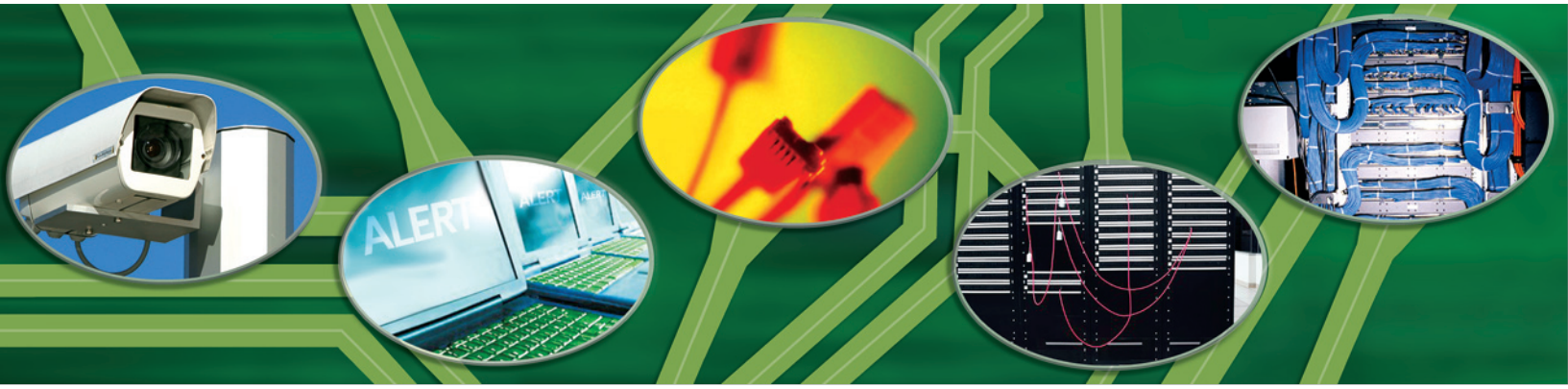
ObjectVideo®




# OBJECTVIDEO® ONBOARD™

## DEPLOYMENT AND MAINTENANCE GUIDE

INSTALLING, SETTING UP AND MAINTAINING OBJECTVIDEO ONBOARD

ObjectVideo® OnBoard™
INTELLIGENT VIDEO

THIS GUIDE ALSO DESCRIBES HOW TO DEPLOY AND MAINTAIN
OBJECTVIDEO® VEW®, OBJECTVIDEO FORENSICS™ AND THE OBJECTVIDEO INTEGRATOR TOOLKIT™.

The information in this documentation is subject to change without notice and does not represent any commitment on behalf of ObjectVideo. ObjectVideo disclaims any liability whatsoever for incorrect data that may appear in this documentation. The product(s) described in this documentation are furnished subject to a license and may only be used in accordance with the terms and conditions of such license.





This product includes software developed by the Apache Software Foundation (http://www.apache.org).



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Find out more about ObjectVideo at http://www.objectvideo.com.

# Contents

# Introduction

This guide describes how to install, set up, and maintain ObjectVideo OnBoard™ 3.0 and ObjectVideo® VEW® 3.0. It also describes how to install, set up, and maintain ObjectVideo Forensics™ 3.0 and ObjectVideo Integrator Toolkit™ 3.0. This chapter provides the following information:

- Tips on how to read this guide
- A description of the ObjectVideo products
- An overview of the ObjectVideo system
- Minimum system and environmental requirements
- Details about the installation CDs that accompany the ObjectVideo products
- A description of other documentation available from ObjectVideo

## How to Read This Guide

Before you install the ObjectVideo system, read this introductory chapter. Pay particular attention to the "System Overview" section on page 5 and follow the guidelines in "Minimum System and Environmental Requirements" on page 17.

When you have the proper hardware and environment in place to support the system, you are ready to start installing and configuring the system.

**You *must* perform the steps described in "Initial Deployment Steps" on page 28.** These preliminary steps must be completed for every ObjectVideo product.

After you have performed the initial set-up steps, do the following:

- To complete the set-up process for ObjectVideo VEW and ObjectVideo OnBoard, follow the instructions in "Completing the ObjectVideo VEW and ObjectVideo OnBoard Deployment Process" on page 78. You only need to complete the steps in this chapter if you are using ObjectVideo VEW or ObjectVideo OnBoard for real-time event detection.

- To complete the set-up process for ObjectVideo Forensics, follow the instructions in "Completing the ObjectVideo Forensics Deployment Process" on page 85. You only need to complete the steps in this chapter if you are using ObjectVideo Forensics to detect events that occurred in the past.

- To install the ObjectVideo Integrator Toolkit, follow the instructions in "Installing the ObjectVideo Integrator Toolkit Applications" on page 106.

Guidelines on how to ensure your system operates optimally over time are provided in "Maintaining the System" on page 110.

If you experience problems while installing the system, see "Troubleshooting" on page 156.

**Notes:**

- This guide explains how to access Microsoft Windows Control Panel options in Category View rather than Classic View.

- This guide assumes that you are using installation CDs provided by ObjectVideo.

# ObjectVideo Products

The ObjectVideo products are ObjectVideo VEW, ObjectVideo OnBoard, and ObjectVideo Forensics. The ObjectVideo Integrator Toolkit is a package of software applications provided with these products. The ObjectVideo products detect events in surveillance video, both in real-time and for investigative purposes. ObjectVideo VEW and ObjectVideo OnBoard perform real-time event detection. ObjectVideo Forensics searches for events that occurred in the past.

ObjectVideo Forensics depends on ObjectVideo VEW or ObjectVideo OnBoard with metadata as a prerequisite. You must install and configure ObjectVideo VEW or ObjectVideo OnBoard with metadata before you can use ObjectVideo Forensics, as described in this guide.

In addition to its event detection products, ObjectVideo provides a package of software tools called the ObjectVideo Integrator Toolkit, which is used by integrators and customer support personnel to help plan for and support ObjectVideo VEW, ObjectVideo OnBoard, and ObjectVideo Forensics.

## *ObjectVideo VEW*

ObjectVideo VEW monitors video feeds for events and alerts you in real time as events take place.

VEW Standard™, VEW HiRes™, VEW Leader/Follower, and VEW FlowControl™ are available with ObjectVideo VEW.

VEW Standard detects and reports when an object crosses a tripwire, crosses multiple tripwires, appears, disappears, enters, exits, loiters in an area, is inside an area, is taken away, or is left behind. VEW Standard also detects and reports scene change events.

VEW HiRes detects and reports the same event types as VEW Standard, but it analyzes video at a higher resolution (640 x 480 or 720 x 480) to detect more events and detect them more accurately. VEW Standard, VEW FlowControl, and VEW Leader/Follower process video at a resolution of 320 x 240.

VEW Leader/Follower detects and reports the same event types as VEW Standard. In response to some of these event types, a VEW Leader/Follower sensor can instruct a Pan-Tilt-Zoom (PTZ) camera to follow an object involved in an event.

VEW FlowControl detects and reports movement in an unauthorized direction, such as a person walking “against the flow” in a crowd.

## *ObjectVideo OnBoard*

Like ObjectVideo VEW, ObjectVideo OnBoard monitors video feeds for events and alerts you in real-time as events take place. In ObjectVideo OnBoard, events are detected by an intelligent surveillance device (such as a camera) running ObjectVideo technology.

ObjectVideo OnBoard includes OnBoard 100, OnBoard 200, and OnBoard 1000 as optional sensor types.

OnBoard 100 detects and reports events in which an object appears, disappears, enters, or exits an area.

OnBoard 200 detects and reports events in which an object crosses a tripwire, appears, disappears, enters, or exits an area. OnBoard 200 also detects and reports scene change events.

OnBoard 1000 detects and reports events in which an object crosses a tripwire, crosses multiple tripwires, appears, disappears, enters, exits, loiters in an area, is inside an area, is taken away, or is left behind. OnBoard 1000 also detects and reports scene change events.

These sensors may support metadata. If a sensor supports metadata, it can generate the forensics data that ObjectVideo Forensics uses to search for past events. These sensors are identified as OnBoard 100MD, OnBoard 200MD, and OnBoard 1000MD in the ObjectVideo Management Tool. Except for their ability to support metadata, these sensors are identical to other ObjectVideo OnBoard sensors.

In ObjectVideo OnBoard, it may be possible to change the sensor type of an existing sensor. Contact your Video Analysis Device vendor to obtain software to manage your sensor types.

## *ObjectVideo Forensics*

ObjectVideo Forensics searches for past events by analyzing stored forensics data collected from surveillance video feeds.

You must install and configure ObjectVideo VEW or ObjectVideo OnBoard with metadata before you can use ObjectVideo Forensics. ObjectVideo VEW components are required to set up the ObjectVideo Forensics system and to analyze surveillance video for later analysis by ObjectVideo Forensics.

## *ObjectVideo Integrator Toolkit (Package)*

The ObjectVideo Integrator Toolkit is a package of software applications used by integrators and customer support personnel to plan for, maintain, and troubleshoot the system. The ObjectVideo Integrator Toolkit applications are used to improve event detection and reduce false alarms.

## System Overview

This section provides an overview of how your ObjectVideo system should be set up, and identifies the role of each component within the system.

Do one of the following:

- If you are setting up an ObjectVideo VEW system, see “ObjectVideo VEW System Overview” on page 6.
- If you are setting up an ObjectVideo OnBoard system, see “ObjectVideo OnBoard System Overview” on page 9.
- If you are also using ObjectVideo Forensics, see “ObjectVideo Forensics System Overview” on page 11.

**Notes:**

- If a component is identified as “ObjectVideo-certified,” it means that you are using hardware that has been tested by ObjectVideo and certified to meet the requirements of the ObjectVideo software. You can learn more about ObjectVideo-certified hardware in “Minimum System and Environmental Requirements” on page 17.
- Custom hardware configurations may vary from those pictured in this guide.

# *ObjectVideo VEW System Overview*

The figure below shows a typical ObjectVideo VEW system.

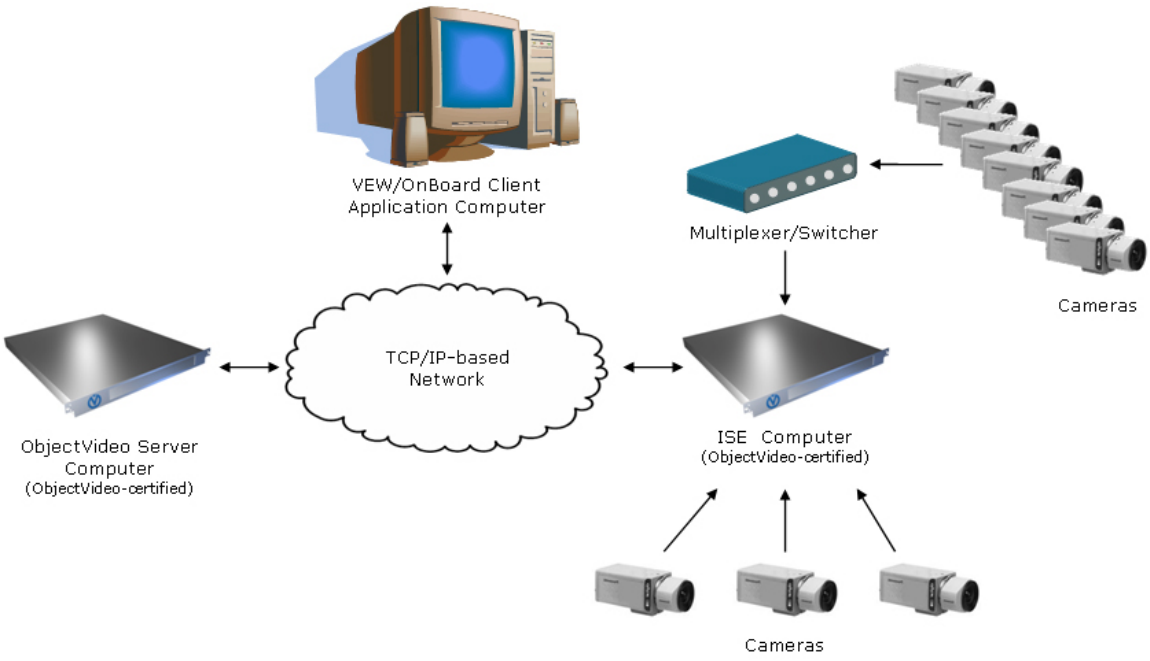



**Figure 1: VEW System Architecture**

## ObjectVideo Server Computer (ObjectVideo-certified Hardware)

The ObjectVideo Server computer runs the ObjectVideo Server software. The ObjectVideo Server software routes information among the components and sends alerts to the Alert Console. Alerts are stored in a database on the ObjectVideo Server computer.

## ISE Computer (ObjectVideo-certified Hardware)

The Intelligent Sensor Engine (ISE) computer runs the ISE software. The ISE software manages sensors, which monitor video feeds for events. Video feeds are connected to the ISE computer. Depending on the sensor type and hardware configuration you are using, video feeds may be directly connected to the ISE computer, connected via a multiplexer/switcher, or connected over the network. Contact customer support for more information about connecting digital video stream sources to the ISE computer over the network (see “Getting Support” on page 223). You may deploy multiple ISEs in your system.

Sensors on the ISE computer perform all event detection functions in ObjectVideo VEW. One sensor monitors each video feed that is connected to the ISE computer. The following types of ObjectVideo VEW sensors may be available:

- VEW Standard
- VEW FlowControl
- VEW HiRes
- VEW Leader/Follower

Only one type of sensor can run on each VEW ISE computer.

The number of video feeds each sensor type can monitor simultaneously varies, as shown in the following table. (Custom hardware configurations may vary.)

**Table 1: Maximum Number of Video Feeds That Can Be Monitored Simultaneously by Each Type of Sensor**

| Sensor Type | No. of Video Feeds |
|---|---|
| VEW Standard | Up to 4 |
| VEW Leader/Follower | Up to 4 |
| VEW FlowControl | Up to 2 |
| VEW HiRes | 1 |

Sensors that support multiple views may be able to monitor a larger number of video feeds in rotation if they are connected to the ISE computer through a multiplexer/switcher.

The number of sensors per ISE computer may vary based on the hardware configuration being used and the number of sensors permitted by licensing.

## VEW/OnBoard Client Application Computer

A VEW/OnBoard client application computer is a computer where one or more of the VEW/OnBoard client applications are installed.

There are three VEW/OnBoard client applications:

- Alert Console – Displays alerts as events occur and allows you to search for alerts.
- Rule Management Tool – Used to set up rules for surveillance cameras. Rules tell the system which events to look for and how to respond when an event occurs.
- System Configuration Tool – Used to set up the system's configuration, enter information about components, and perform other system-related tasks.

“Installing the VEW/OnBoard Client Applications” on page 55 contains installation instructions and a more detailed description of each client application.

## Cameras

Sensors monitor the video feeds from surveillance cameras for events. Using VEW Leader/Follower, a camera can follow (track) an object involved in an event.

## Multiplexer/Switcher

A multiplexer (also referred to as a switcher) is a device that allows multiple video feeds to travel over a single line. Several cameras can connect to a multiplexer, which in turn connects to the ISE computer. The multiplexer switches between the video feeds either automatically (in rotation) or at the command of a user, so the ISE computer receives the video signal from one surveillance camera at a time. This enables one sensor to monitor multiple video feeds for events. VEW FlowControl sensors do not support the use of multiplexers.

## *ObjectVideo OnBoard System Overview*

In ObjectVideo OnBoard, the ObjectVideo Server software and ISE are both installed on the same computer (the Server/ISE computer). You can add more OnBoard ISEs if additional Video Analysis Devices are connected to your network.

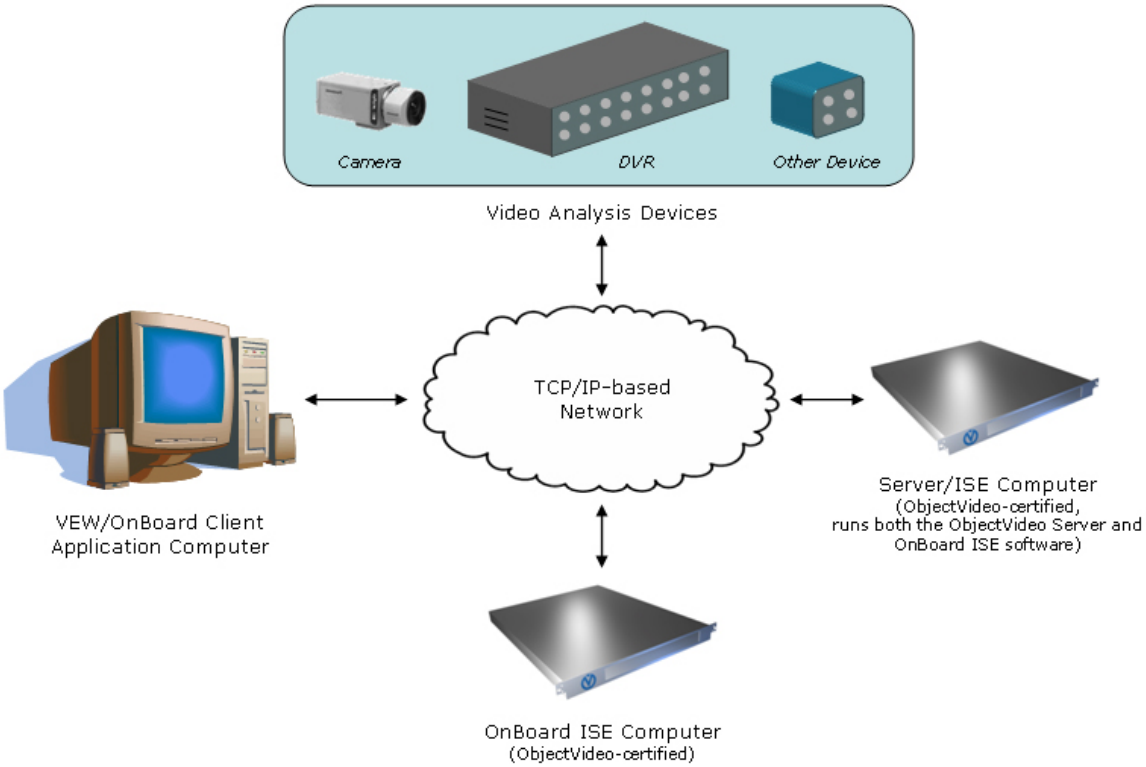



**Figure 2: ObjectVideo OnBoard System Architecture**

### *Video Analysis Devices*

A Video Analysis Device is an intelligent surveillance device, such as a camera or a digital video recorder (DVR), containing ObjectVideo OnBoard technology that enables the device to detect events. Sensors run partly on the Video Analysis Device and partly on the computer running the ISE software. The Server/ISE computer is connected to the Video Analysis Device over the network. The sensors running on the Server/ISE computer and Video Analysis Device work together to detect events.

Each Video Analysis Device supports a limited number of active rules and views. The number of active rules and views supported varies depending on the Video Analysis Device being used. Please contact your Video Analysis Device vendor for more information.

If the Video Analysis Device is not a camera and supports multiple views, the system may be set up using a multiplexer/switcher, which enables one sensor to monitor multiple video feeds.

### *Server / ISE Computer (ObjectVideo-certified Hardware)*

The Server/ISE computer runs both the ObjectVideo Server software and the OnBoard ISE software. The ObjectVideo Server software routes information among the components and sends alerts to the Alert Console. Alerts are stored in a database on the Server/ISE computer.

The ISE software manages sensors, which monitor video feeds for events. Sensors run partly on the computer running the ISE software and partly on the Video Analysis Device.

### *OnBoard ISE Computer (ObjectVideo-certified Hardware)*

If many Video Analysis Devices are on a network, additional OnBoard ISE computers can be added to support them. If another OnBoard ISE computer is used, some Video Analysis Devices connect to the Server/ISE computer and others connect to the additional ISE computer.

### *VEW / OnBoard Client Application Computer*

A VEW/OnBoard client application computer is a computer where one or more of the VEW/OnBoard client applications are installed.

There are three VEW/OnBoard client applications:

- Alert Console – Displays alerts as events occur and allows you to search for alerts.
- Rule Management Tool – Used to set up rules for surveillance cameras. Rules tell the system which events to look for and how to respond when an event occurs.
- System Configuration Tool – Used to set up the system's configuration, enter information about components, and perform other system-related tasks.

"Installing the VEW/OnBoard Client Applications" on page 55 contains installation instructions and a more detailed description of each client application.

## *ObjectVideo Forensics System Overview*

ObjectVideo VEW sensors and ObjectVideo OnBoard sensors that support metadata monitor video feeds and generate forensics data in real-time. ObjectVideo Forensics uses this data to detect past events.

Do one of the following:

- If ObjectVideo VEW sensors are generating the forensics data, see "ObjectVideo VEW with ObjectVideo Forensics System Overview" on page 12.
- If ObjectVideo OnBoard sensors are generating the forensics data, see "ObjectVideo OnBoard with ObjectVideo Forensics System Overview" on page 14.

## ObjectVideo VEW with ObjectVideo Forensics System Overview

The figure below shows a typical system where forensics data is being generated by ObjectVideo VEW and analyzed by ObjectVideo Forensics.

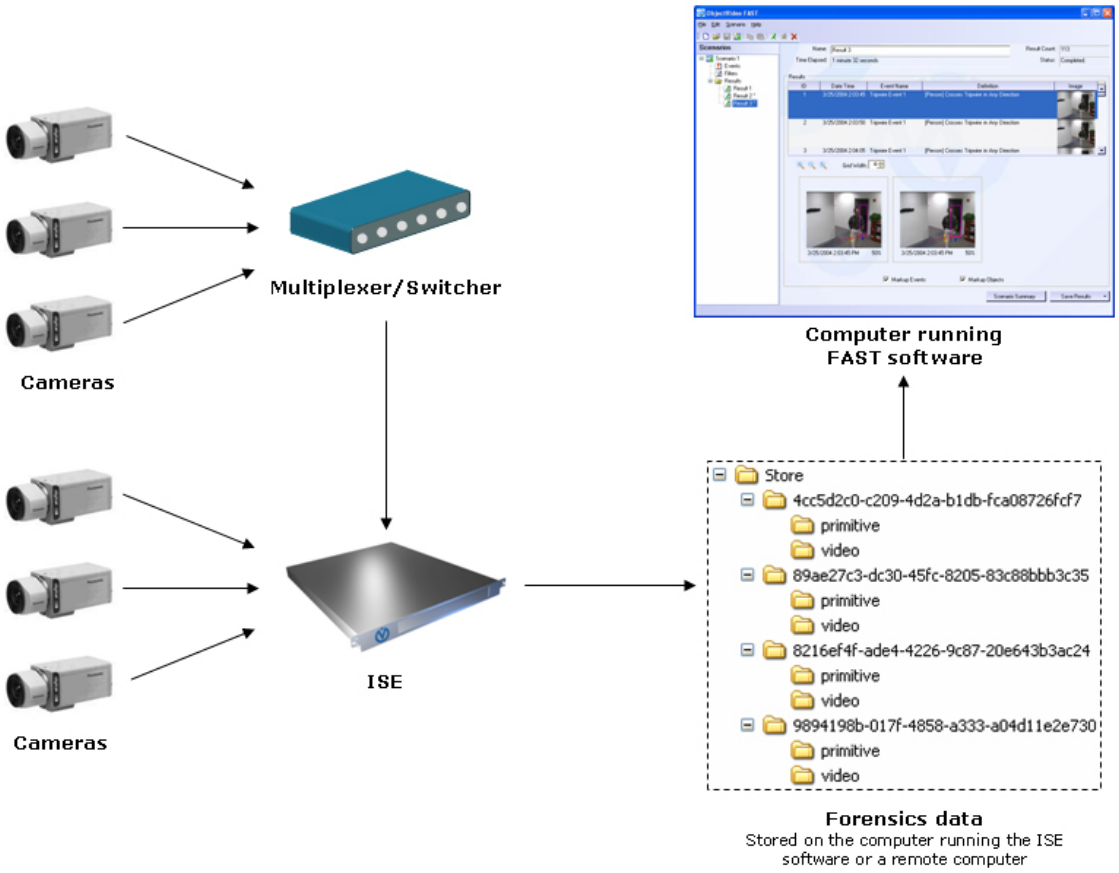



**Figure 3: ObjectVideo Forensics System Architecture for ObjectVideo VEW**

### *Cameras*

Sensors monitor the video feeds from surveillance cameras and generate forensics data.

### *Multiplexer/Switcher*

A multiplexer (also referred to as a switcher) is a device that allows multiple video feeds to travel over a single line. Several cameras can connect to a multiplexer, which in turn connects to the ISE computer. The multiplexer switches between the video feeds either automatically (in rotation) or at the command of a user, so the ISE computer receives the video signal from one surveillance camera at a time. This enables one sensor that supports multiple views to monitor multiple video feeds. VEW FlowControl sensors do not support the use of multiplexers.

### *ISE Computer*

The ISE computer runs the ISE software. The VEW ISE software manages sensors, which monitor video feeds and generate forensics data. The Forensics Store service also runs on ISE computers. The Forensics Store service stores forensics data for use in ObjectVideo Forensics.

### *Forensics Data*

Forensics data describes what occurred within a camera's field of view. It consists of primitives and video. Primitives are text-based descriptions of what is going on in the video. FAST™ (the Forensics Analysis Scenario Tool™) analyzes forensics data to detect events.

Forensics data can also be used by customer support personnel for troubleshooting purposes for ObjectVideo VEW. You will most likely only use the forensics data if you have purchased ObjectVideo Forensics, but because the Forensics Store service runs on the VEW ISE computer by default, it will be easy to add ObjectVideo Forensics later on.

### *Computer Running FAST*

FAST is a software application that enables you to search for events within forensics data.

## ObjectVideo OnBoard with ObjectVideo Forensics System Overview

The figure below shows a typical system where forensics data is being generated by an ObjectVideo OnBoard sensor that supports metadata and analyzed by ObjectVideo Forensics.

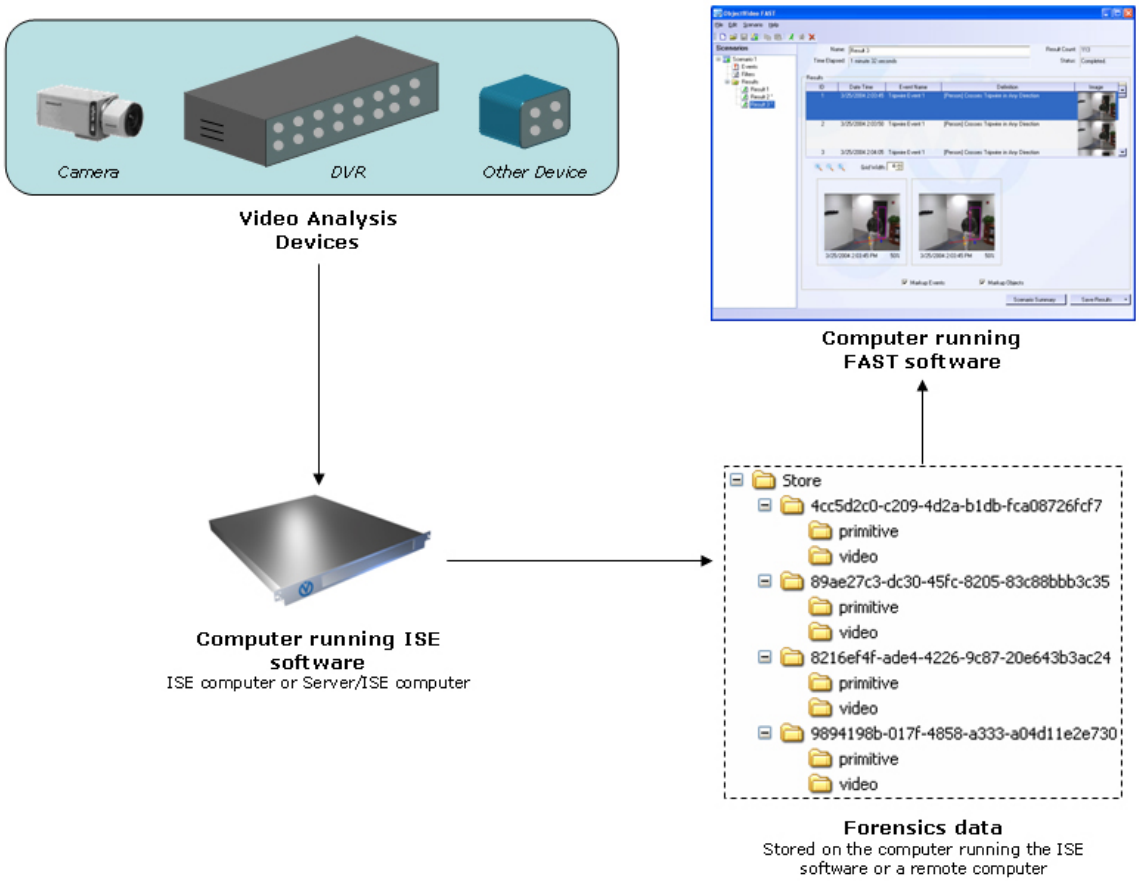



**Figure 4: ObjectVideo Forensics System Architecture for ObjectVideo OnBoard with Metadata**

### *Video Analysis Device*

A Video Analysis Device is an intelligent surveillance device, such as a camera or a DVR, containing ObjectVideo OnBoard technology that enables the device to detect events. Sensors run partly on the Video Analysis Device and partly on the computer running the ISE software. The Server/ISE computer is connected to the Video Analysis Device over the network. The sensors running on the Server/ISE computer and Video Analysis Device work together to detect events.

### *Computer Running ISE Software*

The ISE software manages sensors, which monitor video feeds for events and generate forensics data. Sensors run partly on the computer running the ISE software and partly on the Video Analysis Device.

### *Computer Running FAST*

FAST is a software application that enables you to search for events within forensics data.

### *Forensics Data*

Forensics data describes what occurred within a camera's field of view. It consists of primitives and video. Primitives are text-based descriptions of what is going on in the video. FAST™ (the Forensics Analysis Scenario Tool™) analyzes forensics data to detect events.

