington bar we can change the Severity Pie chart to display ISR data for Cabell Huntington only.

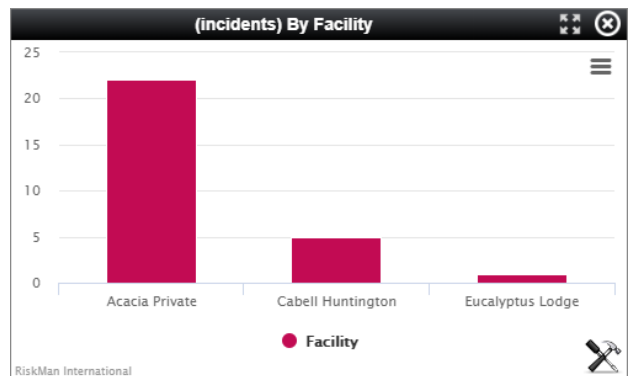
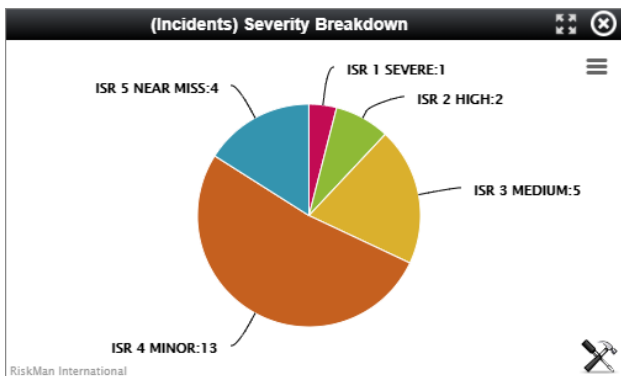


Broadcast Key	Value
@@Outcome	ISR 5 NEAR MISS
@@Site	Cabell Huntington

The Broadcast Monitor has changed its Facility Broadcast Key Value to reflect the choice that we just made:

**@@Outcome, ISR 5 NEAR MISS**  
**@@site, Cabell Huntington**

**Step 4:** Now if we click on the **Clear all** button the Broadcast Monitor will reset and the Widgets will return to their default displays.



Broadcast Key	Value
---------------	-------

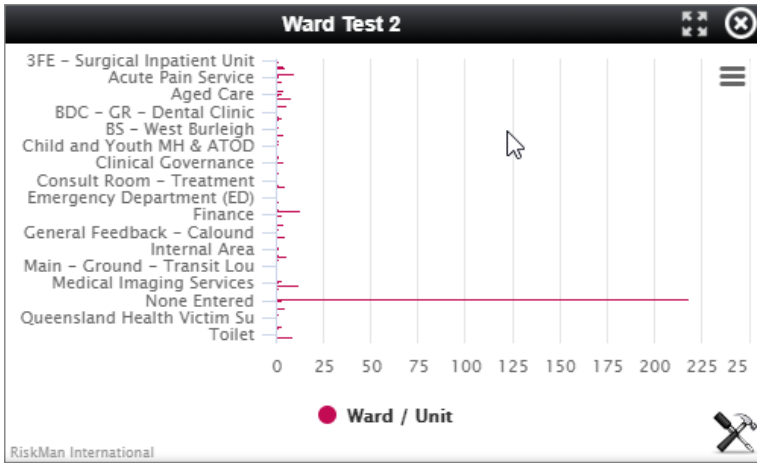
The Broadcast Monitor has cleared all broadcast data and the Widgets are reset to default display.

## USING FILTERS TO FOCUS DATASOURCE RESULTS

Some Datasource fields may contain unneeded categories or too many results to be useful. This can cause the Widgets to display data that:

- A. You don't want to see
- B. That causes the data to be confused or difficult to view

**Example:** In the example below, the Group **Ward / Unit** resulted in so many values that the Widget is not able to display all the data. In cases like this you may want to filter the values.



In the Datasource Builder you can filter your values in the Apply Filters section.

In this example the Ward / Unit value has been filtered to display only five of the large number of wards in the **Ward / Unit** list.

