

1 Purpose

The purpose of this document is to provide guidance for configuring and understanding the exacqVision serial interface. This guide provides step-by-step instructions and also explains more complex topics in-depth.

2 Overview

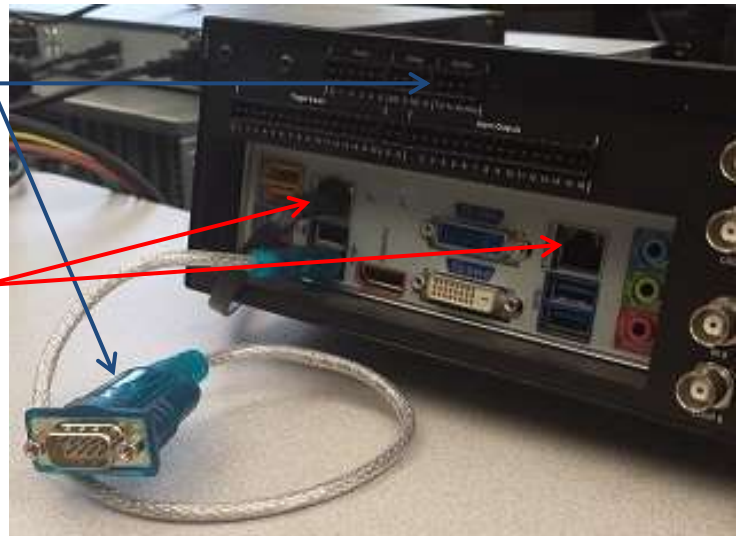
Serial data refers to unencrypted, clear text, or ASCII characters received by exacqVision. It is referred to as serial data because it is sent as a series of characters over a UART (RS-232 or RS-485) interface or in a TCP/IP packet over Ethernet.

exacqVision processes serial data in many ways. For example, the data can simply be stored as human-readable text and overlaid on live views; or it can be used to trigger actions such as calling a PTZ preset on a camera, recording video, triggering an alarm output, changing a view, sending an email, and more.

3 The Physical Layer

You must first determine through which interface the serial data will be received by exacqVision. There are two possibilities, both of which are handled and processed the same by exacqVision software:

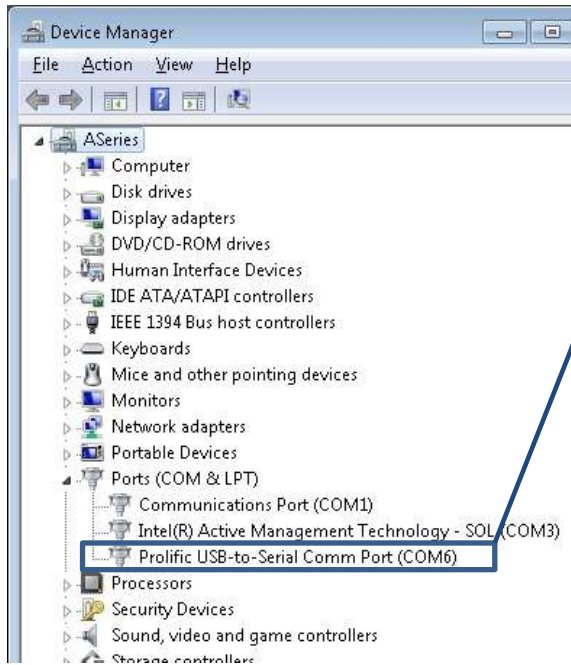
1. **UART (RS-232/RS-485).** In this case, an RS-232 port is not installed in the exacqVision recorder; thus, a USB-to-RS-232 adapter is used.
2. **TCP/IP (Ethernet).** Either Ethernet port can be used for serial data. For simple configurations, serial data can be received through the same port as the video streams, requiring only one Ethernet port to be used.



4 USB-to-RS-232 Adapter

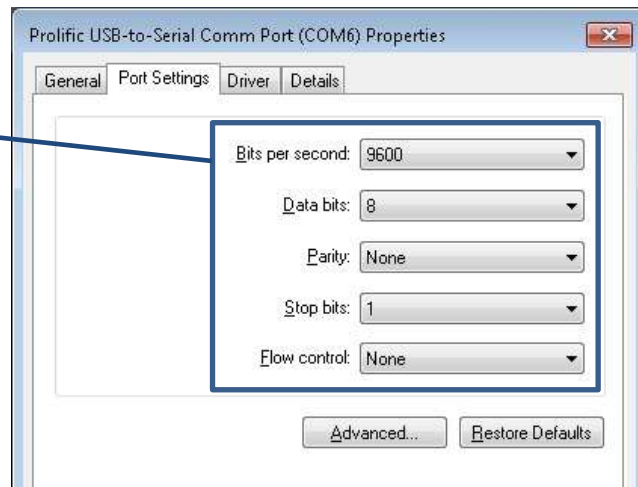
A USB-to-RS-232 can be used if an RS-232 port is not available on the exacqVision system. Most adapters require the installation of device drivers per the manufacturer's instructions. After driver installation, verify the COM port has been detected by the Windows operating system, as described in the following section.

5 Verifying Windows COM Port Drivers



To verify that Windows recognizes any new hardware, look in the Windows Device Manager. In this example, COM6 is the USB-to-RS-232 converter.

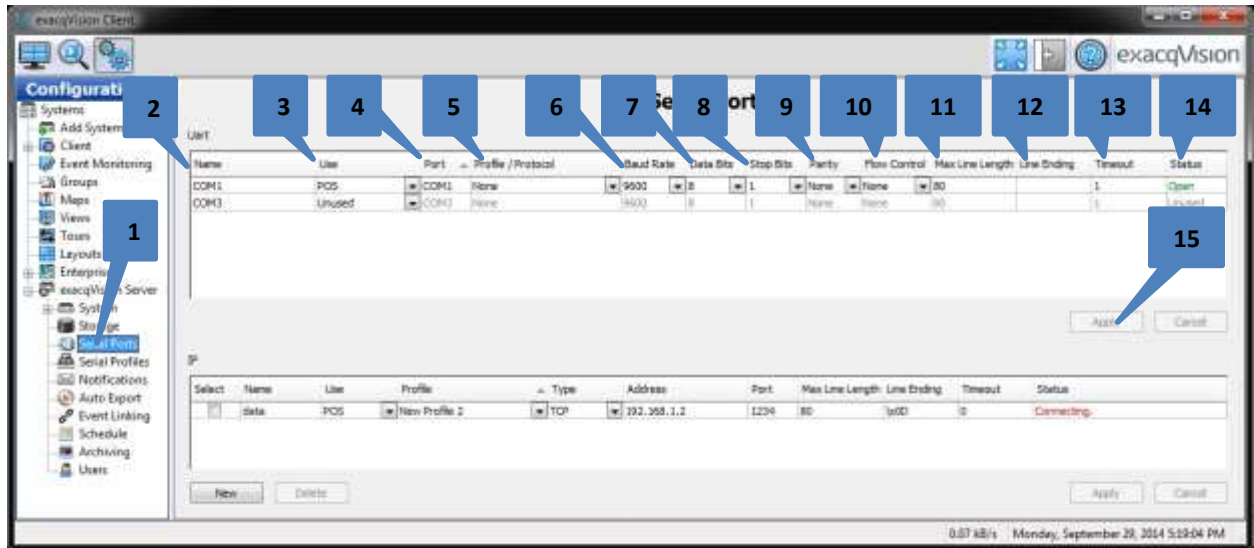
Double click on that entry in Device Manager and note the following settings in the Port Settings tab. These settings must match the device that is connected to the exacqVision system.



6 Configuring a Serial Port

UART

UART is the typical physical implementation of the serial data transmitted over RS-232 or RS-485.



