



Chameleon Information Management Services Limited

INFOFLEX v5

WRITE BACK ACTIONS

USER GUIDE

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Document control

Document name	Write Back Actions User Guide
Confidentiality	Customer
Owner	Jenny Wattis
Version	1.3
InfoFlex version	5.70.0100
Last revised by	Jenny Wattis
Last revised date	Nov 2017
Status	Final

Document history

Date	Doc version	Ifx version	Editor	Change
27/7/2009	1		JW	New document taken from release notes 5.21.0300
27/7/2009	1.1		JW	Addition of performance considerations section
Aug 2012	1.2	5.20.0200	JW	Updates for 5.50.0200 Items tab mapped items in blue / show mapped items only option.
Nov 2017	1.3	5.70.0100	JW	Updates for 5.70.0100 2.3 new option for performing actions on events created by the write back.

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1 ABOUT WRITE BACK ACTIONS

Write back actions allow data to be written back to data items in other events. The action can occur when an event or document is saved.

1.1 Terminology

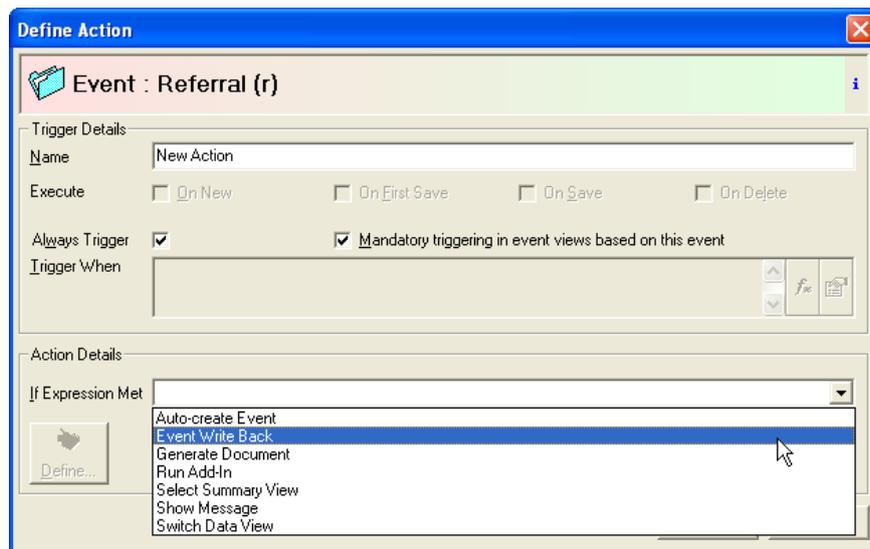
The action event is the source of the data being written back. When the action event is saved then this causes the write-back action to happen (i.e. the action is defined on the action event). If the action is set on a document rather than an event, the action occurs when the document is saved, but the source of the data being written back is the parent event of the document.

The target event is the event that data will be written back to.

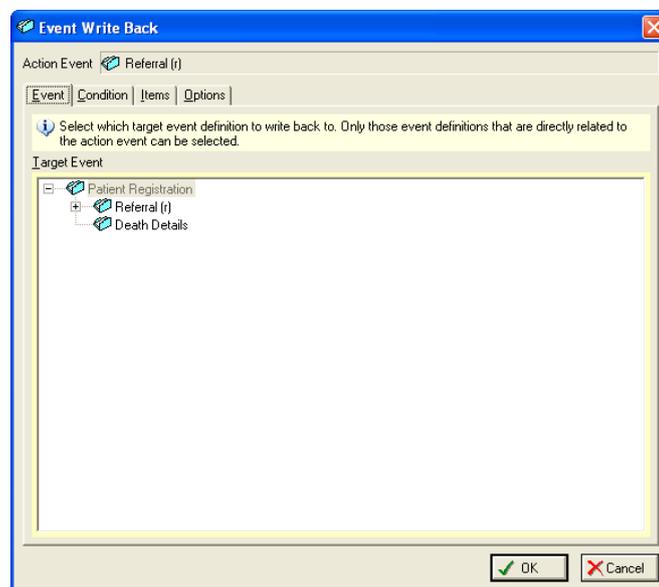
2 CREATING A WRITE BACK ACTION

The Write Back Action is defined in an Event or Document definition (but not Report definitions). It is added through the **Actions** tab by adding a new action and selecting **Event Write-Back** as the type of action.