Forensics data is only generated by ObjectVideo OnBoard sensors that support metadata. In addition, users must enable the generation of forensics data for each sensor using the ObjectVideo Management Tool. See "Enabling Forensics Storage for ObjectVideo OnBoard Sensors" on page 97 for more information.

## Other ObjectVideo VEW and ObjectVideo OnBoard Components Used by ObjectVideo Forensics

In addition to the primary ObjectVideo Forensics components described in the preceding sections, there are other ObjectVideo VEW and ObjectVideo OnBoard components that may occasionally be used for ObjectVideo Forensics. This section only indicates the role of these components in ObjectVideo Forensics. To learn more about these components in the context of ObjectVideo VEW, see "ObjectVideo VEW System Overview" on page 6. To learn more about these components in the context of ObjectVideo OnBoard, see "ObjectVideo OnBoard System Overview" on page 9.

### *Computer Running ObjectVideo Server Software*

In ObjectVideo Forensics, the ObjectVideo Server software's role is to send ObjectVideo Forensics health monitor alerts to the Alert Console. The health monitor alerts are stored in a database on the computer running the ObjectVideo Server software for later searching.

### *VEW / OnBoard Client Application Computers*

A VEW/OnBoard client application computer is a computer where one or more of the VEW/OnBoard client applications are installed.

There are three VEW/OnBoard client applications used with ObjectVideo Forensics:

- Alert Console – Displays health monitor alerts related to forensics data storage space and system performance. It is not used to display information about events detected using ObjectVideo Forensics.

- Rule Management Tool – Used to define sensor views during the set-up of the ObjectVideo Forensics system if you are using sensors that support multiple views. If you are using ObjectVideo VEW or ObjectVideo OnBoard for real-time event detection in addition to using ObjectVideo Forensics, you can also export rules from the Rule Management Tool for use within FAST and import scenarios from FAST for use in the Rule Management Tool.

- System Configuration Tool – Used to set up the system's configuration, enter information about components, and perform other system-related tasks.

# Minimum System and Environmental Requirements

## *Network Requirements*

The system can run on any Transmission Control Protocol/Internet Protocol (TCP/IP)-based network. If possible, the network should have a Domain Name System (DNS) server. If the network does not have a DNS server and you are using host names instead of IP addresses, you will need to create or modify **hosts** files to allow the computers running the ObjectVideo components to resolve host names to IP addresses (see "Adding a Host to a Hosts File" on page 140).

The system supports networks using Dynamic Host Configuration Protocol (DHCP) and static IP addresses. If your network uses DHCP, you must use the host name of the computer running the ObjectVideo Server software rather than the computer's IP address, because the IP address may change when the computer is rebooted.

If you plan to use e-mail-based alert responses, you will need a Simple Mail Transfer Protocol (SMTP) server on the network. Be sure to follow industry best practices for securing all of the computers running the software.

## *Hardware Requirements*

### ObjectVideo Server and ISE Hardware Requirements

The ObjectVideo Server, ISE, and Server/ISE computers must be located near a power source and have TCP/IP connectivity. Ideally, the power source should be backed up so that the ObjectVideo Server and ISE computers can operate continuously through power outages. Make sure that your environment meets all power, climate, humidity, noise abatement, and other requirements indicated by the hardware vendor.

Specific ObjectVideo Server and ISE hardware requirements vary depending on whether you are installing ObjectVideo VEW or ObjectVideo OnBoard. See the next section, "ObjectVideo VEW," for the requirements for ObjectVideo VEW. See "ObjectVideo OnBoard" on page 20 for the requirements for ObjectVideo OnBoard.

### *ObjectVideo VEW*

In ObjectVideo VEW, the ObjectVideo Server and ISE software must be installed on ObjectVideo-certified computers, which have been tested to ensure they meet the requirements of the ObjectVideo Server and ISE software. See "ObjectVideo VEW System Overview" on page 6 for more information about the ObjectVideo VEW architecture.

The tables that follow provide the ObjectVideo Server and ISE minimum hardware requirements for ObjectVideo VEW.

**Table 2: VEW ISE Computer Hardware Minimum Requirements**

| Hardware Component | Minimum Requirement |
|---|---|
| **Processor and RAM** | **Option A:**<br>• Processor: Dual Intel Xeon, 2.8 GHz<br>• RAM: 2 GB<br>**Option B:**<br>• Processor: Pentium 4, 3.0 GHz<br>• RAM: 3 GB |
| **Hard Drive(s)** | (1) 74 GB<br>(1) 200 GB drive (for forensics data)<br>ATA 133, SATA 120 or 150, or SCSI |
| **Other Drives** | 24X CD-ROM drive (recommended) |
| **Network Interface** | 100 MB TX full duplex Ethernet |
| **Operating System** | Windows XP Professional (Service Pack 2) or Windows Server 2003, Standard Edition (Service Pack 1) |
| **Video Source** | **Analog:** Four-channel video capture card (Winnov Videum 4400 VO)<br>**Digital:** Supported, but not required. See “ObjectVideo VEW and Digital Stream Sources” for more information. |
| **Video Display Card** | 8 MB SVGA with independent GPU |

### ObjectVideo VEW and Digital Stream Sources

In ObjectVideo VEW, the computer running the ISE software is usually physically connected to the video feeds (or multiplexers/switchers) through BNC connectors. This guide describes this configuration. In some cases, however, the ISE computer can be connected to a digital video stream source. ObjectVideo VEW supports many types of digital video stream sources from network cameras and DVRs. Contact customer support for more information about connecting to digital video stream sources (see “Getting Support” on page 223).

**Table 3: ObjectVideo Server Computer Minimum Hardware Requirements**

| Hardware Component | Minimum Requirement |
|---|---|
| **Processor** | Dual Intel Xeon, 2.8 GHz |
| **RAM** | 1 GB |
| **Hard Drive(s)** | (1) 74 GB<br>ATA 133, SATA 120 or 150, or SCSI |
| **Other Drives** | 24X CD-ROM drive |
| **Network Interface** | 100 MB TX full duplex Ethernet |
| **Operating System** | Windows XP Professional (Service Pack 2) or Windows Server 2003, Standard Edition (Service Pack 1) |

## *ObjectVideo OnBoard*

A typical ObjectVideo OnBoard architecture consists of one Server/ISE computer and (optionally) one or more OnBoard ISE computers to support additional Video Analysis Devices. The Server/ISE computer and OnBoard ISE computer(s) are certified by ObjectVideo. These computers have been tested to ensure that they meet the requirements of the ObjectVideo Server and ISE software. See "ObjectVideo OnBoard System Overview" on page 9 for more information about the ObjectVideo OnBoard architecture.

Each Server/ISE computer or OnBoard ISE computer can support up to 80 sensors. In order to support 80 sensors, the sensors must be using the default sensor configuration and must not be generating metadata. If sensors are generating metadata, they require four times as many resources. So, one Server/ISE computer or OnBoard ISE computer can only support 20 sensors generating metadata. You can combine sensors that produce metadata and those that do not. For instance, you could have 40 sensors that do not produce metadata and 10 sensors that do produce metadata running on the same computer.

**Important:** An additional 50 GB of storage space (above the minimum hardware requirement listed below) is required for every ObjectVideo OnBoard sensor producing metadata. For example, if you have 20 ObjectVideo OnBoard sensors producing metadata, you would need over 1 TB of additional storage space.

The table that follows provides the minimum hardware requirements for the Server/ISE computer and OnBoard ISE computer for ObjectVideo OnBoard.

**Table 4: Server/ISE Computer and OnBoard ISE Computer Minimum Hardware Requirements**

| Hardware Component | Minimum Requirement |
|---|---|
| **Processor and RAM** | **Option A:**<br>• Processor: Dual Intel Xeon, 2.8 GHz<br>• RAM: 2 GB<br>**Option B:**<br>• Processor: Pentium 4, 3.0 GHz<br>• RAM: 3 GB |
| **Hard Drive(s)** | (1) 74 GB<br>ATA 133, SATA 120 or 150, or SCSI |
| **Other Drives** | 24X CD-ROM drive (recommended) |
| **Network Interface** | 100 MB TX full duplex Ethernet |

| Hardware Component | Minimum Requirement |
|---|---|
| **Operating System** | Windows XP Professional (Service Pack 2) or Windows Server 2003, Standard Edition (Service Pack 1) |
| **Video Display Card** | 8 MB SVGA with independent GPU |

## Client Application Hardware Requirements

Client applications may run on one or more computers, providing that each computer in your system meets the minimum hardware and software requirements. The requirements are listed in Table 5, “Client Application Minimum Hardware Requirements,” on page 22.

### *VEW / OnBoard Client Applications*

The VEW/OnBoard client applications consist of the Alert Console, Rule Management Tool, and System Configuration Tool. When you install the VEW/OnBoard client applications, you can choose to install only the Alert Console, only the Rule Management Tool and System Configuration Tool, or all the VEW/OnBoard client applications. The ObjectVideo Management Tool is also installed when you install any of the VEW/OnBoard client applications.

### *FAST Requirements*

FAST is the client component of ObjectVideo Forensics. FAST requires network connectivity in order to open, because it must be able to connect to the license server on the computer running the ObjectVideo Server software. You can, however, run scenarios on forensics data that resides on local storage media. More information about ObjectVideo licensing is provided in “Installing Licenses” on page 41. Commuter licenses for users who must use FAST offline are also available. See “Checking Out an Authorization for Opening FAST Offline” on page 130 for more information.

### *ObjectVideo Integrator Toolkit Requirements*

The ObjectVideo Integrator Toolkit consists of the Alert Backup Estimator, Camera Placement Tool, Leader/Follower Calibration Tool, Object Sizing Tool, and Parameter Configuration Tool. When you install the ObjectVideo Integrator Toolkit, you can choose to install any one of these components or all of them. As indicated in Table 5, “Client Application Minimum Hardware Requirements,” the Leader/Follower Calibration Tool has a different hardware requirement than the other client applications.

The ObjectVideo Management Tool is also installed when you install any of the ObjectVideo Integrator Toolkit components.

**Table 5: Client Application Minimum Hardware Requirements**

| Hardware Component | Minimum Requirement |
|---|---|
| **Processor and RAM** | **Option A (for computers that are <u>not</u> running the Leader/Follower Calibration Tool):**<br>• Processor: Intel Celeron, 1.0 GHz<br>• RAM: 1 GB<br>**Option B (for computers running the Leader/Follower Calibration Tool):**<br>• Processor: Pentium 4, 3.0 GHz<br>• RAM: 1 GB |
| **Hard Drive** | 1 GB available hard drive space<br>ATA 133, SATA 120 or 150, or SCSI |
| **Other Drives** | 24X CD-ROM drive (recommended) |
| **Network Interface** | 100 MB TX full duplex Ethernet |
| **Operating System** | Windows XP Professional (Service Pack 2) or Windows 2000 (Service Pack 4) |

## PTZ Camera Requirements

VEW Leader/Follower uses PTZ cameras to follow objects. These PTZ cameras are supported by VEW Leader/Follower:

- Sony Network Camera (SNC-RZ30N)
- Any serial camera that supports the Pelco D protocol

## Software Requirements

You must install prerequisite software before you install most ObjectVideo components. See Appendix A, “Prerequisite Software,” on page 224, for more information.

**Important:** Do not install the ObjectVideo Server software on a network that is running SafeNet, Inc. or Rainbow Technologies products. The licensing mechanism used by SafeNet and Rainbow Technologies products may interfere with the licensing mechanism used by the ObjectVideo system. If SafeNet or Rainbow Technologies products are running on the network, contact customer support for assistance (see “Getting Support” on page 223).

## Help System Requirements

When you select **Help** > **Contents** from an ObjectVideo client application, the application’s Help is automatically displayed using your computer’s default Internet browser.

It is recommended that you use one of the following browsers as your default browser:

- Internet Explorer 5.0 or later
- Netscape Navigator 4.0 or later
- Opera 6.0 or later
- Mozilla (all versions)

Internet Explorer 5.0 or later and Netscape Navigator 4.0 or later provide the best results. The Help may open in a browser that is not listed above, but the display of Help content may be affected.

## Installation CDs

Before you start the installation, make sure you have the appropriate installation CDs for the ObjectVideo software. The following table describes the CDs.

**Table 6: Installation CDs**

| Use this CD… | To install this component… | On this computer… |
|---|---|---|
| The blue ObjectVideo Server installation CD | ObjectVideo Server | Computer that meets the ObjectVideo Server requirements on page 17. |
| The gray/purple VEW Standard ISE installation CD (requires the purchase of VEW Standard) | ISE (VEW Standard) | Computer that meets the ObjectVideo VEW ISE requirements on page 17. |
| The OnBoard ISE installation CD (requires the purchase of ObjectVideo OnBoard) | ISE (ObjectVideo OnBoard) | Computer that meets the ObjectVideo OnBoard ISE requirements on page 20. |
| The gray/orange VEW FlowControl ISE installation CD (requires the purchase of VEW FlowControl) | ISE (VEW FlowControl) | Computer that meets the ObjectVideo VEW ISE requirements on page 17. |
| The gray/yellow VEW HiRes ISE installation CD (requires the purchase of VEW HiRes) | ISE (VEW HiRes) | Computer that meets the ObjectVideo VEW ISE requirements on page 17. |
| The gray/aqua ObjectVideo Leader/Follower ISE installation CD (requires the purchase of ObjectVideo Leader/Follower) | ISE (VEW Leader/Follower) | Computer that meets the ObjectVideo VEW ISE requirements on page 17. |
| The red VEW/OnBoard client applications installation CD | Alert Console, Rule Management Tool, and System Configuration Tool | Computer that meets the client application requirements on page 21. |
| The green FAST installation CD (requires the purchase of ObjectVideo Forensics) | FAST | Computer that meets the FAST requirements on page 21. |

| Use this CD… | To install this component… | On this computer… |
|---|---|---|
| The ObjectVideo Integrator Toolkit installation CD | Alert Backup Estimator, Camera Placement Tool, Object Sizing Tool, Leader/Follower Calibration Tool, and Parameter Configuration Tool | Computer that meets the ObjectVideo Integrator Toolkit requirements on page 21. |

# Other Documentation

## *On the Web*

Product documentation, knowledge bases, and frequently asked questions (FAQs) are available at the ObjectVideo web site. For access to customer-oriented content, contact support@objectvideo.com. For access to partner-oriented content, contact your ObjectVideo Channel Sales Representative.

### Product Documentation

Find the complete documentation for all ObjectVideo product releases at the following locations:

- Customer Edition: http://www.objectvideo.com/docs
- Partner Edition: http://www.objectvideo.com/docs/partners (includes the SDK and ObjectVideo Integrator Toolkit documentation)

### Knowledge Bases

Comprehensive, searchable knowledge bases featuring detailed troubleshooting information and how-to articles can be found at the following locations:

- Customer Edition: http://www.objectvideo.com/kb
- Partner Edition: http://www.objectvideo.com/kb/partners (includes additional content exclusive to partners)

### FAQs

The most commonly asked questions about the capabilities of the ObjectVideo software and the ObjectVideo system requirements are available exclusively to partners at http://www.objectvideo.com/faqs.

## *Readme File*

The Readme file provides late-breaking information that supplements the documentation. The Readme contains notes to upgrading users, system requirements, installation information, new feature descriptions, information on known issues, and contact information. Please review the Readme before installing or upgrading ObjectVideo software. The Readme is provided on all installation CDs. It is also installed with the ObjectVideo software under **C:\Program Files\ObjectVideo\Documentation**.

## Online Help

Each ObjectVideo client application contains comprehensive Help that provides a keyword search, index, and glossary. ObjectVideo Help is available whenever an ObjectVideo client application is running. It contains the most up-to-date information available for the system.

To access the Help when an ObjectVideo client application is running, select **Contents** from the **Help** menu. Either select a topic from the **Contents** tab, or click the **Index** tab or **Search** tab to locate information by keyword or phrase. Click the **Glossary** tab to display a list of important terms and definitions.

## Quick Reference Cards

The VEW/OnBoard client applications installation CD contains reference cards that can be printed out and displayed. The reference cards are available in the **Documentation** directory on the CD.

These cards provide information about common tasks and concepts in ObjectVideo VEW, ObjectVideo OnBoard, and ObjectVideo Forensics. The following reference cards are available:

- *Alert Console Quick Reference Card*
- *Snapshot Markup Quick Reference Card*
- *Rule Management Tool Quick Reference Card*

The reference cards are provided in PDF format, which means that you need Adobe Acrobat Reader in order to view them. For your convenience, Acrobat Reader is provided in the VEW/OnBoard client applications installation CD. To run the Acrobat Reader installer, browse to the **Acrobat** directory on the CD, and then double-click **AdbeRdr70_enu_full.exe**.

# Initial Deployment Steps

This chapter describes the initial installation and set-up steps that are required for all ObjectVideo products. The figure below provides an overview of the steps.


**Figure 5: Initial Deployment Steps**

**Note:** If you are deploying ObjectVideo Forensics or the ObjectVideo Integrator Toolkit, you must first install ObjectVideo VEW or ObjectVideo OnBoard.

After you have completed the steps in this chapter, you are ready to perform the steps described in the following chapters:

- To configure real-time event detection and notification using ObjectVideo VEW or ObjectVideo OnBoard, see “Completing the ObjectVideo VEW and ObjectVideo OnBoard Deployment Process” on page 78.

- To configure investigative event detection using ObjectVideo Forensics, see “Completing the ObjectVideo Forensics Deployment Process” on page 85.

- To install the ObjectVideo Integrator Toolkit, see “Installing the ObjectVideo Integrator Toolkit Applications” on page 106.

# Connecting the Video Analysis Device(s) to the Network (ObjectVideo OnBoard)



This is Step 1 in the ObjectVideo OnBoard deployment process. This step is only necessary for ObjectVideo OnBoard systems.

The first step in deploying an ObjectVideo OnBoard system is to connect the Video Analysis Devices to the network and assign an IP address to each device.

A Video Analysis Device is an intelligent surveillance device, such as a camera or a DVR, containing ObjectVideo OnBoard technology that enables the device to detect events.

Once all Video Analysis Devices are connected to the network, proceed to “Installing the ObjectVideo Server Software” on page 36.

# Setting Up the ObjectVideo Server and ISE Computers (ObjectVideo VEW)



This is Step 1 in the ObjectVideo VEW deployment process. This step is only necessary for ObjectVideo VEW systems.

The first step in deploying an ObjectVideo VEW system is to set up the ObjectVideo Server and ISE computers. In ObjectVideo VEW, the ObjectVideo Server and ISE software run on separate computers, both of which have been tested and certified by ObjectVideo. ObjectVideo-certified computers meet minimum hardware requirements (see “ObjectVideo Server and ISE Hardware Requirements” on page 17) and have all prerequisite software preinstalled (see “ObjectVideo Server and ISE Software Requirements” on page 225).

“Setting Up the ObjectVideo Server Computer” on page 32 gives instructions for setting up an ObjectVideo Server computer. “Setting Up the ISE Computer” on page 33 gives instructions for setting up an ISE computer.

## Setting Up the ObjectVideo Server Computer

This section describes how to set up the computer that will run the ObjectVideo Server software.

### *Before You Start*

Make sure you have a computer certified to run the ObjectVideo Server software.

### *To Set Up the ObjectVideo-certified Server Computer*

1. When you receive the ObjectVideo Server computer, unpack the computer, inspect it for damage, and place it in the appropriate location (e.g., a server rack in a location with a network connection, sufficient power, etc.).

2. Connect the computer to a keyboard, mouse, and monitor.

   **Note:** You do not necessarily have to physically connect the computer to a keyboard, mouse, and monitor. These input/output devices can be connected to the computer via a Keyboard, Video, and Mouse (KVM) switch.

3. Connect a network cable to the computer and physically connect the computer to the network.

4. Connect a power cable to the computer and plug the computer into a power source.

5. Turn on the computer.

6. Check the computer's network link light to ensure that the computer is physically connected to the network.

7. After the computer boots up, perform the initial set-up steps for the operating system. Refer to the Windows documentation for more information.

   For example, you may need to activate and register Windows, create an administrator account for the computer, enable users to connect via Remote Desktop Connection, run Windows Update, etc.

8. After the operating system is set up, connect the computer to the network in Windows.

   The way this is accomplished will vary based on the network environment. For example, you may have to configure the operating system for DHCP and assign a host name to the computer, or you may need to assign a host name and IP address to the computer. Refer to the Windows documentation for more information.

9. Proceed to the next section, "Setting Up the ISE Computer."

## Setting Up the ISE Computer

This section describes how to set up the ObjectVideo-certified computer(s) that will run the ISE software.

### *Before You Start*

Make sure you have a computer certified to run the VEW ISE software.
See “ObjectVideo Server and ISE Hardware Requirements” on page 17 for more information.

### *Setting Up the ISE Computer*

**Note:** Perform the following steps for each ISE computer.

1. When you receive the ISE computer from the manufacturer, unpack the computer, inspect it for damage, and place it in the appropriate location (e.g., a server rack in a location with a network connection, proximity to video feeds, sufficient power, etc.).

2. Connect the computer to a keyboard, mouse, and monitor.

   **Note:** You do not necessarily have to physically connect the computer directly to a keyboard, mouse, and monitor. These input/output devices can be connected to the computer via a KVM switch.

3. Connect a network cable to the computer and physically connect the computer to the network.

4. Connect the video cables from the surveillance cameras or multiplexer/switchers to the computer’s video inputs (i.e., the ports on the computer’s video capture card).

5. If you are using serial cameras, connect them to the COM port(s).

   **Note:** If you are connecting multiple serial cameras to a single COM port, you must install the ObjectVideo Serial Port Service (see “To Install the VEW ISE Software” on page 49).

   The following figure shows an example of an ISE computer’s video inputs and COM port. Your computer’s appearance may look different from the one shown.

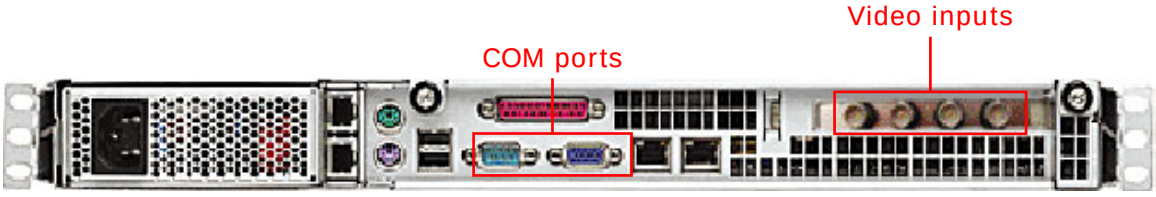



**Figure 6: ISE Video Inputs and COM port**

**Notes:**

- In VEW Standard and VEW Leader/Follower, a maximum of four video feeds can be connected to the computer's video inputs. A VEW Standard or VEW Leader/Follower sensor can monitor four video feeds at a time. In VEW FlowControl, a maximum of two video feeds can be connected to the computer's video inputs. A VEW FlowControl sensor can monitor two video feeds at a time. In VEW HiRes, a maximum of one video feed should be connected to the computer's video inputs. A VEW HiRes sensor can monitor one video feed at a time.

- You can connect multiplexers/switchers to a computer running VEW Standard, VEW HiRes, or VEW Leader/Follower sensors. VEW Standard and VEW HiRes sensors support multiplexed cameras because of their ability to support multiple views. Since VEW Leader/Follower sensors may temporarily change views during an event, it is not recommended that you use multiplexers/switchers with these sensors.

- Do not connect a multiplexer/switcher to a VEW FlowControl ISE computer. VEW FlowControl does not support multiplexed cameras.

- If the video cable does not have the appropriate connector, use an adapter to connect the cable to the video input.

- If you need to split the video signal, you can use a video distribution amplifier. In many cases, there will also be a "looping" connection available via another device, such as a switch, a multiplexer/switcher, or a DVR.

- If the electrical ground at the camera is different than the ground at the ISE computer, use a video isolation transformer to avoid signal distortion.

6. Connect a power cable to the computer and plug the computer into a power source.

7. Turn on the computer.

8. Check the computer's network link light to ensure that the computer is physically connected to the network.

9. After the computer boots up, perform the initial set-up steps for the operating system. Refer to the Windows documentation for more information.

   For example, you may need to activate and register Windows, create an administrator account for the computer, enable users to connect via Remote Desktop Connection, run Windows Update, etc.

10. After the operating system is set up, connect the computer to the network in Windows.

    The way this is accomplished will vary based on the network environment. For example, you may have to configure the operating system for DHCP and assign a host name to the computer, or you may need to assign a host name and IP

address to the computer. Refer to the Windows documentation for more information.

11. Proceed to the next section, “Installing the ObjectVideo Server Software.”

# Installing the ObjectVideo Server Software



This is Step 2 in the ObjectVideo OnBoard deployment process.



This is Step 2 in the ObjectVideo VEW deployment process.

This section describes how to install the ObjectVideo Server software. The ObjectVideo Server is the center of communications in the ObjectVideo system.

If you are deploying ObjectVideo VEW, install the ObjectVideo Server software on the ObjectVideo-certified computer you set up in “Setting Up the ObjectVideo Server Computer” on page 32.

If you are deploying ObjectVideo OnBoard, install the ObjectVideo Server software on an ObjectVideo-certified computer that meets the specifications described in “ObjectVideo Server and ISE Hardware Requirements” on page 17.

**Important:**

- Do not install more than one ObjectVideo Server on your network. Installing multiple ObjectVideo Servers causes license management issues and can result in network instability.
- Do not install the ObjectVideo Server software on a network that is running SafeNet, Inc. or Rainbow Technologies products. The licensing mechanism used by SafeNet and Rainbow Technologies products may interfere with the licensing mechanism used by the ObjectVideo system. If SafeNet or Rainbow Technologies products are running on the network, contact customer support for assistance (see “Getting Support” on page 223).

## *Before You Start*

- Make sure that the computer has all the prerequisite software installed. See “ObjectVideo Server and ISE Software Requirements” on page 225 for more information.
- The blue ObjectVideo Server installation CD and an installation key are required to complete the steps in this section.

## *To Install the ObjectVideo Server Software*

**Note:** You must be logged in as a Windows user with Administrator privileges to install the ObjectVideo Server software.

1. Insert the ObjectVideo Server installation CD into the computer's CD drive.

   The installer starts automatically. If it does not start automatically, use Windows Explorer to browse to the computer's CD drive, and then double-click **AutoSetup.js**.

   The **ObjectVideo Installation** dialog appears.

2. Click **Yes**.

3. Do one of the following:

   - If the **Welcome to the ObjectVideo Daemon Service Installation Wizard** screen appears, proceed to step 4.

   - If the **Welcome to the InstallShield Wizard for Sentinel LM 7.3.0.9 Server** screen appears, skip to step 12.

4. Click **Next**.

   The **License Agreement** screen appears.

5. If you agree to the terms of the license agreement, click the **I accept the license agreement** option.

6. Click **Next**.

   The **Ready to Install the Software** screen appears.

7. Click **Next**.

   The **Updating System** screen appears, followed by the **ObjectVideo Daemon Service Configuration** screen.

8. Type the product installation key.

9. Review the **Server Address** and **Server Port** of the computer that will run the ObjectVideo Server software.

   By default, the ObjectVideo Server computer's IP address is specified as **127.0.0.1**. By default, the ObjectVideo Server software listens on port **8076**.

10. Click **OK**.

    The **ObjectVideo Daemon Service has been successfully installed** screen appears.

11. Click **Finish**.

    The **Welcome to the InstallShield Wizard for Sentinel LM 7.3.0.9 Server** screen appears. The software uses Sentinel LM for license management, so the next few screens walk you through the process of installing Sentinel LM.

12. On the **Welcome to the InstallShield Wizard for Sentinel LM 7.3.0.9 Server** screen, click **Next**.

    The **License Agreement** screen appears.

13. If you agree to the terms of the license agreement, click **Yes**.

    The **Choose Destination Location** screen appears.

14. Do not change the installation location for Sentinel LM. Instead, click **Next**.

    The **Setup Status** screen appears while Sentinel LM is being installed, followed by the **InstallShield Wizard Complete** screen.

15. Click **Finish**.

    The **Welcome to the ObjectVideo Server Installation Wizard** screen appears. The screen may take a few moments to appear.

16. On the **Welcome to the ObjectVideo Server Installation Wizard** screen, click **Next**.

    The **Ready to Install the Software** screen appears.

17. Click **Next**.

    The **Updating System** screen appears while the ObjectVideo Server is installed on the computer, followed by the **ObjectVideo Server Configuration** dialog.

18. Do one of the following:

    - Click the button to the right of the **Web Server Home Directory** field, and then browse to the local web server's document root directory. Click **OK** on the **Browse for Folder** dialog.
    - In the **Web Server Home Directory** field, type the local path to the web server's document root directory.

    The **Web Server Home Directory** is the directory from which the web server hosts alert snapshots so that they are available to the Alert Console.

    **Note**: The fields of the **ObjectVideo Server Configuration** dialog may already be populated with the correct data.

19. In the **Web Server Port** field, enter the web server's port number (usually 80).

20. In the **Purge Database at This Size (MB)** field, enter the maximum size the ObjectVideo database can be before it is automatically purged.

    In a typical installation, the ObjectVideo database is an MSDE database. If you are not using an MSDE database, contact customer support for information on what value to enter in this field (see “Getting Support” on page 223). The primary purpose of the ObjectVideo database is to store alerts for real-time events detected by ObjectVideo VEW and ObjectVideo OnBoard, but it also stores other system data such as sensor groups, camera information, and views.

    The total database size that MSDE can support is 2 GB. This means that the total amount of data in all tables in the database cannot exceed 2 GB. When the amount of data in the database reaches 2 GB, the database stops storing new alerts and you cannot add new views. The database is automatically purged when it reaches the size you specify in this field. It is recommended that you use the default value of **1600** MB (1.6 GB). The value must be less than **2000** MB (2 GB).