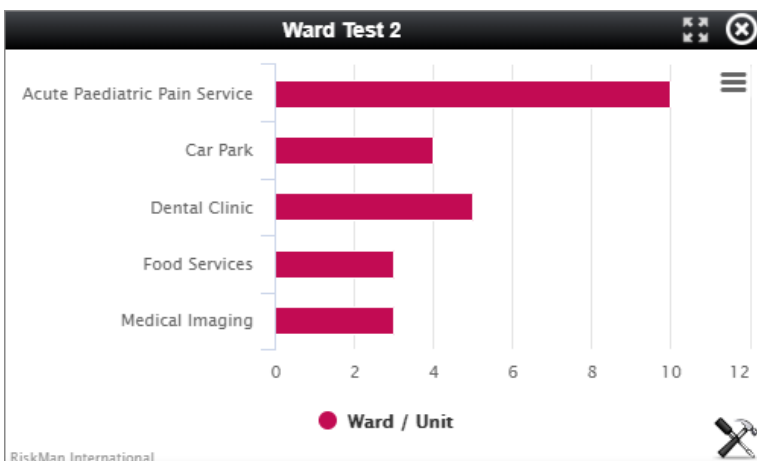
4. Apply filters

**Where** Ward / Unit is one of 5 selected

+

**Watch** [icon]

The result is a smaller, more concise list.



## BROADCAST / WATCH EXAMPLES

### Example 1

Three Widgets. The Gauge is Watching the Values from the Bar Chart and the Pie Chart. The Bar Chart is Watching the Pie Chart Values. The Pie Chart is Watching the Bar Chart Values.



Widget A -	
Broadcast: (nil) Watch: <b>Facility</b> (@@Site), <b>Severity</b> (@@Outcome)	Watch: @@Outcome x @@Site x
Widget B -	
Broadcast: <b>Facility</b> (@@Site) Watch: <b>Severity</b> (@@Outcome)	Broadcast: @@Site x Watch: @@Outcome x
Widget C -	
Broadcast: <b>Severity</b> (@@Outcome) Watch: <b>Facility</b> (@@Site)	Broadcast: @@Outcome x Watch: @@Site x

## Example 2

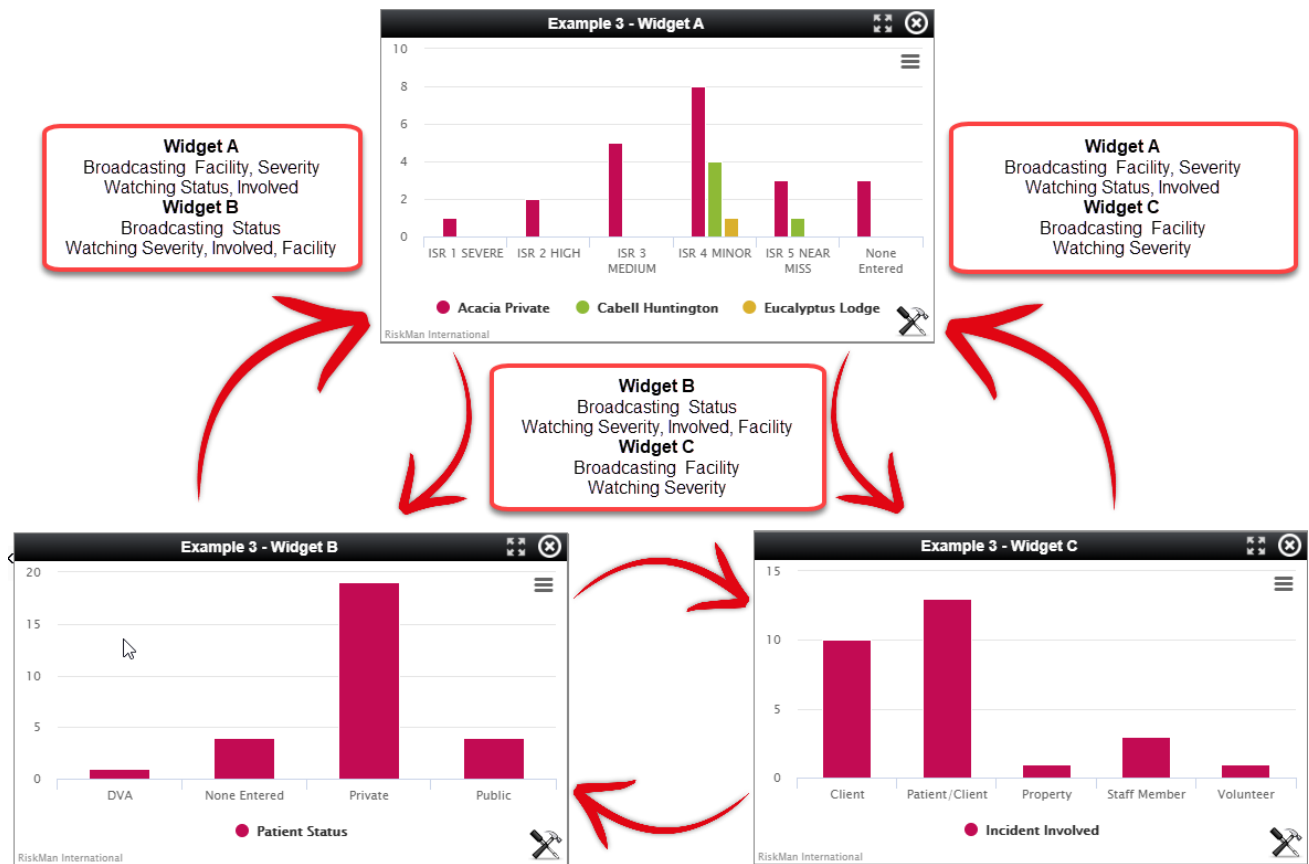
Three Widgets. The Gauge is Watching the Values from the Bar Chart and the Pie Chart. The Bar Chart is Watching the Pie Chart Values. The Pie Chart is Watching the Bar Chart Values.