To create an instance of the new action, select **Event Write Back** from the drop down list of actions, select the trigger **On First Save** and/or **On Save**. Add a trigger condition if necessary (this will make the action only happen when the trigger condition is met).



Then click on the **Define** button to configure the action. The Event Write Back dialog is displayed.



The settings in the action configuration dialog have been split into four tabs: **Event**, **Condition**, **Items**, and **Options**.

2.1 Event Tab

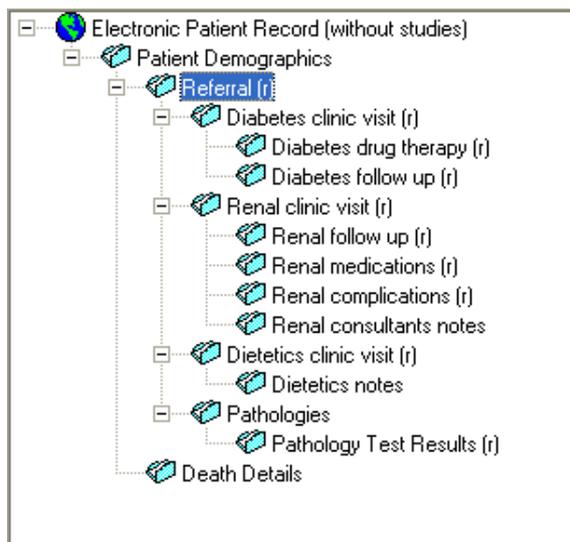
The Event tab is used to select the target event. The event design tree on the Event tab will only contain those events that can be written back from the action event. The target event should be picked first, and then the other tabs filled in as required.

The target event can be:

- Any ancestor event of the action event (e.g. parent event, parent of the parent event, etc.);
- Any immediate child event of the action event;
- A sibling event of an ancestor of the action event;
- Descendants of non-repeat events in the above categories as long as they are not a child event of a repeating event;

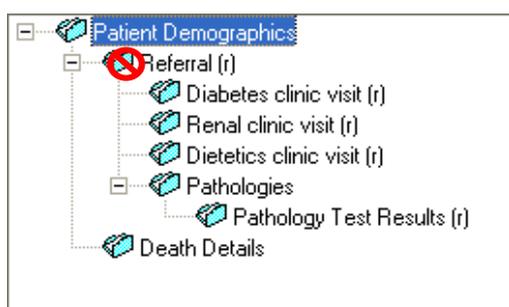
You cannot choose the target event to be the same as the action event. Also notice that you cannot have a target event that is a child event of a repeating event. (See diagram below).

Example Domain



Suppose that a write-back action was put on the **Referral** Event.

Events which can be target event of Referral.