    When you select this value, keep in mind that a health monitor alert notifying you that the database is going to be purged occurs at 1.5 GB. See “Maintaining the ObjectVideo VEW and ObjectVideo OnBoard Systems” on page 111 or “ObjectVideo Forensics and the ObjectVideo Database” on page 129 for more information.

21. Enter the number of days of alerts you want to try to save after the purge in the **Try Not to Purge** <*number of days*> **Days of Recent Alerts** field.

    When the ObjectVideo database is purged, not all alerts are necessarily deleted from the database. When the database reaches the size indicated in the **Purge Database at This Size** field, the alerts that occurred previous to the number of days entered in the **Try Not to Purge** <*number of days*> **Days of Recent Alerts** field are deleted.

    If the database size is still larger than the size in the **Purge Database at This Size** field, another day of alerts are deleted. The alerts are deleted in one-day increments until the database size is smaller than the size indicated in the **Purge Database at This Size** field. The most recent alerts are preserved. For instance, if you used the default value of **7**, every alert that occurred before the previous week would be deleted. If the database was still too large, a day at a time would be deleted (starting from the day farthest from the present) until the database was the specified size.

    See “Maintaining the ObjectVideo VEW and ObjectVideo OnBoard Systems” on page 111 or “ObjectVideo Forensics and the ObjectVideo Database” on page 129 for more information.

22. Click **OK**.

    The **ObjectVideo Server has been successfully installed** screen appears.

23. Click **Finish**.

An **ObjectVideo Installation** dialog appears, asking whether you want to reboot the computer where you installed the ObjectVideo Server software.

24. Click **Yes** to reboot the computer.

    **Important:** You must reboot the computer in order for the ObjectVideo Server software to run. The ObjectVideo Server software runs automatically when the computer starts up.

25. Proceed to “Installing Licenses” on page 41.

**Note:** The ObjectVideo Management Tool is automatically installed when the Daemon Service is installed. The ObjectVideo Management Tool is used to start and stop ObjectVideo services, change various configuration settings in the system, and set up ObjectVideo Forensics.

# Installing Licenses



This is Step 3 in the ObjectVideo OnBoard deployment process.



This is Step 3 in the ObjectVideo VEW deployment process.

This section describes how to install licenses on the computer running the ObjectVideo Server software. The system uses Sentinel LM for license management. Sentinel LM is installed when you install the ObjectVideo Server software.

You must install licenses in order to run sensors. One license is required for each sensor in the system. For example, if you are going to run eight VEW Standard sensors on a network, you need to install eight VEW Standard licenses. Once the maximum number of licensed sensors is reached, running additional sensors will result in existing sensors becoming unusable.

In addition, you have to install licenses to run FAST. Each simultaneous instance of FAST you are going to run requires a license. If you are going to run FAST on two computers at the same time on a network, for example, you need to install two FAST licenses. When the maximum number of instances of FAST opened simultaneously is reached, no other instances of FAST can be opened.

ObjectVideo will provide you with a license file for each type of license you need to install. Each license file contains one or more licenses of a single type. For example, if you need to install four OnBoard 100 and two OnBoard 200 licenses, ObjectVideo will provide you with two license files, one containing the OnBoard 100 licenses and another containing the OnBoard 200 licenses.

**Important:**

- Do not run the ISE software before installing the appropriate licenses.
- Do not run more sensors than you have licenses for (doing so will cause existing sensors to become unusable).
- If you are deploying ObjectVideo Forensics, you must install both sensor and FAST licenses, because sensors generate the forensics data that is analyzed by FAST.

**Note:** Users can open FAST even when they are not connected to the network. See “Checking Out an Authorization for Opening FAST Offline” on page 130 for more information about commuter licenses for FAST.

## *To Install Licenses*

1. From the Windows **Start** menu on the computer running the ObjectVideo Server software, select **All Programs** > **ObjectVideo** > **License Installation Wizard**.

   The first screen of the License Installation Wizard appears.

2. Click **Next**.

   The **Provide Your Locking Code to ObjectVideo** screen appears.

3. Send an e-mail message to license@objectvideo.com.

   This e-mail message must contain the following information:

   - locking code
   - host name of the computer running the Sentinel LM license server (this should be the host name of the computer running the ObjectVideo Server software)
   - number of sensors
   - sensor types

   ObjectVideo will send a license file to you by e-mail.

4. Save the license file to the hard drive of the computer running the ObjectVideo Server software.

5. Check the box at the bottom of the **Provide Your Locking Code to ObjectVideo** screen, and then click **Next**.

   The **Install the License** screen appears.

6. Click the **Load the license code from a file** button.

7. In the **Open** dialog, browse to the license file, and then click **OK**.

   The license code appears in the text box.

8. Click **Next**.

   The **Licenses Installed Successfully** screen appears.

9. Click **Finish**.

10. Do one of the following:

    - If you are setting up an ObjectVideo OnBoard system, proceed to “Installing the OnBoard ISE Software” on page 44.

    - If you are setting up an ObjectVideo VEW system, proceed to “Installing the VEW ISE Software” on page 48.

**Note:** If the ObjectVideo Server hardware changes (e.g., if you install the ObjectVideo Server on a different machine, install a new Network Interface Card, etc.), the locking code will also change, and you will have to obtain a new license code from ObjectVideo.

# Installing the OnBoard ISE Software



This is Step 4 in the ObjectVideo OnBoard deployment process. This step is only necessary for ObjectVideo OnBoard systems.

This section describes how to install the ISE software for ObjectVideo OnBoard deployments. The ISE software manages sensors, which detect events within surveillance video.

Install the ISE software on an ObjectVideo-certified computer that meets the specifications described in “ObjectVideo Server and ISE Hardware Requirements” on page 17.

## *Before You Start*

- Make sure that the computer has all the prerequisite software installed. See “ObjectVideo Server and ISE Software Requirements” on page 225 for more information.

- You must have an installation key and OnBoard ISE installation CD to complete this section.

**Important:** Do not install and run the ISE software before you install licenses, as described in “Installing Licenses” on page 41. Installing and running the ISE before you install the licenses can cause the system to become unstable.

**Note:** You must be logged in as a Windows user with Administrator privileges to install the ISE software.

## *To Install the OnBoard ISE Software*

**Note:** Perform the following steps for each computer that will run OnBoard ISE software.

1. Insert the OnBoard ISE installation CD into the computer's CD drive.

   The installer starts automatically. If it does not start automatically, use Windows Explorer to browse to the computer's CD drive, and then double-click **AutoSetup.js**.

   The **ObjectVideo Installation** dialog appears.

2. Click **Yes**.

3. Do one of the following:

   - If the **Welcome to the ObjectVideo Daemon Service Installation Wizard** screen appears, proceed to step 4.

   - If the **Welcome to the ObjectVideo OnBoard ISE Installation Wizard** screen appears, skip to step 12. This can occur if the Daemon Service is already installed on the computer (e.g., because you installed the ObjectVideo Server on the computer, which includes the Daemon Service).

4. Click **Next**.

   The **License Agreement** screen appears.

5. If you agree to the terms of the license agreement, click the **I accept the license agreement** option.

6. Click **Next**.

   The **Ready to Install the Software** screen appears.

7. Click **Next**.

   The **Updating System** screen appears, followed by the **ObjectVideo Daemon Service Configuration** screen.

8. Type the product installation key.

9. Do one of the following:

   - If the ObjectVideo Server software is installed on another computer on the network, change the **Server Address** to the host name (e.g., **OBVServer1**) or IP address (e.g., **192.168.1.1**) of the ObjectVideo Server computer.

     If you use the ObjectVideo Server computer's host name, you must have a DNS server running on your network. You can also use a **hosts** file for name resolution (see "Adding a Host to a Hosts File" on page 140). If your network

uses DHCP, you must use the host name of the computer running the ObjectVideo Server software rather than the computer's IP address, because the IP address may change when the computer is rebooted.

- If you are installing the ISE software on the same computer as the ObjectVideo Server, do not change the default **Server Address** (**127.0.0.1**), because that is an IP address reserved for the local computer.

**Note:** The **Server Port** (**8076**) is the default port on which the ObjectVideo Server software listens. It is unlikely that you will have to change this value.

10. Click **OK**.

    The **ObjectVideo Daemon Service has been successfully installed** screen appears.

11. Click **Finish**.

    The **Welcome to the ObjectVideo OnBoard ISE Installation Wizard** screen appears.

12. Click **Next**.

    The **Ready to Install the Software** screen appears.

13. Click **Next**.

    The **Updating System** screen appears while the ISE software is installed on the computer, followed by a screen indicating that the installation of the ISE software was successful.

14. Click **Finish**.

    The **Welcome to the ObjectVideo Forensics Store Installation Wizard** screen appears.

15. Click **Next**.

    The **Ready to Install the Software** screen appears.

16. Click **Next**.

    The **Updating System** screen appears while the Forensics Store service is installed on the computer, followed by the **ObjectVideo Forensics Store Configuration** dialog.

17. Do one of the following:

    - Click the button to the right of the **Forensics Data Directory** field, browse to the *local* directory in which forensics data will be stored. Click **OK** on the **Browse for Folder** dialog. Click **OK** on the **ObjectVideo Forensics Store**

**Configuration** dialog. The **ObjectVideo Forensics Store has been successfully installed** screen appears.

- In the **Forensics Data Directory** field, type the path to the local directory in which forensics data will be stored, and then click **OK**. The **ObjectVideo Forensics Store has been successfully installed** screen appears.

You must specify a local forensics data directory, even if you have not purchased ObjectVideo Forensics. Forensics data is only actually generated when the sensor supports metadata and you have enabled the sensor to store the data.

The path must be a local path (e.g., **F:\Store**), and you cannot specify a directory path with spaces. If the directories in the path you specify do not already exist, the installer will create them for you.

18. Click **Finish**.

    An **ObjectVideo Installation** dialog appears, asking whether you want to reboot the computer.

19. Click **Yes** to reboot the computer.

20. Proceed to “Adding Sensors (ObjectVideo OnBoard)” on page 53.

**Important:**

- You must reboot the computer in order for the ISE software to run. The ISE software runs automatically when the computer starts up.

- Do not install or run more ISEs than your licensing arrangement permits. Doing so will cause the system to become unstable.

- Some ObjectVideo systems require vendor-specific files known as Partner Packages that determine the appearance and behavior of the system, such as the supported sensor, event, response, and object filter types. If the system you are deploying requires a Partner Package, copy the Partner Package files to **C:\Program Files\ObjectVideo\ISE\config** on the computer running the ISE software.

**Note:** The ObjectVideo Management Tool is automatically installed when the Daemon Service is installed. The ObjectVideo Management Tool is used to start and stop ObjectVideo services, to change various configuration settings in the system, and to set up ObjectVideo Forensics.

# Installing the VEW ISE Software



This is Step 4 in the ObjectVideo VEW deployment process. This step is only necessary for ObjectVideo VEW systems.

This section describes how to install the ISE software for ObjectVideo VEW deployments. The ISE software manages sensors, which detect events within surveillance video.

Install the ISE software on the ObjectVideo-certified computer you set up in “Setting Up the ISE Computer” on page 33.

## *Before You Start*

- Make sure that the computer has all prerequisite software installed. See “ObjectVideo Server and ISE Software Requirements” on page 225 for more information.
- You must have an installation key to complete this section.
- One of the following installation CDs are required to complete the steps in this section:
    - The gray/purple VEW Standard ISE CD
    - The gray/orange VEW FlowControl ISE CD
    - The gray/yellow VEW HiRes CD
    - The gray/aqua ObjectVideo Leader/Follower CD

**Important:** Do not install and run the ISE software before you install licenses, as described in “Installing Licenses” on page 41. Installing and running the ISE before you install the licenses can cause the system to become unstable.

**Note:** You must be logged in as a Windows user with Administrator privileges to install the ISE software.

## *To Install the VEW ISE Software*

**Note:** Perform the following steps for each ISE computer.

1. Insert the ISE installation CD into the computer's CD drive.

   The installer starts automatically. If it does not start automatically, use Windows Explorer to browse to the computer's CD drive, and then double-click **AutoSetup.js**.

   The **ObjectVideo Installation** dialog appears.

2. Click **Yes**.

3. Do one of the following:

   - If the **Welcome to the ObjectVideo Daemon Service Installation Wizard** screen appears, proceed to step 4.

   - If an ISE installation screen appears (such as the **Welcome to the ObjectVideo VEW Standard Installation Wizard** screen), skip to step 12. This can occur if the Daemon Service is already installed on the computer.

4. Click **Next**.

   The **License Agreement** screen appears.

5. If you agree to the terms of the license agreement, click the **I accept the license agreement** option.

6. Click **Next**.

   The **Ready to Install the Software** screen appears.

7. Click **Next**.

   The **Updating System** screen appears, followed by the **ObjectVideo Daemon Service Configuration** screen.

8. Type the product installation key.

9. Change the **Server Address** to the host name (e.g., **OBVServer1**) or IP address (e.g., **192.168.1.1**) of the ObjectVideo Server computer.

   If you use the ObjectVideo Server computer's host name, you must have a DNS server running on your network. You can also use a **hosts** file for name resolution (see "Adding a Host to a Hosts File" on page 140). If your network uses DHCP, you must use the host name of the computer running the ObjectVideo Server software rather than the computer's IP address, because the IP address may change when the computer is rebooted.

**Note:** The **Server Port** (**8076**) is the default port on which the ObjectVideo Server software listens. It is unlikely that you will have to change this value.

10. Click **OK**.

    The **ObjectVideo Daemon Service has been successfully installed** screen appears.

11. Click **Finish**.

    The first ISE installation screen appears.

12. Click **Next**.

    The **Ready to Install the Software** screen appears.

13. Do one of the following:

    - If you are not installing a VEW HiRes ISE, proceed to step 14.
    - If you are installing a VEW HiRes ISE, select a resolution (**640 x 480** or **720 x 480**) from the **Resolution** field, and then proceed to step 14.

      Selecting **720 x 480** may result in a slightly longer monitoring range where events can be detected by ObjectVideo. The **640 x 480** setting is the correct aspect ratio for most computers, and you may want to select this option if you are going to export Alert Console images to a Hypertext Markup Language (HTML) file.

14. Click **Next**.

    The **Updating System** screen appears while the ISE software is installed on the computer, followed by a screen indicating that the installation of the ISE software was successful.

15. Click **Finish**.

16. Do one of the following:

    - If the **ObjectVideo Installation** screen appears, proceed to step 17.
    - If the **Welcome to the ObjectVideo Forensics Store Installation Wizard** screen appears, proceed to step 20.

17. Do one of the following when asked if you would like to install the ObjectVideo Serial Port service:

    - If you want to install the service, click **Yes**. Proceed to step 18.
    - If you do not want to install the service, click **No**. Proceed to step 20.

The ObjectVideo Serial Port service allows multiple VEW Leader/Follower sensors acting as followers to connect to a single COM port on the ISE computer. You will need to install and run this service if you have multiple cameras connected to an ISE computer with a single COM port.

18. In the **Welcome to the ObjectVideo Serial Port Service Installation Wizard** screen, click **Next**.

    The **Updating System** screen appears while the ObjectVideo Serial Port service is installed, followed by the **ObjectVideo Serial Port Service has been successfully installed** screen.

19. Click **Finish**.

20. In the **Welcome to the ObjectVideo Forensics Store Installation Wizard** screen, click **Next**.

    The **Ready to Install the Software** screen appears.

21. Click **Next**.

    The **Updating System** screen appears while the Forensics Store service is installed on the computer, followed by the **ObjectVideo Forensics Store Configuration** dialog.

22. Do one of the following:

    - Click the button to the right of the **Forensics Data Directory** field, browse to the *local* directory in which forensics data will be stored. Click **OK** on the **Browse for Folder** dialog. Click **OK** on the **ObjectVideo Forensics Store Configuration** dialog. The **ObjectVideo Forensics Store has been successfully installed** screen appears.

    - In the **Forensics Data Directory** field, type the path to the local directory in which forensics data will be stored, and then click **OK**. The **ObjectVideo Forensics Store has been successfully installed** screen appears.

    You must specify a forensics data directory, even if you have not purchased ObjectVideo Forensics. A certain amount of forensics data is stored on all VEW ISE computers by default.

    The path must be a local path (e.g., **F:\Store**), and you cannot specify a directory path with spaces. If the directories in the path you specify do not already exist, the installer will create them for you.

23. Click **Finish**.

    An **ObjectVideo Installation** dialog appears, asking whether you want to reboot the ISE computer.

24. Click **Yes** to reboot the computer.

25. Proceed to “Installing the VEW/OnBoard Client Applications” on page 55.

**Important:**

- You must reboot the computer in order for the ISE software to run. The ISE software runs automatically when the computer starts up.

- Do not install or run more ISEs than your licensing arrangement permits. Doing so will cause the system to become unstable.

- Some ObjectVideo systems require vendor-specific files known as Partner Packages that determine the appearance and behavior of the system, such as the supported sensor, event, response, and object filter types. If the system you are deploying requires a Partner Package, copy the Partner Package files to **C:\Program Files\ObjectVideo\ISE\config** on the computer running the ISE software.

**Note:** The ObjectVideo Management Tool is automatically installed when the Daemon Service is installed. The ObjectVideo Management Tool is used to start and stop ObjectVideo services, to change various configuration settings in the system, and to set up ObjectVideo Forensics.

# Adding Sensors (ObjectVideo OnBoard)



This is Step 5 in the ObjectVideo OnBoard deployment process. This step is only necessary for ObjectVideo OnBoard systems.

This section describes how to add ObjectVideo OnBoard sensors. In ObjectVideo OnBoard, you must add sensors after installing the ISE software. This step is not necessary for ObjectVideo VEW, because sensors are automatically added when the VEW ISE software is installed.

Sensors monitor video to detect events in real-time and trigger alerts as events occur. One sensor is responsible for monitoring each video feed. OnBoard 100, OnBoard 200, and OnBoard 1000 sensors detect different event types. See “ObjectVideo OnBoard” on page 3 for information about the types of events ObjectVideo OnBoard sensors can detect.

These sensors may support metadata. If a sensor supports metadata, it can generate the forensics data that ObjectVideo Forensics uses to search for past events. These sensors are identified as OnBoard 100MD, OnBoard 200MD, and OnBoard 1000MD in the ObjectVideo Management Tool. Except for their ability to support metadata, these sensors are identical to other OnBoard sensors.

The steps in this section are performed using the ObjectVideo Management Tool on the computer running the ISE software. The number of sensors that can be created varies based on the sensor type, hardware configuration, and licensing.

## *To Add a Sensor*

1. On the computer running the ISE software, run the ObjectVideo Management Tool (**Start** > **All Programs** > **ObjectVideo** > **ObjectVideo Management Tool**).

2. In the **ISE** tab, click the **Add Sensor** button.

   The **Add Sensor Type** dialog appears.

3. Select the type of sensor you want to create, and then click **OK**.

   A new sensor tab is created on the **ISE** tab. The new tab is named with a unique sensor ID generated by the system.

4. Click **Apply** to apply your changes.

   If you do not click **Apply**, the sensor will not be added. The **Number of Active Sensors** is updated automatically to reflect the addition of the new sensor.

5. Do one of the following:

    - If you want to add another sensor, return to step 2.

    - If you have finished adding sensors, proceed to the next section, “Installing the VEW/OnBoard Client Applications.”

**Important:**

- Do not create more sensors than you have licenses to support. Doing so will cause the system to become unstable.

- When you click **Apply**, the ObjectVideo Management Tool automatically stops and restarts the ObjectVideo services running on that computer. This may take a few minutes. Only services that were running when you clicked **Apply** will be restarted. You will know that the services are restarted when the field next to each service in the ObjectVideo Management Tool says **Running**.

**Note:** If the Video Analysis Device is not a camera and supports multiple views, the system may be set up using a multiplexer/switcher, which enables one sensor to monitor multiple video feeds.

# Installing the VEW/OnBoard Client Applications



This is Step 5 in the ObjectVideo VEW deployment process.



This is Step 6 in the ObjectVideo OnBoard deployment process.

The VEW/OnBoard client applications are the System Configuration Tool, Rule Management Tool, and Alert Console. When you install the VEW/OnBoard client applications, you can choose to install only the Alert Console, only the Rule Management Tool and System Configuration Tool, or all of the VEW/OnBoard client applications.

The role of these applications within the system depends on the products they are being used with, as described in the sections that follow.

**Note:** After you install the client applications, you may wish to use Windows security to restrict access to each of the applications, so that system administrators have access to the System Configuration Tool only and security professionals have access to the Rule Management Tool and Alert Console only.

## *About the Alert Console*

In ObjectVideo VEW and ObjectVideo OnBoard, the Alert Console displays alerts as events occur and allows you to search for alerts. Alerts provide a snapshot of the event and additional information, such as the location at which the event occurred, the camera the event took place in front of, and the date and time on which the event occurred.

ObjectVideo provides an optional DVR Alert Console feature for some types of DVRs. The DVR Alert Console allows you to view a live video feed from a sensor that receives an alert. It also allows you to view a video segment from the time period when the alert occurred. Contact customer support for information on obtaining the DVR Alert Console (see “Getting Support” on page 223).

## *About the System Configuration Tool*

The System Configuration Tool is used to set up the system’s configuration, enter information about components, and perform other system-related tasks. The System Configuration Tool is typically used right after the system is installed.

## About the Rule Management Tool

In ObjectVideo VEW and ObjectVideo OnBoard, the Rule Management Tool is used to set up rules for surveillance cameras. Rules tell the system which events to look for and how to respond when an event occurs. The system saves alerts in a database for later searching using the Alert Console, and it can be set up (using the Rule Management Tool) to respond to events by displaying alerts in the Alert Console, sending alerts by e-mail, or following objects with a PTZ camera (for VEW Leader/Follower).

The Rule Management Tool is used to define an initial camera view during the set-up of the ObjectVideo Forensics or ObjectVideo VEW system if you are using VEW Standard, VEW HiRes, or VEW Leader/Follower sensors. For the system to detect events for the sensor, at least one view has to be set up for every video feed a sensor is monitoring and for every preset position on a PTZ camera. The Rule Management Tool is also used to create additional views for VEW Standard, VEW HiRes, VEW Leader/Follower, and ObjectVideo OnBoard sensors that support multiple views.

## Before You Start

- Make sure that the computer you are installing the client applications on meets the “Client Application Hardware Requirements” on page 21.
- Make sure that the computer has all the prerequisite software installed. See “Client Application Software Requirements” on page 226 for more information.
- The red VEW/OnBoard client applications installation CD and an installation key are required to complete the steps in this section.

## To Install the VEW/OnBoard Client Applications

On a computer that meets the minimum requirements for the VEW/OnBoard client applications (see “Minimum System and Environmental Requirements” on page 17), insert the VEW/OnBoard client applications installation CD in the computer’s CD drive.

One of the following occurs:

- An HTML page opens. Follow the instructions on the HTML page to install the software.
- The HTML page does not open, and the installer does not run. If this occurs, use Windows Explorer to browse to the computer’s CD drive and double-click **Installation_Instructions.htm**. Follow the instructions on the HTML page.
- In the event that you are unable to access the HTML page, the directions are included in the following section.

Complete the following steps to install the software:

1. Use Windows Explorer to browse to the installation CD.

2. On the CD, double-click **AutoSetup.js**.

   The **ObjectVideo Installation** dialog appears.

3. Click **Yes**.

4. Do one of the following:

   - If the **Welcome to the ObjectVideo Daemon Service Installation Wizard** screen appears, proceed to step 5.

   - If the **Welcome to the ObjectVideo VEW/OnBoard Client Applications Installation Wizard** screen appears, skip to step 13. This occurs if the Daemon Service is already installed on the computer.

5. Click **Next**.

   The **License Agreement** screen appears.

6. If you agree to the terms of the license agreement, click the **I accept the license agreement** option.

7. Click **Next**.

   The **Ready to Install the Software** screen appears.

8. Click **Next**.

   The **Updating System** screen appears, followed by the **ObjectVideo Daemon Service Configuration** screen.

9. Type the product installation key.

10. Change the **Server Address** to the host name (e.g., **OBVServer1**) or IP address (e.g., **192.168.1.1**) of the computer running the ObjectVideo Server software.

    If you use the computer's host name, you must either have a DNS server running on your network or a **hosts** file for name resolution (see "Adding a Host to a Hosts File" on page 140 for more information). If your network uses DHCP, you must use the host name of the computer running the ObjectVideo Server software rather than the computer's IP address, because the IP address may change when the computer is rebooted.

    **Note:** The **Server Port** (**8076**) is the default port on which the ObjectVideo Server software listens. It is unlikely that you will have to change this value.

11. Click **OK**.

The **ObjectVideo Daemon Service has been successfully installed** screen appears.

12. Click **Finish**.

    The **Welcome to the ObjectVideo VEW/OnBoard Client Applications Installation Wizard** screen appears.

13. On the **Welcome to the ObjectVideo VEW/OnBoard Client Applications Installation Wizard** screen, click **Next**.

    The **Select Applications** screen opens.

14. If desired, select **Rule Management Tool and System Configuration Tool** and/or **Alert Console** from the left side of the window.

    A drop-down menu appears.

15. From the drop-down menu, select whether you want to install the software. By default, all of the software is installed.

    If you select **Entire feature will be unavailable** from the menu, the software will not be installed. Selecting either of the other options will result in the software being installed. If you click **Reset**, all the VEW/OnBoard client applications will be installed.

16. Click **Next**.

    The **Ready to Install the Software** screen appears.

17. Click **Next**.

    The **Updating System** screen appears while the VEW/OnBoard client applications are installed on the computer, and then the **ObjectVideo VEW/OnBoard Client Applications have been successfully installed** screen appears.

18. Click **Finish**.

    An **ObjectVideo Installation** dialog appears, asking whether you want to reboot the VEW/OnBoard client application computer.

19. Click **Yes** to reboot the computer.

    You must reboot the computer in order for the System Configuration Tool, Rule Management Tool, and Alert Console to operate.

20. If you want to use the DVR Alert Console, install it on the computer(s) running the Alert Console.

    See “About the Alert Console” on page 55 for more information on this feature.

21. Proceed to the next section, “Assigning a Video Source to a Sensor.”

**Important:** Some ObjectVideo systems require vendor-specific files known as Partner Packages that determine the appearance and behavior of the system, such as the supported sensor, event, response, and object filter types. If the system you are deploying requires a Partner Package, copy the Partner Package files to **C:\Program Files\ObjectVideo\Administration Tools\config** on the computer running the VEW/OnBoard client application software.

**Note:** The ObjectVideo Management Tool is automatically installed when the Daemon Service is installed. The ObjectVideo Management Tool is used to start and stop ObjectVideo services and change various configuration settings in the system.

# Assigning a Video Source to a Sensor



This is Step 6 in the ObjectVideo VEW deployment process.



This is Step 7 in the ObjectVideo OnBoard deployment process.

This section describes how to assign a video source to a sensor. This is accomplished using the ObjectVideo Management Tool on the computer running the ISE software.

In ObjectVideo VEW, when you assign a video source to a sensor, you are assigning the video feed the sensor will monitor. One sensor is responsible for monitoring each video feed. See “To Assign Video Sources to ObjectVideo VEW Sensors” for step-by-step instructions.

In ObjectVideo OnBoard, when you are assigning a video source, you are associating a sensor with a Video Analysis Device. See “To Assign Video Sources to ObjectVideo OnBoard Sensors” on page 62 for more information.

When you have finished selecting the video source, click **Apply**.

You can verify that the video source has been properly selected by opening the System Configuration Tool. If you have the System Configuration Tool open, you must click the **Refresh Configuration** button to display the new configuration.

Select the sensor icon in the System Configuration Tool. Click the **View** tab to verify that a snapshot of video source you selected appears. See the System Configuration Tool Help for more information about the **View** tab.

After you have completed this section, proceed to “Validating the Installation” on page 63.

## *To Assign Video Sources to ObjectVideo VEW Sensors*

In the sensor’s tab on the **ISE** tab, select a video source for the sensor from the **Video Source** list. The list displays the ISE computer’s video inputs. The video inputs correspond to the video capture ports on the ISE computer. This is the source of the video feed that the ISE computer is receiving from a surveillance camera or multiplexer/switcher. The sensor analyzes this video feed. The number of video inputs listed does not necessarily correspond to the number of live camera feeds connected to the ISE computer.

Select one of the following for each sensor:

- **device://video:0**
- **device://video:1**
- **device://video:2**
- **device://video:3**

You must select a different video source for every sensor. Two or more sensors cannot share the default **Video Source** of **device://video:0** or any of the other **Video Source** values.

**Important:**

- You must assign a different video source to each sensor. If you assign the same video source to two or more sensors, the system will not operate properly.
- When you click **Apply**, the ObjectVideo Management Tool automatically stops and restarts the ObjectVideo services running on that computer. This may take a few minutes. Only services that were running when you clicked **Apply** will be restarted. You will know that the services are restarted when the field next to each service in the ObjectVideo Management Tool says **Running**. If you have the Rule Management Tool or System Configuration Tool open, you must click the **Refresh Configuration** button in these tools to display the new configuration.

**Notes:**

- It is not necessary to associate sensors with video sources that are not receiving a live camera feed. For example, in ObjectVideo VEW, if the video input on the ISE computer is not connected to a camera or multiplexer/switcher, there is no need to associate a sensor with that video input. To avoid confusion, you may want to rename unassigned sensors to indicate that they do not have a video source (e.g., **Unassigned** or **No Video Source**).
- Next to the **Video Source** is the **Selector** field. If you are using an ObjectVideo-certified computer to run the ISE software, you should never have to change this field. You would only change this setting if you have a video card that requires you to choose between physical inputs.

## *To Assign Video Sources to ObjectVideo OnBoard Sensors*

In the sensor's tab on the **ISE** tab, enter a video source for the sensor. Use the **Video Source** field to associate a sensor with a Video Analysis Device. The convention for assigning video sources is determined by the type of Video Analysis Device you are using. Contact your Video Analysis Device vendor for instructions.

