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NiagaraAX Batch Editor

The Batch Editor:

- Makes it possible to quickly add, edit, rename, and remove multiple slots. With NiagaraAX 3.6 you can also set or clear slot flags.
- Uses drag and drop, copy and paste or the Bql Query Builder (with a dialog-box driven user-interface) to select the objects to edit.
- Serves as the default view of the NiagaraAX-3.x ProgramService.

These sections explain how the Batch Editor works and provide examples:

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About the Batch Editor

The Batch Editor performs the specified operation on all selected items (objects). To select items, you drag and drop (or copy and paste) them into the Batch Editor’s Object field. Or you can use the Bql Query Builder.

For example, if your installation has 150 points configured to go offnormal when a property exceeds a given limit, you could use the Batch Editor to change the limit on all objects at once. Otherwise, you would have to change the limit on each object’s property sheet individually.

The Batch Editor requires the ProgramService in your Services container. If you don’t have this service, copy it from the `program` palette.

To access the Batch Editor

Step 1 Save and back up the station.

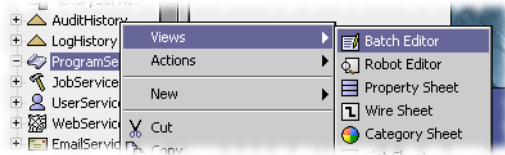


Caution *There is no undo. Should you make a mistake, it is always easier to reload a config.bog than to reconfigure the station.*

Step 2 Do one of the following:

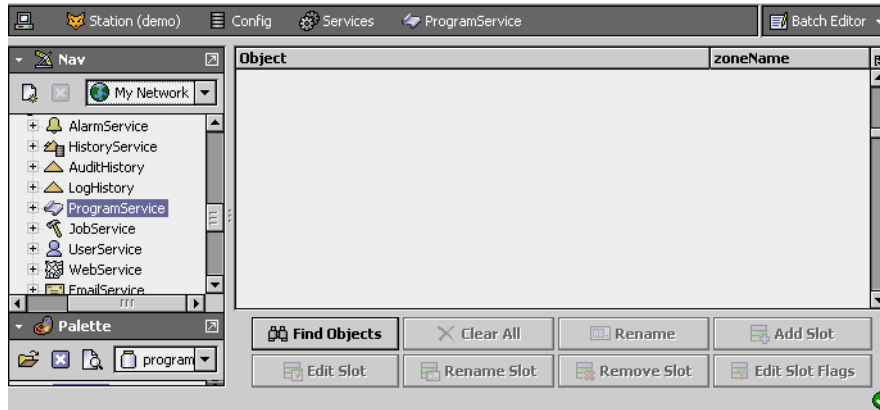
- Double-click the ProgramService container in the nav tree (Config\Services\ProgramService), or
- Right-click **ProgramService** > **Views** > **Batch Editor**

Figure 1 Accessing the Batch Editor



A blank Object field appears.

Figure 2 Blank Batch Editor Objects field

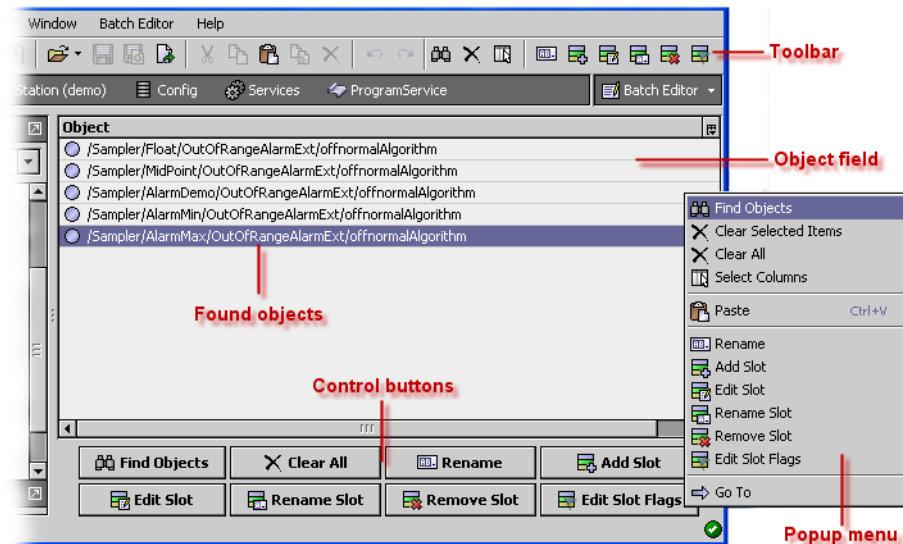


Interface tour

Main window

The main Batch Editor view consists of the following:

Figure 3 Batch Editor tour



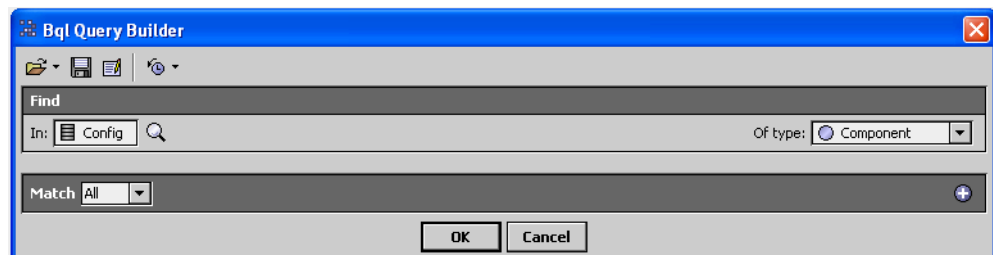
- **Toolbar**
Provides the same functions as the control buttons and right-click menu.
- **Object field**
Displays each object including its path.
- **Popup menu**
Right-clicking the Object field displays this menu, which provides the same functionality as the control buttons.
- **Found objects**
The Batch Editor operates on all found objects. You can drag and drop (or copy and paste) single or selected objects onto the Object field, or use the Bql Query Builder to populate the field.
- **Control buttons**
Perform Batch Editor functions. Each function is described later in this document.

Locate the items to edit (Find Objects)

There are three ways to populate the Object field:

- Drag and drop points (items) from the nav tree.
- Copy and paste points (items) from the nav tree.
- Click **Find Objects** and use the Bql Query Builder.

Figure 4 Bql Query Builder



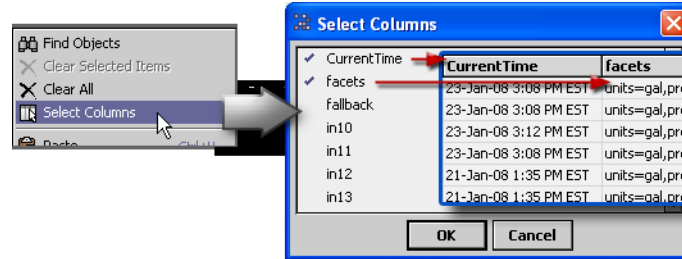
The 'In:' field allows you to define where to start searching in the nav tree. The 'Of Type' field lets you filter your search by type of component. The Match field works with the plus (+) to filter objects using search criteria. For more information about how to use the Bql Query Builder, see "About the Bql Query Builder" in the *NiagaraAX Drivers Guide*.

To add columns of information to the Object field

In addition to displaying the selected items, you can add columns of information about the them. Column selections apply to all items that are direct children of the items displayed in the Object field.

- Step 1 Populate the Object field with items to edit.
You must have at least one item in the Object field. The Batch Editor lets you add different kinds of slots (objects) to the Object field. To avoid errors, make sure all objects are of the same type.
- Step 2 Click the Select Columns icon (📄) or right-click the field and click Select Columns. The Select Columns dialog box appears.

Figure 5 Selecting columns



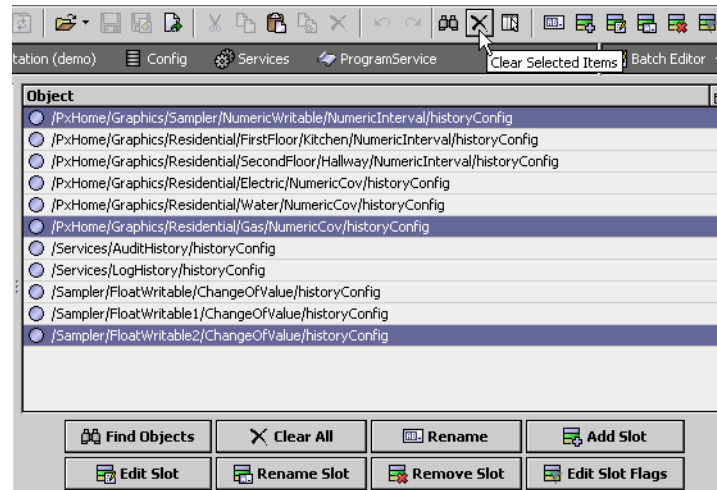
- Step 3 Click to mark the columns in the list, and click OK.
Figure 5 shows the right-click pop-up menu (on the left), the Select Columns dialog box overlaid by how the columns appear in the Object field.

Clear items from the Object field (Clear All)

There are two ways to remove items from the Object field.

- To clear *selected* items, hold down Ctrl and click to select items, then click the toolbar icon (✕) or use the right-click menu (Clear Selected Items).
- To remove *all items*, click the ✕ Clear All control button at the *bottom* of the view.

Figure 6 Clearing selected items from the Object field



Rename items


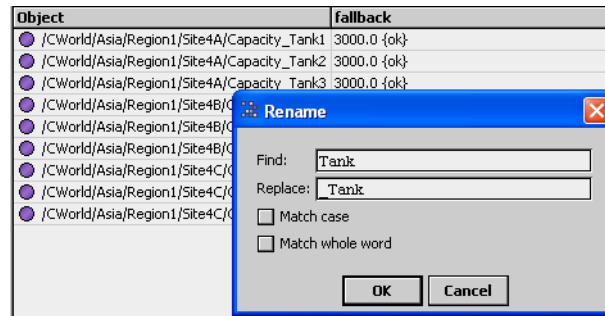
 **Rename** provides a find and replace feature.