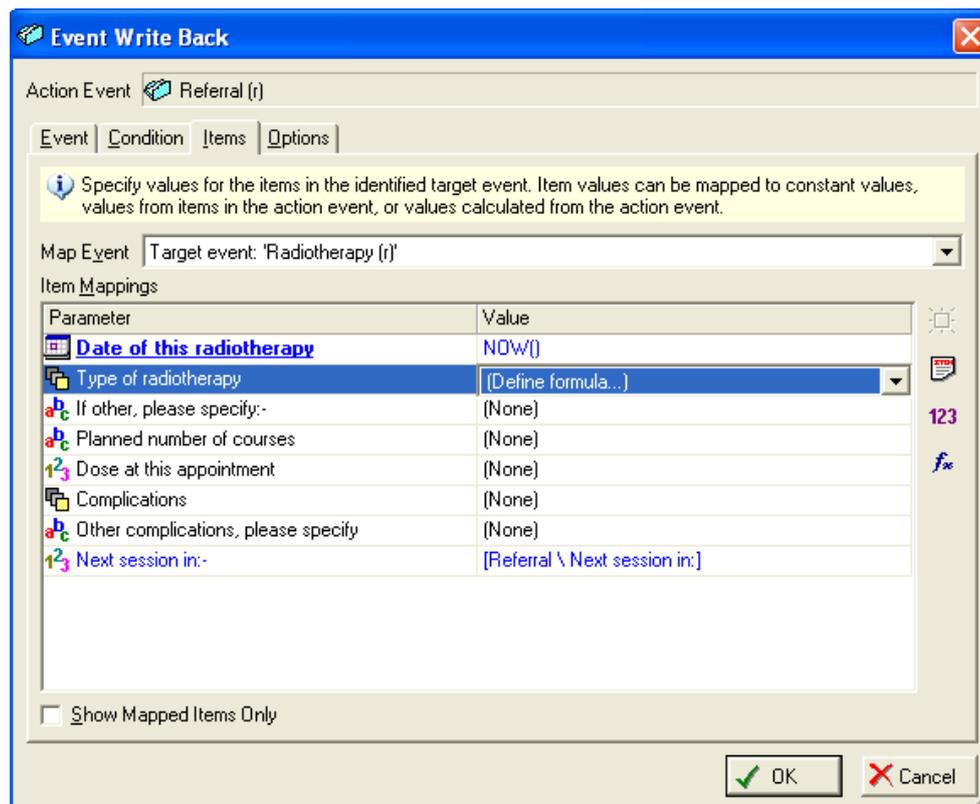


Note that **Referral** itself cannot be the target event.

2.2 Items tab

The **Items** tab is used to specify which data should be written to the target event. It provides a map to determine which items in the target event to update and the values they should receive. This tab will list all of the available items in the target event (no derived or archived items, although write protected items will be permitted). The values specified for the items can be either constant values, item references, or formula expressions. Item references can be taken from the action event or any ancestor event of the action event up to, and including, the root event. Likewise for the items used in the formula expressions.

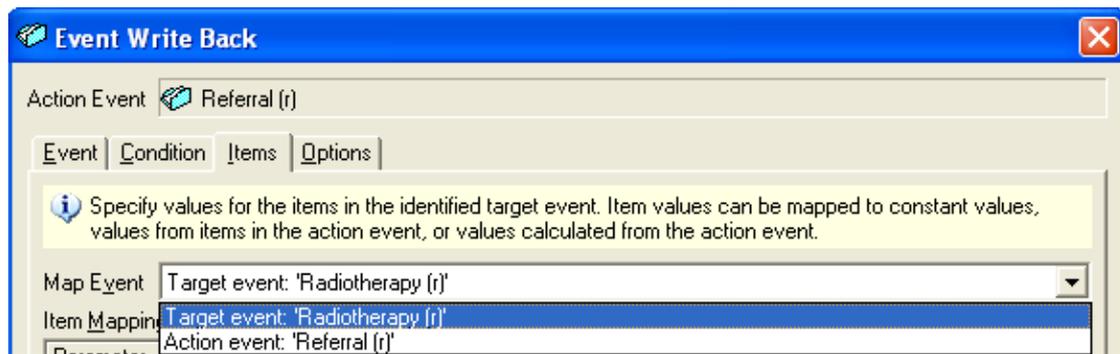
The target event should be chosen before filling in this tab.



To make it easier to see which items in target and action events have been mapped, any items that are mapped are shown in blue. Also there is a **Show Mapped Items Only** option to filter the item map grids so that the grids only show items that have been mapped.

The **Show Mapped Items Only** option works independently for the target and action event item map grids. Also, the setting is not retained when closing and re-opening the dialog. By default all items in the target/action event are shown when the dialog is first opened. Additionally, if the option is switched on and the mapped value is cleared for a particular mapped item then that item will not be removed from the grid until the option is deselected and then selected again. This is by design so that the user can set the cleared item's mapped value to another value without having to find the item again in the unfiltered item map grid.