**Important:**

- You must assign a different video source to each sensor. If you assign the same video source to two or more sensors, the system will not operate properly.
- When you click **Apply**, the ObjectVideo Management Tool automatically stops and restarts the ObjectVideo services running on that computer. This may take a few minutes. Only services that were running when you clicked **Apply** will be restarted. You will know that the services are restarted when the field next to each service in the ObjectVideo Management Tool says **Running**. If you have the Rule Management Tool or System Configuration Tool open, you must click the **Refresh Configuration** button in these tools to display the new configuration.

# Validating the Installation



This is Step 7 in the ObjectVideo VEW deployment process.



This is Step 8 in the ObjectVideo OnBoard deployment process.

In this section, you will ensure that the system is running properly so that you can troubleshoot any problems you observe. Validating the installation involves the following:

- Using the System Configuration Tool to check the system
- Validating that the Alert Console can connect to the ObjectVideo Server

After you take the steps in this section, do one of the following:

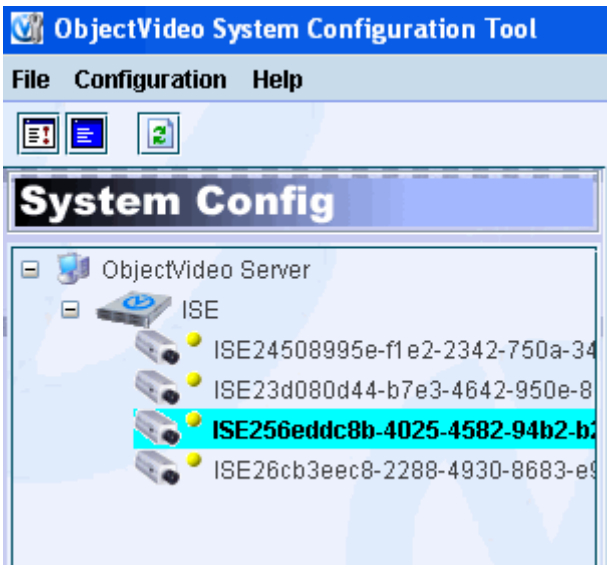
- If you are deploying ObjectVideo VEW, proceed to “Creating Views (ObjectVideo VEW)” on page 70.
- If you are deploying ObjectVideo OnBoard, proceed to “Forcing or Adding Views (ObjectVideo OnBoard)” on page 72.

## *Using the System Configuration Tool to Check the System*

Run the System Configuration Tool. By default, if everything is working properly, the System Configuration Tool automatically connects to the ObjectVideo Server running on the network, and the Tool displays the ISE(s) you have installed with their sensor(s).

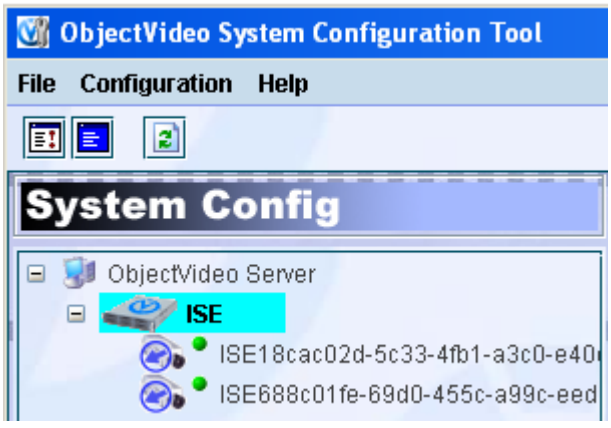
This section describes what a properly running system looks like after you have completed the ISE installation process and assigned video sources. If your system does not seem to be running properly, skip to “Symptoms of System Problems” on page 67.

The following figure shows a System Configuration Tool window displaying a newly installed system with all components running and communicating and a VEW Standard ISE with four sensors. VEW Standard sensors are initially in a **Searching for Known View** status, indicated by a yellow dot.

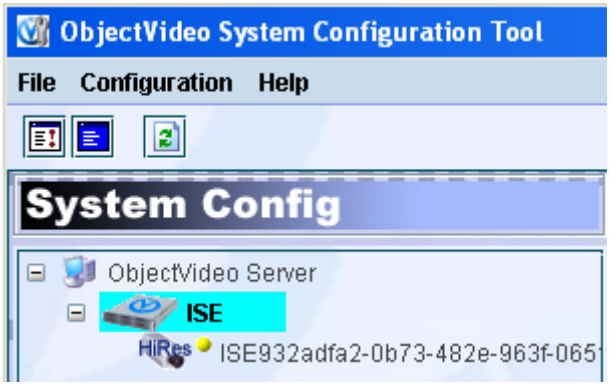



A system with VEW Leader/Follower sensors would appear the same as the figure above, except with VEW Leader/Follower sensor icons instead of VEW Standard icons.

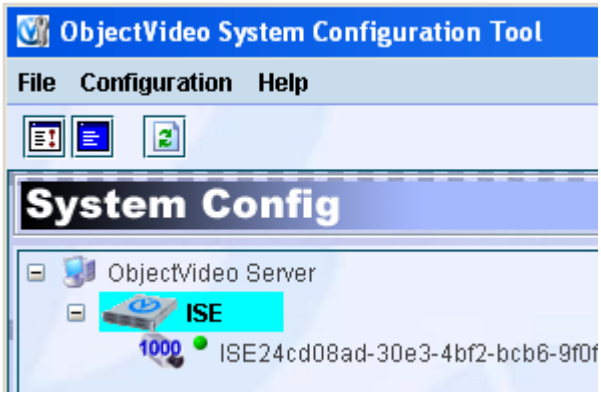
In the following figure, the System Configuration Tool window displays a VEW FlowControl ISE and two sensors. VEW FlowControl sensors are initially in a **Known View** status, indicated by a green dot.



In the following figure, the System Configuration Tool window displays a VEW HiRes ISE and one sensor. VEW HiRes sensors are initially in a **Searching for Known View** status, indicated by a yellow dot.




In the following figure, the System Configuration Tool window displays an OnBoard ISE with an OnBoard 1000 sensor. Once they are assigned a video source, OnBoard sensors are in a **Known View** status, indicated by a green dot.



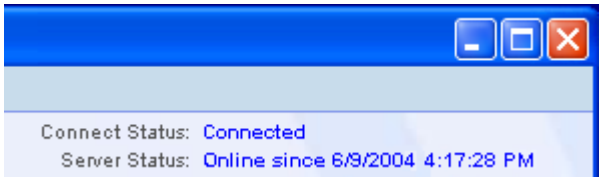

A system with OnBoard 100 sensors would appear the same as the previous figure, except with OnBoard 100 icons instead of OnBoard 1000 icons.


A system with OnBoard 200 sensors would appear the same as the figure above, except with OnBoard 200 icons instead of OnBoard 1000 icons.


**Note:** You should see an ObjectVideo OnBoard sensor icon for every sensor you added in “Adding Sensors (ObjectVideo OnBoard)” on page 53.

Check for the following, which indicate that the system is running properly:

- The **Connect Status** should be **Connected**, and the **Server Status** should be **Online**. Both statuses are displayed in the upper-right corner of the System Configuration Tool window.




- On the left side of the System Configuration Tool window, under the ObjectVideo Server icon, one ISE icon should appear for each ISE that is running on the network.

By default, the name of each ISE is the host name of the computer that the ISE software is running on.

Sensor icons represent sensors that monitor video feeds for events. Based on the table that follows, verify that the appropriate number of sensor icons appear (per ISE icon) with the default sensor status.

| Sensor Type | Sensor Icon | Number of Sensor Icons | Initial Sensor Status |
|---|---|---|---|
| VEW Standard |  | 4 | **Searching for Known View** status that eventually becomes an **Unknown View** status. These statuses are indicated by a yellow dot next to each sensor icon. |
| VEW Leader/Follower |  | 4 | **Searching for Known View** status that eventually becomes an **Unknown View** status. These statuses are indicated by a yellow dot next to each sensor icon. |
| VEW HiRes |  | 1 | **Searching for Known View** status that eventually becomes an **Unknown View** status. These statuses are indicated by a yellow dot next to each sensor icon. |
| VEW FlowControl |  | 2 | **Known View** status. This status is indicated by a green dot next to each sensor icon. (If the status is not **Known View** immediately, it should be within a few seconds.) |

| Sensor Type | Sensor Icon | Number of Sensor Icons | Initial Sensor Status |
|---|---|---|---|
| OnBoard 100 |  | Varies according to license and hardware configuration | **Known View** status. This status is indicated by a green dot next to each sensor icon. |
| OnBoard 200 |  | Varies according to license and hardware configuration | **Known View** status. This status is indicated by a green dot next to each sensor icon. |
| OnBoard 1000 |  | Varies according to license and hardware configuration | **Known View** status. This status is indicated by a green dot next to each sensor icon. |

See the “System Configuration Tool/Rule Management Tool Troubleshooting” on page 175 for more information about sensor statuses.

Each sensor’s name starts with the host name of the computer running the ISE software, followed by a string of random characters.

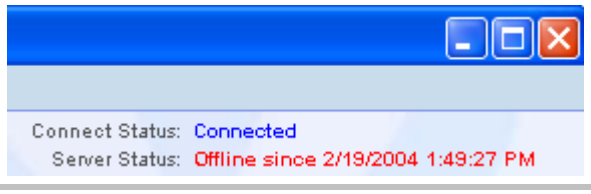
When you select an ISE icon and click the **View** tab, a snapshot of a video feed should appear for each sensor with an assigned video source.

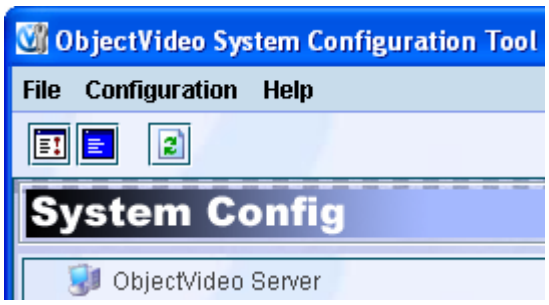
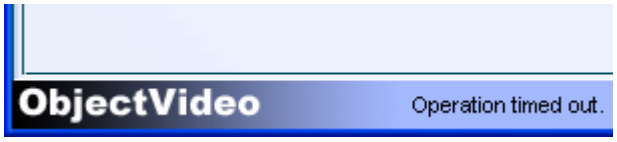
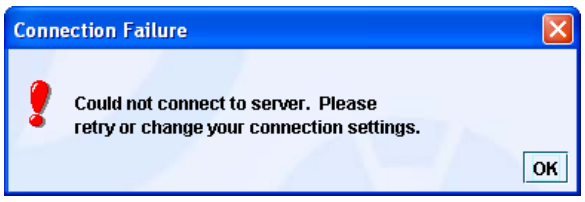
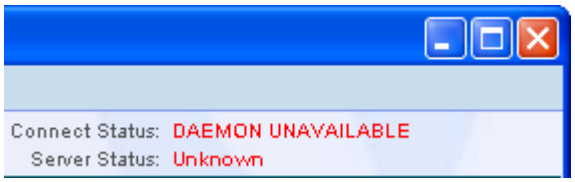
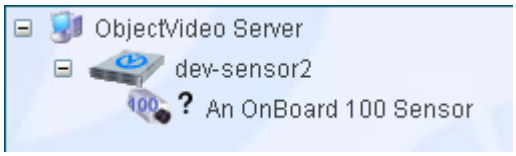
**Note:** If the system does not seem to be running properly, refer to the next section, “Symptoms of System Problems,” on page 67.

## Symptoms of System Problems

The following symptoms in the System Configuration Tool indicate that a problem may have occurred. Refer to the indicated page in “System Configuration Tool/Rule Management Tool Troubleshooting” for information about how to address the problem.

**Table 7: Symptoms of System Problems**

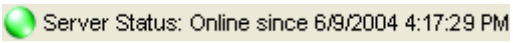
| Symptom | | Page |
|---|---|---|
| The **Server Status** is **Offline**. |  | 177 |

| Symptom | | Page |
|---|---|---|
| Only the ObjectVideo Server icon appears, with no ISE icons. |  | 183 |
| An **Operation timed out** message appears in the bottom center of the System Configuration Tool window. |  | 189 |
| The **Connection Failure** dialog appears. |  | 182 |
| The **Connect Status** is **DAEMON UNAVAILABLE**. |  | 182 |
| The **Server Status** is **Unknown**. (The **Connect Status** can vary in this case.) |  | 178 |
| One or more of the sensors displayed in the System Configuration Tool are in an **Unvalidated** status, with a question mark beside the sensor icon(s). |  | 198 |

## *To Verify that the Alert Console Connects to the System*

1. Open the Alert Console.
2. Verify that the **Server Status** is **Online**.

The **Server Status** message appears in the lower-left corner of the Alert Console.




If the **Server Status** is not **Online**, the Alert Console is not communicating properly. Refer to “Alert Console Troubleshooting” on page 203 for more information.

**Note:** You will not receive any alerts unless you have created a rule in the Rule Management Tool that requires an alert response, and an event has occurred to trigger that response. Refer to “Creating Rules” on page 80 for more information.

# Creating Views (ObjectVideo VEW)



This is Step 8 in the ObjectVideo VEW deployment process. This step is only necessary for ObjectVideo VEW systems.

You must create at least one view before you create a VEW Standard, VEW HiRes, or VEW Leader/Follower rule or ObjectVideo Forensics scenario. Sensors cannot detect events until you define a view. A view (also referred to as a stored view) is a surveillance camera's field of view that has been designated in the system for monitoring by a sensor. For sensors that support multiple views, views are used to accommodate the use of PTZ surveillance cameras and multiplexers/switchers.

**Notes:**

- VEW FlowControl does not support views. Some ObjectVideo OnBoard sensors may also support multiple views, but the initial view of all ObjectVideo OnBoard sensors is automatically assigned by the system when the video source is assigned to the sensor.

- If a VEW Leader/Follower sensor is only going to follow objects, not detect events, you do not need to create a view for the sensor.

## *To Create an Initial View*

1. Run the Rule Management Tool.

2. In the **Rule Manager** area on the left side of the Rule Management Tool window, select the sensor to which you want to add a view.

3. Click the **View** tab on the right side of the Rule Management Tool window.

   The snapshot on the left shows the feed from the surveillance camera. The snapshot on the right contains the text **Unknown View**.

4. Do one of the following, if desired:

   - Leave the camera in the current field of view.

   - If the camera is a PTZ camera, move or zoom the camera to a position or zoom level you want the system to monitor.

   - If the camera corresponds to several cameras on a multiplexer/switcher, switch to the camera you want the system to monitor.

5. Click the **Add** button between the two snapshots.

   The **Add View** dialog appears.

6. Type a **Name** and **Description** for the new view.

   Use a name that will make the view easily recognizable.

   The table that follows describes the rest of the properties displayed on the **Add View** dialog.

**Table 8: View Properties**

| Property | Description |
|---|---|
| **Created By** | The Windows user ID of the user who created the view. |
| **Created On** | The date and time on which the view was created. |
| **Modified By** | The Windows user ID of the last user who edited the view. |
| **Modified On** | The date and time on which the view was last modified. |
| **Filters** | Indicates whether or not object filters have been defined for this view. Object filters are optional. The field contains the text **Undefined**, because the view is new and no object filters have been defined for the view yet. If you are using ObjectVideo VEW or ObjectVideo OnBoard for real-time event detection, you can create object filters later by editing the view. If you are using ObjectVideo Forensics only, there is no need to define an object filter from this dialog. |

7. Click **OK**.

   A snapshot of the new view appears at the bottom of the **View** tab. The snapshot has a green box around it, indicating that the live camera feed matches the new view you have created. The snapshot of the view is also added to the right of the **Live Camera Feed** snapshot as the **Active View**.

   In addition, a green dot appears to the left of the sensor's name and the view's name in the **Rule Manager** area on the left side of the Rule Management Tool window.

8. Repeat steps 2-7 for every VEW Standard, VEW HiRes, and VEW Leader/Follower sensor that will detect events.

9. Proceed to "Editing and Reviewing Component Properties" on page 75.

**Note:** After you have created the initial view, you cannot create additional views for that sensor until you pan the camera or switch to another camera on the multiplexer/switcher. See the Rule Management Tool Help for information about creating additional views, managing views, and troubleshooting views.

# Forcing or Adding Views (ObjectVideo OnBoard)



This is Step 9 in the ObjectVideo OnBoard deployment process. This step is only necessary for ObjectVideo OnBoard systems.

When the ObjectVideo OnBoard system is installed, a default view is created that reflects the field of view of the camera at the time of the installation.

ObjectVideo OnBoard sensors may have the capability to support multiple views based on the Video Analysis Device you are using. Contact your Video Analysis Device vendor for more information. The Rule Management Tool provides different options based on whether the sensor has the capability to support multiple views.

If your sensor only supports a single view, this default view will be the field of view for which you create rules unless you change the default view. You can change a sensor's default view by moving the surveillance camera or adjusting the zoom of the camera and then using the Rule Management Tool to force the view. This is an optional step for ObjectVideo OnBoard deployments. See "To Force a View" below for instructions.

If your sensor supports multiple views, you can add a new view for the sensor. This is an optional step for ObjectVideo OnBoard deployments. See "To Add an Additional View" on page 73 for instructions.

**Note:** If using multiple views, remember that differences between views may require different rule settings between views.

## *To Force a View*

1. Run the Rule Management Tool.

2. On the left side of the Rule Management Tool window, select the sensor icon associated with the view you want to change.

   The status of the sensor should be **Unknown View** (with a yellow dot beside the sensor icon), because you moved the camera or adjusted its zoom and the sensor no longer recognizes the camera's field of view. You can only force the view if the sensor's status is **Unknown View**.

3. On the right side of the Rule Management Tool window, select the **View** tab.

4. Click the **Force** button between the two snapshots in the upper portion of the **View** tab.

5. When the **Force View** dialog appears, select the view and click the **Force View** button.

The **Forcing View** dialog is displayed until the view is added. The view now matches the **Live Camera Feed**. It replaces the **Unknown View** snapshot in the **Active View** area, and a green box appears around the view in the lower portion of the **View** tab, indicating that the sensor is now monitoring that view.

6. Repeat steps 2-5 for every sensor on which you want to force a view.

7. Proceed to the next section, “Editing and Reviewing Component Properties.”

## *To Add an Additional View*

1. Run the Rule Management Tool.

2. In the **Rule Manager** area on the left side of the Rule Management Tool window, select the sensor to which you want to add a view.

3. Click the **View** tab on the right side of the Rule Management Tool window.

   The snapshot on the left shows the video feed from the surveillance camera.

4. Do one of the following, if desired:

   - If the camera is a PTZ camera, move or zoom the camera to a position or zoom level you want the system to monitor.

   - If the camera corresponds to several cameras on a multiplexer/switcher, switch to the camera you want the system to monitor.

5. Click the **Add** button between the two snapshots.

   The **Add View** dialog appears.

6. Type a **Name** and **Description** for the new view.

   Use a name that will make the view easily recognizable.

   The table that follows describes the rest of the properties displayed on the **Add View** dialog.

**Table 9: View Properties**

| Property | Description |
|---|---|
| **Created By** | The Windows user ID of the user who created the view. |
| **Created On** | The date and time on which the view was created. |
| **Modified By** | The Windows user ID of the last user who edited the view. |
| **Modified On** | The date and time on which the view was last modified. |

| Property | Description |
|---|---|
| **Filters** | Indicates whether or not object filters have been defined for this view. Object filters are optional. The field contains the text **Undefined**, because the view is new and no object filters have been defined for the view yet. If you are using ObjectVideo VEW or ObjectVideo OnBoard for real-time event detection, you can create object filters later by editing the view. If you are using ObjectVideo Forensics only, there is no need to define an object filter from this dialog. |

7. Click **OK**.

   A snapshot of the new view appears at the bottom of the **View** tab. The snapshot has a green box around it, indicating that the live camera feed matches the new view you have created. The snapshot of the view is also added to the right of the **Live Camera Feed** snapshot as the **Active View**.

   In addition, a green dot appears to the left of the sensor's name and the view's name in the **Rule Manager** area on the left side of the Rule Management Tool window.

8. Repeat steps 2-7 for every sensor on which you want to add a view.

9. Proceed to the next section, "Editing and Reviewing Component Properties."

**Note:** Video Analysis Devices are configured to only support a limited number of views. If you receive an error when you try to add a view, consult your Video Analysis Device vendor.

# Editing and Reviewing Component Properties



This is Step 9 in the ObjectVideo VEW deployment process.



This is Step 10 in the ObjectVideo OnBoard deployment process.

When you select any component (ObjectVideo Server, ISE, or sensor) on the left side of the System Configuration Tool window, information about that component appears in the **Properties** tab on the right side of the window. As this section describes, some fields provide read-only information about your configuration and other fields allow you to enter data. All properties are also displayed (read-only) in the Rule Management Tool.

**Important:** If the **Operation timed out** message appears in the bottom left of the System Configuration Tool window when you select a component, the Tool may not be displaying the current component properties. See “Sensor Synchronization Times Out and Operation Timed Out Message Appears” on page 189 for information on why this message may appear.

**Notes:**

- With the exception of the **Source** and **Status** fields, the **Properties** tab is for your reference only and does not affect the operation of the system in any way.
- You can click **Reset** to automatically restore editable fields to the values they had when the component was last selected.
- Make sure that you click **Apply** to save any changes you make to the component properties.

## *Editing and Reviewing ObjectVideo Server and ISE Properties*

You can enter and view information about the ObjectVideo Server and ISE(s) in the **Properties** tab.

### To Edit and Review ObjectVideo Server and ISE Properties

1. Select the ObjectVideo Server icon on the left side of the System Configuration Tool window.

The **Properties** tab displays the name of the ObjectVideo Server and the version number of the ObjectVideo Server software you are running.

2. Select an ISE icon on the left side of the System Configuration Tool window.

3. If desired, in the **Properties** tab, enter the **Name**, **Description**, and **Location** of the ISE.

   These fields are for your reference only, so you can use whatever naming conventions you have established. Avoid giving ISEs the same name. Unique names will make it easier to identify ISEs in the System Configuration Tool.

4. Review the ISE fields described in the table that follows.

**Table 10: ISE Properties**

| Property | Meaning |
|---|---|
| **Version** | The version number of the ISE software |
| **Net Address** | The IP address of the computer running the ISE software and the TCP port number |
| **Status** | The status the ISE is reporting to the System Configuration Tool |
| **Sensors** | A list of the sensors running on the same computer as the ISE software |

5. Click **Apply** to save your changes.

6. Repeat steps 2–5 for each ISE in your configuration.

## *Editing and Reviewing Sensor Properties*

You may want to enter information about your sensors in the **Properties** tab. There are also read-only sensor properties that can be reviewed from this tab.

### To Edit and Review Sensor Properties

1. Select a sensor icon on the left side of the System Configuration Tool window.

2. If desired, complete the fields described in the table that follows.

**Table 11: Sensor Properties to Edit**

| Property | Meaning |
|---|---|
| **Name** | The name of the sensor. Avoid giving sensors the same name. Unique names will make it easier to identify sensors in the Rule Management Tool and System Configuration Tool. |
| **Description** | Any description of the sensor. |

| Property | Meaning |
|---|---|
| **Location** | Where the camera is physically located: **Indoor** or **Outdoor**. You can also select **other** and type a location in the **Location** field. |
| **Source** | In ObjectVideo VEW, this is the name of the video input on the ISE computer associated with the sensor. If you select **other** from the **Source** list, you can enter the path to an AVI file (e.g., **C:\Media\default.avi**) in the field below the **Source** list. The AVI file must be located on the ISE computer.<br>In ObjectVideo OnBoard, use the **Source** field to associate a sensor with a Video Analysis Device.<br>See the System Configuration Tool Help for information on assigning the source in the System Configuration Tool. You can also assign the source in the ObjectVideo Management Tool using the instructions in “Assigning a Video Source to a Sensor” on page 60. |
| **Make** | The manufacturer of the camera. |
| **Model** | The model number of the camera. Choices may populate based on the **Make** selection. |
| **Spec** | Any additional specifications. May be populated based on the **Model** selection. |
| **Type** | The type of camera: **Black & White**, **Color**, **Active IR**, **Thermal**, **IDN**, or **other**. |
| **Mount** | The type of mount the camera utilizes: **Fixed**, **Fixed Dome**, **PTZ**, **Auto Dome**, or **other**. |

3. Review the sensor fields described in the table that follows.

**Table 12: Sensor Properties to Review**

| Property | Meaning |
|---|---|
| **Intelligent Sensor Engine** | The name of the ISE. |
| **Group** | If applicable, the group the sensor belongs to. |
| **Status** | The status of the sensor. See the System Configuration Tool Help for more information about sensor status. |

4. Click **Apply** to save your changes.

5. Repeat steps 1–4 for each sensor icon in your configuration.

# Completing the ObjectVideo VEW and ObjectVideo OnBoard Deployment Process

This chapter describes the final steps in setting up ObjectVideo VEW and ObjectVideo OnBoard. These systems detect events in real time and notify users of those events. You do not need to complete the steps in this chapter if you do not want to take advantage of the ObjectVideo VEW or ObjectVideo OnBoard real-time event detection capabilities and are going to use only ObjectVideo Forensics or the ObjectVideo Integrator Toolkit.

To complete the ObjectVideo VEW and ObjectVideo OnBoard set-up process, perform the initial installation and set-up steps described in "Initial Deployment Steps" starting on page 28, and then take the following steps described in this chapter:

- Calibrating VEW Leader/Follower sensors (VEW Leader/Follower only)
- Creating rules
- Configuring the system for e-mail responses (optional)
- Creating contacts (optional)
- Testing the alert sound (optional)

## Calibrating VEW Leader/Follower Sensors

VEW Leader/Follower allows a PTZ camera to follow an object that triggered an event in another camera's view. The sensor that originally detects the event is known as the leader. The sensor that subsequently follows the object is known as the follower.

In the Leader/Follower Calibration Tool, you calibrate the follower to the leader sensor's view. During this process, you determine how the follower will pan, tilt, and zoom to target an object. The Leader/Follower Calibration Tool is part of the ObjectVideo Integrator Toolkit. To install the ObjectVideo Integrator Toolkit, see “Installing the ObjectVideo Integrator Toolkit Applications” on page 106.

Before you create a VEW Leader/Follower rule that contains a follow object response, you must use the Leader/Follower Calibration Tool.

The Help system available with the Leader/Follower Calibration Tool contains detailed information on how to calibrate VEW Leader/Follower sensors. To open the Help in the Leader/Follower Calibration Tool, select **Contents** from the **Help** menu.

## Creating Rules

The installation and set-up process is complete for ObjectVideo VEW and ObjectVideo OnBoard. You are ready to start using the system. The steps below provide a brief introduction on how to create rules. Rules tell the system which events to look for on the video feeds from surveillance cameras and how to respond to those events.

See the Rule Management Tool Help's "Getting Started" topic for detailed information about how to create rules in ObjectVideo VEW and ObjectVideo OnBoard. To access the Help, select **Help** > **Contents** in the Rule Management Tool window.

### *To Create a Rule*

1. In the **Rule Manager** area on the left side of the Rule Management Tool window, select the view icon, VEW FlowControl sensor icon, or OnBoard sensor icon for which you want to create a rule.

2. Click the **Rules** tab on the right side of the Rule Management Tool window.

3. Click **New**.

   The first screen of the Rule Wizard appears.

4. If desired, edit the **Name** and **Description** fields.

5. Click **Next**.

   The **Create Event** screen appears.

6. Select **Create New Event** or **Copy From Existing Event**.

7. If you are copying from an existing event, select an event from the **Existing Event** drop-down list.

8. If desired, edit the event name.

9. Select an event type.

10. Complete the **Event Specification** area, and then click **Next**.

11. Specify a schedule, and then click **Next**.

12. Specify one or more responses. Click **Next** on each **Create Response** screen.

13. On the last **Create Response** screen, click **Finish**.

    A rule must be active before it can trigger alerts. When a rule is first created, it is inactive. You can tell that a rule is inactive because there is no check mark next to the rule's name in the **Active** column.

14. Activate the rule by checking the box in the **Active** column to the right of the rule's name.

**Note:** Each Video Analysis Device supports a limited number of active rules. The number of active rules supported varies depending on the Video Analysis Device being used. Contact your Video Analysis Device vendor for more information.

# Configuring the System for E-mail Responses (Optional)

When you create rules, you have the option of having ObjectVideo VEW and ObjectVideo OnBoard generate e-mail-based alerts when events occur. If you are going to use e-mail-based responses, you must use the System Configuration Tool to specify an SMTP server and a sending e-mail address.

## *To Configure the System for E-mail Responses*

1. Start the System Configuration Tool, if it is not already running.
2. Select **File** > **Options**.

   The **System Configuration Tool Options** dialog appears.
3. Click the **Connection** tab.
4. In the **E-mail (SMTP) Server** field, enter the host name or IP address of the SMTP server used to send alert e-mail messages.
5. In the **E-mail Response Sender** field, enter an e-mail address.

   When e-mail alert messages are sent, this is the e-mail address that the messages are sent from. The name entered here will appear in the **From** field of response e-mail messages. If an alert e-mail is replied to, it will be sent to this address.
6. Click **OK**.

**Note:** An e-mail response will not occur unless a rule has been created that requires an e-mail response and an alert is triggered due to that rule. See the Rule Management Tool Help for information about creating e-mail responses for rules.

# Creating Contacts (Optional)

Contacts are created and managed in the **Contacts** tab of the Rule Management Tool. Contacts help you quickly find the contact information of coworkers and associates and make it easier for you to create e-mail-based responses to events. Contacts can be stored in a file on your local computer or shared on a computer network for centralized contact management.

## *To Create Contacts*

1. Start the Rule Management Tool, if it is not already running.
2. Select **File** > **Options**.

   The **Rule Management Tool Options** dialog appears.
3. Click the **Contacts** tab.
4. Click **Add**.

   The **Contact Data** window appears.
5. Enter the contact information in the **Contact Data** window.

   **Note:** The **Name** and **E-Mail** fields are required.
6. Click **OK**.
7. Repeat steps 4–6 for each contact you want to add.
8. Click **Apply** in the **Rule Management Tool Options** dialog to save the contacts you have added.