Figure 7 Rename dialog box



The Object field in [Figure 7](#) shows numeric points that have had their display names changed to add an underscore before the letters “Tank.”

Add slots


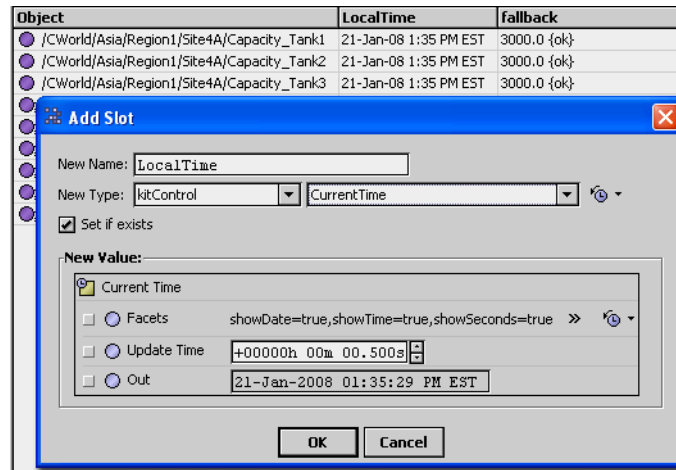
The  **Add Slot** feature lets you add the specified slot to all components in the Object field.

Figure 8 Adding a slot



The values that appear in the New Value field depend on the selected slot type.

In the example above, a new slot named `LocalTime` is being added and configured. The new slot is defined as a `CurrentTime` component from the `kitControl` module. The `Facets` and `Update Time` properties in the New Value field box are configurable.

The ‘Set if exists’ check box allows you to change values for components that already have a `LocalTime` slot. If the check box is not selected, the `CurrentTime` properties are not changed for previously existing `LocalTime` slots.

Edit slots


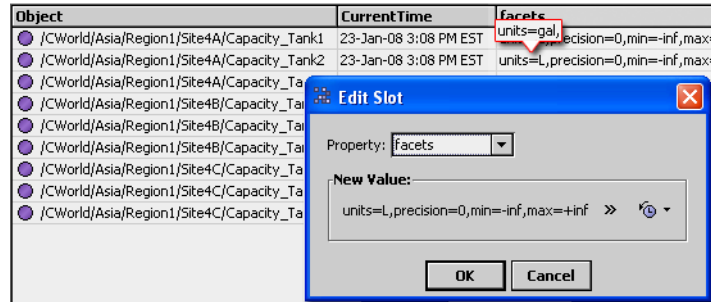
 **Edit Slot** can be used to edit any slot property.

Figure 9 Editing object slots



In the example above, the value of the `facets` property is being changed from `units=gal` (gallons) to `units=L` (Liters). The Object field shows the changed property in the `facets` column.

Rename slots


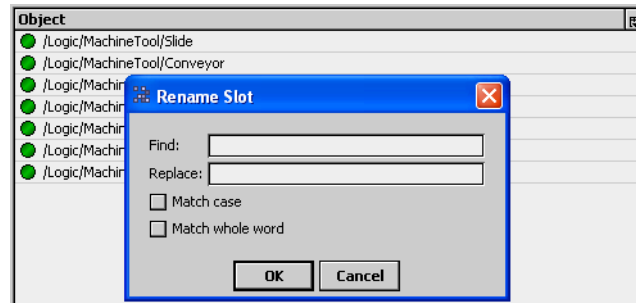
 **Rename Slot** provides a find and replace feature.

Figure 10 Rename slot dialog box



Remove slots


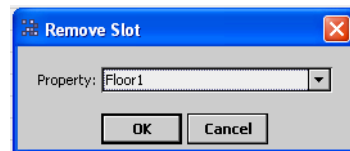
 **Remove Slot** makes it possible to remove all slots with the selected property.

Figure 11 Remove slot dialog box



Note: There is no undo. Make sure you want to remove multiple slots before clicking OK.

Edit slot flags

Beginning with NiagaraAX-3.6, you can batch edit slot flags. This feature applies only to stations running on an AX-3.6 or later host, using an AX-3.6 or later version of Workbench.

Figure 12 Edit Slot Flags dialog box



- Set flags for object's slot within its parent
This option sets flags for child objects.
- Slot
This drop-down list identifies the type of slot.
- Flag
This drop-down list identifies which flag to change.
- Action
This option identifies which action to take:
 - Set Flag or Remove Flag.

Using the Batch Editor

Please note.

