Systems FAST

Installation Guide

TERRA 4D Integration

with

Milestone XProtect®

Last Update: November 2021

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1. Overview

TERRA 4D is a software platform designed to integrate multiple unconnected security and safety applications and devices and control them through one comprehensive user interface. The platform is vendor independent and supports cross-platform interoperability. The common unified user interface allows remote control of platforms, sensors and subsystems including air, land, maritime and space-based platforms.

The TERRA 4D platform includes a plug-in interface which makes it possible to integrate different types of physical sensors, data bases and 3rd party applications into the system without touching the core software version. Changes to the configuration can be made in real-time without the need to stop operation of the integrated solution.

Interfacing with the TERRA 4D platform can be done on different levels (types of integration). There is a scripting service included providing access to the system configuration, events and selected functions. This scripting service can be used by other software to change system parameters or to get live information during system run-time.

With the integration of Milestone XProtect® operators are now able to monitor and operate devices connected to XProtect® seamless from the TERRA 4D user interface.

Solution Key Features:

- Live view of video streams in 2D video views or embedded directly in the 3D GIS model
- Play back of recorded material
- Automatic camera display according to distance to incident location
- Direct PTZ camera control from video view or 3D GIS map
- Geo-referenced video: determine object location (latitude, longitude, height), speed, direction and size directly from video image
- Augmented reality: additional graphical layer on top of video image showing interactive items
- IO devices: IO devices connected to XProtect® can be monitored or controlled
- Display and visualization of status of all devices connected to XProtect®
- Receive of any event or alarm from XProtect® in TERRA 4D

Important Note: This documentation does not replace the manufacturer's documentation.

2. Software Licensing Model

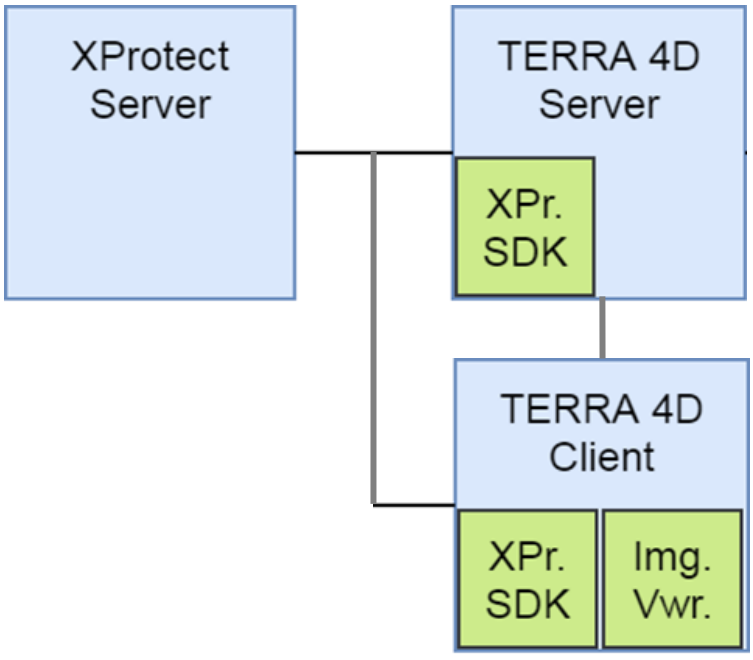
The Milestone XProtect® integration in TERRA 4D comprise a plug-in for the relevant XProtect® version.

Licensing of the TERRA 4D plug-in is for each Milestone XProtect® version that is part of a TERRA 4D installation.

To request a license for the Milestone XProtect® plug-in please forward the key file after the TERRA 4D installation (see chapter 2.4 in the TERRA 5D Installation Guide) to support@fastsystems.ch

3. Design

The configuration for the Milestone XProtect® integration in TERRA 4D via plug-in is shown in the simplified block diagram below:



TERRA 4D runs on a client server architecture. The TERRA 4D server connects through the XProtect SDK to the XProtect® Server to get the status of all devices and to receive events. The TERRA 4D client also runs the SDK to show the live and playback video in the XProtect® ImageViewerDotNet control.