1. Click on Serial Ports in the navigation tree of the exacqVision Client software.
2. Enter a unique name, if desired.
3. Select an option from the Use drop down menu:



- Unused.** Default setting used for disabling the port.
- PTZ.** Used for connecting to an analog PTZ camera for control (UART option ONLY).
- POS.** Used for receiving point-of-sale serial data.
- ATM.** Used for receiving ATM serial data.
- Access Ctrl.** Used for receiving access control serial data.

4. The port is automatically assigned by the operating system.
5. The Profile/Protocol varies based on the Use selection.

- a. If POS, ATM, or Access Ctrl is selected for Use, existing serial profiles are available. Select New to create a Serial Profile after the serial port configuration is complete



- b. If PTZ is selected for Use, a PTZ protocol list is available.

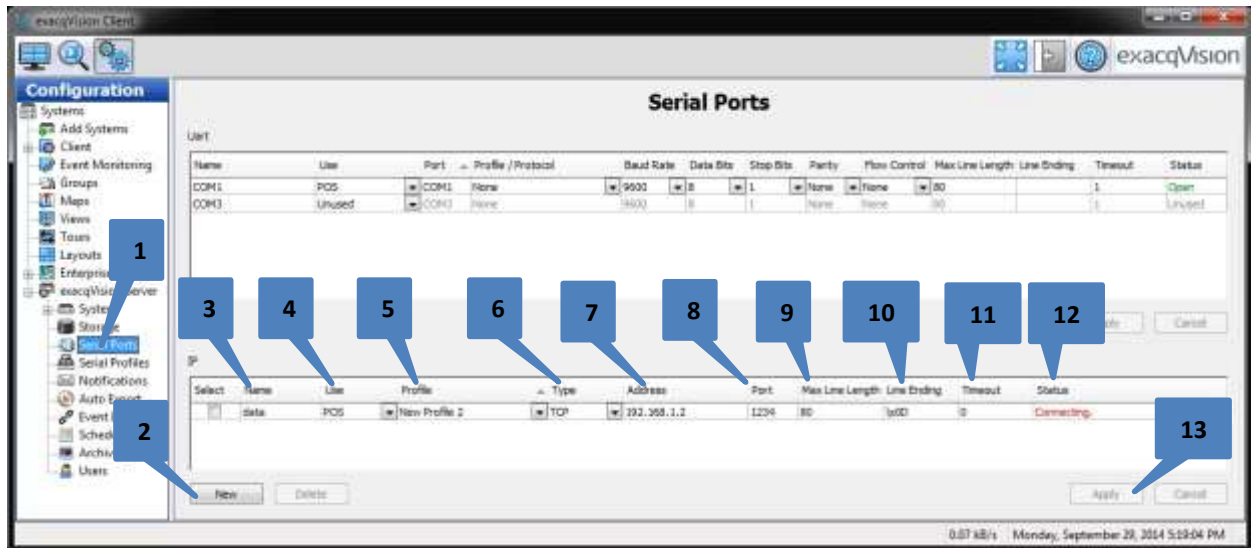


6. Select a rate of data transmission for the Baud Rate. This must match the rate configured in the serial device.
7. Data Bits defaults to 8. This must match the rate configured in the serial device.
8. Stop Bits defaults to 1. This must match the rate configured in the serial device.
9. Parity defaults to None. This must match the rate configured in the serial device.
10. Flow Control defaults to None. This must match the rate configured in the serial device.
11. Max Line Length defaults to 80. This is the maximum number of characters before assuming an END OF LINE.
12. Line Ending is a character or set of characters that defines the END OF LINE.

13. Timeout is the interval in seconds at which END OF LINE is inserted.
14. Status displays the status of the port. Open means that the port is ready to send or receive data; unused means that the port is disabled or unconfigured.
15. Click Apply when finished.

IP

An IP-based serial port is the same as UART, except that the serial data is received over TCP/IP or an Ethernet network.



1. Click on Serial Ports in the navigation tree of the exacqVision Client software.
2. Click New.
3. Enter a unique name, if desired.
4. Select an option from the Use drop down menu:



- Unused.** Default setting used for disabling the port.
- POS.** Used for receiving point-of-sale serial data.
- ATM.** Used for receiving ATM serial data.
- Access Ctrl.** Used for receiving access control serial data.

5. Select a serial profile to process the data received by this serial port:



- None.** Default selection.
- New.** Prompts the user to create a serial profile after configuring this serial port.
- New Profile 1.** An example existing serial profile.
- New Profile 2.** An example existing serial profile.

6. Select a Type:



- TCP.** Acts as a TCP client (default).
- HTTP.** For connecting via HTTP protocol.
- TCP Listener.** Acts as a TCP server.

7. Enter an IP address of the remote source.
8. Enter the TCP port of the remote source.
9. Max Line Length defaults to 80. This is the maximum number of characters before assuming an END OF LINE.
10. Line Ending is a character or set of characters that defines the END OF LINE.
11. Timeout is the interval in seconds at which END OF LINE is inserted.
12. Status displays the status of the port: Not Available, Connecting, or Connected.
13. Click Apply when finished.

7 Use and Profile/Protocol Fields

UART

Selecting PTZ in the Use field results in PTZ protocols in Profile/Protocol field.

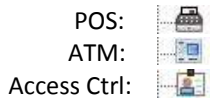


UART and IP

Selecting POS, ATM, or Access Ctrl in the Use field results in Serial Profiles in Profile/Protocol field.



POS, ATM, and Access Ctrl are the same functionally; they simply change the look of the icon that appears in Live view in exacqVision:



When POS, ATM, or Access Ctrl is selected, you must make a Profile selection. If no profiles exist, New is the only option. Selecting New displays the Serial Profile page immediately following the completion of the Serial Port configuration. (Serial Profiles do not apply to UART ports if PTZ is selected in Use field.)

For UART ports, selecting PTZ allows you to configure PTZ control, typically for analog PTZ-capable cameras. For this reason, the Profile/Protocol field displays a list of supported PTZ protocols instead of Serial Profiles. Generally, the COM port associated with the RS-485 network should be selected.

8 Max Line Length, Line Ending, and Timeout Fields

exacqVision processes serial data on a line-by-line basis. Therefore, it is necessary to define what a line is. Lines are defined by an END OF LINE (EOL). This is done using the three following fields; if any one of these fields is received, an EOL is identified and the line segment can be processed:

1. **Max Line Length** determine the EOL when this character count is reached.
2. **Line Ending** determines the EOL when a specific character string is matched.
3. **Timeout** determines the EOL after a certain time interval, in seconds, has elapsed (0 = disabled).

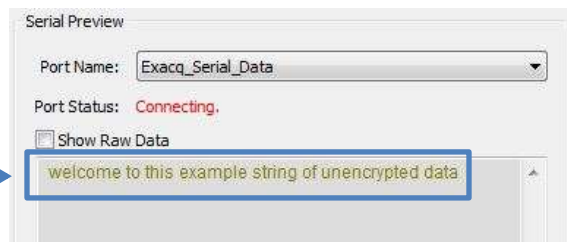
NOTE: It might appear that no data is being received if the criteria for one of these three methods is not met. Or, data might be received but it is not in the expected format.

Let's use the following stream of serial data to perform each of the three EOL methods. There are 50 printable characters here, and two control characters that are invisible and non-printable. These control characters are represented by `\x0D` and `\x0A`. (More on control characters later.)

welcome to this example string of unencrypted data\x0D\x0A

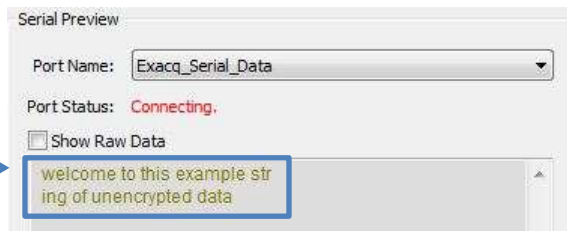
Full Line of Text

Full line of text.



