Technical Document

Niagara Histories Guide

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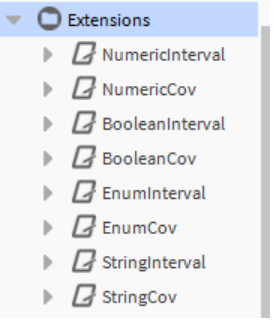
niagara4

Contents

  - Configure the extensions.
  - Use a valid history name (part of the configuration).
- Storing data involves defining the properties of the history database file. For example, you can customize the name of the database file, define the maximum number of records to save, and choose metadata to add to the records.
- Archiving data includes importing and exporting (transferring) records from one station to another station. For example, you can limit your local station records to a small number, which you specify while archiving all collected records to another station.

To extend the functionality of the component, you add extensions to a component's **Property Sheet**. By adding a history extension, you can collect a time-stamped entry in the associated history table for a the real-time value or the status of the component's output. The **`history`** palette makes history extensions available.

Figure 3 History extensions in the history palette



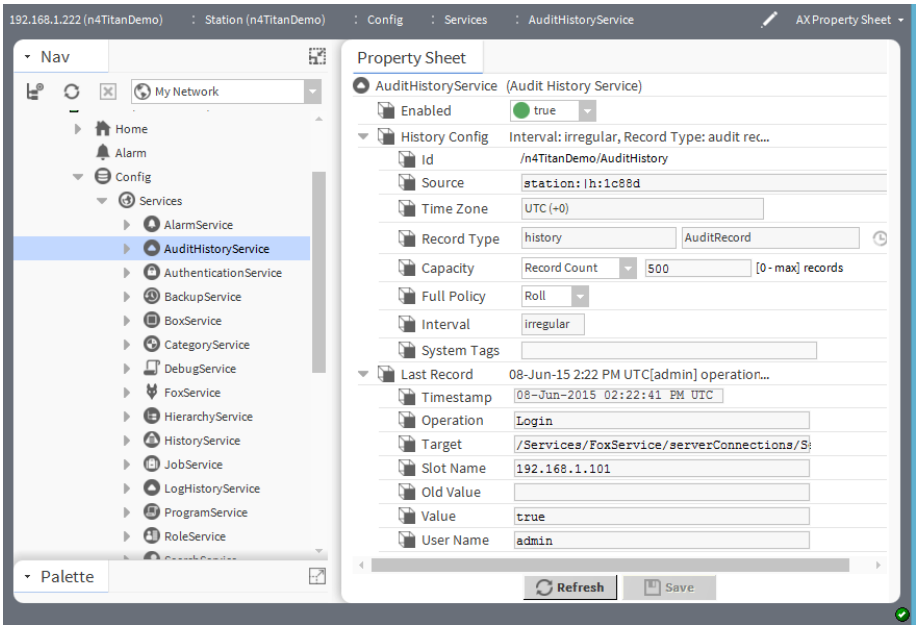
The history table is not stored as part of the component's data but is a separate collection of data referred to as the "history."

About history names

By default, when a history extension is added to a component, a history format default string is set to the following: `%parent.name%`. This string automatically names any histories with the name of the parent component and appends a sequential number to additional names, as necessary.

For example, a history extension on a **`NumericWritable`** component creates the default history name: `NumericWritable`. Then, another numeric writable receives the same name incremented to `NumericWritable1`.

Figure 17 Audit History Service properties



To open this **Property Sheet**, expand **Config→Services** and double-click on the **AuditHistoryService** in the Nav tree.

The component is designed to audit all property modifications and all action invocations. These events are subject to audit:

- Property changed
- Property added
- Property removed
- Property renamed
- Property reordered
- Action invoked

History Config properties

These properties configure the audit function. A separate set under the heading **Security Audit History Source** applies specifically to security-related events, such as authentication and changes to security-related properties.

Property	Value	Description
Enabled	`true` or `false`	Activates and deactivates use of the component.
HistoryConfig		Container for sub-properties used to configure the attributes of the history record stored in the **History** space.
Id	Text string	Read only value. String results from value configured in history extension's **History Name** property. An error string here indicates the **History Name** property is incorrectly configured .
Time Zone	display or drop-down list	The time zone is set up using the Set System Date/Time, which you access either using a platform connection and **Platform Administration→Change Date/Time** or using one of the station's **PlatformServices** views (**Platform Service Container**

Property	Value	Description
		plugin or **System Date and Time Editor**). Otherwise, the time zone is displayed for information only.
Record Type	Text	Read only values. Displays the data that the record holds in terms of: extension type (`history`) and data type (`Boolean-TrendRecord`, `NumericTrendRecord`, and so on).
Capacity	Record Count: `nnn` (500 default), Unlimited	Specifies local storage capacity for histories. In general, 500 (default record count) or less is adequate for a controller station because those records are usually archived (exported) to a Supervisor station. For this reason, a very large number, such as 250,000 is acceptable for Supervisor stations. `Unlimited` is not the wisest choice even for a Supervisor station.
Full Policy	Roll (default), Stop	Applies only if Capacity is set to "Record Count". Upon specified record count, the oldest records are overwritten by newest records. `Roll` ensures that the latest data are recorded. `Stop` terminates recording when the number of stored records reaches specified history capacity. Full policy has no effect if **`Capacity`** is `Unlimited`.
Interval	Text string	Read only value. For Interval-based data collection, the cycle time, or how often the history properties are checked. Any time you change this property, a new history is created (or "split-off") from the original history because histories with different intervals are not compatible.
System Tags	Text	This property allows you to assign additional metadata (the System Tag) to a history extension. This identifier is then available for selective import or export of histories using the **Niagara System History Import** or **Niagara System History Export** option (using the System Tag Patterns). Each System Tag is separated by a semicolon. For example: `NorthAmerica;Region1;Cities`.
Last Record		Container for read only values for sub-properties that describe attributes of the last recorded change: date/time the last record was made, time zone, and the operation that generated the record, and the user who made the change.

Last Record properties

Property	Value	Description
Timestamp	read-only	Reports when the event occurred.
Operation	read-only	Identifies the type of event.
Target	read-only	Reports the modified Ord.
Slot Name	read-only	Identifies the host IP address.
Old Value	read-only	Reports the value before the change.
Value	read-only	Reports the new value.
User Name	read-only	Identifies the person who made the change.