- The operations run on the *entire contents* of the window—whether selected or not. You can highlight individual items for the purpose of selectively clearing them from the Object field, but you cannot highlight individual items for batch processing.
- To run a batch edit you may click the buttons below the Object field, use the toolbar at the top of the window, or right-click a blank area of the field and use the pop-up menu.
- You can populate the Object field by finding objects, dragging and dropping them from the nav tree, and copying and pasting them from the nav tree.
- Each find objects, drag and drop or copy and paste operation *adds* to the currently-selected objects. The Batch Editor does not automatically clear items from the Objects field.
- The Batch Editor runs on the items found in the current station with the ProgramService used to launch the editor. Attempting to operate on objects left over from a previous station typically causes a “not found” error.
- You will find that some slots cannot be renamed or removed, unless the objects also exist on the current station. These slots appear as “frozen” on the property sheet.
- Always back up the station before you start batch editing slots.

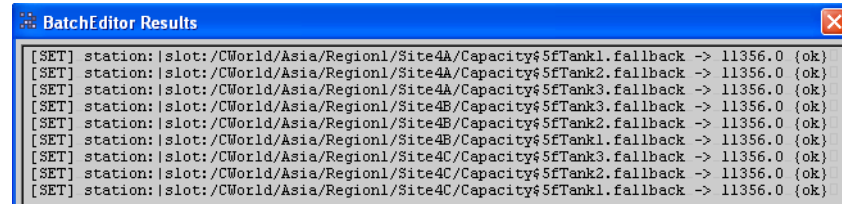
Suggested best practice: edit a single object first. You can easily drag and drop it onto the Object field and test the change. Make sure you are happy with the results before you find the other objects and change them.

Resources: Use the slot sheet to view object names and flags. Use the Bajadoc to locate the name of the precise component to change.

BatchEditor Results

The **BatchEditor Results** dialog reports the action taken on each object.

Figure 13 Example of BatchEditor results list



At the beginning of each row, the operation appears in square brackets, for example, [SET]. The object ORD comes next followed by an arrow (->) and an indication of what changed or why no change occurred.

Examples

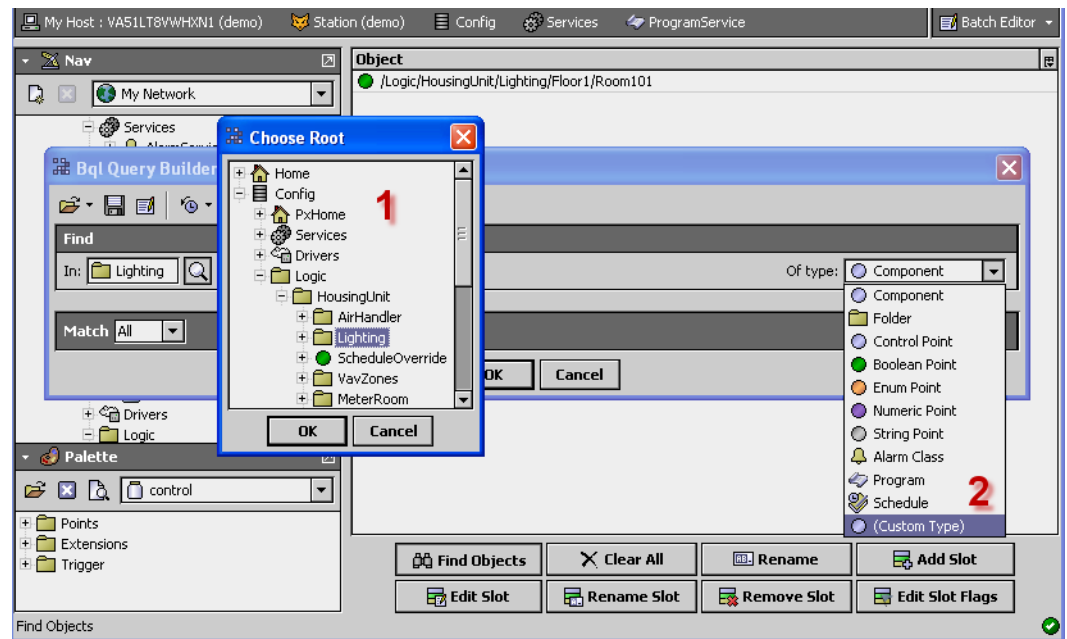
Hide action slot on BooleanWritables

The ability to batch edit slots is the primary use of the Batch Editor. For NiagaraAX-3.6 and later systems (Workbench and JACE controllers), you can also edit slot *flags* (Config Flags). For example, you can set or clear the “Operator” flag on slots, or set or clear the “Hidden” flag on slots.

In this example, we will hide the emergencyActive slot on a number of BooleanWritable components. Step numbers correspond to the numbers in the graphics.