Max Line Length = 27 would result in:

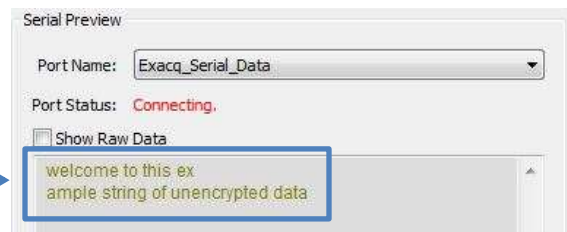
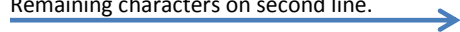
First EOL is after 27th character.
Remaining characters on second line.



Line Ending = x

(NOTE: We've set Max Line Length to 80.)

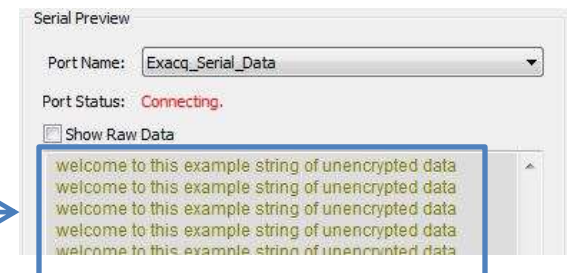
First EOL is after the first x.
Remaining characters on second line.



Timeout = 1

(NOTE: We've set Line Ending to blank.)

Every one second we get a line.



Max Line Length

In the example, we inserted an EOL after the 27th character. This separated the line into two parts, assuring the receipt of the first 27 characters (exacqVision identifies the 28th character location as an EOL). We also received the rest of the characters on the next line because of the built-in carriage return (\x0D) and line feed (\x0A) control characters at the end of the line.



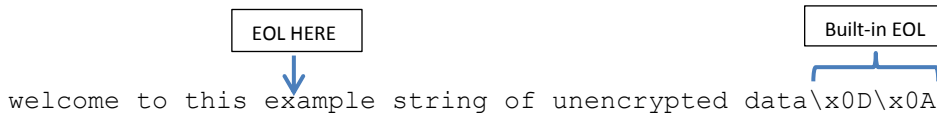
Line Ending

Line ending assumes that there will be a particular character or string of characters at the end of a line. Windows and Linux use different strategies for appending their EOL characters:

- Windows terminates the EOL with a carriage return and line feed (\x0D\x0A).
- Linux terminates the EOL with just a line feed (\x0A).

Leaving the Line Ending field blank causes exacqVision to try to match a carriage return and line feed (\x0D\x0A) automatically for Windows operating systems or just a line feed (\x0A) for Linux operating systems. Therefore, the user does not have to enter anything in this field for this matching to occur. However, if the user wants to match something other than the standard control characters, any character or string of characters can be entered into this field. It is important to understand that once a character is typed into this field, the automatic matching of carriage returns and line feeds is disabled, and exacqVision will attempt to match the entry in this field instead.

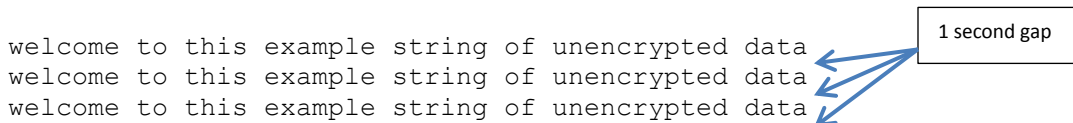
In the previous example, we entered an "x" into the Line Ending field. This told exacqVision to match an x in the data string instead of trying to match a carriage return and line feed (\x0Ax0D). This separated the line into two parts, between the x and the next character. The rest of the characters appeared on the next line.



Timeout

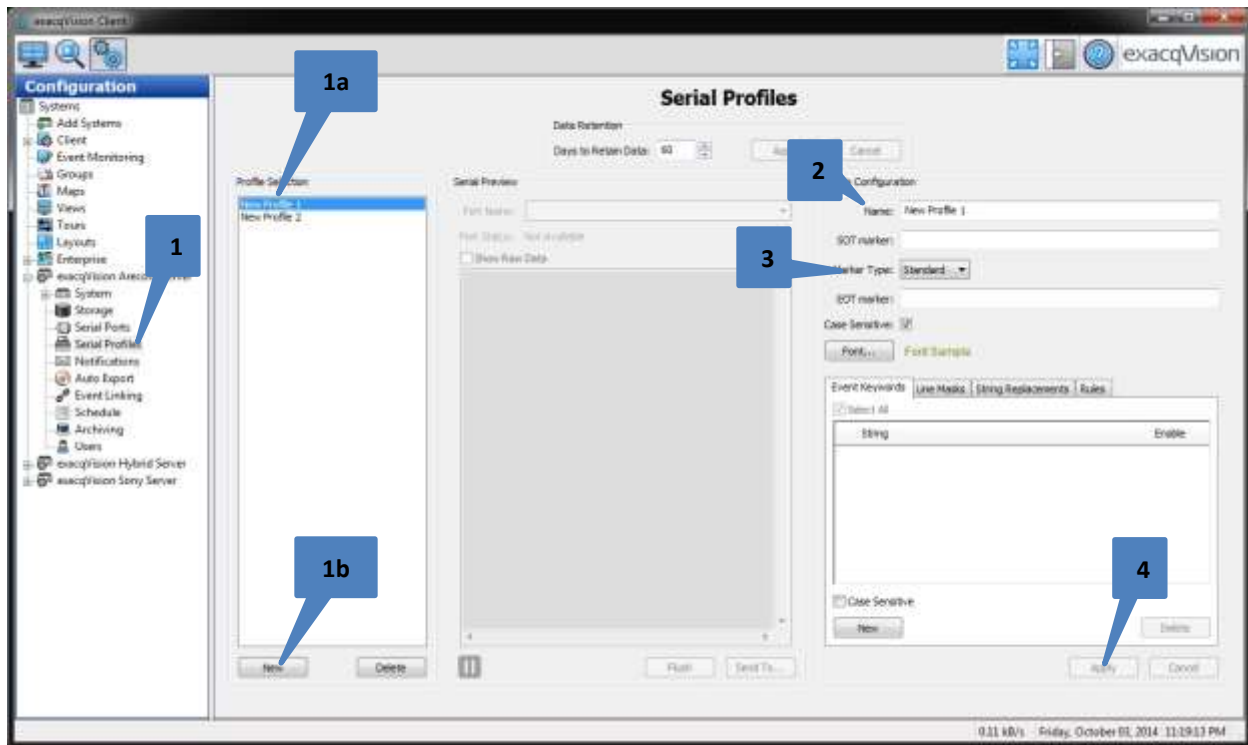
Timeout pulls a segment of data from the serial data stream at a regular interval, specified in seconds. If neither Line Length nor Line Ending result in the capture of data, setting Timeout to 1 second could reveal the data. This method is useful for troubleshooting. **NOTE:** A setting of zero means timeout is disabled.

In this example, let's assume that there are no carriage returns or line feeds, and the data size is less than the Max Line Length value. Therefore, there is nothing to tell exacqVision that an EOL has occurred. Let's also assume that the data source is continuously producing the same line of data. If we set the Timeout field to 1, we might see something like the following



9 Configuring a Serial Profile

Serial Profiles are intended for processing inbound serial data from POS, ATM, or access control systems. After the Serial Port has been configured correctly to identify individual segments or lines of serial data, the Serial Profile allows the user to process these data segments into more meaningful textual structures and set up actions such as keyword matching, line masks, string replacements, and rules.