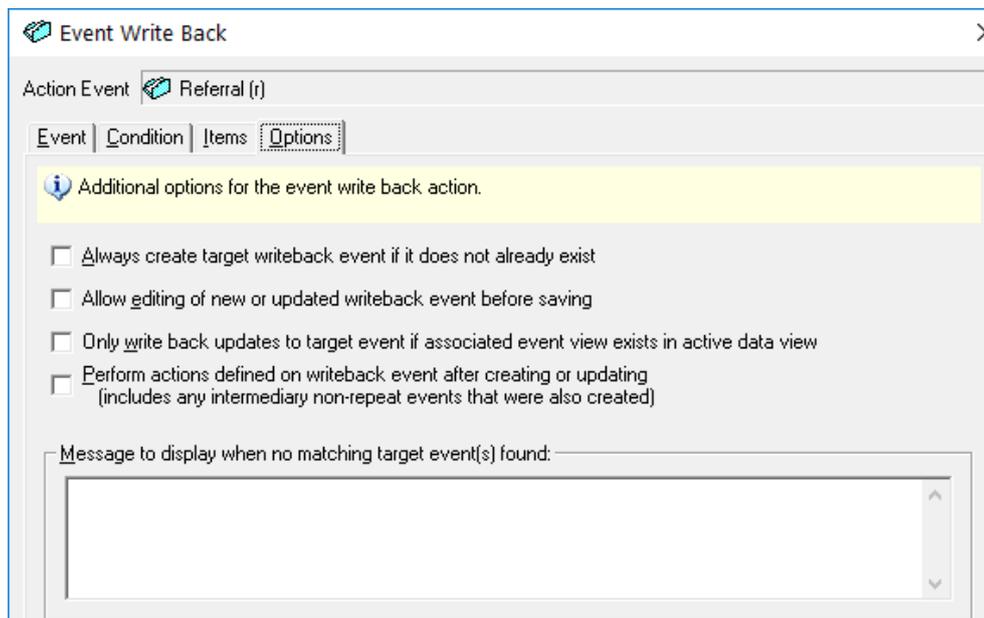
The Items tab also contains an item map for the action event, which is obtained via the drop down list **Map Event**.



The reason for this is that it may be useful to update control items in the action event, for example to provide a flag so that the action will not run every time the event is saved. The item references will again be from the action event and its ancestors. The item mappings for both events will be stored when the action definition is saved. This map is only available for events and not documents.

2.3 Options tab

The Options tab contains a number of options available for the action.



Always create target event if it does not already exist. With this option selected then if there is no existing target event to write back to, one will be created. If the option is not selected then the action will only ever update existing target events.

Allow editing of new or updated writeback event before saving. If this option is selected then the changes to the target event will be displayed to the user before they are saved. This gives the user the ability to check or edit the updated target event item values or to cancel the update altogether. Note that it will not be possible to edit the identifier item value for existing repeat target events.

Only write back updates to target event if associated event view exists in active data view. If this option is selected then the action will only create and/or update the target event if a linked event view exists in the currently active data view. If this option is not selected then the event will still be created and/or updated even if no event view linked to the target event exists in the current data view. In this case the event will be loaded or created on the domain rather than the current data view. Also, note that the target event can not be displayed to the user prior to saving if the event is loaded or created on the domain rather than the current data view. Note that these nested actions will not be carried out if the writeback action itself is performed as a task.

Perform actions defined on writeback event after creating or updating (include any intermediary non-repeat events that were also created). If this option is selected then actions defined on any events updated or created by the writeback action will be carried out. Nested actions will also be performed for any intermediary non-repeat events, between the saved event and the target writeback event, that were created as part of the action.

Message to display when no matching target event(s) found: A message can be typed in to display to the user to explain that the target event cannot be found. Carriage returns can be entered into the message via Ctrl+Return. No message will be displayed to the user if the contents of this text are empty. Note that this message will not be displayed to the user if the **Always create target event if it does not already exist** option is selected.

