Difference Between TCP, TCP Listening, HTTP, and UDP Serial Profile Protocols in exacqVision

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Introduction

exacqVision can ingest serial data (for example POS/ATM/access-control text strings) and then use Serial Profiles to store, display, search, and trigger actions from that data. Serial data is typically unencrypted, clear-text/ASCII characters delivered either through a physical serial interface (UART/RS-232/RS-485) or over the network (serial-over-IP).

This article explains how the Serial Port "Type" options relate to common network protocols so you can select the correct option for your device or integration.

Problem

Customers and integrators often see multiple serial transport options (TCP, TCP Listener, HTTP, UDP) and are unsure which one to use. Choosing the wrong option can prevent serial data from being received, which can break Event Keywords, Event Linking, POS overlays, or searches.

Cause

The protocol names describe different connection models and traffic direction. For example, TCP vs TCP Listener is mainly about which side initiates the connection (client vs server). UDP is connectionless and does not guarantee delivery. HTTP is request/response and is usually associated with web endpoints/APIs rather than a persistent serial socket.

Solution

Use the guidance below to pick the correct Serial Port Type in exacqVision and confirm firewall direction.

High-level rules:

- Use TCP when exacqVision must connect OUT to a device that is listening (device acts as server).
- Use TCP Listener when the device/app pushes IN to exacqVision (exacqVision acts as server/listener).
- Use UDP only when the sender is UDP-based and occasional loss is acceptable.

• Use HTTP when integrating through web endpoints/APIs (not typical for raw Serial Ports ingestion).

Protocol	Direction	Transport Characteristics	Typical exacqVision Use
TCP	Outbound (exacqVision connects out)	Reliable, ordered byte-stream	Serial-over-IP when device is listening and expects a client connection
TCP Listener (TCP Listening)	Inbound (exacqVision listens)	Reliable, ordered byte-stream	Device/app pushes serial strings to exacqVision; requires inbound firewall allowance
HTTP	Request/response	Stateless application protocol	Typically used for web endpoints/APIs; not the usual method for raw Serial Ports ingestion
UDP	Connectionless datagrams	No delivery/order guarantee	Use only when sender is UDP-based or integration specifies UDP; loss may occur

Where to configure in exacqVision Client:

• Config (Setup) → Serial Profiles (keywords, rules, masking)
• Config (Setup) → Serial Ports (choose Type: TCP / TCP Listener / etc.)

Reminder: TCP vs TCP Listener is about which side initiates the connection.

References

https://support.cloudvue.com/#/knowledge-base/article/2802 - TCP HTTP Serial Connections
https://youtu.be/7GTtH0KEdoM?si=dv5mC_usRoOrKj9c - Serial Profile
https://support.cloudvue.com/#/knowledge-base/article/13779 - TCP Listening