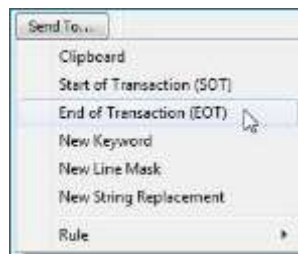
1. Click on Serial Profiles in the navigation tree.
 - a. If New was selected in the Profile field while configuring the serial port, exacqVision automatically creates a blank profile named New Profile 1. Select this profile and continue to step 3.
 - b. If the profile list is empty, click New. exacqVision initially names the first new profile New Profile 1. However after completing the next two steps, go back to the Serial Ports page and select your newly created profile in the Profile field of the serial port.
2. Change the name of the profile to something meaningful.
3. Leave SOT Marker (start of transaction) and EOT Marker (end of transaction) blank and Marker Type as Standard.
4. Click Apply.

A blank profile has been created and associated with a serial port. A conduit now exists for routing serial data from the wire into exacqVision. From here, it is important to have an understanding of the nature of the data you will be formatting.

10 Using Serial Preview

The Serial Preview window displays the data segments or lines that have been defined by the Serial Ports page. With an open Serial Profile we should start to see data.

1. Select the serial port name. This is the value assigned in the Name field on the Serial Ports configuration page.
2. Port Status shows the current connection status.
3. Show Raw Data displays the non-printable control characters such as carriage returns and line feeds (\x0D\x0A) along with the standard characters.
4. The Run button starts and stops the display. Clicking inside the display pauses the update.
5. The Flush button allows you to display the next line of data in the buffer, if there is any.
6. Send To... provides a quick way of assigning SOT, EOT, keywords, and more. First, highlight serial a string of data from the window, and then click "Send To..."

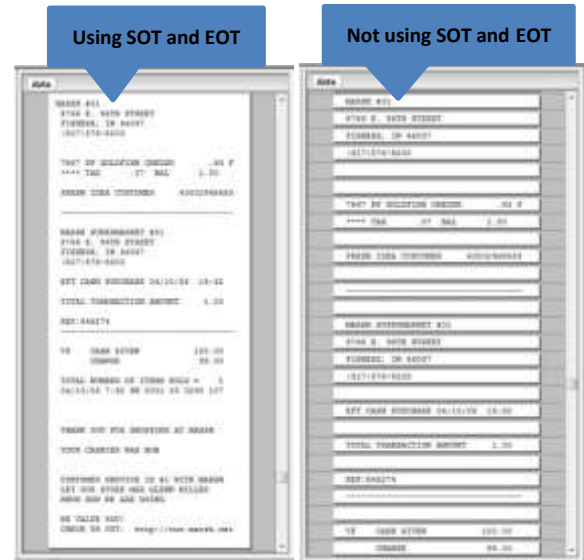


11 SOT and EOT

Start of Transaction (SOT) and End of Transaction (EOT) identify the beginning and the end of a transaction. This requires that the markers you are attempting to match are present in the data segments coming from the serial port. This can be verified by using the Serial Preview window.

exacqVision trims data to the left of the SOT and to the right of the EOT, and then aggregates all lines between into an individual transaction with timestamps for SOT and EOT. This results in a single database entry containing all data from an individual transaction.

The two examples to the right are from the Search page in exacqVision. They illustrate the difference between using SOT and EOT to construct a point of sale transaction and leaving those fields blank. Leaving SOT and EOT fields blank is equivalent to having each line be a unique transaction.



12 Marker Type

The marker type allows the user to select between two methods for identifying the structure of the data: standard and XML.

Standard

Standard tells exacqVision to expect plain text characters without any special formatting or structure in mind. Following is a piece of XML data that will be processed as Standard, clear text input. The text is a character match as it exists in the file. No special processing has taken place.



XML

XML tells exacqVision to identify XML formatting syntax, including angle brackets and a hierarchical structure. exacqVision assumes an opening and closing element for all pieces of data. exacqVision also disables user input to the EOT field, because it will generate the proper closing EOT based on what has been entered in the SOT field. For now, in this example, the SOT and EOT have been left blank.

exacqVision processes the XML data as follows:

1. Remove all angle bracket characters from the XML elements.
2. Remove the closing element from each element pair.
3. Indent as appropriate.
4. Insert equal signs between data and values, making it easy to set up Rules.



NOTE: When entering an SOT for XML data, you must prepend the opening angle bracket (<). For example, you would enter the SOT as "<TRANSACTION." exacqVision then generates the EOT when you click Apply.

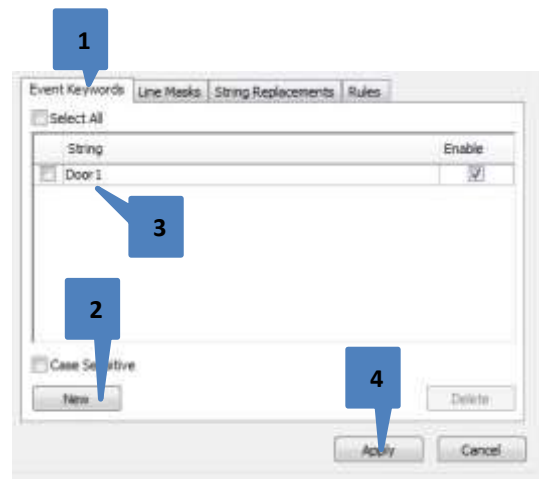


13 Event Keywords

Event keywords trigger exacqVision to react when it detects a certain combination of characters. Actions can be defined using Event Linking or Event Monitoring in exacqVision.

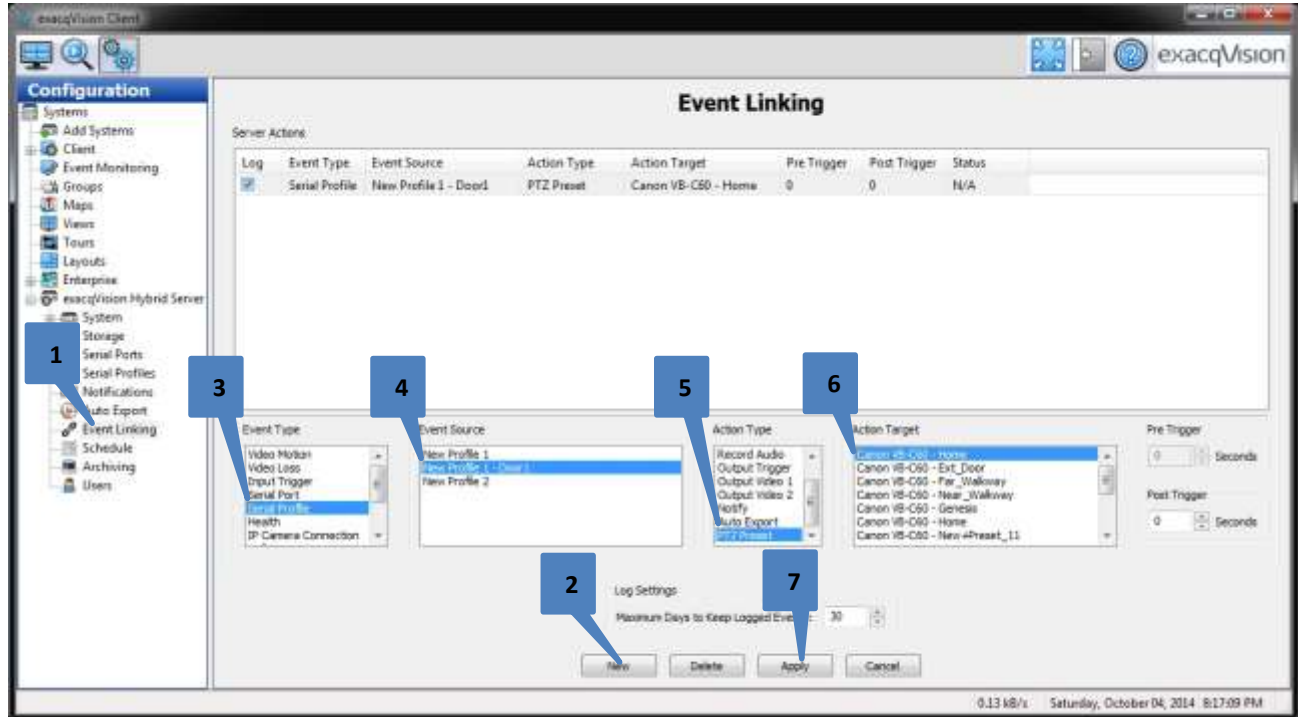
1. Click the Event Keywords tab.
2. Click New.
3. Enter the keyword.
4. Click Apply.