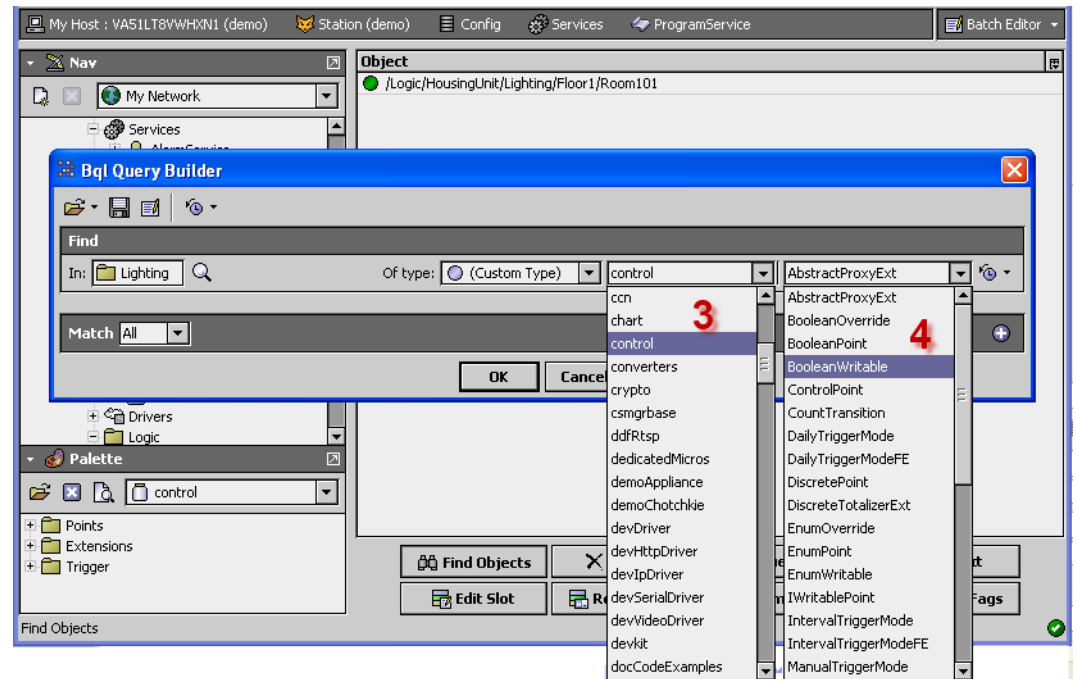
- Step 1 To locate the components to edit, we’ll use the Bql Query Builder (Click **Find Objects** to display the Bql Query Builder) and narrow the search by drilling down in the nav tree.

Figure 14 Narrowing the search



- Step 2 To further narrow the search we’ll select the module and component by choosing (Custom Type) from the ‘Of Type:’ drop-down list. This opens two additional lists: one for the module and the other for the component.
- Step 3 Knowing that a BooleanWriteable is in the control module, we choose control from the drop-down list.

Figure 15 Choosing component type



Step 4 Next we choose the component type from the component drop-down list and click **OK**.

Note: To find the module and component type, refer to the 'Type' column on the slot sheet. The module and component type are displayed in the format: *module:component*.

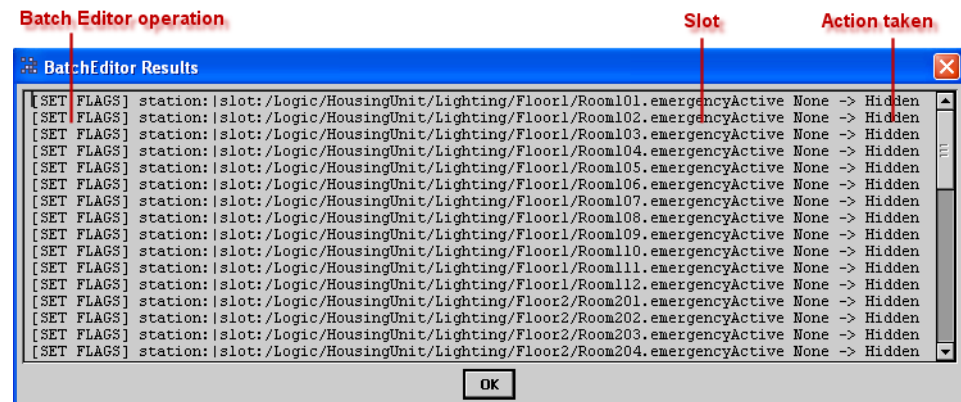
Step 5 Finally, we click **Edit Slot Flags**, set Slot to emergencyActive, set Flag to Hidden, set action to Set Flag and click **OK**.

Figure 16 Edit Slot Flags dialog box



All the slot flags change and the Batch Editor displays the results.

Figure 17 BatchEditor Results



Step 6 To confirm the change, check the slot sheet for one of a changed component.