4. Requirements

Regard the prerequisites to get a fully working installation of TERRA 4D as outlined in detail in the generic TERRA 4D Installation Guide.

To get up-to-date Information that can be important for selecting a hardware, or to get tips on installations and configuration, including for Milestone XProtect® Video Management System, please visit our Wiki website: http://wiki.fastsystems.ch

5. Installation

To connect Milestone XProtect® SDK and TERRA 4D, the server must be configured correctly. If cameras are visible on the Milestone XProtect® server, this does not automatically mean that TERRA 4D can access them. All server settings are made in the Milestone Management Application.

Typical error sources could be:

- Ports blocked by firewall

  The Milestone Server communicates by default via various ports incl. ports 80, 443, 6473, 7475 and others. Please verify that all ports are also passed through in the Microsoft Windows® firewall.

  Note:

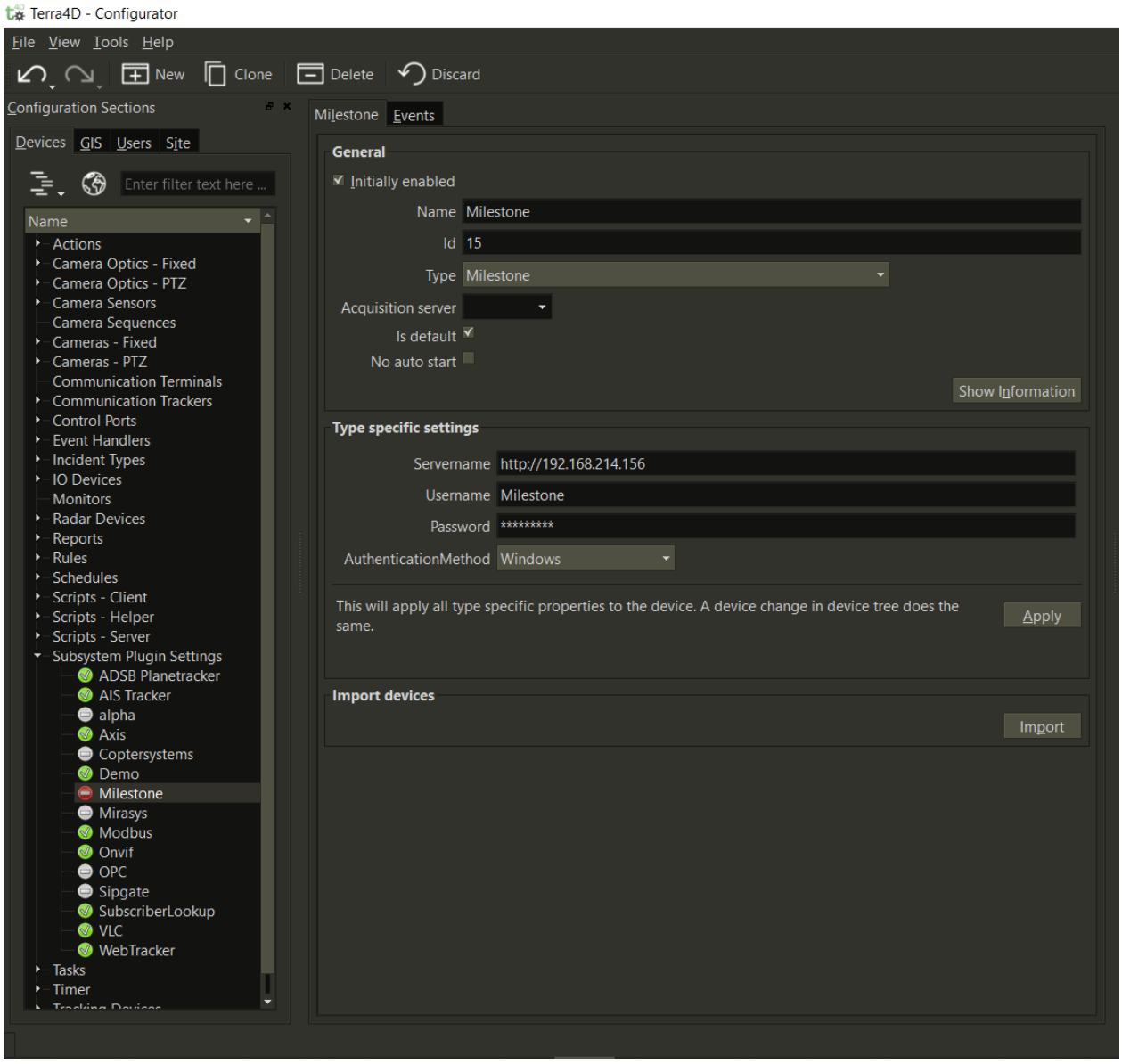
  A list of TCP/IP ports used in XProtect® Advanced VMS products can be found on the Milestone Systems developer website: https://developer.milestonesys.com