This keyword will be available for selecting in the Event Source list in both the Event Linking page and the Event Monitoring page of exacqVision.



Using a Keyword in Event Linking

Event Linking allows you to set up event-based actions that can trigger functions such as recording video, PTZ control, sending an email, and more. For more information on Event Linking, see the exacqVision User Manual. A simple example is shown here for verification of how keywords in the Serial Profile are shown in Event Linking.



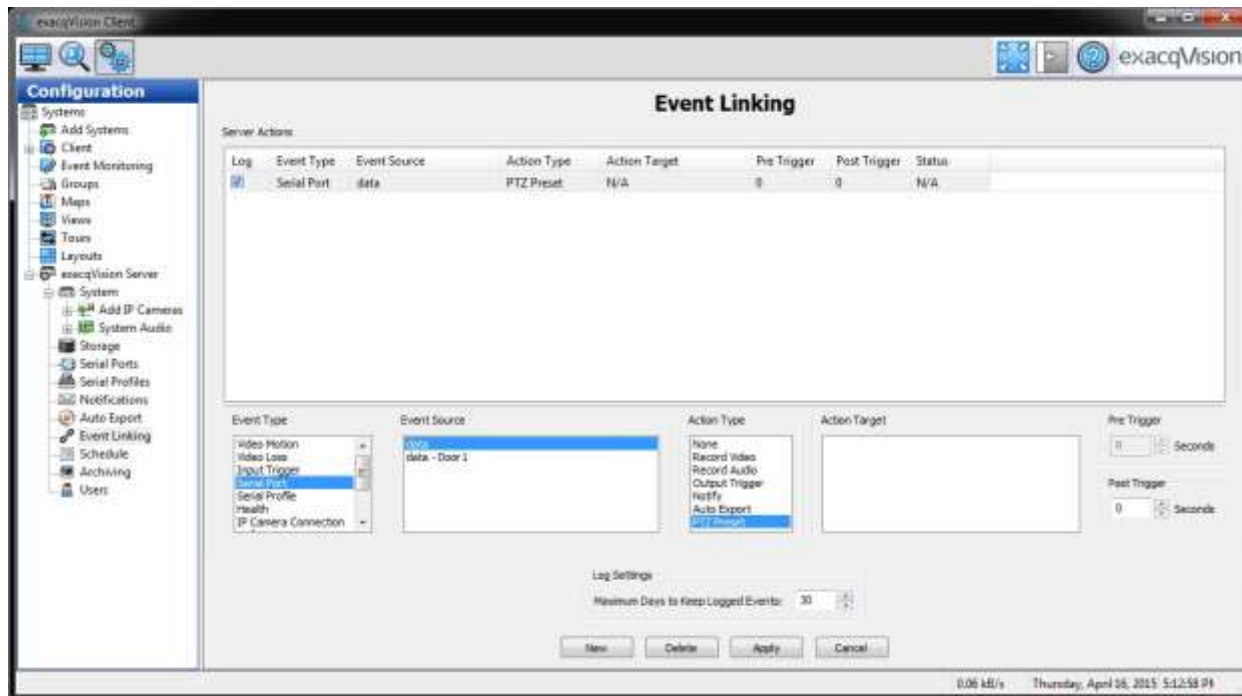
1. Select Event Linking in the navigation tree.
2. Click New.
3. Select Serial Profile in the Event Type list.
4. Select the serial profile name with “ - Door1” appended to it. This affirms that exacqVision recognizes “Door1” as a keyword from the Serial Profile for use as an Event Source.

NOTE: Selecting only the serial profile name “New Profile 1” without the “ - Door 1” appended to it will cause ALL keywords defined in the serial profile to be matched.

5. Select an Action Type.
6. Select a camera from the Action Target list.
7. Click Apply.

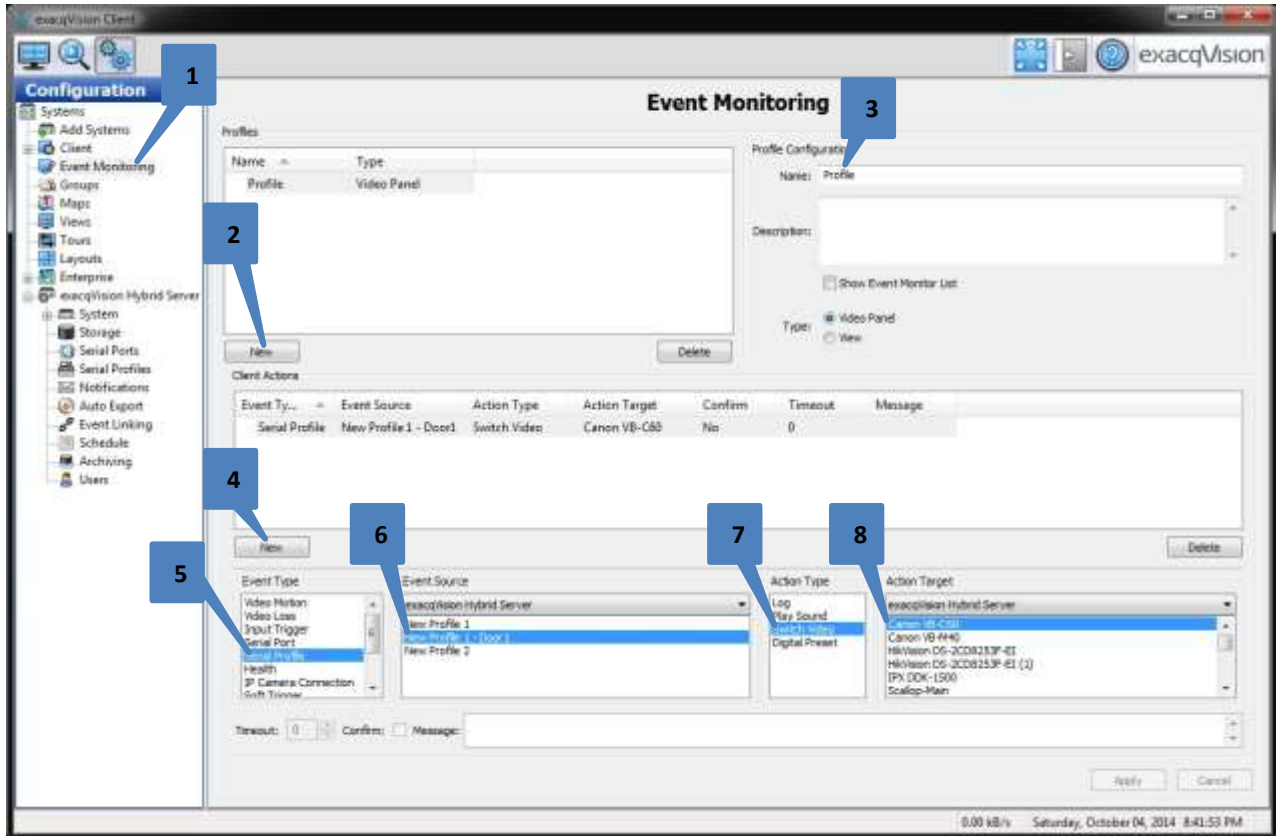
An Event Linking action has now been configured so that when exacqVision receives the serial string “Door1,” the camera selected will move to a PTZ preset position. The options available in Action Type and Action Target vary based on other features of the exacqVision system, along with available cameras and components.