Figure 18 Fragment of a slot sheet showing the change

Slot	#	Name	Display Name	Definition	Flags	Type
Property	13	in10	In10	Frozen	ts	baja:5
Property	14	in11	In11	Frozen	t	baja:5
Property	15	in12	In12	Frozen	t	baja:5
Property	16	in13	In13	Frozen	t	baja:5
Property	17	in14	In14	Frozen	t	baja:5
Property	18	in15	In15	Frozen	t	baja:5
Property	19	in16	In16	Frozen	tsL	baja:5
Property	20	fallback	Fallback	Frozen		baja:5
Property	21	overrideExpiration	Override Expiration	Frozen	ro	baja:5
Property	22	minActiveTime	Min Active Time	Frozen		baja:5
Property	23	minInactiveTime	Min Inactive Time	Frozen		baja:5
Property	24	setMinInactiveTimeOnStart	Set Min Inactive Time On Start	Frozen		baja:5
Action	25	emergencyActive	Emergency Active	Frozen	h	void
Action	26	emergencyInactive	Emergency Inactive	Frozen		void
Action	27	emergencyAuto	Emergency Auto	Frozen		void
Action	28	active	Active	Frozen	n	void

In Figure 18, the “h” in the Flags column indicates that the hidden flag for slot emergencyActive has been set.

Set the offnormal high limit on alarm extensions

In this example, we will change the temperature high limit from 100° to 95°. We’ll also demonstrate how to use the right-click pop-up menu to selectively clear items that you don’t want to include in the change.

- Step 1 In the Batch Editor Bql Query Builder (double-click ProgramService and click **Find Objects**) configure ‘Of Type’, (Custom Type) as follows.

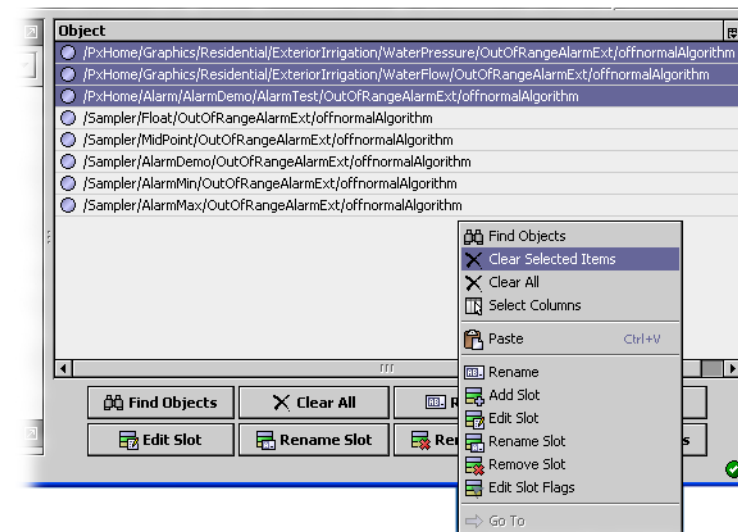
Figure 19 Bql Query Builder configured to locate OffnormalAlgorithm




The OffnormalAlgorithm is the component used to define the conditions that trigger an alarm.

- Step 2 In this step we select and clear from the Object field the objects we do not want to change.

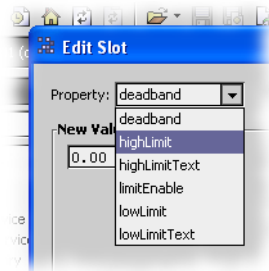
Figure 20 Selected objects to be removed



The quickest way to clear items from the Object field is to click the Clear Selected Items icon  in the toolbar. If you're using the pop-up menu, right-click in the blank area of the Object field otherwise you may inadvertently deselect an object.

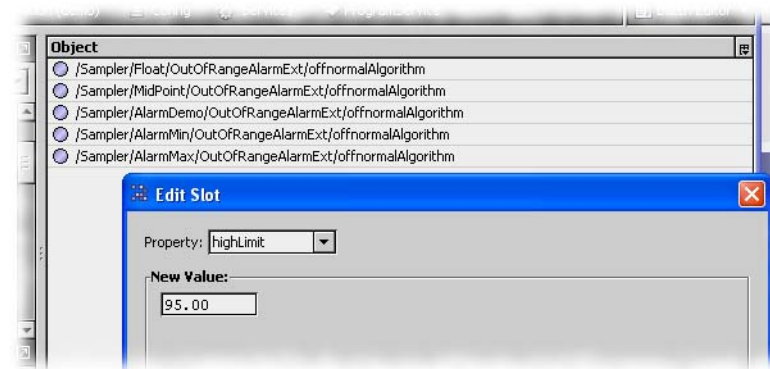
- Step 3 Click  **Edit Slot** and choose the highLimit property from the Property drop-down menu.

Figure 21 Choosing the property to edit



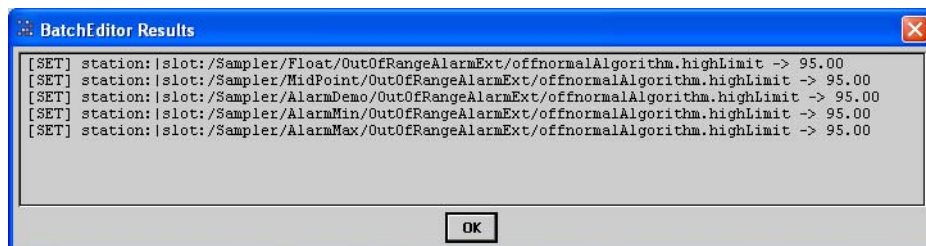
- Step 4 Set the New Value field to 95 and click **OK**.