**Notes:**

- You can click the **Reset** button to “undo” the addition of a new contact.
- Providing an e-mail address in the **E-mail** field assists users when they create e-mail-based responses to events. The user can type only the name of the e-mail recipient, rather than having to type the recipient’s entire e-mail address.

## Testing the Alert Sound (Optional)

The Alert Console can play an audible alert when new alerts are displayed in the Alert Console. In order for the Alert Console to play a sound when an event occurs, the appropriate event response must have been set up for that event using the Rule Management Tool.

If it is not already running, open the Alert Console. You can test whether you are able to hear audible alerts by selecting **Test Alert Sound** from the **Tools** menu. This option plays an example alert sound. The only purpose for this option is to allow you to see if your computer is capable of generating an alert sound.

If you do not hear an alert sound, consult “Alert Console Troubleshooting” on page 203 for information on how to fix this problem.

After you have completed the installation of ObjectVideo VEW and ObjectVideo OnBoard, you can do the following:

- To complete the set-up and installation of ObjectVideo Forensics, see “Completing the ObjectVideo Forensics Deployment Process” on page 85.
- To install the ObjectVideo Integrator Toolkit, see “Installing the ObjectVideo Integrator Toolkit Applications” on page 106.

# Completing the ObjectVideo Forensics Deployment Process

This chapter describes how to complete the installation and set-up of ObjectVideo Forensics, which collects data about live video for later analysis. Only complete the steps in this chapter if you are going to use ObjectVideo Forensics.

You must install and configure ObjectVideo VEW or ObjectVideo OnBoard with metadata before you can use ObjectVideo Forensics. ObjectVideo VEW or ObjectVideo OnBoard components are required to set up the ObjectVideo Forensics system and to analyze surveillance video for later analysis by ObjectVideo Forensics.

After you have completed the steps in "Initial Deployment Steps" starting on page 28, perform the steps described in this chapter to complete the ObjectVideo Forensics set-up and installation process:

- Customizing forensics storage settings
- Sharing the forensics data directory for access by FAST
- Enabling forensics for ObjectVideo OnBoard sensors
- Validating that forensics data is being generated
- Installing FAST
- Creating scenarios

# Customizing Forensics Storage Settings

This section describes how to customize the following ObjectVideo Forensics settings:

- Setting the time span for the storage of forensics data
- Customizing settings that affect the disk space used for forensics data
- Setting the **File Clipping Interval**

You must be logged in as a Windows user with Administrator or Power User privileges to complete the steps in this section.

## *Setting the Time Span for the Storage of Forensics Data*

You can customize the time span for which the Forensics Store service stores forensics data. This setting is configured for each sensor separately using the ObjectVideo Management Tool. For example, you can configure the Forensics Store service so that it stores one sensor's forensics data for four days at a time and another sensor's forensics data for ten days at a time. When the specified time span is exceeded, the Forensics Store service begins deleting the oldest primitives and video files. By default, the Forensics Store service stores seven days of forensics data for each sensor.

**Note:** Increasing the forensics data storage time span for a sensor increases the amount of drive space occupied by forensics data. Consult "Target Time Spans and Disk Space Used for Forensics Data" on page 87 before increasing the time span.

### To Set the Time Span for the Storage of Forensics Data

1. Run the ObjectVideo Management Tool on the ISE computer.
2. On the **Forensics Store** tab, click the **Advanced** button.

   The **Forensics Store Advanced Options** dialog appears.
3. On the bottom of the **Forensics Store Advanced Options** dialog, click the tab associated with the sensor for which you want to change the **Target Time Span**.
4. Change the **Target Time Span** to the desired time span.

   The **Target Time Span** is specified in days, hours, minutes, and seconds (DD.HH:MM:SS). The default **Target Time Span** is seven days (**7.00:00:00**).

   **Note:** The **Target Time Span** is not guaranteed. Other settings affect the amount of data that is stored (i.e., the amount of disk space occupied by forensics data), and they are based on factors such as remaining disk space and the expected data stored based on estimated bit rates. See "Customizing Settings that Affect the Disk Space Used for Forensics Data" on page 89 for more information.

5. Click **OK**.

6. Click the **Apply** button on the ObjectVideo Management Tool window.

   When you click **Apply**, the ObjectVideo Management Tool automatically stops and restarts the ObjectVideo services running on the computer. This may take a few minutes. You will know that the services are restarted when the field next to each service in the ObjectVideo Management Tool says **Running**. Only services that were running when you clicked **Apply** will be restarted.

## Target Time Spans and Disk Space Used for Forensics Data

The tables that follow reflect the amount of data stored when the default settings for **Primitive Stream Bit Rate** and **Video Stream Bit Rate** are used on the **Forensics Store Advanced Options** tab. Changing these settings affects the amount of data being stored, but you should not change them without consulting customer support for assistance (see “Getting Support” on page 223).

To access the **Forensics Store Advanced Options** tab in the ObjectVideo Management Tool, open the ObjectVideo Management Tool on an ISE computer, and then click the **Forensics Store** tab. On the **Forensics Store** tab, click the **Advanced** button.

For all types of sensors, the default **Primitive Stream Bit Rate** is the same, at 122,880 bits per second (bps). The **Video Stream Bit Rate** settings vary, depending on the type of sensor being used. For VEW Standard, VEW FlowControl, VEW Leader/Follower, and ObjectVideo OnBoard sensors, the default rate is 563,200 bps. For VEW HiRes sensors, the default rate is 2,252,800 bps.

The storage units in the tables are indicated in megabytes (MB), gigabytes (GB), or terabytes (TB).

**Table 13: Max. Total Disk Space Used by Multiple Sensors Over Time (VEW Standard, VEW FlowControl, VEW Leader/Follower, and ObjectVideo OnBoard)**

| Time Span | Disk Space | | | |
|---|---|---|---|---|
| | 1 Sensor | 2 Sensors | 3 Sensors | 4 Sensors |
| 1 second | 83.75 KB | 167.5 KB | 251.25 KB | 335 KB |
| 1 minute | 4.907 MB | 9.814 MB | 14.722 MB | 19.629 MB |
| 1 hour | 294.434 MB | 588.867 MB | 883.301 MB | 1.15 GB |
| 1 day | 6.901 GB | 13.802 GB | 20.702 GB | 27.603 GB |
| 5 days | 34.504 GB | 69.008 GB | 103.512 GB | 138.016 GB |
| 7 days | 48.306 GB | 96.611 GB | 144.917 GB | 193.222 GB |
| 10 days | 69.008 GB | 138.016 GB | 207.024 GB | 276.031 GB |
| 14 days | 96.611 GB | 193.222 GB | 289.833 GB | 386.444 GB |
| 30 days | 207.024 GB | 414.047 GB | 621.071 GB | 828.094 GB |
| 180 days | 1.213 TB | 2.426 TB | 3.639 TB | 4.852 TB |
| 365 days | 2.46 TB | 4.92 TB | 7.379 TB | 9.839 TB |

**Table 14: Max. Total Disk Space Used by Sensor Over Time (VEW HiRes)**

| Time Span | Disk Space (1 Sensor) |
|---|---|
| 1 second | 290 KB |
| 1 minute | 16.992 MB |
| 1 hour | 0.996 GB |
| 1 day | 23.895 GB |
| 5 days | 119.476 GB |
| 7 days | 167.267 GB |
| 10 days | 238.953 GB |
| 14 days | 334.534 GB |
| 30 days | 716.858 GB |
| 180 days | 4.2 TB |
| 365 days | 8.517 TB |

The amount of forensics data stored is also affected by the **Min Disk Space Available In Bytes** setting on the **Forensics Store Advanced Options** tab. The purpose of the **Min Disk Space Available In Bytes** setting is to preserve a specific amount of drive space on the computer running the Forensics Store service. When the amount of space remaining on the Forensics Store service computer's hard drive reaches the **Min Disk Space Available In Bytes** setting (about 47.68 MB by default), the Forensics Store service starts deleting the oldest primitives and video files until the available drive space is above the threshold.

## *Customizing Settings that Affect the Disk Space Used for Forensics Data*

Several settings affect how much disk space is occupied by the forensics data stored by the Forensics Store service. You can customize these settings based on the disk space available on the computer(s) on which forensics data is being stored.

Most of the settings that affect the amount of disk spaced used for forensics data are configured on the computer running the Forensics Store service from the ObjectVideo Management Tool's **Forensics Store Advanced Options** dialog.

To access the **Forensics Store Advanced Options** dialog, take the following steps:

1. Run the ObjectVideo Management Tool on the ISE computer, if it is not already running.

2. On the **Forensics Store** tab, click the **Advanced** button.

   The **Forensics Store Advanced Options** dialog appears.

The **Forensics Store Advanced Options** settings listed in the table that follows affect the amount of disk space used for forensics data.

**Table 15: Forensics Store Advanced Options Settings that Affect Disk Space**

| Setting | Description | Default Value |
|---|---|---|
| **Min Disk Space Available In Bytes** | Specifies the minimum amount of space that must remain available on the disk where forensics data is being stored. See “Setting the Min Disk Space Available In Bytes” on page 91 for more information. | 50,000,000 bytes (about 47.68 MB) |
| **Store Check Interval** | Specifies how often the Forensics Store service checks to make sure that the time span for storing forensics data has not been exceeded and that the forensics data is not taking up too much disk space. See “Setting the Store Check Interval” on page 92 for more information. | 2 minutes |
| **Primitive Stream Bit Rate** and **Video Stream Bit Rate** | The maximum estimated bit rates at which primitives and video data for a video feed are transferred from the sensor to the Forensics Store service and stored. These are per-sensor settings. **Do not change these settings without consulting customer support.** See “Setting the Time Span for the Storage of Forensics Data” on page 86 for more information. | 122,880 bps for primitives<br><br>563,200 bps for VEW Standard, VEW Leader/Follower, VEW FlowControl, and ObjectVideo OnBoard video<br><br>2,252,800 bps for VEW HiRes video |

| Setting | Description | Default Value |
|---|---|---|
| **Target Time Span** | The total time period for which the Forensics Store service stores forensics data for a sensor. This is a per-sensor setting. See “Setting the Time Span for the Storage of Forensics Data” on page 86 for more information. | 7 days |

**Note:** The type of video compressor used also affects the amount of forensics data stored. Compressor settings are configured using the ObjectVideo Management Tool, but they should not be changed without consulting customer support (see “Getting Support” on page 223).

## Setting the Min Disk Space Available In Bytes

The **Min Disk Space Available In Bytes** setting in the ObjectVideo Management Tool’s **Forensics Store Advanced Options** dialog specifies the minimum amount of space that must remain available on the disk where forensics data is being stored. This setting only affects forensics storage on the computer running the Forensics Store service.

When this limit is reached, the Forensics Store service begins deleting the oldest video and primitives files for each sensor in the system until the amount of available disk space is above the **Min Disk Space Available In Bytes**. A health monitor alert is also generated when this limit is reached. The alert is displayed on the Alert Console when it is generated and can be searched for using the Alert Console.

The default setting is 50,000,000 bytes, which is equivalent to about 47.68 MB. If you plan to use more than 47.68 MB of disk space for non-forensics data on the computer running the Forensics Store service, you should increase this number. If you plan to use less than that amount for non-forensics data, decrease the number.

The Forensics Store service checks for this limit and other forensics storage-related limits at the interval specified in the **Store Check Interval**. See “Setting the Store Check Interval” on page 92 for more information.

### *To Set the Min Disk Space Available In Bytes*

1. Run the ObjectVideo Management Tool on the ISE computer, if it is not already running.

2. On the **Forensics Store** tab, click the **Advanced** button.

   The **Forensics Store Advanced Options** dialog appears.

3. Change the **Min Disk Space Available In Bytes** setting to the desired number of bytes.

4. Click **OK**.

5. Click the **Apply** button on the ObjectVideo Management Tool window.

   When you click **Apply**, the ObjectVideo Management Tool automatically stops and restarts the ObjectVideo services running on the computer. This may take a few minutes. You will know that the services are restarted when the field next to each service in the ObjectVideo Management Tool says **Running**. Only services that were running when you clicked **Apply** will be restarted.

## Setting the Store Check Interval

The **Store Check Interval** on the ObjectVideo Management Tool's **Forensics Store Advanced Options** dialog specifies how often the Forensics Store service checks to make sure that the time span for storing forensics data has not been exceeded and that the forensics data is not taking up too much disk space.

At the specified interval, the Forensics Store service checks the following:

- Whether the **Target Time Span** for each sensor's forensics data has been met or exceeded. See "Setting the Time Span for the Storage of Forensics Data" on page 86 for more information.

- Whether the **Min Disk Space Available In Bytes** setting has been reached. See "Setting the Min Disk Space Available In Bytes" on page 91 for more information.

- Whether the storage space used for each sensor's forensics data has met or exceeded the amount of data expected based on the **Primitive Stream Bit Rate**, **Video Stream Bit Rate**, and **Target Time Span**.

If the Forensics Store service determines that the time period specified in the **Target Time Span** has been exceeded for a sensor, it deletes the oldest video and primitives files for that sensor until the forensics data is within the specified time span.

If the **Min Disk Space Available In Bytes** setting has been reached, a health monitor alert is generated and displayed on the Alert Console, and the Forensics Store service deletes the oldest video and primitives files for the relevant sensors until adequate disk space is available. The health monitor alert is also stored in the database on the ObjectVideo Server for later searching using the Alert Console.

The Forensics Store service also checks to make sure that the expected amount of data is being stored during the **Target Time Span**, based on the **Primitive Stream Bit Rate** and **Video Stream Bit Rate**. The expected amounts of data are described in "Target Time Spans and Disk Space Used for Forensics Data" on page 87. If more than the expected amount of data has been generated, the Forensics Store service deletes the oldest video and primitives files for the relevant sensors until the expected amount of forensics data remains.

### *To Set the Store Check Interval*

1. Run the ObjectVideo Management Tool on the ISE computer, if it is not already running.

2. On the **Forensics Store** tab, click the **Advanced** button.

   The **Forensics Store Advanced Options** dialog appears.

3. Change the **Store Check Interval** setting to the desired time between checks.

   The **Store Check Interval** is in hours, minutes, and seconds (HH:MM:SS). The default setting is one hour (**01:00:00**).

4. Click **OK**.

5. Click the **Apply** button on the ObjectVideo Management Tool window.

   When you click **Apply**, the ObjectVideo Management Tool automatically stops and restarts the ObjectVideo services running on the computer. This may take a few minutes. You will know that the services are restarted when the field next to each service in the ObjectVideo Management Tool says **Running**. Only services that were running when you clicked **Apply** will be restarted.

## *Setting the File Clipping Interval*

As the Forensics Store service receives forensics data (video and primitives) from the sensor, it stores the video and primitives as files. Video files and primitives files are created in separate directories for each sensor under the **Store Base Directory**, which is specified when you install the Forensics Store service and is configured on the ObjectVideo Management Tool's **Forensics Store** tab. The files are clipped before they are stored, which means that the Forensics Store service allows the files to cover only a specific amount of time.

The **File Clipping Interval** on the **Forensics Store Advanced Options** dialog is the maximum time in hours, minutes, and seconds (HH:MM:SS) before each video and primitives file being stored is clipped and a new video or primitives file is created. The default value is 10 minutes (**00:10:00**).

There are advantages to having a relatively short **File Clipping Interval** (5 to 10 minutes). A short **File Clipping Interval** enables you to create and run scenarios using FAST on more recent forensics data, because you cannot create or run a scenario on forensics files while they are being created by the Forensics Store service. For example, if you wanted to run a scenario in FAST for an event that took place 5 minutes ago, you may have to wait for the Forensics Store service to finish creating the forensics files for that period before you can create and run a scenario on those files using FAST.

In addition, FAST can retrieve snapshots from stored video quicker while you are running a scenario if you set a short **File Clipping Interval**.

## To Set the File Clipping Interval

1. Run the ObjectVideo Management Tool on the ISE computer, if it is not already running.

2. On the **Forensics Store** tab, click the **Advanced** button.

   The **Forensics Store Advanced Options** dialog appears.

3. Change the **File Clipping Interval** setting as desired.

4. Click **OK**.

5. Click the **Apply** button on the ObjectVideo Management Tool window.

   When you click **Apply**, the ObjectVideo Management Tool automatically stops and restarts the ObjectVideo services running on the computer. This may take a few minutes. You will know that the services are restarted when the field next to each service in the ObjectVideo Management Tool says **Running**. Only services that were running when you clicked **Apply** will be restarted.

# Sharing the Forensics Data Directory for Access by FAST

When you install the ISE software and the Forensics Store service, you specify the local directory where forensics data should be stored. You need to share this directory in Windows so that FAST can access the forensics data.

## *To Share the Forensics Data Directory*

1. On the computer running the ISE software, run Windows Explorer.

2. Browse to the directory you designated for forensics data storage during the installation process.

   The forensics data directory was specified during the ISE installation, which is described in “Installing the VEW ISE Software” on page 48 or “Installing the OnBoard ISE Software” on page 44.

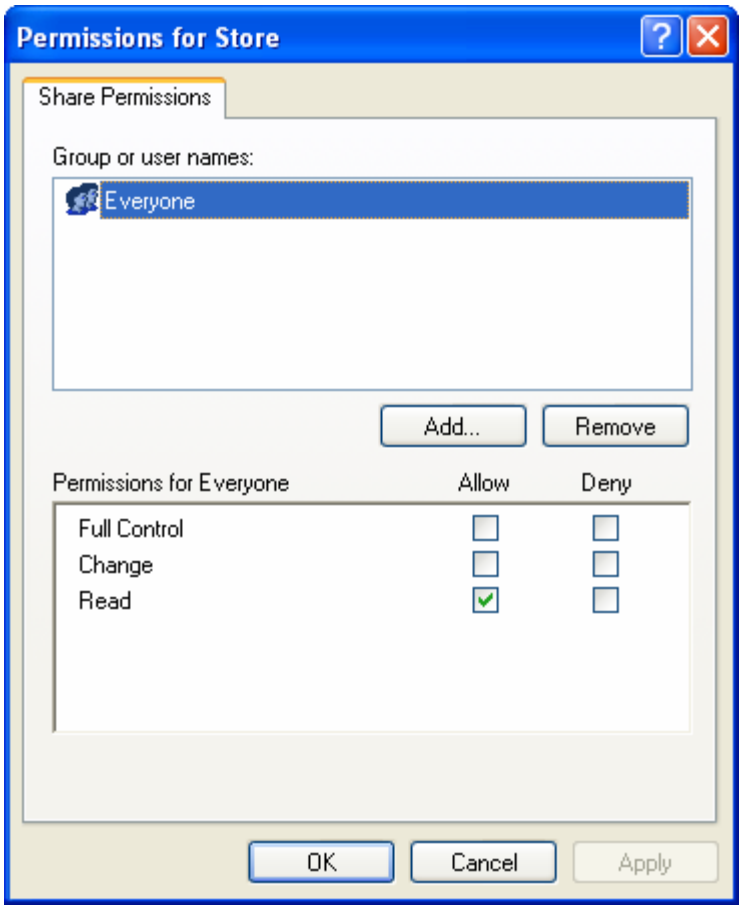
3. Right-click the directory, and then select **Sharing and Security** from the menu that appears.

4. On the **Sharing** tab, select **Share this folder**.

   **Important:** Do not change the **Share Name**. The **Share Name** must be the same as the directory name specified during the ISE installation.

5. Click the **Permissions** button.

The **Permissions for** dialog appears. In the **Group or user names** area, the **Everyone** icon appears, as shown in the following figure. In the **Permissions for Everyone** area at the bottom of the dialog, the **Read** permission is selected in the **Allow** column. These default Windows permissions are adequate for FAST to access the forensics data.




6. Click **OK**, and then click **OK** on the directory's **Properties** dialog.

   In Windows Explorer, the folder icon for the directory indicates that it is shared, as shown in the figure below.

# Enabling Forensics Storage for ObjectVideo OnBoard Sensors

By default, ObjectVideo OnBoard sensors that support the use of metadata are not enabled to store forensics data. Each sensor must be enabled to store forensics data in the ObjectVideo Management Tool.

**Note:** By default, ObjectVideo VEW sensors store forensics data automatically.

## *To Enable Forensics Storage*

1. On the computer running the ISE software, run the ObjectVideo Management Tool (**Start** > **All Programs** > **ObjectVideo** > **ObjectVideo Management Tool**).

2. Start the Forensics Store service.

   See “To Start the Forensics Store Service” on page 128 for instructions.

3. Turn on forensics storage for each individual sensor.

   See “To Enable Forensics Data Storage” on page 128 for instructions.

4. See the next section for instructions on how to verify that the sensor is generating forensics data.

## Verifying that Forensics Data is Generated

This step is only necessary on computers running sensors that support the creation of forensics data.

### *To Verify Forensics Data Generation*

1. On the computer running the ISE software, open Windows Explorer.

2. Browse to the forensics data directory.

The table below indicates the number of subdirectories that should appear under the forensics data directory.

**Table 16: Forensic Subdirectories by ISE Type**

| ISE | Number of Forensic Subdirectories |
|---|---|
| VEW Standard | 4 |
| VEW Leader/Follower | 4 |
| VEW HiRes | 1 |
| VEW FlowControl | 2 |
| ObjectVideo OnBoard (100MD, 200MD, 1000MD) | One subdirectory for each ObjectVideo OnBoard sensor you have created. |

Each subdirectory contains the forensics data that is being stored for one video feed that the sensor is monitoring. The subdirectories have names consisting of a random string of letters and numbers. These correspond to the sensor ID assigned by the system to the video feed being monitored. Each of these subdirectories should contain two additional subdirectories: one called **primitive** and another called **video**, each of which contains at least one file. These files are the primitives and video being stored for the video feed.

If you do not see any subdirectories under the main storage directory, try waiting 10–15 minutes and clicking the **F5** key to refresh Windows Explorer. If no directories or files appear, there may be a problem. Refer to “Forensics Store Service Troubleshooting” on page 216 for possible solutions to the problem.

# Installing FAST

FAST is the central software application in ObjectVideo Forensics. FAST enables you to define scenarios, which specify the events that FAST looks for within forensics data. When you run the scenario to detect events, FAST detects events and displays information about the events it has detected.

The types of events FAST can detect depend on the type of ObjectVideo VEW or ObjectVideo OnBoard sensor that you used to gather the forensics data. See "ObjectVideo VEW" or "ObjectVideo OnBoard" on page 3 for more information on the types of events that can be detected by each product.

**Note:** You must be logged in as a Windows user with Administrator privileges to install FAST.

## *Before You Start*

- Make sure that the computer you are installing FAST on meets the "FAST Requirements" on page 21.
- Make sure that the computer has all the prerequisite software installed. See "Client Application Software Requirements" on page 226 for more information.
- The green FAST installation CD is required to complete the steps in this section.

## *To Install FAST*

Insert the FAST installation CD in the computer's CD drive.

One of the following occurs:

- An HTML page opens. Follow the instructions on the HTML page to install the software.
- The HTML page does not open, and the installer does not run. If this occurs, use Windows Explorer to browse to the computer's CD drive and double-click **Installation_Instructions.htm**. Follow the instructions on the HTML page.

**Important:**

- FAST is only part of the ObjectVideo Forensics system. If you do not install and configure the entire ObjectVideo Forensics system as described in "Initial Deployment Steps" on page 28 and the previous sections in this chapter, the system will not function properly.
- If they are not already installed, install the MPEG-4 video compressor, Microsoft .NET Framework 1.1, Java Runtime Environment 1.4.2_03, Microsoft DirectX 9.0b, and Windows Media Player 9. See the appendix on page 224 for detailed instructions.

## To Install the FAST Software

1. Use Windows Explorer to browse to the installation CD.
2. On the CD, double-click **AutoSetup.js**.

   The **ObjectVideo Installation** dialog appears.
3. Click **Yes**.

   The **Welcome to the ObjectVideo Forensics Analysis Scenario Tool Installation Wizard** screen appears.
4. Click **Next**.

   The **License Agreement** screen appears.
5. If you agree to the terms of the license agreement, click the **I accept the license agreement** option.
6. Click **Next**.

   The **Ready to Install the Software** screen appears.
7. Click **Next**.

   The **Updating System** screen appears, followed by the **FAST Configuration** screen.
8. In the **License Server** field, type the host name or IP address of the computer on which the Sentinel LM license server is running. This should be the same as the host name or IP address of the ObjectVideo Server computer.
9. Click **OK**.

   The **FAST has been successfully installed** screen appears.
10. Click **Finish**.

    An **ObjectVideo Installation** dialog appears, asking whether you want to reboot the computer.
11. Click **Yes** to reboot the computer.

**Important:**

- You must reboot the computer in order for FAST to operate.
- Some ObjectVideo systems require vendor-specific files known as Partner Packages that determine the appearance and behavior of the system, such as the supported sensor, event, response, and object filter types. If the system you are deploying requires a Partner Package, copy the Partner Package files to **C:\Program Files\ObjectVideo\FAST\config** on the computer running the FAST software.

# Creating Scenarios

The installation and set-up process of ObjectVideo Forensics is complete. You are ready to start using ObjectVideo Forensics.

The steps below provide a brief introduction on how to create scenarios. A scenario specifies the events that FAST looks for within stored forensics data. An event is security-related activity or other activity of interest that takes place within a camera's field of view. FAST allows you to create many types of events and then see whether any of the events occurred, adjusting the time ranges, cameras, event types, etc., as often as necessary until FAST produces the desired results.

See the FAST Help for detailed information about how to create scenarios. To access the FAST Help, select **Help** > **Contents** in the FAST window.

You can create a scenario using the Scenario Wizard, or you can define an event in the FAST window's **Scenarios** area. This section describes both approaches.

## *To Create a Scenario*

1. Do one of the following:

   - When you open FAST, the **What would you like to do?** dialog may appear. Click **OK** to create a new scenario.
   - Click the **New Scenario** button in the FAST window.
   - Select **File** > **New Scenario** in the FAST window.
   - Press Ctrl + N on your keyboard when in the FAST window.

   If you are using the Scenario Wizard to create new scenarios, the **Select Location** screen of the wizard appears.

   If you are not using the Scenario Wizard, the new scenario appears in the **Scenarios** area on the left side of the FAST window.

2. Edit the name in the **Scenario Name** field, if desired.

3. For the **Forensics Location**, specify the path to the root directory where the forensics data is stored.

   The **Forensics Location** can be on a network or the local computer. See the FAST Help for information on the approaches that can be used to set the directory.

4. Do one of the following:

   - If you are using the Scenario Wizard, click **Next** on the **Select Location** screen. The **Searching for data files** dialog appears while FAST checks the location for the forensics data. If an error occurs, refer to the troubleshooting in the FAST Help.

   - If you are not using the Scenario Wizard, select the scenario icon  , if it is not already selected.

5. Click a sensor icon from the list of sensors.

   FAST will run the scenarios on the forensics data associated with the sensor icon you select. One or more snapshots of the views associated with the sensor appear in the **Views** area when you select a sensor icon.

   The sensor icon indicates the types of events you can create for a sensor. The sensor icon you select may represent any type of video feed, such as a fixed camera, a PTZ camera, or more than one video feed connected to an ISE via a multiplexer/switcher.

6. In the **Scenario Time Range** area, select the time range for which you want to run the scenario.

   FAST looks for events within the time period you specify for the scenario.

   To select a time range, do one of the following:

   - Click and move the controls on the left and right sides of the green time range bar.

   - Adjust the dates and times in the time range inputs in the lower right and left corners of the **Scenario Time Range** area.

7. If you selected a VEW Standard, VEW HiRes, VEW Leader/Follower, or ObjectVideo OnBoard sensor icon in step 5, click a view in the **Views** area. Otherwise, skip to the next step. (You do not have to select a view for VEW FlowControl sensors.)

   A blue box appears around the snapshot you select. The view you select in the **Views** area is the surveillance camera field of view FAST will analyze for events.

8. Do one of the following:

   - If you are using the Scenario Wizard, click **Next**.

   - If you are not using the Scenario Wizard, click the **Apply** button in the lower-right corner of the FAST window.

9. Do one of the following:

   - If you are using the Scenario Wizard, click the **New** button on the **Create Events** screen.

   - If you are not using the Scenario Wizard, click the **Events** icon  in the **Scenarios** area, and then click the **New** button in the lower-right corner of the FAST window.

10. In the **Event Wizard** screen, type a name for the event in the **Name** field.

11. Select the type of event you want to create.

12. Complete the **Event Specification** area.

    See the FAST Help for more information about event types and the **Event Specification** area.

13. Click **Finish** on the **Event Wizard** screen.

14. If you want to create additional events for this scenario, return to step 9. Otherwise, proceed to step 15.

    Creating multiple events for a scenario enables you to check for several events at the same time when you run the scenario.

15. Do one of the following:

    - If you are using the Scenario Wizard, click **Finish**.

    - If you are not using the Scenario Wizard, skip to step 18.

16. Do one of the following:

    - If the **Run Scenario** dialog appears, go to the next step.

    - If the **Run Scenario** dialog does not appear, skip to step 18.

17. On the **Run Scenario** dialog, do one of the following:

    - Click **Yes** to run the scenario. Skip to step 19.

      When you run the scenario, FAST analyzes the forensics data for the events you have specified, detects events, and lists the events it has detected.

    - Click **No** if you do not want to run the scenario, and then skip to step 19.

18. Run the scenario, if desired.

19. Save the scenario by clicking the **Save Scenario** button in the FAST window or selecting **File** > **Save Scenario**.

You must save the scenario in order to access it after you close FAST. See the FAST Help for information on running and saving scenarios.

# Installing the ObjectVideo Integrator Toolkit Applications

The ObjectVideo Integrator Toolkit is a group of software applications used by customer support personnel and integrators to plan for, maintain, and troubleshoot the system.

The following applications are included in the ObjectVideo Integrator Toolkit:

- Alert Backup Estimator – Used to estimate how often you should search for database size health monitor alerts. If a database size alert occurs, alerts are about to be purged from the ObjectVideo database and you should back up the alerts stored in the database.

- Camera Placement Tool – Used to determine the ideal surveillance camera settings and location of cameras to optimize event detection.