It is also possible to match keywords on a specific serial port, as opposed to all serial ports. In this example, Serial Port is chosen as the Event Type. The Event Source box contains the names of the configured serial ports. You can select the serial port name, without any appended keywords (to match all keywords configured), or you can select the serial port name with individual keywords appended.



Using Keywords in Event Monitoring

Event Monitoring allows you to set up event-based actions that change the way the client displays cameras, views, and video. For a full discussion of Event Monitoring, see the exacqVision User Manual. A simple example is shown here for verification of how keywords in the Serial Profile are shown in Event Monitoring.



1. Select Event Monitoring.
2. Click New.
3. Name the Event Monitoring profile. This a profile specifically for the Event Monitoring page, which should not be confused with the profile for Serial Profiles. There is no correlation between these two profiles.
4. Click New.
5. Select Serial Profile.
6. Select the serial profile name with “ – Door1” appended to it. This affirms that exacqVision has recognized “Door1” as a keyword for use as an Event Source.
7. Select an Action Type.
8. Select an Action Target.

In this example, Event Monitoring has been configured so that when exacqVision receives the serial string “Door1,” exacqVision Client switches the video currently being displayed to the camera selected in the Action Target. The options available in Action Type and Action Target vary based on other features of the exacqVision system, along with the cameras and components connected to the system.

14 Line Masks

Line masks are used for masking out entire line segments. Line Masks work by matching a character string entered by the user to a character string embedded in the serial data segment. When a match is found, the entire segment is removed from the transaction. The Live and Search checkboxes provide control of where and how you want the line segment removed.

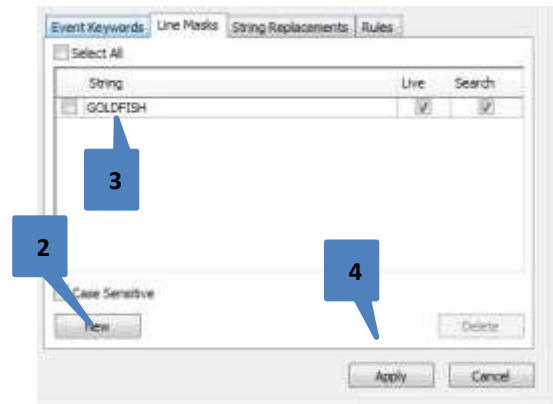
- Live removes line segment from Live View, but still writes the data to database for searching.
- Search prevents line from being written to database, and therefore it cannot be searched.

NOTE: Selecting Search but not Live results in seeing the line segment in live view, but not saving it to the database.

In this example, a Line Mask of "GOLDFISH" prevents the entire line containing the word GOLDFISH from being displayed.

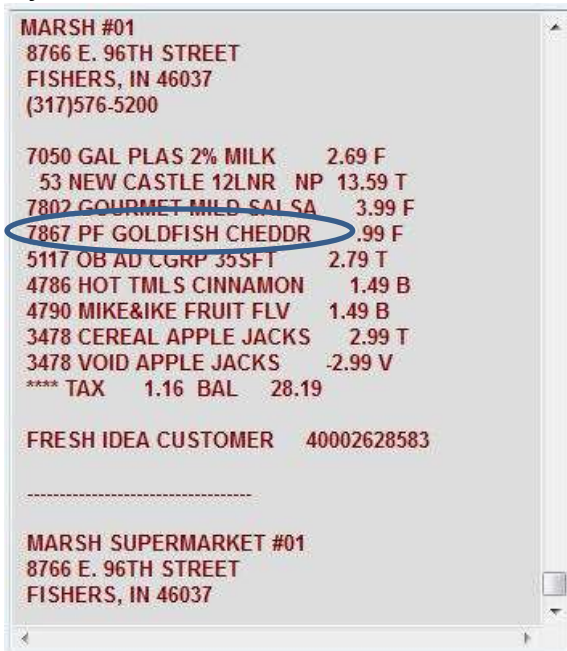
First, configure the Line Mask

1. Select Line Masks.
2. Click New.
3. Enter the character string to match.
4. Click Apply.



Here are the before and after results of this Line Mask in the Serial Preview Window. The entire line containing GOLDFISH has been removed from Serial Preview.

Before



After



Here are the results in the Search Page of exacqVision. Notice that, with the Search box checked when we created the line mask, the line segment does not appear in search results because it was not written to the database. This means the data has not been saved. Use caution when creating line masks and configuring the Search and Live checkboxes.

Before

Marsh Feed

```

MARSH #01
8766 E. 96TH STREET
FISHERS, IN 46037
(317)576-5200

7050 GAL PLAS 2% MILK      2.69 F
 53 NEW CASTLE 12LNR NP 13.59 T
7802 GOURMET MILD SALSA    3.99 F
7867 PF GOLDFISH CHEDDR    .99 F
5117 OB AD CGRP 35SFT     2.79 T
4786 HOT TMLS CINNAMON    1.49 B
4790 MIKE&IKE FRUIT FLV   1.49 B
5295 LIQUOR JIM BEAM     -17.25 T
4763 VOID JIM BEAM       -17.25 V
**** TAX      1.16 BAL    28.19

FRESH IDEA CUSTOMER      42302628583

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MARSH SUPERMARKET #01
  
```

Paused

03:26 03:27 03:28 03:29 03:30 03:31

03:26:43

After

Marsh Feed

```

MARSH #01
8766 E. 96TH STREET
FISHERS, IN 46037
(317)576-5200

7050 GAL PLAS 2% MILK      2.69 F
 53 NEW CASTLE 12LNR NP 13.59 T
7802 GOURMET MILD SALSA    3.99 F
5117 OB AD CGRP 35SFT     2.79 T
4786 HOT TMLS CINNAMON    1.49 B
4790 MIKE&IKE FRUIT FLV   1.49 B
3478 CEREAL APPLE JACKS   2.99 T
3478 VOID APPLE JACKS     -2.99 V
**** TAX      1.16 BAL    28.19

FRESH IDEA CUSTOMER      40002628583

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MARSH SUPERMARKET #01
8766 E. 96TH STREET
  
```

Paused

03:26 03:27 03:28 03:29 03:30 03:31

03:27:52

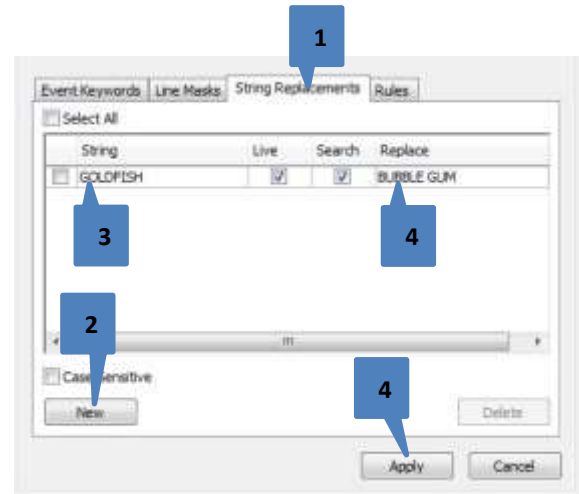
15 String Replacements

String replacements are used to replace an anticipated character string in the serial data with a character string defined by the user. String Replacements can be visible in the exacqVision Live and Search views:

- Live performs replacement in Live View but still writes the original data to database.
- Search replaces of data written to the database but leaves data displayed in Live View unchanged.

In this example, GOLDFISH is replaced by BUBBLE GUM.