Figure 22 Setting the property



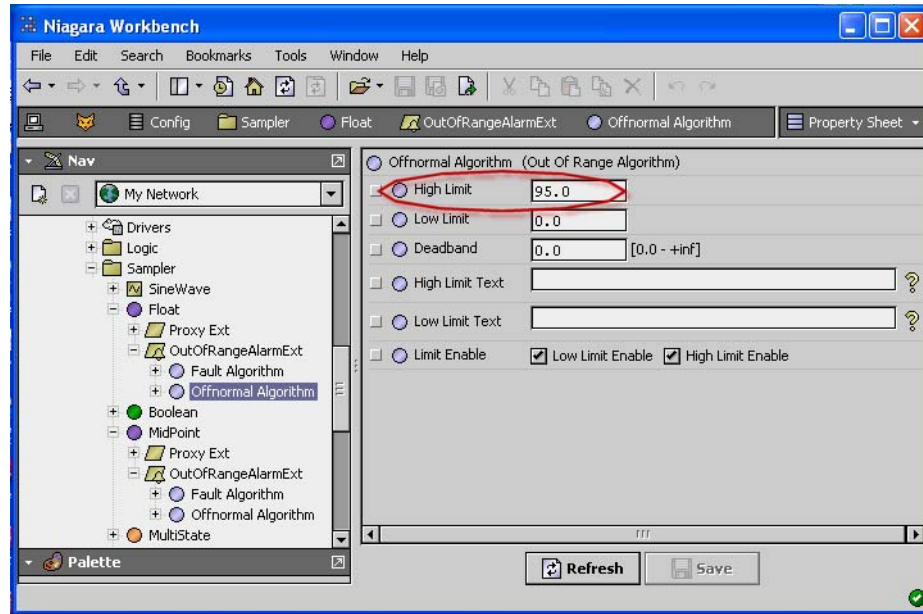
The Batch Editor changes the objects. This may take a few seconds. Then it displays the results.

Figure 23 Results



- Step 5 To close the BatchEditor Results, click **OK**.
- Step 6 Check the property sheet for one of the points to ensure that the change was made.

Figure 24 Property sheet

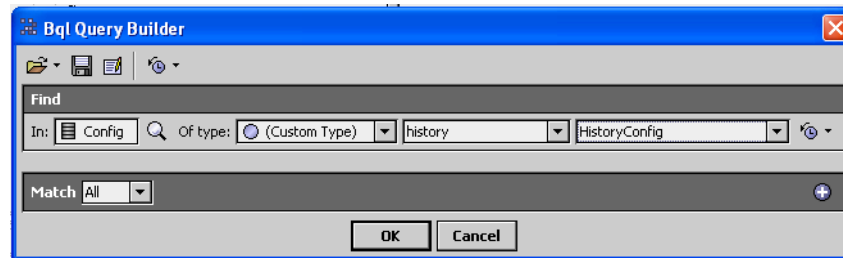


Increase history record count

In this example we will expand the capacity of the history databases that currently hold 500 records to allow them to hold 600 records. First we will do a wide search for all historyConfig containers, starting from the Config folder in the nav tree. Then, we will clear the containers configured to hold less than 500 records. And finally, we will change the capacity property on the remaining historyConfig containers.

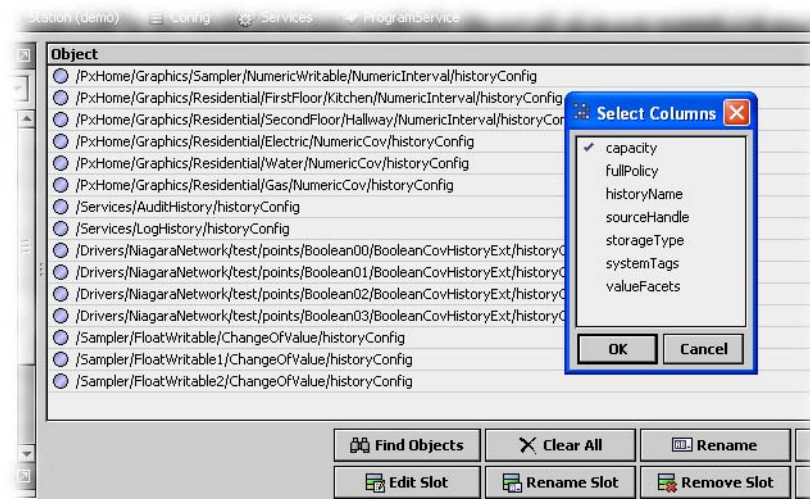
- Step 1 Using the Bql Query Builder, search for all historyConfig container slots.