- Leader/Follower Calibration Tool – Used to calibrate the follower to the leader sensor's view. Determines how the follower will pan, tilt, and zoom to target an object. You only need to install the Leader/Follower Calibration Tool if you are using VEW Leader/Follower sensors.

- Object Sizing Tool – Used to determine the size (in pixels) of objects within a camera's field of view. It allows you to determine whether objects of a certain size will be reliably detected by a sensor.

- Parameter Configuration Tool– Used during advanced troubleshooting tasks to improve event detection. The Parameter Configuration Tool allows you to access parameters that determine how events are detected by each sensor. The Tool is also used for some advanced configuration tasks.

The ObjectVideo Integrator Toolkit applications can be installed on the same computer as the VEW/OnBoard client applications and FAST.

## Before You Start

- Make sure that the computer you are installing the ObjectVideo Integrator Toolkit on meets the "ObjectVideo Integrator Toolkit Requirements" on page 21.

- Make sure that the computer has all the prerequisite software installed. See "Client Application Software Requirements" on page 226 for more information.

- The ObjectVideo Integrator Toolkit installation CD and an installation key are required to complete the steps in this section.

## To Install the ObjectVideo Integrator Toolkit Applications

1. Insert the ObjectVideo Integrator Toolkit installation CD in the computer's CD drive.

   The **ObjectVideo Installation** dialog appears.

2. Click **Yes**.

   One of the following occurs:

   - A dialog appears indicating that you do not have the Microsoft .NET Framework 1.1. Click **OK**. An HTML page opens. Follow the instructions on the HTML page to install the software.

   - The **Welcome to the ObjectVideo Daemon Service Installation Wizard** screen appears. Proceed to step 3.

   - The **Welcome to the ObjectVideo Integrator Toolkit Installation Wizard** screen appears, because the Daemon Service is already installed on the computer. This can occur if ObjectVideo software was previously installed on the computer. Skip to step 11.

   - The HTML page does not open, and the installer does not run. If this occurs, use Windows Explorer to browse to the computer's CD drive and double-click **Installation_Instructions.htm**. Follow the instructions on the HTML page.

3. Click **Next**.

   The **License Agreement** screen appears.

4. If you agree to the terms of the license agreement, click the **I accept the license agreement** option.

5. Click **Next**.

   The **Ready to Install the Software** screen appears.

6. Click **Next**.

   The **Updating System** screen appears, followed by the **ObjectVideo Daemon Service Configuration** screen.

7. Type the product installation key.

8. Change the **Server Address** to the host name (e.g., **OBVServer1**) or IP address (e.g., **192.168.1.1**) of the computer running the ObjectVideo Server software.

   If you use the computer's host name, you must have a DNS server running on your network. You can also use a **hosts** file for name resolution (see "Adding a Host to a Hosts File" on page 140). If your network uses DHCP, you must use the

host name of the computer running the ObjectVideo Server software rather than the computer's IP address, because the IP address may change when the computer is rebooted.

**Note:** The **Server Port** (**8076**) is the default port on which the ObjectVideo Server software listens. It is unlikely that you will have to change this value.

9. Click **OK**.

   The **ObjectVideo Daemon Service has been successfully installed** screen appears.

10. Click **Finish**.

    The **Welcome to the ObjectVideo Integrator Toolkit Installation Wizard** screen appears.

11. On the **Welcome to the ObjectVideo Integrator Toolkit Installation Wizard** screen, click **Next**.

    The **Select Applications** screen opens.

12. If desired, select **Parameter Configuration Tool**, **Camera Placement Tool**, **Object Sizing Tool**, **Alert Backup Estimator**, and/or **Leader/Follower Calibration Tool** from the left side of the window.

    A drop-down menu appears. Also, the right side of the **Select Applications** screen indicates how much disk space the installation of that application will require.

    The Leader/Follower Calibration Tool is only required if you are using VEW Leader/Follower sensors.

13. From the drop-down menu, select whether you want to install the software. By default, all of the software is installed.

    If you select **Entire feature will be unavailable** from the menu, the software will not be installed. Selecting either of the other options will result in the software being installed. If you click **Reset**, all of the software will be installed.

14. Click **Next**.

    The **Ready to Install the Software** screen appears.

15. Click **Next**.

    The **Updating System** screen appears while the ObjectVideo Integrator Toolkit applications are installed on the computer, and then the **ObjectVideo Integrator Toolkit applications have been successfully installed** screen appears.

16. Click **Finish**.

An **ObjectVideo Installation** dialog appears, asking whether you want to reboot the ObjectVideo Integrator Toolkit computer.

17. Click **Yes** to reboot the computer.

**Important:**

- You must reboot the computer in order for the ObjectVideo Integrator Toolkit applications to operate.

- Some ObjectVideo systems require vendor-specific files known as Partner Packages that determine the appearance and behavior of the system, such as the supported sensor, event, response, and object filter types. If the system you are deploying requires a Partner Package, copy the Partner Package files to **C:\Program Files\ObjectVideo\Integrator Toolkit\config** on the computer running the ObjectVideo Integrator Toolkit.

**Note:** The ObjectVideo Management Tool is automatically installed when the Daemon Service is installed. The ObjectVideo Management Tool is used to start and stop ObjectVideo services and change various configuration settings in the system.

# Maintaining the System

This chapter describes how to maintain ObjectVideo VEW, ObjectVideo OnBoard, and ObjectVideo Forensics and provides information about other maintenance tasks for the ObjectVideo system. It is critical that you review the information in this chapter to ensure the continued operation of the system.

This guide does not cover the maintenance of the hardware and operating systems on which the ObjectVideo software runs. For information about this type of maintenance, consult the appropriate vendor documentation and apply industry best practices.

# Maintaining the ObjectVideo VEW and ObjectVideo OnBoard Systems

This section describes the following ObjectVideo VEW and ObjectVideo OnBoard maintenance tasks:

- Preparing to purge the ObjectVideo database
- Deleting images files from the computer running the ObjectVideo Server software

**Important:** If you are also using ObjectVideo Forensics, follow the maintenance instructions in "Maintaining the ObjectVideo Forensics System" on page 121 in addition to the instructions in this section.

## *Preparing to Purge the ObjectVideo Database*

**Important:**

- **You must read and follow the instructions in this section if you are using ObjectVideo VEW or ObjectVideo OnBoard.** Failing to do so means you may have no record of the alerts automatically purged from the ObjectVideo database.
- You will need the Alert Backup Estimator to complete the steps in this section. The Alert Backup Estimator is an ObjectVideo Integrator Toolkit application. See "Installing the ObjectVideo Integrator Toolkit Applications" on page 106 for information on how to install the Alert Backup Estimator.
- You will need the installation key for the ObjectVideo Server to complete the steps in this section. The installation key is found in the ObjectVideo Management Tool. Open the ObjectVideo Management Tool on the computer running the ObjectVideo Server software. In the **Connection** tab, the key is located in the **Installation Key** field.

The ObjectVideo database runs on the same computer that runs the ObjectVideo Server software. Its primary purpose is to store alerts for real-time events detected by ObjectVideo VEW and ObjectVideo OnBoard, but it also stores other system data such as sensor groups, sensor information, and ObjectVideo VEW views. Alerts often contain one or more snapshots (digital pictures) of an incident from a surveillance camera, so they can take up a significant amount of space in the ObjectVideo database.

Alert records vary in size based on the type of sensor that detected the event, the resolution of the alert, and the number of snapshots that were in the alert. Alerts contain one or two snapshots based on the type of event. See the Alert Console Help for more information about the number of snapshots included in alerts.

See the table below for information on the average alert size.

**Table 17: Average Alert Size by Sensor Type, Number of Alert Snapshots, and Resolution**

| Type of Sensor | Snapshot Resolution | Number of Alert Snapshots | Total Alert Size (KB) |
|---|---|---|---|
| VEW Standard, VEW FlowControl, or VEW Leader/Follower | 320 x 240 | 1 | 45 |
| | | 2 | 92 |
| VEW HiRes | 640 x 480 | 1 | 70 |
| | | 2 | 120 |
| | 720 x 480 | 1 | 78 |
| | | 2 | 128 |
| OnBoard 100, OnBoard 200, or OnBoard 1000 | Varies (default is 320 X 240) | 1 | Varies (determined by resolution) |
| | | 2 | Varies (determined by resolution) |

Since alert records take up a significant amount of space in the ObjectVideo database, alerts are purged from the ObjectVideo database automatically.

In a typical installation, the ObjectVideo database is an MSDE database. If you are not using an MSDE database, contact customer support for more information about maintaining the ObjectVideo database. The total database size that MSDE can support is 2 GB (2,000 MB). This means that the total amount of data in all tables in the database cannot exceed 2 GB. When the amount of data in the database reaches 2 GB, the database stops storing new alerts.

When the ObjectVideo Server is installed, you select at what size the ObjectVideo database should be automatically purged. This option is explained in “Installing the ObjectVideo Server Software” on page 36. It is recommended that you use the default value of 1.6 GB (1,600 MB). The value must be less than 2 GB (2,000 MB). If you select a value less than 1.5 GB (1,500 MB), the database size health monitor alert that indicates that the ObjectVideo database is about to be purged will never be generated.

The database size alert notifies you that the ObjectVideo database is about to be purged so that you can export alerts to one or more HTML files using the Alert Console. Unless you export the alerts, you will not have access to them in the future. See “Determining When to Export Alerts” on page 113 for more information. Purging the database does not affect any of the system information (views, sensor groups, etc.) stored in the database.

When the ObjectVideo Server is installed, you also enter the number of days of alerts you want to try to save after the purge in the **Try Not to Purge** <*number of days*> **Days of Recent Alerts** field. This option is explained in "Installing the ObjectVideo Server Software" on page 36. When the ObjectVideo database is purged, not all alerts are necessarily deleted from the database. When the database reaches the size indicated in the **Purge Database at This Size** field, the alerts that occurred previous to the number of days entered in the **Try Not to Purge** <*number of days*> **Days of Recent Alerts** field are deleted.

If the database size is still larger than the size in the **Purge Database at This Size** field, another day of alerts are cleared. The alerts are cleared in day increments until the database size is smaller than the size indicated in the **Purge Database at This Size** field. The most recent alerts are preserved. For instance, if you used the default value of 7, every alert that occurred before the previous week would be cleared. If the database was still too large, a day at a time would continue to be cleared (starting from the day farthest from the present) until the database was the specified size.

## Determining When to Export Alerts

When the system detects that the database has reached 1.5 GB, a dialog opens and a health monitor alert appears in the Alert Console indicating that the database is almost full. The database size alert appears so that you have time to export important alerts to HTML files using the Alert Console. Unless you export the alerts, you will not have access to them in the future. Inform all Alert Console users that they must notify a system administrator when this alert appears. You can also search for past occurrences of this alert, as described in "Searching for Database Size Alerts" on page 115.

To determine when to export alerts using the Alert Console, do the following, as described in this section:

- Set up a schedule for searching for database size health monitor alerts.
- Use the Alert Console to periodically search for the database size health monitor alert that warns that the database has reached 1.5 GB.

### *Setting a Schedule to Search for Database Size Alerts*

You can estimate how often you will need to search for database size health monitor alerts using the ObjectVideo Integrator Toolkit's Alert Backup Estimator. Once you have estimated how often the alerts should be searched, you can set a schedule for searching in the Alert Console and search for the database size alerts regularly based on that schedule.

#### To Set a Schedule for Searching for Database Size Alerts

1. Determine the average number of alerts that are occurring per day in the ObjectVideo system, and make note of this number.

You can do this by using the Alert Console's Search **Alerts** tab to perform a search on **ALL** the sensors during a 7-day period. The Alert Console Help describes how to perform searches in detail.

For example, run a search for all alerts that have occurred from 12:00 a.m., March 1, to 12:00 a.m., March 8. The Alert Console displays a list of all alerts that have occurred during that period. The bottom-center of the Alert Console displays the number of alerts that were retrieved during the search. For example, it might say **Retrieved 280 alerts**.

Divide the number of alerts retrieved by the number of days. For example, if a total of 280 alerts were triggered during a 7-day period, the average number of alerts per day would be 40.

2. Take the number of alerts from step 1 and divide that number by the number of sensors in your system, and make note of this number.

   This gives you the average number of alerts generated per sensor per day. For example, if you determined that 40 alerts are generated per day in the ObjectVideo system, and you have 2 sensors in the ObjectVideo system, an average of about 20 alerts are being generated per sensor per day.

3. Using the Alert Backup Estimator, enter how many of each type of sensor is detecting events in the **Number of Sensors** area.

   For instance, if you had a total of three sensors (two VEW Standard sensors and one VEW HiRes sensor with a resolution of 720 x 480), you would enter **2** in the **VEW Standard** field, **1** in the **VEW HiRes (720 x 480)** field, and **0** in all the remaining sensor fields.

   Since all ObjectVideo OnBoard alerts are the same size, the total number of ObjectVideo OnBoard sensors is entered in a single field. The default processing resolution for ObjectVideo OnBoard sensors is 320 x 240. If an ObjectVideo OnBoard sensor is using a different resolution or the sensor you are using does not appear in the **Number of Sensors** area, see the Alert Backup Estimator Help for information on how to customize the options available in the Estimator. Select **Help** > **Contents** to access the Help in the Alert Backup Estimator.

4. Enter the number of alerts you determined in step 2 in the **Average No. of Alerts (per Sensor per Day)** field.

5. Click **Calculate**.

   The **No. of Days before Alert Search is Needed** field displays how often you should search for database size alerts using the Alert Console.

6. Based on the number of days determined in step 5, create a schedule for searching for database size alerts, and keep to the schedule to ensure that you have time to export important alerts before the database is purged automatically.

7. Reevaluate the schedule regularly, in case the average number of alerts changes over time.

**Important:**

- The Alert Backup Estimator only provides an approximation of when you should search for the database size alert. You can check the size of the ObjectVideo database to determine its exact size. See “Checking the Size of the Database” on page 118 for more information.

- If the ObjectVideo database is set to be purged at less than 1,500 MB (1.5 GB), the database size alert will never be generated. The size at which the database is purged is configured when you install the ObjectVideo Server software. See “Installing the ObjectVideo Server Software” on page 36 for more information.

- If your system includes VEW Standard, VEW HiRes, or VEW Leader/Follower sensors, the views you create using the Rule Management Tool are stored in the database and can occupy a significant amount of space. Each view you create for a VEW Standard sensor and VEW Leader/Follower sensor occupies around 1 MB of space in the database. Each view you create for a VEW HiRes sensor occupies around 4 MB of space in the database. If you have a large number of views, you may need to search for database size alerts more frequently. It is possible for the database to be entirely filled up with just views and sensor groups, especially if you have created many VEW HiRes views.

## *Searching for Database Size Alerts*

If you want to find out whether the ObjectVideo database has reached 1.5 GB, you can use the Alert Console to search for database size health monitor alerts. These alerts are triggered when the system detects that the database has reached or exceeded 1.5 GB. An alert is triggered every 6 hours after the initial database size alert is triggered, until the database is purged.

The alert contains the following text: **Attention! The database is almost full and is about to be purged automatically. Contact customer support or your system administrator.** A **System Warning** snapshot accompanies the alert.

Search for the database size alert from the Alert Console's **Search Alerts** tab. Select the desired date and time ranges, select **Database** from the **Sensors** list, and then click **Find Now**. The **Database** option only appears in the **Sensors** list if at least one database size alert has been triggered. Detailed instructions are provided in the Alert Console Help.

## Exporting Alerts to an HTML File

Before the ObjectVideo database is purged, it is highly recommended that you use the Alert Console to generate HTML-based reports for important alerts stored in the database. Once the database is purged, these reports are the only record you will have of past alerts.

The Alert Console can export all of the alerts displayed on the Console to an HTML file, which can be viewed using a web browser (such as Microsoft Internet Explorer) or a word processor (such as Microsoft Word) and printed.

Reports are generated from the **Current Alerts** tab or **Search Alerts** tab. Only those alerts displayed in the tab the report is generated from will be included in the report. For instance, if you generate a report from the **Search Alerts** tab, only those alerts that are displayed in the **Search Alerts** tab will be included in the report.

### *To Generate a Report*

1. Do one of the following:

   - If you want to generate a report containing only the most recent alerts displayed on the Alert Console, select the **Current Alerts** tab.

   - If you want to generate a report of past alerts, select the **Search Alerts** tab, and then perform a search. You can search for events that occurred during a specific date and time range and on specific sensors. Be aware that the **Search Alerts** tab can only display 1,000 alerts at a time, so you may need to perform multiple searches and generate multiple reports. See the Alert Console Help for more information about performing searches.

2. Since the Alert Console exports all of the currently visible alerts to the report file, you may want to clear any alerts from the Console that you do not want to appear in the report. To clear an alert, right-click the alert and select **Clear Alert** from the menu that appears. Be aware, however, that this action cannot be undone. (Clearing an alert is not equivalent to deleting it from the database.)

3. In the Alert Console window, select **Actions** > **Export Alerts**. You can also press Ctrl + E on your keyboard.

   The **Save As** dialog appears.

4. Browse to the location where you want to save the alerts, rename the file if desired, and then click **Save**.

   When you save the file, the Alert Console will automatically create a directory where all of the snapshots for the report are stored as JPEG files.

**Notes:**

- If markup is displayed on snapshots in the Alert Console at the time the report is generated, the snapshots in the report will display markup.

- See the Alert Console Help for information on opening and printing alert reports.

## Verifying a Purge Has Occurred

To ensure that the purge has occurred, you can confirm that the archive file resulting from the purge has been created and the size of the database is less than the limit you set during the installation of the ObjectVideo Server software.

### *Verifying that the Archive File Exists*

When the purge occurs, an archive file is created at **C:\Program Files\ObjectVideo\Server\Data** on the computer where the ObjectVideo Server software is installed. All archive files begin with **OBVArchive**, followed by the year, month, date, and time of the last alerts that were deleted during the purge.

Archive files use the following format:

OBVArchiveYYYYMMDDHHMMSS.bak

This is an example of an archive file name:

**OBVArchive20040405115300.bak**

In this example, alerts from no later than April 5, 2004 at 11:53 am would appear in the database. If an archive file does not appear when you suspect the database should have been purged, you can check the size of the ObjectVideo database using the instructions in the next section.

**Note:** Archive files can be large, so you may want to move them to an alternate location after they are generated. If the database purges frequently, you may need to regularly move these files.

## *Checking the Size of the Database*

You can check the size of the ObjectVideo database to verify that the purge has occurred. The **checkObjectStore.bat** script enables you to check the database's size. If the size of the database is larger than the maximum size you selected when the ObjectVideo Server software was installed, automatic purging has not worked correctly. If this is the case, see "Maintenance Troubleshooting" on page 217.

You can check the database size anytime. This may be useful if you have not yet received a database size alert, but you suspect that your database is nearing the maximum size. Before the database is purged, you should export alerts using the instructions in "Exporting Alerts to an HTML File" on page 116.

The commands described in this section need to be run from the command prompt on the computer running the ObjectVideo Server software. To access the command prompt in Windows, click **Start** > **Run**, type **cmd** in the **Open** field, and then click **OK**.

### To Check the Size of the Database

1. From a command prompt on the computer running the ObjectVideo Server software, change directories to the ObjectVideo Server installation directory.

   To change directories, type the following in the command prompt window, and then press the **Enter** key:

   ```
   cd C:\Program Files\ObjectVideo\Server
   ```

   The command prompt displays the following:

   ```
   C:\Program Files\ObjectVideo\Server>
   ```

2. Check the current size of the database by typing the following, and then pressing **Enter**:

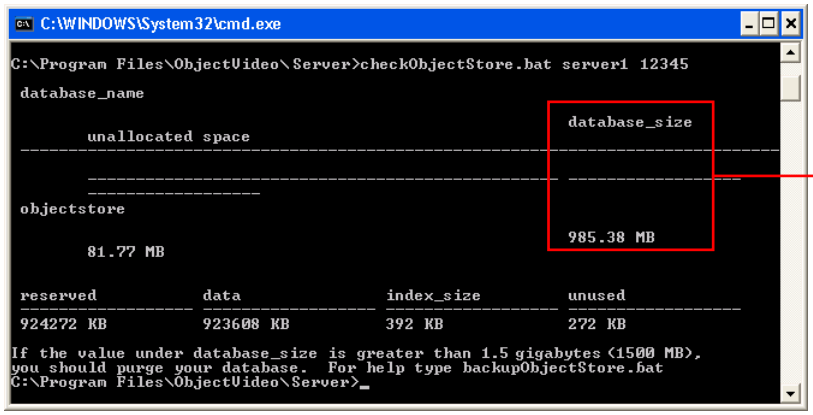
   checkObjectStore.bat *hostname installationkey*

The *hostname* is the host name of the computer running the ObjectVideo Server software, and the *installationkey* is the installation key used when installing the ObjectVideo Server software on that computer. Omit any hyphens in the installation key.

For example, if the computer's host name is server1 and the installation key is 12345, you would type the following in the command prompt:

```
checkObjectStore.bat server1 12345
```

Text that resembles the following appears on the command prompt:




On the right side of the command prompt, make note of the value under the **database_size** column. The **database_size** indicates the size of the current ObjectVideo database. If the database size displayed is at or above 1,500 MB (1.5 GB), you need to purge the database. In the example shown in the previous figure, the size of the database is 985.38 MB.

**Important:** If the **database_size** ever indicates that the ObjectVideo database is 2,000 MB (2 GB) or larger, contact customer support immediately (see "Getting Support" on page 223). Alerts are not being saved into the database.

**Note:** Running **checkObjectStore.bat** with no arguments displays help text for the script.

## *Deleting Image Files from the Computer Running the ObjectVideo Server Software*

If you have set up e-mail-based alerts, any snapshots associated with those alerts are stored as .jpg files in **C:\Windows\Temp** on the computer running the ObjectVideo Server software. The file names begin with **VideoFrame**. It is recommended that you periodically delete these files from the computer.

# Maintaining the ObjectVideo Forensics System

This section describes the following ObjectVideo Forensics maintenance tasks:

- Backing up forensics data
- Checking for forensics storage health monitor alerts
- Stopping and starting forensics storage

It also describes how ObjectVideo Forensics data affects the ObjectVideo database.

**Note:** If you are using ObjectVideo VEW or ObjectVideo OnBoard for real-time event monitoring and notification, you should also follow the maintenance instructions in the previous section, “Maintaining the ObjectVideo VEW and ObjectVideo OnBoard Systems,” starting on page 111.

## *Backing Up Forensics Data*

The Forensics Store service deletes forensics data when certain limitations on storage are met, as described in “Customizing Settings that Affect the Disk Space Used for Forensics Data” on page 89. A command line utility called the Forensics Media Extractor enables you to regularly back up forensics data before it is deleted. FAST can be used to run scenarios on the backed up data later on.

You can use the Forensics Media Extractor to back up data on a remote computer or the local computer. Forensics data can be backed up for all sensors or individual sensors.

The Forensics Media Extractor is provided on the following CDs in the **ForensicsMediaExtractor** directory:

- All ISE installation CDs
- VEW/OnBoard client applications installation CD
- FAST installation CD
- ObjectVideo Integrator Toolkit installation CD

The Forensics Media Extractor is also installed on any computer on which the Daemon Service is installed, which includes the following:

- The ObjectVideo Server computer
- All ISE computers
- All computers running VEW/OnBoard client applications
- All computers on which the ObjectVideo Integrator Toolkit is installed

The Forensics Media Extractor is installed in the following directory on these computers:

**C:\Program Files\ObjectVideo\Forensics Media Extractor**

The tool is also installed with FAST, in the following directory:

**C:\Program Files\ObjectVideo\FAST\Forensics Media Extractor**

The commands described in this section need to be run from a command prompt. To access the command prompt in Windows, click **Start** > **Run**, type **cmd** in the **Open** field, and then click **OK**.

**Note:** If you want to use the Forensics Media Extractor from another computer, you can run it from an installation CD or copy the entire **ForensicsMediaExtractor** directory from the CD to the computer. However, the computer must have the Microsoft .NET Framework 1.1 installed in order to run the Forensics Media Extractor.

The Microsoft .NET Framework 1.1 is provided on the FAST installation CD and the VEW/OnBoard client applications installation CD under **DotNET\dotnetfx.exe**.

## To Back Up Forensics Data

1. From a command prompt on a computer with the Forensics Media Extractor, change directories to the location of the Forensics Media Extractor files.

   For example, if the Forensics Media Extractor is on the ISE computer, to change directories, type the following in the command prompt window, and then press the **Enter** key:

   ```
   cd C:\Program Files\ObjectVideo\Forensics Media Extractor
   ```

   In this case, the command prompt would the display the following:

   ```
   C:\Program Files\ObjectVideo\Forensics Media Extractor>
   ```

2. Type the following in the command prompt, and then press **Enter**:

   `forensicsmediaextractor.exe backup` *`sourcedirectory targetdirectory starttime endtime`*

   The *`sourcedirectory`* is the directory or network path for the location of the forensics data you want to back up (for example, `F:\Store` or `\\ISE1\Store`).

   Make sure that you type the path to either the root forensics data directory or an individual sensor's forensics data directory, but not the **primitive** or **video** subdirectories. Individual sensors' directories are usually long strings of letters and numbers. An example of the path to such a directory is `\\ISE1\Store\2dd91d2a-39f4-4713-b1fd-549ea4bc9762`.

   If you type the path to the root forensics directory, all of the forensics data below it for the time range you specified will be backed up. If you type the path to an individual sensor's forensics data directory, only that sensor's forensics data will be backed up for the time range you specified.

   The Forensics Media Extractor only backs up the data in the **Store Base Directory** specified in the ObjectVideo Management Tool.

   The *`targetdirectory`* is the directory or network path for the location to which you want to back up the data. In order to back up data to the directory using the Forensics Media Extractor, you must have Full Control permissions for the directory in Windows.

   The *`starttime`* and *`endtime`* are optional. They are the beginning and end times, respectively, of the segment of forensics data you want to back up. Both should be in the following format:

   YYYYMMDD.HHMMSS.FFF

   The time you enter should be based on a 24-hour clock (e.g., **204000** would be 8:40 p.m.). FFF represents milliseconds and should almost always be set to **000**.

For example, if you wanted to back up data from May 1, 2006 at 1 p.m. to May 7, 2006 at 1 p.m., you would type the following:

```
20060501.130000.000 20060507.130000.000
```

An example of a complete backup operation is as follows:

```
forensicsmediaextractor.exe backup C:\Store \\backup1\backupdir
20060501.130000.000 20060507.130000.000
```

## *Checking for Forensics Storage Health Monitor Alerts*

An important aspect of maintaining ObjectVideo Forensics is to regularly check for and respond to health monitor alerts that relate to forensics data storage. Health monitor alerts are generated by the system to indicate how the system is operating. If the **Min Disk Space Available In Bytes** setting in the ObjectVideo Management Tool is reached, a health monitor alert is generated, displayed on the Alert Console if the Console is open, and stored in the alert database.

The **Min Disk Space Available In Bytes** setting specifies the minimum amount of space that must remain available on the disk where forensics data is being stored. It is set to 47.68 MB by default. When this threshold is reached, forensics data is lost, because the Forensics Store service starts deleting the oldest primitives and video files until the available drive space is above the threshold.

If a forensics storage health monitor alert appears, you can reduce the **Min Disk Space Available In Bytes** so that the forensics data can occupy more space on the computer. You can also decrease the **Target Time Span** for some or all sensors. The **Target Time Span** is the duration for which forensics data is stored for a sensor. It is possible that you have set a **Target Time Span** that is too long and forensics data is taking up too much space on disk, possibly to the point that the Forensics Store service is not storing data for the time period specified. See “Customizing Forensics Storage Settings” on page 86 for more information about changing these settings.

The alert contains the following text: **Attention! The forensics system is running out of disk space.** A **System Warning** snapshot with an exclamation point accompanies the alert.


When the alert is generated, it is displayed on the Alert Console. If you are using ObjectVideo VEW or ObjectVideo OnBoard for real-time event detection, the Alert Console user will see it when it appears and should contact customer support or a system administrator.

If you are only using ObjectVideo Forensics, however, and are not using ObjectVideo VEW or ObjectVideo OnBoard for real-time event detection, users will probably not

be running the Alert Console frequently. For this reason, it is important to regularly check for the health monitor alerts using the Alert Console. The next section describes how to search for forensics storage health monitor alerts.

## To Search for Forensics Storage Health Monitor Alerts Using the Alert Console

1. Run the Alert Console.

2. Click the **Search Alerts** tab.

3. Select the desired date and time ranges.

4. From the **Sensors** list, select the name of the ISE that generated the health monitor alert, and then click **Find Now**.

   The name of the ISE only appears in the **Sensors** list if at least one forensics storage health monitor alert has been triggered.

# *Stopping and Starting Forensics Storage*

This section describes how to stop and start the generation of forensics data. Stopping and starting forensics data are tasks that may need to be performed during the routine operation of ObjectVideo Forensics. You must be logged in as a Windows user with Administrator or Power User privileges to complete the steps in this section.

## Stopping Forensics Data Storage

You can take the following approaches to stopping forensics data storage using the ObjectVideo Management Tool:

- You can stop storing forensics data for an individual video feed being monitored by a sensor.
- You can stop the Forensics Store service on the ISE computer. If you take this approach, no forensics data is stored for any video feeds being monitored by sensors.

### *To Disable Forensics Data Storage*

1. Open the ObjectVideo Management Tool on the computer running the ISE software, if it is not already running.
2. Click the **ISE** tab.
3. On the sensor tab at the bottom of **ISE** tab, deselect **Store Forensics Data**.
4. Click the **Apply** button.

   When you click **Apply**, the ObjectVideo Management Tool automatically stops and restarts the ObjectVideo services running on the computer. This may take a few minutes. You will know that the services are restarted when the field next to each service in the ObjectVideo Management Tool says **Running**. Only services that were running when you clicked **Apply** will be restarted.

### *To Stop the Forensics Store Service*

1. Open the ObjectVideo Management Tool on the computer running the ISE software, if it is not already running.
2. Click the **Stop** button next to **ObjectVideo Forensic Store Service**.

   You will know that the service has stopped when the field next to the service says **Stopped**.