1. Select the String Replacements tab.
2. Click New.
3. Enter the string to replace.
4. Enter the replacement string.
5. Click Apply



The Live and Search checkboxes enable or disable the masking effects in exacqVision for the Live or Search pages. Remember, the original data is not deleted, and it is saved in the database.

Here are the before and after results of this String Replacement.

Before



After



Here are the result on the Search age. Notice that, with the Search box checked when we created the string replacement, the data written to the database was the substituted data of "BUBBLE GUM," not the original data of "GOLDFISH." Use caution when selecting the Search and Live checkboxes.

Before

Marsh Feed

```

MARSH #01
8766 E. 96TH STREET
FISHERS, IN 46037
(317)576-5200

7050 GAL PLAS 2% MILK      2.69 F
 53 NEW CASTLE 12LNR NP 13.59 T
7802 GOURMET MILD SAISA   3.99 F
7867 PF GOLDFISH CHEDDR   .99 F
5117 OB AD CGRP 3SSFI    2.79 T
4786 HOT TMLS CINNAMON    1.49 B
4790 MIKE&IKE FRUIT FLV   1.49 B
3478 CEREAL APPLE JACKS   2.99 T
3478 VOID APPLE JACKS     -2.99 V
**** TAX      1.16 BAL    28.19

FRESH IDEA CUSTOMER      40002628583

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MARSH SUPERMARKET #01
8766 E. 96TH STREET
FISHERS, IN 46037
(317)576-5200
    
```

Paused 04:28 04:29 04:30 04:31 04:32
04:29:05

After

Marsh Feed

```

MARSH #01
8766 E. 96TH STREET
FISHERS, IN 46037
(317)576-5200

7050 GAL PLAS 2% MILK      2.69 F
 53 NEW CASTLE 12LNR NP 13.59 T
7802 GOURMET MILD SAISA   3.99 F
7867 PF BUBBLE GUM CHEDDR .99 F
5117 OB AD CGRP 3SSFI    2.79 T
4786 HOT TMLS CINNAMON    1.49 B
4790 MIKE&IKE FRUIT FLV   1.49 B
5295 LIQUOR JIM BEAM      17.25 T
4763 VOID JIM BEAM        -17.25 V
**** TAX      1.16 BAL    28.19

FRESH IDEA CUSTOMER      42302628583

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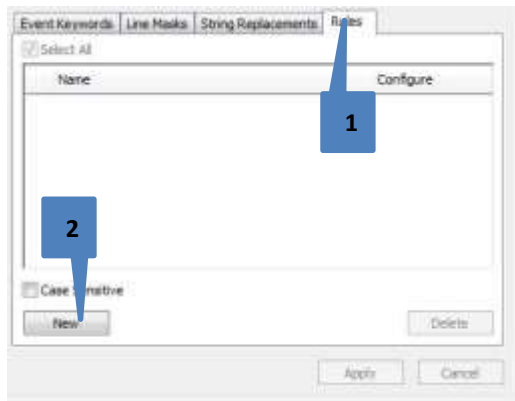
MARSH SUPERMARKET #01
8766 E. 96TH STREET
FISHERS, IN 46037
(317)576-5200
    
```

Paused 04:28 04:29 04:30 04:31 04:32
04:29:40

16 Serial Rules

Serial Rules provide a way to perform simple logic algorithms on serial data.

1. Select the Rules tab.
2. Click New. A dialog box for configuring the first rule is opened.



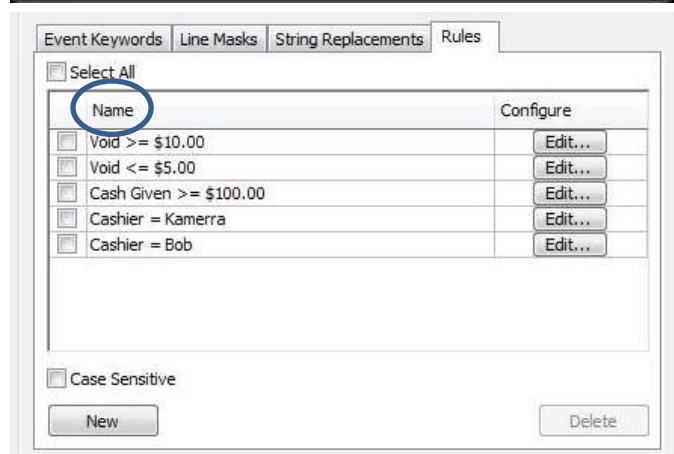
3. Field Position tells exacqVision where the field is positioned relative to its associated value in the serial data segment:
4. Field is the variable. This can be a previously defined Event Keyword, or it can be declared in the text box:
5. Operator is a typical mathematical comparison functions:
6. Value is the value for which the comparison will be made (+ and - signs are respected).
7. Add Sub-Rule Subtract Sub-Rule

If more than one Sub-Rule is defined for any given Serial Rule, the Sub-Rules are ANDED together. This means that all Sub-Rules must be satisfied for the Serial Rule to be true.

Serial Rules are made available in:

- Event Linking
- Event Monitoring
- Serial Search

The Serial Rule Name field is how the Serial Rule is identified in these other features of exacqVision.

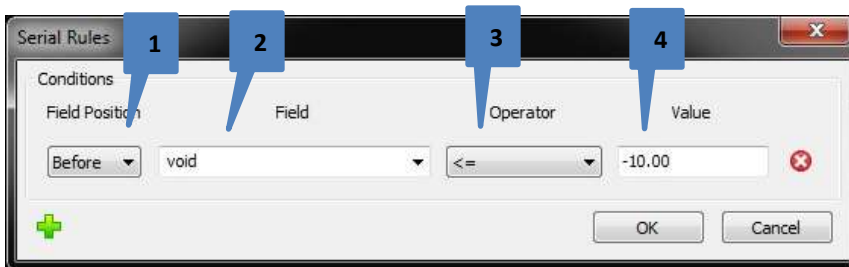


Example Serial Rule

You might set up a rule for encountering the word "void" this way.

1. The word "void" occurs before, or to the left of, the actual value (-10.00). Therefore, choose Before for Field Position.
2. Enter the word that you want exacqVision to address as the variable. In this case, it is "void."
3. Enter the operator type.
4. Enter the value you want to compare.

This rule will become TRUE when a void occurs on an item less than or equal to \$-10.00.



Event Monitoring with Serial Rules

In Event Monitoring, Serial Rules become Event Sources. When the Serial Rule becomes true, the Action Type and Action Target mechanisms are executed.

Event Monitoring

Profiles

Name	Type
Profile	Video Panel

Profile Configuration

Name: Profile

Description:

Show Event Monitor List

Type: Video Panel New

Client Actions

Event Type	Event Source	Action Type	Action Target	Confirm	Timeout	Message
Serial Profile	Unknown	Digital Preset	Analog - Disco Ball - New Preset_1	No	0	

Event Type: Serial Profile

Event Source: IP Marsh Port - Void >= \$10.00

Action Type: Digital Preset

Action Target: Analog - Disco Ball - New Preset_1

Timeout: 0 Confirm: Message:

Event Linking with Serial Rules

In Event Linking, Serial Rules become Event Sources. When the Serial Rule becomes true, the Action Type and Action Target mechanisms are executed.