Widget A -	
Broadcast: <b>Incident Involved</b> (@@IncidentInvolved) Watch: <b>Facility</b> (@@Site), <b>Severity</b> (@@Outcome)	Broadcast: @@IncidentInvolved x Watch: @@Outcome x @@Site x
Widget B -	
Broadcast: <b>Severity</b> (@@Outcome) Watch: <b>Facility</b> (@@Site), <b>Incident Involved</b>	Broadcast: @@Outcome x Watch: @@Site x @@IncidentInvolved x
Widget C -	
Broadcast: <b>Facility</b> (@@Site) Watch: ) <b>Incident Involved</b> , <b>Facility</b> (@@Site)	Broadcast: @@Site x Watch: @@IncidentInvolved x @@Outcome x

### Example 3

Three Widgets. The Multiple Series Chart is Watching the Values from the two Single Series Bar Charts. The Bar Charts are Watching the Multiple Series Chart Values.



Widget A -	
Broadcast: <b>Facility, Severity</b> Watch: <b>Incident Involved, Patient Status</b>	Broadcast: @@Site x @@Outcome x Watch: @@IncidentInvolved x @@Patient_Status x
Widget B -	
Broadcast: <b>Patient Status</b> Watch: <b>Severity, Incident Involved, Facility</b>	Broadcast: @@Patient_Status x Watch: @@Outcome x @@IncidentInvolved x @@Site x
Widget C -	
Broadcast: <b>Incident Involved</b> Watch: <b>Facility, Severity, Patient Status</b>	Broadcast: @@IncidentInvolved x Watch: @@Site x @@Outcome x @@Patient_Status x

## Example 4

Three Widgets. The Gauge is Watching the Values from the Bar Chart and the Pie Chart. The Bar Chart is Watching the Pie Chart Values. The Pie Chart is Watching the Bar Chart Values.



Widget A -	
Broadcast: (nil) Watch: <b>Facility, Incident Involved, Severity</b>	Watch: @@Site x @@IncidentInvolved x @@Outcome x
Widget B -	
Broadcast: <b>Severity</b> Watch: <b>Incident Involved, Facility</b>	Broadcast: @@Outcome x Watch: @@IncidentInvolved x @@Site x
Widget C -	
Broadcast: <b>Facility</b> Watch: <b>Incident Involved, Severity</b>	Broadcast: @@Site x Watch: @@IncidentInvolved x @@Outcome x
Widget D -	
Broadcast: <b>Incident Involved</b> Watch: (nil)	Broadcast: @@IncidentInvolved x Watch: Select Active Watches ...