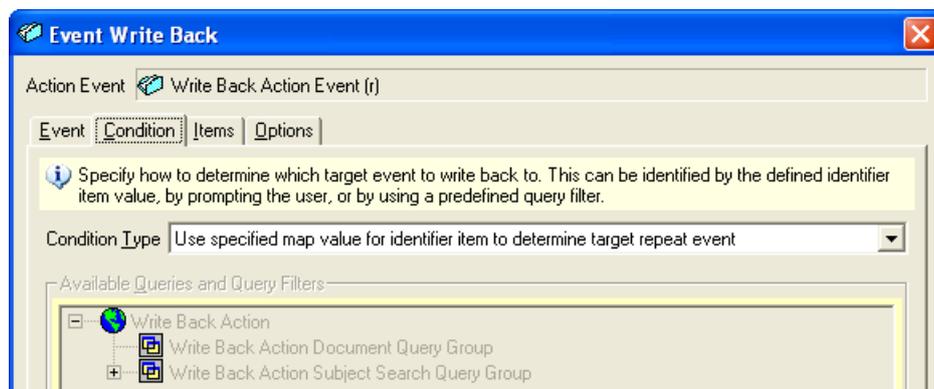
2.4 Condition tab

The **Condition** tab is used to specify how to identify the target event to write back to.

It is not needed in the following scenarios:

- The target event is an ancestor of the action event (because there is no ambiguity as to which event is the target event).
- The target event is non-repeat (because there will be only one of these events as a possible target).

If the target event does not fall into these categories then there must be a way of identifying which repeat target event to write data back to. This is done in the **Condition** tab.



The options available for determining which target event is the correct one can be found on the drop down list in the dialog:

Prompt user to select target repeat event
 Always create new target repeat event
 Use specified map value for identifier item to determine target repeat event
 Use Query or Query Filter to determine target repeat event

Prompt user to select target repeat event

The user is shown the selection of possible target repeat events and chooses the correct one.

Always create new target repeat event

A new target repeat event is always created. In this scenario, no attempt is made to find any matching target event and a new instance of the selected target event is then created, updated according to the specified item map, and then saved.

The identifier of the target repeat event is the value specified in the **Items** tab. This could be created using a formula e.g. using the function Now(). Note that if the identifier item value conflicts with an existing instance of the target event then no new instance of the target event will be created. The existing event instance will also be untouched.

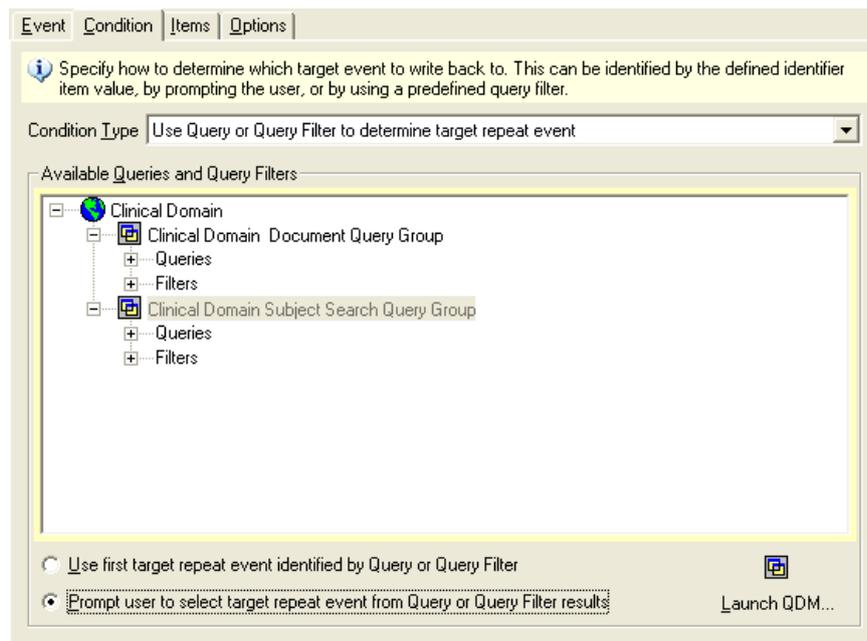
Use specified map value for identifier item to determine target repeat event

This is the default option. The **Items** tab is used to specify a value for the identifier for the target repeat event. The identifier will appear in bold and underlined in the list of items in the **Items** tab.

Use Query or Query Filter to determine target repeat event

If a query or query filter is used to determine the target repeat event, this must be defined through the **Query Design Manager** in the Subject Search Query group or the Document Query group of the current Domain.