Event Linking

Server Actions

Log	Event Type	Event Source	Action Type	Action Target	Pre Trigger	Post Trigger	Status
<input checked="" type="checkbox"/>	Serial Profile	IP Marsh Port	Output Trigger	Output 2 - Disco ball	0	0	N/A

Event Type: Serial Profile

Event Source: IP Marsh Port - Void >= \$10.00

Action Type: Output Trigger

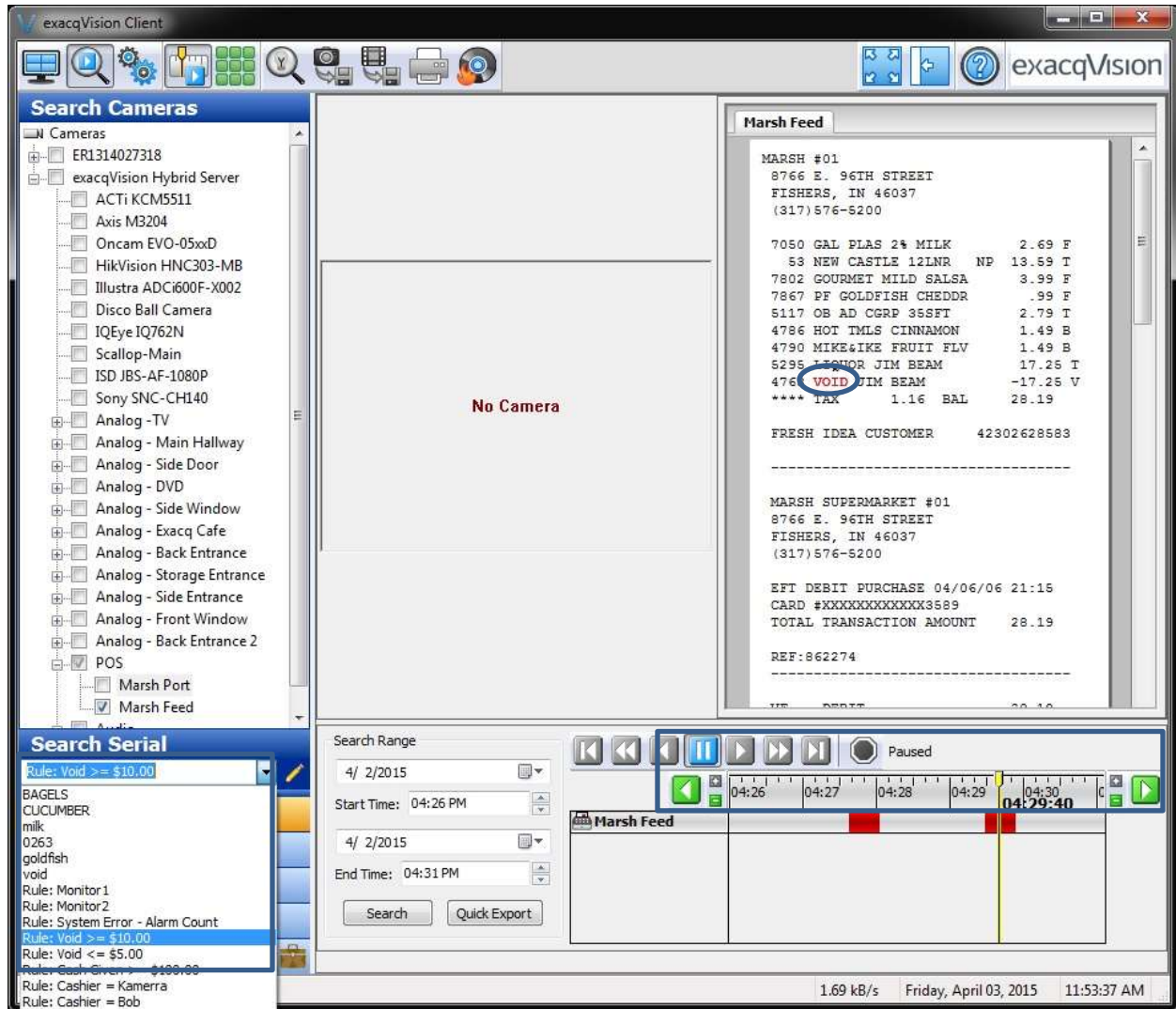
Action Target: Output 2 - Disco ball

Pre Trigger: 0 Seconds

Post Trigger: 0 Seconds

Serial Search with Serial Rules

In the Search feature of exacqVision, Serial Rules are made available as shown below. exacqVision highlights search results in red and displays only instances of those results on the timeline



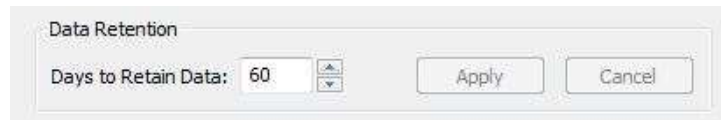
Data Interpretation in Serial Rules

Because there are no controls over assigning variables directly or declaring data types for the purpose of Serial Rules, there are specific ways in which exacqVision interprets variables and handles data types:

1. exacqVision assumes that a numerical value is the value to be operated if any characters 0-9 are found.
2. exacqVision interprets the numerical value it finds in one of two ways:
 - a. If a decimal point is not found, exacqVision interprets the numerical value as an integer.
 - b. If a decimal point is found, exacqVision interprets the data as a floating point value.
3. Minus and plus signs are respected if they precede a numeric value.
4. If neither floating point nor an integer is detected, exacqVision interprets the value as text.
5. An equal sign operator also serves as a match operator when matching character strings instead of numeric values.
6. Less than "<" and greater than ">" operators apply ONLY to numeric values.

17 Data Retention

The Data Retention feature of Serial Profiles allows you to determine how long serial data remains stored in the database before it is automatically deleted. By default, this value is set to 60 days.



The screenshot shows a dialog box titled "Data Retention". It contains a label "Days to Retain Data:" followed by a text input field containing the number "60". To the right of the input field is a small spinner control with up and down arrows. To the right of the spinner are two buttons: "Apply" and "Cancel".

It is recommended that you set the data retention equal to the retention of video on the exacqVision system.

18 Known Issue

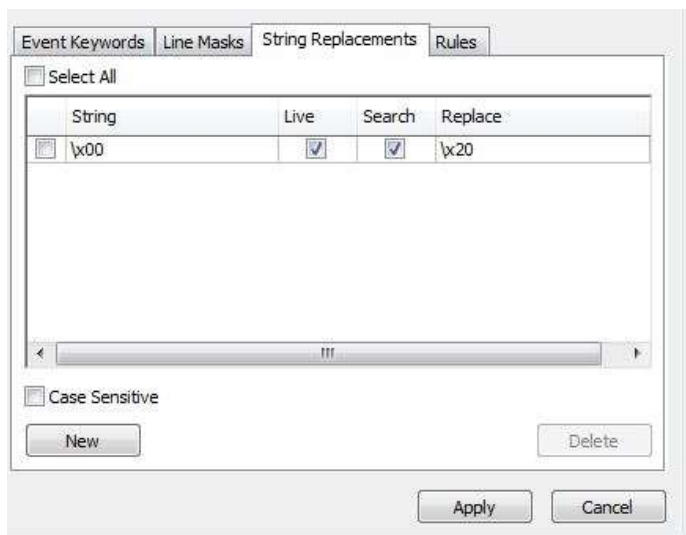
NULL Character (0x00)

There is a known issue when NULL characters (0x00) are received and stored by exacqVision. When NULL characters are saved in the database, it can cause searches to return partial data.

As a workaround, add an entry to the String Replacement feature in the Serial Profiles page. In this example, we are replacing the NULL character with a SPACE character. This causes a space to be written permanently into the database in place of NULL characters. This enables searches to work as expected in the future.


NOTE: Data already written to the database before enabling a string replacement will NOT be replaced by the string.

- \x00 represents NULL character.
- \x20 represents a SPACE character.



19 More Information

The intent of this document was to provide guidance in configuring and using exacqVision's serial integration capabilities. Please see the following resources for more help:

- Context-based Help is available in the exacqVision interface in the upper-right corner. 
- <https://exacq.com/support/specsheets.php> (Quick Start Guides, User Manuals, Integration Guides and more)
- <https://exacq.com/kb/#loadCategory~FAQs> (exacqVision Knowledge Base)
- <https://exacq.com/support/techsupport/> (FAQs and technical support)