Figure 25 Bql Query Builder



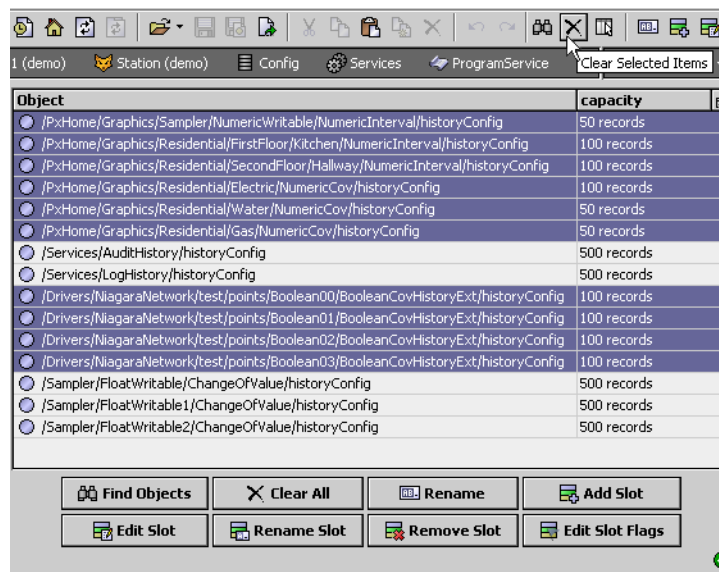
- Step 2 Expand the window slightly so you can see an additional column.
- Step 3 To add a capacity column to the Object field, click the Select Columns icon (⌘) in the toolbar.

Figure 26 Adding the capacity column



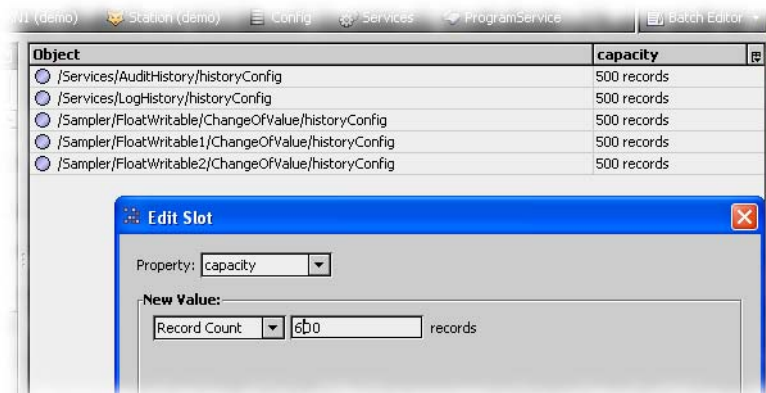
Step 4 To clear the historyConfig slots configured to hold less than 500 records, click the Clear Selected Items icon in the toolbar.

Figure 27 Highlighted historyConfig container slots to be cleared



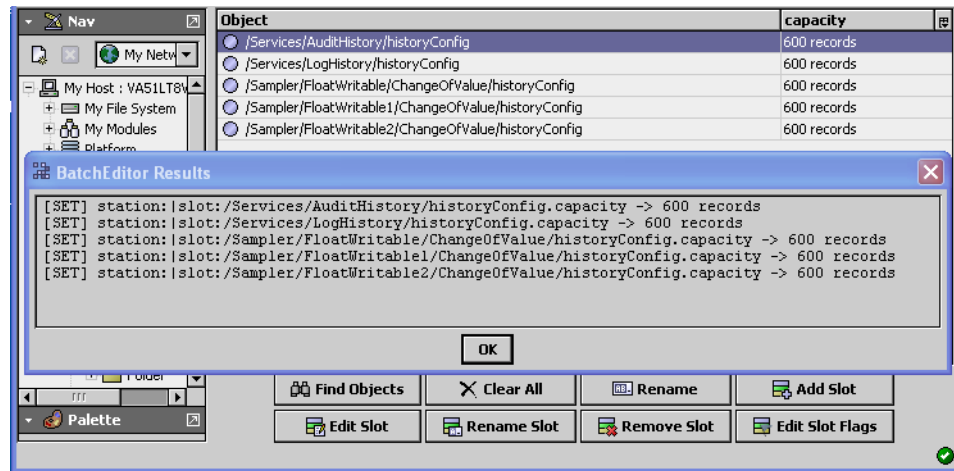
Step 5 Click **Edit Slot**, change the capacity property to 600 records and click OK.

Figure 28 Capacity changed to 600 records



The results indicate the change was made and the capacity column changes to reflect the change.

Figure 29 Capacities changed



Troubleshooting

If some items update while others generate errors in the BatchEditor Results box, make sure you are editing like items. The Batch Editor will let you populate the Object field with all types of slots, but you may not want to run a batch edit on all of them. A good practice is to click Clear All before starting a batch edit session.

You cannot batch edit frozen slots.

Document change log

Updates (changes/additions) to this *Batch Editor* document are listed below.

- Publication: March 31, 2011
Initial document.