In addition to the normal TERRA 4D installation, the Milestone XProtect® SDK must also be installed on the TERRA 4D Server and Clients.

6. Configuration

Once the TERRA 4D installation has been completed and started the Milestone XProtect® plug-in can be configured in the TERRA 4D Configurator program. This program is part of the TERRA 4D installation and offers real-time configuration of the system without the need to stop or restart the TERRA 4D application.

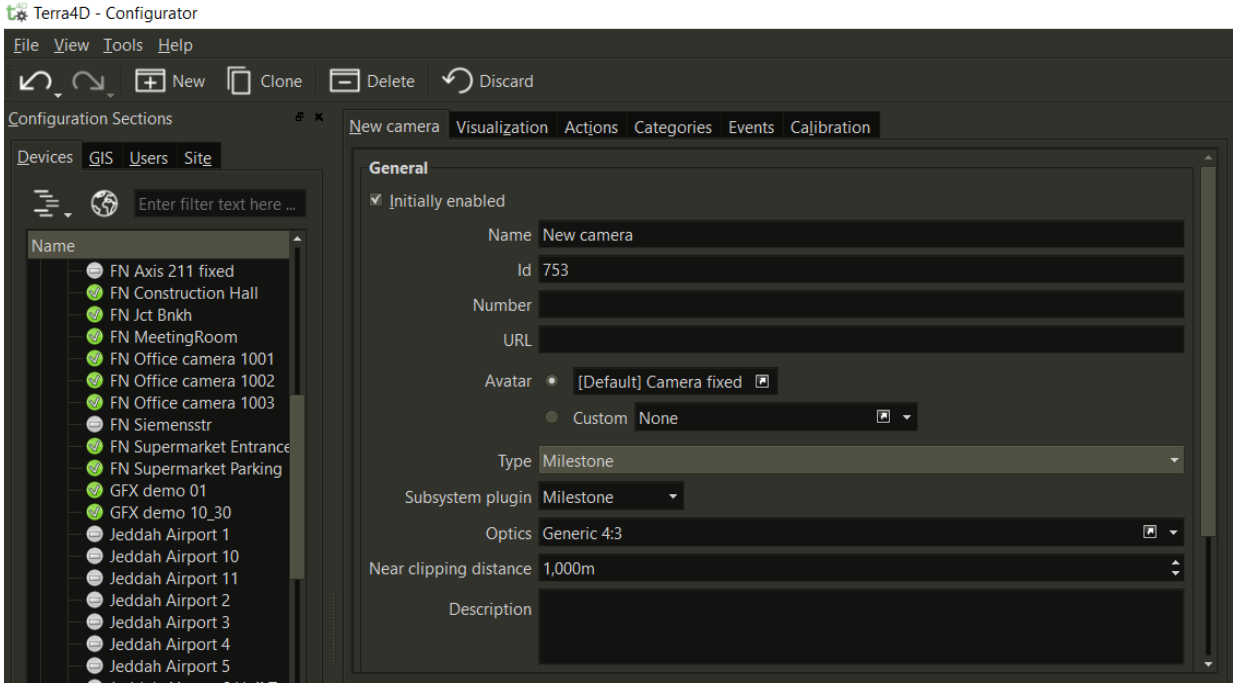
Open Tab “Devices” > “Subsystem Plugin Settings” > “Milestone”:



Default information regarding the Milestone XProtect® plug-in is defined under **General** (ID and name of the TERRA 4D plug-in etc.). In order to connect to the Milestone server specific settings have to be entered:

Name	Kind	Comment
Servername	Text	The name or IP Address of the Milestone server.
Username	Text	Username to access the device.
Password	Text	Password to access the device.
Authentication Mode	Drop down list	How Terra 4D authenticate itself against the server. Values are: • Basic • Windows

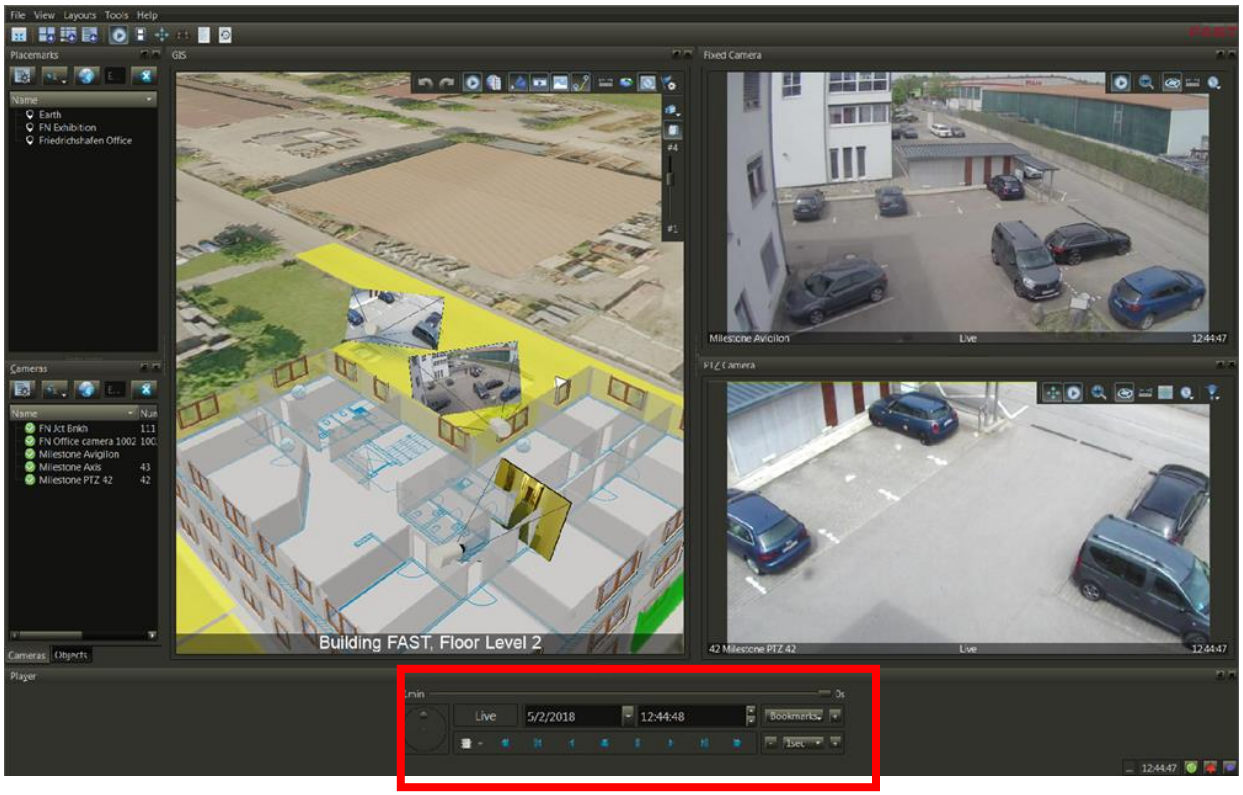
As the next step cameras connected to the Milestone XProtect® server can be easily loaded through the plug-in menu item **Import devices.**



Each camera (device) that is connected through the Milestone server must then be configured on the “Devices” tab according to the device’s capabilities.

7. Operation

The following screenshot shows live video streaming of cameras that are connected through the Milestone XProtect® plug-in in the TERRA 4D client application. The videos are shown as 2D video view on the right side and embedded with camera location and virtual video wall in the 3D GIS view in the center part.



The Video Player widget at the buttom of the screenshots allow easy control of recorded streams in the video archive.