**Note:** The Forensics Store service will start again automatically if you reboot the ISE computer.

## Starting Forensics Data Storage

Forensics data is stored when the Forensics Store service is running and a sensor has been enabled to store the data.

**Important:** Regardless of the settings in the ObjectVideo Management Tool, ObjectVideo OnBoard sensors will only generate forensics data if they support metadata.

### *To Enable Forensics Data Storage*

1. Open the ObjectVideo Management Tool on the computer running the ISE software.

2. Click the **ISE** tab.

3. On the sensor tab at the bottom of **ISE** tab, select **Store Forensics Data**.

4. Click the **Apply** button.

   When you click **Apply**, the ObjectVideo Management Tool automatically stops and restarts the ObjectVideo services running on the computer. This may take a few minutes. You will know that the services are restarted when the field next to each service in the ObjectVideo Management Tool says **Running**. Only services that were running when you clicked **Apply** will be restarted.

### *To Start the Forensics Store Service*

1. Open the ObjectVideo Management Tool on the computer running the ISE software.

2. Click the **Start** button next to **ObjectVideo Forensic Store Service**.

   You will know that the service has started when the field next to the service says **Running**.

**Note:** In order for the Forensics Service to store data, the ISE service must also be running, and the **Store Forensics Data** option for each sensor on the **ISE** tab must be selected.

## *ObjectVideo Forensics and the ObjectVideo Database*

This section describes how ObjectVideo Forensics affects the ObjectVideo database. In a typical installation, the ObjectVideo database is an MSDE database. MSDE has a 2 GB storage space limitation, but it should be automatically purged before the database reaches this size. If you are not using MSDE, contact customer support for more information (see “Getting Support” on page 223).

ObjectVideo Forensics, ObjectVideo VEW, and ObjectVideo OnBoard use the ObjectVideo database, but ObjectVideo Forensics uses far less space in the database, because forensics-related event occurrences detected by FAST are not stored in the database. If you are using ObjectVideo VEW or ObjectVideo OnBoard for real-time event detection and notification, it is critical that you follow the instructions in “Preparing to Purge the ObjectVideo Database” on page 111 to save important alerts to HTML files before a purge occurs.

If you are using ObjectVideo Forensics exclusively, you should never need to purge the ObjectVideo database, because in ObjectVideo Forensics, only views, groups, and health monitor alert data are stored in the database. Purging the database deletes health monitor alerts, but it does not delete groups and views. However, health monitor alerts take up a very small amount of space in the database, and it would take a large number of views to fill the database.

Each health monitor alert occupies only about 4 KB in the ObjectVideo database. This means that it would take 393,225 health monitor alerts to fill the entire ObjectVideo database.

You must create at least one view for each VEW Standard, VEW HiRes, and VEW Leader/Follower sensor that is going to detect events. Each view created for a VEW Standard or VEW Leader/Follower sensor occupies around 1 MB of space in the database. Each view created for a VEW HiRes sensor occupies around 4 MB of space in the database. This means that it would take around 384 VEW HiRes views or 1,536 VEW Standard or VEW Leader/Follower views to fill the ObjectVideo database. ObjectVideo OnBoard views are not stored in the ObjectVideo database.

**Note:** VEW FlowControl does not support views.

If you are not using ObjectVideo VEW for real-time event detection but you receive a database size health alert containing the following text, contact customer support: **Attention! The database is almost full and is about to be purged automatically. Contact customer support or your system administrator.** A **System Warning** snapshot accompanies the alert.

## *Checking Out an Authorization for Opening FAST Offline*

Normally, FAST requires a connection to the network and the Sentinel LM license server (which runs on the ObjectVideo Server computer) in order to run. However, some users may wish to use FAST offline, because they are away from the office or unable to connect to the network for some other reason. This can be accomplished using a software application called WCommute.

WCommute enables a user to check out an authorization to use a commuter license for FAST for a limited period of time (up to 30 days), and then to check in the authorization when it is no longer needed. While an authorization is checked out, the number of available uses of FAST decreases for other users, so you should encourage users to check out authorizations for the minimum number of days necessary and to check in the authorization promptly after reconnecting to the network.

You will be unable to open FAST if an authorization you have checked out expires while you are offline. When an authorization expires, it immediately becomes available for other users connected to the license server.

### To Check Out an Authorization

1. While the computer on which FAST is installed has a connection to the network on which the license server is running, from the Windows **Start** menu, select **All Programs** > **ObjectVideo** > **Forensics** > **FAST** > **Manage Commuter License**.

   WCommute opens.

2. Do one of the following:

   - Click the **Search Subnet** button to have WCommute automatically search for a license server on the current subnet. The host name of the computer running the license server appears. Under the host name, one or more available authorizations for FAST commuter licenses are listed. Select an authorization.

   - Click **Single Server** to find a specific license server by host name or IP address. This option enables you to find a license server on another subnet. Type the host name or IP address in the field provided, and then click **OK**. WCommute searches for the license server and displays the server and the available authorizations on the main window. Select an authorization.

3. Specify the duration for which you want to check out the authorization in the **Please enter the number of days until the authorization expires** field.

   The maximum duration is 30 days. Specify the minimum number of days necessary, because while an authorization is checked out, fewer uses of FAST are available to other users.

4. Click **Check Out**.

   A red checkmark appears to the left of the authorization you have checked out. You can now use FAST while you are offline. When you reconnect to the network, make sure that you check in the authorization to make it available to other users, as described in the next section.

## To Check In an Authorization

1. While the computer FAST is installed on has a connection to the network on which the license server is running, from the Windows **Start** menu, select **All Programs** > **ObjectVideo** > **Forensics > FAST** > **Manage Commuter License.**

   WCommute opens.

2. Do one of the following:

   - Click the **Search Subnet** button to have WCommute automatically search for a license server on the current subnet. The host name of the computer running the license server appears. Under the host name, one or more available authorizations for FAST commuter licenses are listed.

   - Click **Single Server** to find a specific license server by host name or IP address. This option enables you to find a license server on another subnet. Type the host name or IP address in the field provided, and then click **OK**. WCommute searches for the license server and displays the server and the available authorizations on the main window.

3. If an authorization has a red check mark next to it, you have checked it out. Select the authorization, and then click **Check In**.

   The check mark next to the authorization disappears.

## Other Maintenance Tasks

This section describes the following tasks that may be performed during the operation of ObjectVideo VEW, ObjectVideo OnBoard, ObjectVideo Forensics, and the ObjectVideo Integrator Toolkit:

- Changing the ObjectVideo Server settings
- Working with the ObjectVideo services
- Working with licenses
- Adding a host to a **hosts** file
- Deleting and replacing corrupt parameter files

You must be logged in as a Windows user with Administrator or Power User privileges to complete the steps in this section.

## *Changing the ObjectVideo Server Settings*

If desired, you can change the ObjectVideo Server that a computer on the system is communicating with. This is not a normal part of the installation process, but it is necessary if you want to use an ObjectVideo Server other than the server you entered during the installation of the Daemon Service.

To change the ObjectVideo Server, open the ObjectVideo Management Tool. With the exception of the computer where FAST is installed, the ObjectVideo Management Tool is installed on every computer where ObjectVideo software is installed. It is automatically installed at the same time that the Daemon Service is installed. The **Connection** tab of the ObjectVideo Management Tool displays the server address and port number of the ObjectVideo Server.

You can change the **Server Address** and **Port** to the host name (e.g., OBVServer1) or IP address (e.g., 192.168.1.1) of the computer running the ObjectVideo Server software. By default, the ObjectVideo Server listens on port 8076. You should not need to change the default port number.

Click **Apply** to save the settings.

When you click **Apply**, the ObjectVideo Management Tool automatically stops and restarts the ObjectVideo services running on that computer. See “Working with the ObjectVideo Services” on page 134 for more information about ObjectVideo services. You will know that the services are restarted when the field next to each service in the ObjectVideo Management Tool says **Running**. Only services that were running when you clicked **Apply** will be restarted. If you have the Rule Management Tool or System Configuration Tool open, you must click the **Refresh Configuration** button in these applications to display the new configuration.

**Note:**

- Changes made to the ObjectVideo Management Tool only affect the ObjectVideo software running on that computer. Unlike the Rule Management Tool and the System Configuration Tool, the ObjectVideo Management Tool is not a distributed application. In other words, you cannot run the ObjectVideo Management Tool on one computer to change settings or manage Windows services on another computer. You must run the ObjectVideo Management Tool on the local computer to make configuration changes and manage services for the ObjectVideo software on the local computer.

- If you use the computer’s host name, you must have a DNS server running on your network. You can also use a **hosts** file for name resolution (see “Adding a Host to a Hosts File” on page 140). If your network uses DHCP, you must use the host name of the computer running the ObjectVideo Server software rather than the computer’s IP address, because the IP address may change when the computer is rebooted.

# *Working with the ObjectVideo Services*

Several ObjectVideo components are deployed as Windows services. These services start automatically when the computers running the ObjectVideo components boot up. This chapter describes the services and how to start and stop them, should the need arise. Services are started and stopped using the ObjectVideo Management Tool. With the exception of the computer where FAST is installed, the ObjectVideo Management Tool is installed on every computer where ObjectVideo software is installed. It is automatically installed at the same time that the Daemon Service is installed.

**Important:** You must be logged in as a Windows user with Administrator or Power User privileges in order to work with the ObjectVideo services.

**Note:** The field next to the service name indicates whether a service is **Running** or **Stopped**. You may also see a status of **Starting** when the service is about to run and **Stopping** when the service is about to stop.

## Starting and Stopping ObjectVideo Server Services

The ObjectVideo Server uses the following ObjectVideo software deployed as Windows services:

- ObjectVideo Communication Server – The core ObjectVideo Server component that performs many of the system's communications tasks.
- ObjectVideo Daemon Service – Enables the ObjectVideo Server to communicate with the other ObjectVideo components.
- ObjectVideo Alert Logger – Receives event information from the sensor(s) and stores alerts in the alert database.

When these three services are running, the ObjectVideo Server is running.

**Note:** The ObjectVideo Forensic Store Service and ObjectVideo Serial Port Service may appear in the ObjectVideo Management Tool if ISE software is running on the same computer as the ObjectVideo Server software. See "Starting and Stopping the ISE Services" on page 136 for more information on the ObjectVideo Forensic Store Service and ObjectVideo Serial Port Service.

The Sentinel LM license server software is a Windows service running on the same computer as the ObjectVideo Server software. See the next section for instructions on stopping and starting the service.

To start the ObjectVideo services displayed in the ObjectVideo Management Tool, click the **Start All Services** button.

To stop the ObjectVideo services displayed in the ObjectVideo Management Tool, click the **Stop All Services** button.

You can also start and stop the services individually. Click the **Start** button next to the service you want to start. Click the **Stop** button next to the service you want to stop.

If all of the services are stopped and you want to start them individually, start them in the following order:

1. **ObjectVideo Communication Server**
2. **ObjectVideo Daemon Service**
3. **ObjectVideo Alert Logger**
4. **ObjectVideo Forensic Store Service** (only appears if ISE software is also installed on the computer)
5. **ObjectVideo Serial Port Service** (may appear if VEW Leader/Follower ISE software is also installed on the computer)

If all of the services are started and you want to stop them individually, stop them in the following order:

1. **ObjectVideo Serial Port Service** (may appear if VEW Leader/Follower software is also installed on the computer)
2. **ObjectVideo Forensic Store Service** (only appears if ISE software is also installed on the computer)
3. **ObjectVideo Alert Logger**
4. **ObjectVideo Daemon Service**
5. **ObjectVideo Communication Server**

**Important:**

- You must be logged in as a Windows user with Administrator or Power User privileges in order to work with the ObjectVideo services.
- By default, the services are set to the **Automatic** startup type in Windows, which means that they run automatically when the computer starts. Do not change this setting.

## Starting and Stopping the Sentinel LM License Management Service

The Sentinel LM license service runs as a Windows service on the same computer as the ObjectVideo Server software. Unlike the other ObjectVideo services, the Sentinel LM service is started and stopped using the Windows Service Manager rather than the ObjectVideo Management Tool. Take the following steps to start and stop the service:

1. On the computer running the ObjectVideo Server software, open Windows Service Manager (**Start** > **Control Panel** > **Performance and Maintenance** > **Administrative Tools** > **Services**).

2. Right-click **Sentinel LM** from the list of services, and then do one of the following:

   - To stop the service, select **Stop** from the menu that appears.

   - To start the service, select **Start** from the menu that appears.

## Starting and Stopping the ISE Services

The ISE uses the following ObjectVideo software deployed as Windows services:

- ObjectVideo Daemon Service – Enables the ISE to communicate with the other ObjectVideo components and starts the ISE software.

- ObjectVideo Forensic Store Service - The ObjectVideo Forensics component that stores forensics data for FAST to analyze and use. This service is only relevant for sensors that support the creation of forensics data.

- ObjectVideo Serial Port Service - Allows multiple VEW Leader/Follower sensors acting as followers to connect to a single COM port on the ISE computer. This service only appears if a user included it in the VEW Leader/Follower ISE installation.

When the Daemon Service is running, the ISE software is running. When the Forensics Store service is running, it stores the forensics data it receives from the sensor, as long as the sensor is configured to generate forensics data. When the ObjectVideo Serial Port Service is running, it allows multiple cameras to be connected to an ISE computer with a single COM port (for instance, multiple cameras using a serial connection). See the ObjectVideo Management Tool Help for more information.

**Note:** The ObjectVideo Communication Server and ObjectVideo Alert Logger services also appear in the ObjectVideo Management Tool if the ObjectVideo Server software is running on the same computer as the ISE software. See “Starting and Stopping ObjectVideo Server Services” on page 134 for more information on these services.

Click the **Start All Services** button to start all the services. Click the **Stop All Services** button to stop all the services.

You can also start and stop the services individually. Click the **Start** button next to the service you want to start. Click the **Stop** button next to the service you want to stop.

If all of the services are stopped and you want to start them individually, start them in the following order:

1. **ObjectVideo Communication Server** (only appears if the ObjectVideo Server software is also installed)
2. **ObjectVideo Daemon Service**
3. **ObjectVideo Alert Logger** (only appears if the ObjectVideo Server software is also installed)
4. **ObjectVideo Forensic Store Service**
5. **ObjectVideo Serial Port Service** (only appears if the user included it in the VEW Leader/Follower ISE installation)

If all of the services are started and you want to stop them individually, stop them in the following order:

1. **ObjectVideo Forensic Store Service**
2. **ObjectVideo Serial Port Service** (only appears if the user included it in the VEW Leader/Follower ISE installation)
3. **ObjectVideo Alert Logger** (only appears if the ObjectVideo Server software is also installed)
4. **ObjectVideo Daemon Service**
5. **ObjectVideo Communication Server** (only appears if the ObjectVideo Server software is also installed)

By default, the services are set to the **Automatic** startup type in Windows, which means that they run automatically when the computer starts. Do not change this setting.

**Note:** If the documentation advises you to start the ISE services but they are already running, stop and restart the ISE services.

## Starting and Stopping the Daemon Service on a Client Application Computer

The only ObjectVideo-related Windows service that runs on the client application computers is the ObjectVideo Daemon Service. This service enables the client applications to communicate with the other ObjectVideo components. The Daemon Service is started and stopped using the ObjectVideo Management Tool.

FAST, the Camera Placement Tool, and the Alert Backup Estimator are the only ObjectVideo client applications that do not use the Daemon Service. A computer running any of the other ObjectVideo client applications must have a Daemon Service running on it for the ObjectVideo system to function properly.

The Daemon Service also runs on the computers running the ObjectVideo Server and ISE software.

To start the Daemon Service, click the **Start** button.

To stop the Daemon Service, click the **Stop** button.

**Important:**

- You must be logged in as a Windows user with Administrator or Power User privileges in order to work with the ObjectVideo services.
- By default, the services are set to the **Automatic** startup type in Windows, which means that they run automatically when the computer starts. Do not change this setting.

## *Working with Licenses*

This guide describes the two most common license-related tasks you will need to perform on the system: “Installing Licenses” on page 41 describes how to install licenses, and “Upgrading or Downgrading the System” on page 143 describes how to install additional licenses to upgrade the system.

The ObjectVideo Server is also accompanied by a Sentinel LM tool called WlmAdmin that allows you to perform these and other license-related tasks. The tool is installed on the computer running the ObjectVideo Server software under the following path:

**C:\Program Files\ObjectVideo\Server\WlmAdmin.exe**

For information about how to use WlmAdmin, refer to the WlmAdmin documentation, which is provided at the following location on the computer running the ObjectVideo Server software:

**C:\Program Files\ObjectVideo\Documentation\WlmAdmin Docs\index.html**

**Note:** If the ObjectVideo Server computer fails or if you change the hard drive or primary Ethernet card on the computer running the ObjectVideo Server software, contact ObjectVideo to acquire new licenses.

## *Adding a Host to a Hosts File*

On the computers running the ISE and ObjectVideo client application software, you specify the ObjectVideo Server by providing the ObjectVideo Server's IP address or host name in the **Server Address** field of the ObjectVideo Management Tool. If you provide the ObjectVideo Server's host name but your network is not running a DNS server, you will need to add a host to the Windows **hosts** file.

To add a host to a **hosts** file, do the following:

1. On the ISE or ObjectVideo client application computer, stop the ObjectVideo services.

   See "Starting and Stopping the ISE Services" on page 136 and "Starting and Stopping the Daemon Service on a Client Application Computer" on page 138 for more information.

2. Close the ObjectVideo Management Tool and any other ObjectVideo software running on the computer.

3. In Windows Explorer, browse to **C:\WINDOWS\system32\drivers\etc**.

4. Open the **hosts** file using a text editor (such as Windows Notepad).

5. Directly beneath the last IP address and host name entered in the hosts file, type the IP address of the computer running the ObjectVideo Server software, press the Tab key, and type the host name of the computer running the ObjectVideo Server software.

6. Save and close the file.

7. Start the ObjectVideo services.

   See "Starting and Stopping the ISE Services" on page 136 and "Starting and Stopping the Daemon Service on a Client Application Computer" on page 138 for more information.

8. Repeat steps 1-7 on every computer running the ObjectVideo client applications and ISE software.

## *Deleting and Replacing Corrupt Parameter Files*

If a sensor icon is missing from the configuration displayed in the System Configuration Tool, the sensor's parameter model may have become corrupt. Each sensor's parameter settings are saved in a parameter model file. When a parameter file is corrupt, it must be deleted from the computer running the ISE software. A new parameter model for the sensor is automatically created when the ObjectVideo services on the computer running the ISE software are started.

**Important:** Before you complete the steps in this section, try every solution described in "ISE Not Communicating with the ObjectVideo Server" on page 186. Deleting parameter files permanently removes any changes you have made to the default parameter settings. Back up existing parameter files before deleting them using the instructions in this article.

### To Delete and Replace Corrupt Parameter Files

1. Stop the ObjectVideo services on the computer running the ISE software (see "Starting and Stopping the ISE Services" on page 136).

2. In Windows Explorer, browse to **C:\Program Files\ObjectVideo\ISE**.

3. To make the parameter model files easier to locate, in Windows Explorer, select **Details** from the **View** menu and click the **Type** heading to order the files by file type.

4. Select the XML parameter model file for each sensor whose icon is missing from the System Configuration Tool.

   The parameter model files start with the unique string of letters and numbers assigned to the sensor by the ObjectVideo system and end in **-SensorConfig-ParameterModel.xml**.

   **Important:** Do not delete any files that do not end in **-SensorConfig-ParameterModel.xml**.

5. Back up the parameter model files to another location.

   You can do this by copying the files and pasting them into a different directory on the computer running the ISE software. This ensures that you can copy the original parameter files back into this directory in the event that they are not corrupt and are not causing the sensor icons to disappear from the System Configuration Tool and Rule Management Tool. This will preserve any changes you have made to the parameter model.

6. Delete the parameter model files for each sensor.

7. Start the ObjectVideo services on the computer running the ISE software (see "Starting and Stopping the ISE Services" on page 136).

   When the services are restarted, a new parameter model file replaces each deleted parameter model file.

8. Click the **Refresh Configuration button** in the System Configuration Tool to display the missing sensor icons.

9. Do one of the following:

   - If the missing sensor(s) appear in the System Configuration Tool, use the Parameter Configuration Tool to make any changes to the new parameter model that had been made to the original parameter model that was deleted. After you take this step, the parameter models for the sensors will be restored, and no further action is necessary.

   - If the missing sensor(s) do not appear, proceed to step 10.

10. Stop the ObjectVideo-related Windows services on the computer running the ISE software (see “Starting and Stopping the ISE Services” page 136).

11. Copy the parameter model files you backed up in step 5 to their original location in **C:\Program Files\ObjectVideo\ISE**.

12. Contact customer support (see “Getting Support” on page 223).

# Upgrading or Downgrading the System

This chapter describes how to do the following with the system:

- Increase the number of sensors monitoring video feeds
- Allow more instances of FAST to run simultaneously
- Upgrade or downgrade ObjectVideo OnBoard sensors

For information about upgrading to another version of an ObjectVideo product (e.g., upgrading from release 2.5 to release 3.0), contact customer support (see “Getting Support” on page 223).

## Increasing Sensor Number

The number of sensors actively monitoring video feeds is determined by licensing. You can increase the number of sensors in your system by installing additional licenses. To purchase additional licenses to upgrade an ObjectVideo system, contact customer support (see "Getting Support" on page 223). Once you have received your new license file, install it according to the instructions in "To Install Licenses" on page 42.

To accommodate additional active sensors, you may also wish to increase the number of ISEs in your system (this would be necessary if, for example, you lack enough storage space for forensics data on your current system). Follow the instructions in "Installing the OnBoard ISE Software" on page 44 or "Installing the VEW ISE Software" on page 48 to install each additional ISE. You may need to receive installation CDs from ObjectVideo in order to install the software you have purchased.

**Important:** Do not install and run the new ISE software before you install the new licenses. Installing and running the new software before you install the licenses can cause the system to become unstable.

To validate that the upgrade was successful, take the steps in the following chapters and sections of this guide, in the order listed.

**Table 18: Validating and Completing the Upgrade**

| Chapter or Section | What to Do |
|---|---|
| "Assigning a Video Source to a Sensor," page 60 | Follow the instructions in the section to assign a video input to the sensor icon associated with each newly licensed sensor. |
| "Using the System Configuration Tool to Check the System," page 63 | Follow the instructions in the section to make sure that the newly licensed and installed sensors in your system do not have an **Unvalidated** (ObjectVideo VEW) or **Lost Communication** (ObjectVideo OnBoard) status. If they do, refer to the troubleshooting articles on page 175. |
| "Creating Views," page 70 | Follow the instructions in the section to create an initial view for each new VEW Standard, VEW HiRes, and VEW Leader/Follower sensor monitoring a video feed.<br>**Note:** It is not necessary to create views for VEW FlowControl sensors. The initial view is automatically created for ObjectVideo OnBoard sensors. |

| Chapter or Section | What to Do |
|---|---|
| “Editing and Reviewing Component Properties,” page 75 | Follow the instructions in the section to edit and review the properties of any new sensor icons or ISE icons listed in the upgraded system. |

After you have taken the steps in the sections cited in the table, you may wish to perform other tasks to complete the upgrade.

- For ObjectVideo VEW and ObjectVideo OnBoard deployments, refer to “Completing the ObjectVideo VEW and ObjectVideo OnBoard Deployment Process” on page 78.
- For ObjectVideo Forensics deployments, refer to “Completing the ObjectVideo Forensics Deployment Process” on page 85.

## Upgrading FAST

To upgrade FAST to allow more instances to run simultaneously, purchase an upgraded FAST license (see “Getting Support” on page 223).

Once you have received the new license file, install the license according to the instructions in “To Install License” on page 42. Then follow the instructions in “Installing FAST” on page 99 to install additional instances of FAST.

# Upgrading or Downgrading ObjectVideo OnBoard Sensors

It may be possible to upgrade or downgrade existing ObjectVideo OnBoard sensors to a different type of OnBoard sensor. Contact your Video Analysis Device vendor for instructions. This can be used to change sensor types within the same version of the software. For instance, you could upgrade an OnBoard 100 sensor to OnBoard 200.

See “ObjectVideo OnBoard” on page 3 for information on which features are supported by each ObjectVideo OnBoard sensor type.

# Uninstalling the Software

This chapter describes how to uninstall the components of an ObjectVideo system. In order to uninstall the software, you must log in as a Windows user with Administrator privileges.

**Important:** If you plan on reinstalling the ObjectVideo system after completely uninstalling the software, additional steps may be required. Consult the ObjectVideo Troubleshooting Knowledge Base at http://www.objectvideo.com/kb (or http://www.objectvideo.com/kb/partners for partners) or customer support for more information.

**Note:** You cannot uninstall the Daemon Service if the Microsoft .NET Framework is not installed. If you have uninstalled the Microsoft .NET Framework, reinstall it before attempting to uninstall the ObjectVideo Server software, ISE software, VEW/OnBoard client applications, or ObjectVideo Integrator Toolkit applications.

## To Uninstall the ISE Software

**Note:** In ObjectVideo OnBoard, if you are running both the ISE and ObjectVideo Server software on the same computer, remove the ISE software prior to removing the ObjectVideo Server software.

1. On a computer running the ISE software, open the ObjectVideo Management Tool.

2. Click the **Stop All Services** button to stop the ISE services.

3. Verify that the status for all services is **Stopped**.

4. Exit the ObjectVideo Management Tool.

   You must close the ObjectVideo Management Tool before uninstalling the software.

5. In the Windows Control Panel, open Add or Remove Programs.

6. Select **ObjectVideo Forensics Store** from the list of programs, and then click the **Remove** button.

   The **Add or Remove Programs** screen appears.

7. Click **Yes**.

   The **ObjectVideo Forensics Store** screen appears while the software is being uninstalled.

8. Do one of the following:

   - If the **ObjectVideo Serial Port Service** appears in the list of programs, proceed to step 9.

   - If the **ObjectVideo Serial Port Services** does not appear, proceed to step 11.

9. Select the **ObjectVideo Serial Port Service**, and then click the **Remove** button.

   The **Add or Remove Programs** screen appears.

10. Click **Yes**.

    The **ObjectVideo Serial Port Service** screen appears while the software is being uninstalled.

11. Select **ObjectVideo VEW Standard ISE**, **ObjectVideo VEW FlowControl ISE**, **ObjectVideo VEW HiRes ISE**, **ObjectVideo Leader/Follower ISE**, or **ObjectVideo OnBoard ISE** from the list of programs, and then click the **Remove** button.

The **Add or Remove Programs** screen appears.

12. Click **Yes** to uninstall the software.

13. Do one of the following:

    - If you have been running ISE and ObjectVideo Server software on the same computer, proceed to “Uninstalling the ObjectVideo Server Software” on page 151.

    - If only ISE software in installed on this computer, proceed to step 14.

14. Select **ObjectVideo Daemon Service** from the list of programs, and then click the **Remove** button.

    The **Add or Remove Programs** screen appears.

15. Click **Yes**.

    The **ObjectVideo Daemon Service** screen appears while the software is being uninstalled.

# Uninstalling the ObjectVideo Server Software

Uninstalling the ObjectVideo Server software involves the following steps:

- Uninstalling the ObjectVideo Server software
- Uninstalling the Sentinel LM license management software
- Deleting the ObjectVideo database

If you want to keep the information in the ObjectVideo database (such as stored alerts, groups, views, etc.), do not delete the ObjectVideo database. You may need the information in the database if you reinstall the ObjectVideo Server software or migrate to a later version of the software.

**Note:** In ObjectVideo OnBoard, if you are running both the ISE and ObjectVideo Server software on the same computer, remove the ISE software prior to removing the ObjectVideo Server software.

## *To Uninstall the ObjectVideo Server Software*

1. On the computer running the ObjectVideo Server software, open the ObjectVideo Management Tool.
2. Click the **Stop All Services** button.
3. Verify that the status for all services is **Stopped**.
4. Exit the ObjectVideo Management Tool.

   You must close the ObjectVideo Management Tool before uninstalling the software.
5. Follow the instructions in “Starting and Stopping the Sentinel LM License Management Service” on page 136 to stop the service for the Sentinel LM license server.
6. In the Windows Control Panel, open Add or Remove Programs.
7. Select **ObjectVideo Server** from the list of programs, and then click the **Remove** button.

   The **Add or Remove Programs** screen appears.
8. Click **Yes**.

   The **ObjectVideo Server** screen appears while the software is being uninstalled.
9. Select **Sentinel LM 7.3.0.9 Server** from the list of programs, and then click the **Change/Remove** button.
10. On the **Confirm File Deletion** dialog, click **OK**.

11. Click **Finish**.

12. Select **ObjectVideo Daemon Service** from the list of programs, and then click the **Remove** button.

    The **Add or Remove Programs** screen appears.

13. Click **Yes**.

    The **ObjectVideo Daemon Service** screen appears while the software is being uninstalled.

## *To Delete the ObjectVideo Database*

This section describes how to delete the main ObjectVideo database, which contains stored alerts, groups, views, etc., and two supporting databases that store other system data. If you want to keep the information in the ObjectVideo database (such as stored alerts, groups, views, etc.), do not follow the instructions in this section. You may need the information in the database if you reinstall the ObjectVideo Server software or migrate to a later version of the software.

In the instructions that follow, <Enter> means press the **Enter** key on your keyboard. Take the following steps to delete the ObjectVideo database:

1. From a command prompt on the computer running the ObjectVideo Server software, type the following:

   `osql -E –S` *`hostname`*`\obvserver <Enter>`

   The *`hostname`* is the name of the computer on which the database is installed.

   A `1>` appears in the command prompt after you press **Enter**.

2. Type the following text:

   ```
   use master <Enter>

   go <Enter>

   drop database objectstore <Enter>

   go <Enter>

   drop database objectstore_archive <Enter>

   go <Enter>

   drop database objectstore_archivelogdb <Enter>

   go <Enter>
   ```

   The database is deleted.

## To Uninstall the VEW/OnBoard Client Applications

1. Exit the VEW/OnBoard client applications (Rule Management Tool, System Configuration Tool, and Alert Console), if they are running.