The Query or Filter chosen should return one or more of the target events in its results. The additional context that the target event has to belong to the current subject is automatically provided when the query is run. A Query is useful when Query properties such as 'Outer Join', 'Context', 'Link at' are required to select the correct results. The Query View is not used and so can be very simple. Note that it is not currently possible to use parameterised query filters as the condition for the action.



If the Query or Query filter returns multiple target events, either the first target event found can be used or, alternatively, the user can be prompted to select the desired target event from the results.

When the user is prompted, the possible target events are seen as they would be in the subject overview, so that the user can understand how they relate to the other events.



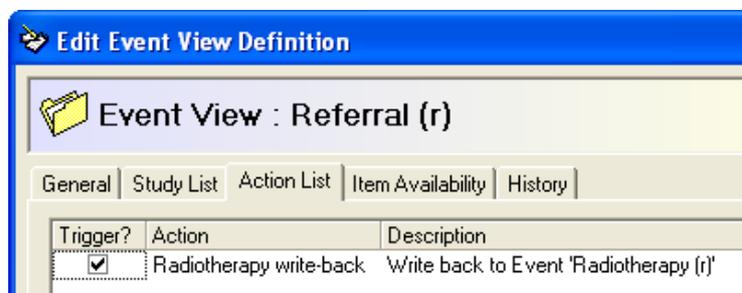
3 RESTRICTING THE WRITE-BACK ACTION TO SELECTED DATAVIEWS

The Write-Back action will behave in the same way as for other actions. There is a property on the Action called: **Mandatory triggering in event views based on this event**.

Mandatory triggering in event views based on this event

If the option is ticked then the action will execute in all data views that contain an event view based on the action event.

If the option is not ticked, then the action will only execute in data views which have been chosen in Design Management to execute the action. This is done by finding the appropriate event view linked to the event and editing the **Action list** of the Event View. Adding a tick to the **Trigger?** column means that the action will execute in the data view that contains this event view.



4 DATA ENTRY

In data entry, the action is executed after saving the action event (assuming the trigger condition has been met).

1. First the target event to write back to is identified. This may involve prompting the user depending on the options chosen.
2. If no target event can be identified, InfoFlex may be required to create one, if the **Always create new target repeat event** option has been chosen in the **Options** tab. This may involve creating missing intermediate non-repeats events.
3. Once the target event is found, it will then be updated according to the item map. For repeat target events, the value of the identifier item will only be set if the target event is new. If an existing target event is being updated then the identifier item value will not be changed.
4. If the user has chosen the option **Prompt user before writing back updates to target event** then they have a chance to see the target event before it is finally saved. (In a similar way as for auto-created events). They can choose to cancel the write-back action at this point if they wish.
5. The target event is then saved. The subject overview tree in design management will be updated as required to show any newly created target events.
6. If there are updates to be made to the action event from the item map, these will be made and the action event saved. This will only happen if a target event was successfully updated and saved. If the updates did not actually turn out to change any data in the target event, but the operation had successfully happened, the action event would still be updated and saved.

5 PERFORMANCE CONSIDERATIONS

When an action event is saved and a write back action is carried out, data needs to be saved to several different events. This will naturally take longer than saving a single event and the user may experience a delay. CIMS therefore recommends that write back events are tested fully and that any impact on performance for the data entry user is assessed carefully.

You may wish to consider using the InfoFlex Task Server to carry out write back actions. The Task Server allows write back actions to be processed on a server rather than on a PC and thus removes any delay which a write back action might cause. However, users need to be aware that write back actions are added to the Task Server's queue and may not be carried out instantly.

For more information about the Task Server, please speak to your InfoFlex Implementer.

5.1 About the Task Server

If a write-back action has been configured to run on the task server, then when the end-user saves the action event, a task is added to the task queue. This task contains the information required for carrying out the write-back action. When the task server polls the queue and finds the task, it will carry out the write-back action. The user who saves the event does not have to wait for the write back to happen, and the action is not performed on their client pc. Instead it is handled by the task server, thus improving the end user's performance.