2. On the computer running the VEW/OnBoard client applications, open the ObjectVideo Management Tool.

3. Click the **Stop** button next to **ObjectVideo Daemon Service**.

4. Verify that the status for the service is **Stopped**.

5. Exit the ObjectVideo Management Tool.

   You must close the ObjectVideo Management Tool before uninstalling the software.

6. In the Windows Control Panel, open Add or Remove Programs.

7. Select **ObjectVideo VEW/OnBoard Client Applications** from the list of programs, and then click the **Remove** button.

   The **Add or Remove Programs** screen appears.

8. Click **Yes**.

   The **ObjectVideo VEW/OnBoard Client Applications** screen appears while the software is being uninstalled.

9. Select **ObjectVideo Daemon Service** from the list of programs, and then click the **Remove** button.

   The **Add or Remove Programs** screen appears.

10. Click **Yes**.

    The **ObjectVideo Daemon Service** screen appears while the software is being uninstalled.

## To Uninstall the FAST Software

1. Exit FAST, if it is running.

2. In the Windows Control Panel, open Add or Remove Programs.

3. Select **ObjectVideo Forensics FAST** from the list of programs, and then click the **Remove** button.

   The **Add or Remove Programs** screen appears.

4. Click **Yes**.

   The **ObjectVideo Forensics FAST** screen appears while the software is being uninstalled.

## To Uninstall the ObjectVideo Integrator Toolkit Applications

1. Exit the ObjectVideo Integrator Toolkit applications (Alert Backup Estimator, Camera Placement Tool, Leader/Follower Calibration Tool, Object Sizing Tool, and Parameter Configuration Tool).

2. On the computer running the ObjectVideo Integrator Toolkit applications, open the ObjectVideo Management Tool.

3. Click the **Stop** button next to **ObjectVideo Daemon Service**.

4. Verify that the status for the service is **Stopped**.

5. Exit the ObjectVideo Management Tool.

   You must close the ObjectVideo Management Tool before uninstalling the software.

6. In the Windows Control Panel, open Add or Remove Programs.

7. Select **ObjectVideo Integrator Toolkit** from the list of programs, and then click the **Remove** button.

   The **Add or Remove Programs** screen appears.

8. Click **Yes**.

   The **ObjectVideo Integrator Toolkit** screen appears while the software is being uninstalled.

9. Select **ObjectVideo Daemon Service** from the list of programs, and then click the **Remove** button.

   The **Add or Remove Programs** screen appears.

10. Click **Yes**.

    The **ObjectVideo Daemon Service** screen appears while the software is being uninstalled.

# Troubleshooting

This chapter lists some common problems that can occur while installing, setting up, and using a system and possible solutions to the problems:

- If you encounter a problem while using the installers, see “Installer Troubleshooting” on page 157.
- If you encounter a System Configuration Tool or Rule Management Tool problem, see “System Configuration Tool/Rule Management Tool Troubleshooting” on page 175.
- If you encounter an Alert Console problem, see “Alert Console Troubleshooting” on page 203.
- If you encounter a Leader/Follower Calibration Tool problem, see “Leader/Follower Calibration Tool Troubleshooting” on page 211.
- If you encounter a Parameter Configuration Tool problem, see “Parameter Configuration Tool Troubleshooting” on page 212.
- If you encounter an Object Sizing Tool problem, see “Object Sizing Tool Troubleshooting” on page 214.
- If you encounter a FAST problem, see “FAST Troubleshooting” on page 215.
- If you encounter a problem related to the Forensics Store service, see “Forensics Store Service Troubleshooting” on page 216.
- If you encounter a problem while maintaining the system, see “Maintenance Troubleshooting” on page 217.

Additional troubleshooting articles concerning the day-to-day operation of the system are included in the Help for the ObjectVideo client applications. You may also obtain access to the online ObjectVideo Troubleshooting Knowledge Base at http://www.objectvideo.com/kb (or http://www.objectvideo.com/kb/partners for partners).

The Knowledge Base contains the troubleshooting articles in this chapter, as well as other troubleshooting material related to post-installation problems. In addition, it contains useful how-to articles describing various system tasks. To obtain an account to access the Knowledge Base, contact customer support. Also, contact customer support if you are experiencing a problem that is not addressed in this chapter or the Help (see “Getting Support” on page 223).

This chapter does not provide solutions to problems caused by hardware and operating system issues. To address such problems, refer to the hardware or operating system documentation or contact the appropriate hardware or operating system vendor.

# Installer Troubleshooting

The articles in this section describe in detail various problems and errors messages that can occur during the installation process for ObjectVideo software. The actual error messages appear in quotes below.

### Installer Does Not Start

**Article Number:** 1417

**Found In:** Installation of ObjectVideo client applications, ObjectVideo Server, and ISEs

**Product(s) Affected:**

- ObjectVideo VEW 2.5 or later (Standard, HiRes, FlowControl)
- ObjectVideo VEW 3.0 or later (Leader/Follower)
- ObjectVideo OnBoard 1.5 or later (100, 200)
- ObjectVideo OnBoard 3.0 or later (1000)
- ObjectVideo Forensics 2.5 or later
- ObjectVideo Integrator Toolkit 2.5 or later

**Summary:**

The installation instructions do not open or the installer does not start automatically when I insert an installation CD.

**Solution:**

For FAST, the VEW/OnBoard client applications, or the ObjectVideo Integrator Toolkit applications, use Windows Explorer to browse to the computer's CD drive. Double-click **Installation_Instructions.htm**. Follow the instructions on the HTML page.

For the ObjectVideo Server and ISE, use Windows Explorer to browse to the computer's CD drive. Double-click **AutoSetup.js**. This begins the installation process.

**Error Message: The ObjectVideo software has not been installed. See the Windows Event Viewer for information on why the installation failed.**

**Article Number:** 1090

**Found In:** Installation of ObjectVideo client applications, ObjectVideo Server, and ISEs

**Product(s) Affected:**

- ObjectVideo VEW 2.0 or later (Standard, HiRes, FlowControl)
- ObjectVideo VEW 3.0 or later (Leader/Follower)
- ObjectVideo OnBoard 1.5 or later (100, 200)
- ObjectVideo OnBoard 3.0 or later (1000)
- ObjectVideo Forensics 2.0 or later
- ObjectVideo Integrator Toolkit 2.0 or later

**Summary:**

The following message appears when I attempt to install the software: **The ObjectVideo software has not been installed. See the Windows Event Viewer for information on why the installation failed.**

**Solution:**

The installation has ended due to an error. Open the Microsoft Event Viewer to investigate the cause of the error.

**To Learn More about an Installation Error**

1. Open the Microsoft Event Viewer:
    - In Windows 2000, select **Start** > **Settings** > **Control Panel** > **Administrative Tools** > **Event Viewer**.
    - In Windows XP, select **Start** > **Control Panel** > **Performance and Maintenance** > **Administrative Tools** > **Event Viewer**.
2. Select the applications event log:
    - In Windows 2000, double-click **Application Log**.
    - In Windows XP, double-click **Application**.
3. Look in the **Source** column of the application events and see if there is an event with one of the following sources:
    - **WinInstallUtil_*[name of application being installed]***

- **MsiInstaller**

4. Do one of the following:

   - If you are not experiencing an error that is derived from one of these sources, contact customer support (see “Getting Support” on page 223). If you do have an error from one of these sources, proceed to step 5.

   - If you see an event with one of the sources listed in step 3, double-click the event to open it.

     The **Event Properties** dialog opens.

5. Use the table that follows to diagnose the error.

**Table 19: Event Viewer Error Sources**

| Source | Cause |
|---|---|
| **WinInstallUtil_*[name of application being installed]*** | Most errors of this kind are related to the creation of ObjectVideo services. On the ObjectVideo Server, this error may be related to database access errors. If you do not know how to correct the error, contact customer support. |
| **MsiInstaller** | This error may appear due to a variety of unexpected problems. If you do not know how to correct the error, contact customer support. |

### Missing ObjectVideo Server Requirements

**Article Number:** 1410

**Found In:** Installation of ObjectVideo Server

**Product(s) Affected:**

- ObjectVideo VEW 2.5 or later (Standard, HiRes, FlowControl)
- ObjectVideo VEW 3.0 or later (Leader/Follower)
- ObjectVideo OnBoard 1.5 or later (100, 200)
- ObjectVideo OnBoard 3.0 or later (1000)
- ObjectVideo Forensics 2.5 or later
- ObjectVideo Integrator Toolkit 2.5 or later

**Summary:**

During installation, you are notified in an error message that you do not have one of the requirements for running the ObjectVideo Server software.

**Solution:**

Find the error message in the table below, and then use the appropriate solution. A full list of software requirements is listed in “ObjectVideo Server and ISE Software Requirements” on page 225.

| Error Message | Solution |
|---|---|
| **This software requires Windows XP or Windows Server 2003.** | ObjectVideo Server software must be run on Windows XP or Windows Server 2003. If you are using another operating system, this message will appear.<br>This message should never appear if you are using ObjectVideo-certified hardware. If you receive this message on a certified computer, contact customer support for assistance (see “Getting Support” on page 223).<br>If you received this message on a computer not certified by ObjectVideo, see http://www.microsoft.com for information on obtaining and installing the correct operating system. |

| Error Message | Solution |
|---|---|
| **You must install the Microsoft SQL Server Desktop Engine before installing *[product name].*** | See “To Install MSDE” on page 234 for installation instructions. |
| **This software requires Microsoft .NET Framework version 1.1.4322.** | See “To Install the Microsoft .NET Framework” on page 233 for installation instructions. |
| **This software requires Microsoft DirectX 9.0b.** | See “To Install Microsoft DirectX” on page 231 for installation instructions. |

**Error Message: Specified directory is not valid.**

**Article Number:** 1494

**Found In:** Installation of ObjectVideo Server or ISE

**Product(s) Affected:**

- ObjectVideo VEW 3.0 or later (Standard, HiRes, FlowControl, Leader/Follower)
- ObjectVideo OnBoard 3.0 or later (100, 200, 1000)
- ObjectVideo Forensics 3.0 or later
- ObjectVideo Integrator Toolkit 3.0 or later

**Summary:**

The **Specified directory is not valid** message appears when I attempt to install the ObjectVideo Server or ISE software.

**Solution:**

For the ObjectVideo Server installer, the problem can occur if an invalid path was entered in the **ObjectVideo Server Configuration** dialog's **Web Server Home Directory** field. If the computer is running an Apache web server, the default document directory is usually **C:\Program Files\Apache Group\Apache2\htdocs**. If the computer is running Microsoft Internet Information Server (IIS), the default document directory is usually **C:\Inetpub\wwwroot**.

For an ISE installer, the problem can occur if an invalid value was entered in the **ObjectVideo Forensics Store Configuration** dialog's **Forensics Data Directory** field.

While specifying a directory in the ObjectVideo Server or ISE installer, one of the following could also have occurred:

- You left the field blank.
- You typed a directory path containing a space or selected a directory that contains a space in the **Browse the Folder** dialog.
- You typed a network path in the field.

Click **OK** on the error dialog, and then specify a valid directory path.

**Error Message: Specified path cannot be found.**

**Article Number:** 1495

**Found In:** Installation of ObjectVideo Server or ISE

**Product(s) Affected:**

- ObjectVideo VEW 3.0 or later (Standard, HiRes, FlowControl, Leader/Follower)
- ObjectVideo OnBoard 3.0 or later (100, 200, 1000)
- ObjectVideo Forensics 3.0 or later
- ObjectVideo Integrator Toolkit 3.0 or later

**Summary:**

The **Specified path cannot be found** message appears when I attempt to install the ObjectVideo Server or ISE software.

**Solution:**

You typed a path with an invalid drive letter:

- For the ObjectVideo Server installer, the problem occurs in the **ObjectVideo Server Configuration** dialog's **Web Server Home Directory** field (e.g., you typed **W:\Program Files\Apache Group\Apache2\htdocs** but the computer has no W: drive).
- For an ISE installer, the problem occurs in the **ObjectVideo Forensics Store Configuration** dialog's **Forensics Data Directory** field (e.g., you typed **W:\Store** but the computer has no W: drive).

Click **OK** on the error dialog, and then specify a path with a valid drive letter.

**Error Message: You are not authorized to create the specified directory.**

**Article Number:** 1496

**Found In:** Installation of ObjectVideo Server or ISE

**Product(s) Affected:**

- ObjectVideo VEW 3.0 or later (Standard, HiRes, FlowControl, Leader/Follower)
- ObjectVideo OnBoard 3.0 or later (100, 200, 1000)
- ObjectVideo Forensics 3.0 or later
- ObjectVideo Integrator Toolkit 3.0 or later

**Summary:**

The **You are not authorized to create the specified directory** message appears when I attempt to install the ObjectVideo Server or ISE software.

**Solution:**

You typed a path to a directory that does exist, but you do not have the Windows permissions necessary to create a directory at the specified location:

- For the ObjectVideo Server installer, the problem occurs in the **ObjectVideo Server Configuration** dialog's **Web Server Home Directory** field.
- For an ISE installer, the problem occurs in the **ObjectVideo Forensics Store Configuration** dialog's **Forensics Data Directory** field.

Your Windows account must have Full Control permissions to create directories at the location you specify. Click **OK** on the error dialog, and then specify a path to a location for which you have Full Control permissions in Windows.

**Error Message: Unable to create specified directory.**

**Article Number:** 1497

**Found In:** Installation of ObjectVideo Server or ISE

**Product(s) Affected:**

- ObjectVideo VEW 3.0 or later (Standard, HiRes, FlowControl, Leader/Follower)
- ObjectVideo OnBoard 3.0 or later (100, 200, 1000)
- ObjectVideo Forensics 3.0 or later
- ObjectVideo Integrator Toolkit 3.0 or later

**Summary:**

The **Unable to create specified directory** message appears when I attempt to install the ObjectVideo Server or ISE software.

**Solution:**

You specified an invalid directory path:

- For the ObjectVideo Server installer, the problem occurs in the **ObjectVideo Server Configuration** dialog's **Web Server Home Directory** field. The **Web Server Home Directory** is the local directory from which the web server hosts alert snapshots so that they are available to the Alert Console.
- For an ISE installer, the problem occurs in the **ObjectVideo Forensics Store Configuration** dialog's **Forensics Data Directory** field.

You must not specify a directory path with spaces. If the directories in the path you specify do not already exist, the installer will create them for you. You must use a local directory.

For the ISE installer, specify a path even if you do not plan on using ObjectVideo Forensics.

Click **OK** on the error dialog, and then specify a valid path.

**Error Message: Invalid port specified.**

**Article Number:** 1125

**Found In:** Installation of ObjectVideo Server

**Product(s) Affected:**

- ObjectVideo VEW 2.0 or later (Standard, HiRes, FlowControl)
- ObjectVideo VEW 3.0 or later (Leader/Follower)
- ObjectVideo OnBoard 1.5 or later (100, 200)
- ObjectVideo OnBoard 3.0 or later (1000)
- ObjectVideo Forensics 2.0 or later
- ObjectVideo Integrator Toolkit 2.0 or later

**Summary:**

The **Invalid port specified** message appears when I attempt to install the ObjectVideo Server software.

**Solution:**

You entered an invalid port number in the **ObjectVideo Server Configuration** dialog's **Web Server Port** field. One of the following may have occurred:

- You may have left the **Web Server Port** field empty.
- You may have typed letters in the **Web Server Port** field instead of numbers.
- You may have typed a negative number in the **Web Server Port** field.

Click **OK** on the error dialog, and then type a valid port number in the **Web Server Port** field.

**Error Message: Specified directory is not valid. Invalid port specified.**

**Article Number:** 1126

**Found In:** Installation of ObjectVideo Server

**Product(s) Affected:**

- ObjectVideo VEW 2.0 or later (Standard, HiRes, FlowControl)
- ObjectVideo VEW 3.0 or later (Leader/Follower)
- ObjectVideo OnBoard 1.5 or later (100, 200)
- ObjectVideo OnBoard 3.0 or later (1000)
- ObjectVideo Forensics 2.0 or later
- ObjectVideo Integrator Toolkit 2.0 or later

**Summary:**

The following message appears when I attempt to install the ObjectVideo Server software: **Specified directory is not valid. Invalid port specified.**

**Solution:**

In the **ObjectVideo Server Configuration** dialog in the ObjectVideo Server installer, you did not specify a path in the **Web Server Home Directory** field and you entered an invalid port number in the **Web Server Port** field. Do the following:

1. Click **OK** on the error dialog.
2. Specify the web server's document directory in the **Web Server Home Directory** field.
3. Type a valid port number in the **Web Server Port** field.

**Missing ISE Requirements**

**Article Number:** 1498

**Found In:** Installation of ISE

**Product(s) Affected:**

- ObjectVideo VEW 3.0 or later (Standard, HiRes, FlowControl, Leader/Follower)
- ObjectVideo OnBoard 3.0 or later (100, 200, 1000)
- ObjectVideo Forensics 3.0 or later
- ObjectVideo Integrator Toolkit 3.0 or later

**Summary:**

During installation, you are notified in an error message that you do not have one of the requirements for running the ISE software.

**Solution:**

Find the error message in the table below, and then use the appropriate solution. A full list of software requirements is listed in “ObjectVideo Server and ISE Software Requirements” on page 225.

| Error Message | Solution |
|---|---|
| **This software requires Windows XP or Windows Server 2003.** | ObjectVideo ISE software must be run on Windows XP or Windows Server 2003. If you are using another operating system, this message will appear.<br>This message should never appear if you are using ObjectVideo-certified hardware. If you receive this message on a certified computer, contact customer support for assistance (see “Getting Support” on page 223).<br>If you received this message on a computer not certified by ObjectVideo, see http://www.microsoft.com for information on obtaining and installing the correct operating system. |
| **The ObjectVideo Forensics Store requires Microsoft Message Queuing.** | See “To Install MSMQ” on page 232 for installation instructions. |
| **You must install the MPEG-4 video compressor before installing the ObjectVideo Forensics Store.** | See “To Install the MPEG-4 Video Compressor” on page 236 for installation instructions. |

| Error Message | Solution |
|---|---|
| **You must install the ObjectVideo Daemon Service before installing the ObjectVideo Forensics Store.** | You may encounter this message if you did not initiate the installation as described in the installation instructions. See “Installing the VEW ISE Software” on page 49 or “Installing the OnBoard ISE Software” on page 44 for more information. |
| **You must install the ObjectVideo Daemon Service before installing the ObjectVideo *[ISE type]* ISE.** | You may encounter this message if you did not initiate the installation as described in the installation instructions. See “Installing the VEW ISE Software” on page 49 or “Installing the OnBoard ISE Software” on page 44 for more information. |
| **You must install the MPEG-4 video compressor before installing the ObjectVideo *[ISE type]* ISE.** | See “To Install the MPEG-4 Video Compressor” on page 236 for installation instructions. |
| **The ObjectVideo *[ISE type]* ISE requires Microsoft Message Queuing.** | See “To Install MSMQ” on page 232 for installation instructions. |
| **This software requires Microsoft .NET Framework version 1.1.4322.** | See “To Install the Microsoft .NET Framework” on page 233 for installation instructions. |
| **This software requires Microsoft DirectX 9.0b.** | See “To Install Microsoft DirectX” on page 231 for installation instructions. |

### Missing VEW/OnBoard Client Application Requirements

**Article Number:** 1412

**Found In:** Installation of VEW/OnBoard client applications

**Product(s) Affected:**

- ObjectVideo VEW 2.5 or later (Standard, HiRes, FlowControl)
- ObjectVideo VEW 3.0 or later (Leader/Follower)
- ObjectVideo OnBoard 1.5 or later (100, 200)
- ObjectVideo OnBoard 3.0 or later (1000)
- ObjectVideo Forensics 2.5 or later

**Summary:**

During installation, you are notified in an error message that you do not have one of the requirements for running the VEW/OnBoard client applications (Rule Management Tool, System Configuration Tool, and Alert Console).

**Solution:**

Find the error message in the table below, and then use the appropriate solution. A full list of software requirements is listed in “Client Application Software Requirements” on page 226.

| Error Message | Solution |
|---|---|
| **This software requires Windows 2000 or Windows XP.** | The ObjectVideo client applications must be run on Windows 2000 or Windows XP. If you are using another operating system, this message will appear.<br><br>See http://www.microsoft.com for information on obtaining and installing the correct operating system. |
| **This software requires Microsoft .NET Framework version 1.1.4322.** | See “To Install the Microsoft .NET Framework” on page 233 for installation instructions. |

| Error Message | Solution |
|---|---|
| **You must install the ObjectVideo Daemon Service before installing the VEW client applications.** | The ObjectVideo Daemon Service must be installed on the computer before the VEW/OnBoard client applications can be installed. You may encounter this message if you did not initiate the installation as described in the installation instructions. See “To Install the VEW/OnBoard Client Applications” on page 55 for instructions. |
| **You must install MDAC version 2.7 or higher before installing the ObjectVideo VEW client applications.** | See “To Install MDAC” on page 230 for installation instructions. |

**Missing FAST Requirements**

**Article Number:** 1413

**Found In:** Installation of FAST

**Product(s) Affected:** ObjectVideo Forensics 2.5 or later

**Summary:**

During installation, you are notified in an error message that you do not have one of the requirements for running the FAST software.

**Solution:**

Find the error message in the table below, and then use the appropriate solution. A full list of software requirements is listed in “Client Application Software Requirements” on page 226.

| Error Message | Solution |
|---|---|
| **This software requires Windows 2000 or Windows XP.** | FAST must be run on Windows 2000 or Windows XP. If you are using another operating system, this message will appear.<br><br>See http://www.microsoft.com for information on obtaining and installing the correct operating system. |
| **This software requires Microsoft .NET Framework version 1.1.4322.** | See “To Install the Microsoft .NET Framework” on page 233 for installation instructions. |
| **You must install the MPEG-4 video compressor before installing FAST** | See “To Install the MPEG-4 Video Compressor” on page 236 for installation instructions. |
| **You must install Java Runtime Environment 1.4.2 before installing FAST.** | See “To Install the Java Runtime Environment” on page 229 for installation instructions. |
| **You must install Windows Media Player 9 before installing FAST.** | See “To Install Windows Media Player 9” on page 235 for installation instructions. |
| **You must install DirectX 9.0b before installing FAST.** | See “To Install Microsoft DirectX” on page 231 for installation instructions. |

**Missing ObjectVideo Integrator Toolkit Requirements**

**Article Number:** 1414

**Found In:** Installation of ObjectVideo Integrator Toolkit

**Product(s) Affected:** ObjectVideo Integrator Toolkit 2.5 or later

**Summary:**

During installation, you are notified in an error message that you do not have one of the requirements for running the ObjectVideo Integrator Toolkit.

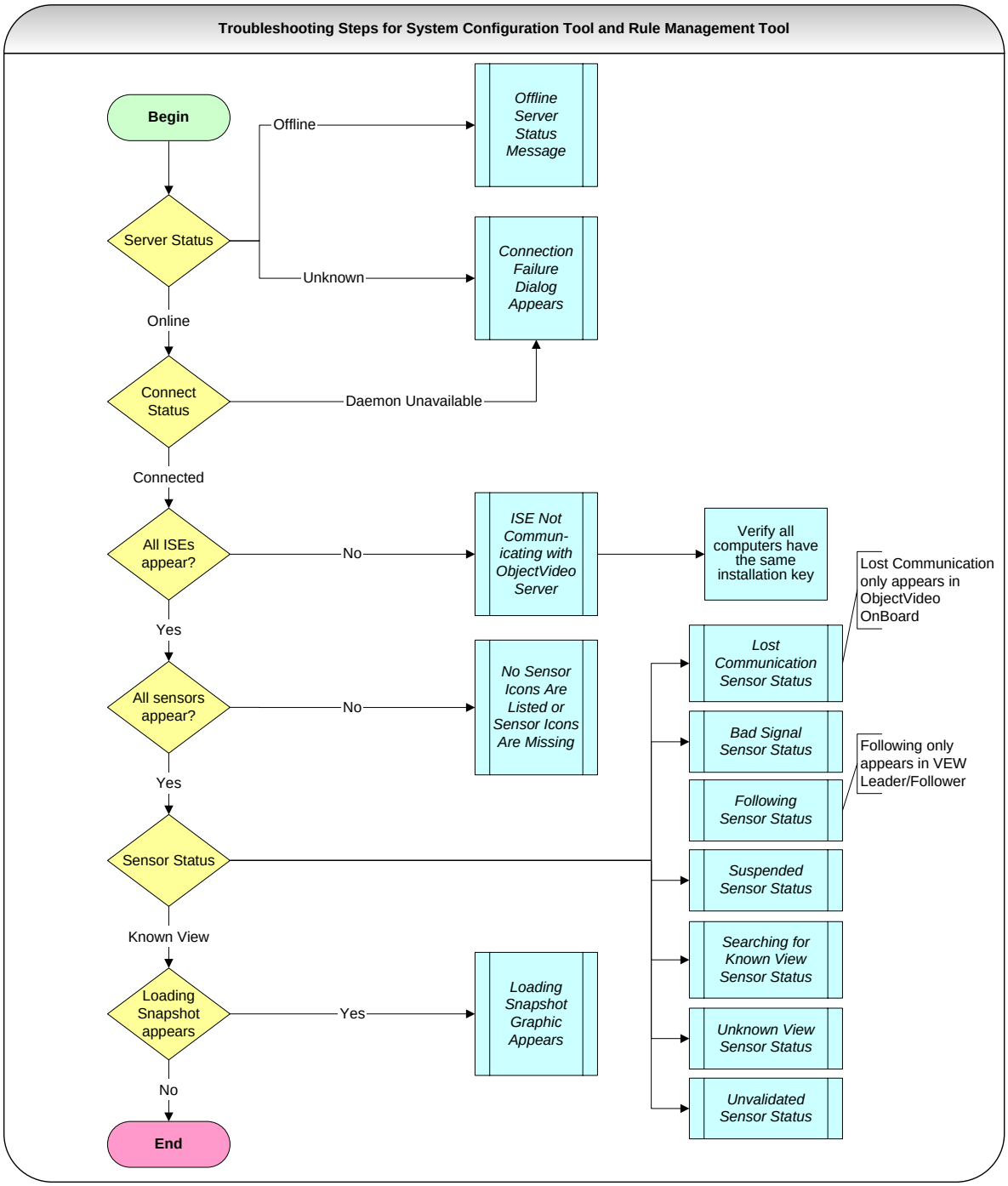
**Solution:**

Find the error message in the table below, and then use the appropriate solution. A full list of software requirements is listed in “Client Application Software Requirements” on page 226.

| Error Message | Solution |
|---|---|
| **This software requires Windows 2000 or Windows XP.** | The ObjectVideo Integrator Toolkit must be run on Windows 2000 or Windows XP. If you are using another operating system, this message will appear.<br><br>See http://www.microsoft.com for information on obtaining and installing the correct operating system. |
| **This software requires Microsoft .NET Framework version 1.1.4322.** | See “To Install the Microsoft .NET Framework” on page 233 for installation instructions. |
| **You must install the ObjectVideo Daemon Service before installing *[product name].*** | The ObjectVideo Daemon Service must be installed on the computer before the ObjectVideo Integrator Toolkit applications can be installed. You may encounter this message if you did not initiate the installation as described in the installation instructions. See “Installing the ObjectVideo Integrator Toolkit Applications” on page 106 for more information. |

# System Configuration Tool/Rule Management Tool Troubleshooting

The figure below shows the process for verifying that all system components are installed correctly for the System Configuration Tool and Rule Management Tool. Where necessary, it references troubleshooting articles outlined in this chapter.



**Offline Server Status Message**

**Article Number:** 1370

**Found In:** Rule Management Tool and System Configuration Tool

**Product(s) Affected:**

- ObjectVideo VEW 2.5 or later (Standard, HiRes, FlowControl)
- ObjectVideo VEW 3.0 or later (Leader/Follower)
- ObjectVideo OnBoard 1.5 or later (100, 200)
- ObjectVideo OnBoard 3.0 or later (1000)
- ObjectVideo Forensics 2.5 or later

**Summary:**

The **Server Status** message is **Offline**.

**Solution:**

If the ObjectVideo Server is **Offline**, it means that the local Daemon Service cannot locate an ObjectVideo Server. Problems with the ObjectVideo Server should be corrected immediately. A connection to the ObjectVideo Server is required for the ObjectVideo system to operate.

The **Offline** status can occur for the following reasons:

- The computer running the ObjectVideo Server software may be shut down. If this is the case, turn on the computer.
- The ObjectVideo Server software may not be running. Use the instructions in “Starting and Stopping ObjectVideo Server Services” on page 134 to verify whether this is the case. If necessary, start the ObjectVideo Server services. Click the **Refresh Configuration** button in the Rule Management Tool or System Configuration Tool.
- You may have specified the wrong ObjectVideo Server host name, IP address, or port number, or the host name or IP address of the computer running the ObjectVideo Server software may have changed. Open the ObjectVideo Management Tool and verify that the **Server Address** and **Port** are configured correctly.
- The ObjectVideo Server may be unavailable due to network issues. Check your network to ensure that all the components are operating normally. See Appendix B, “Diagnosing Network Problems,” on page 237 for more information.

**Unknown Server Status Message**

**Article Number:** 1377

**Found In:** Rule Management Tool and System Configuration Tool

**Product(s) Affected:**

- ObjectVideo VEW 2.5 or later (Standard, HiRes, FlowControl)
- ObjectVideo VEW 3.0 or later (Leader/Follower)
- ObjectVideo OnBoard 1.5 or later (100, 200)
- ObjectVideo OnBoard 3.0 or later (1000)
- ObjectVideo Forensics 2.5 or later

**Summary:**

The **Server Status** is **Unknown**.

**Solution:**

The **Unknown** status may appear for the following reasons:

- The Rule Management Tool or System Configuration Tool cannot locate a Daemon Service on the local machine. If this has occurred, the **Connect Status** message is **DAEMON UNAVAILABLE**. Refer to “Connection Failure Dialog Appears/Daemon Unavailable Connect Status Message” on page 182 for instructions on solving this problem.
- The computer running the ObjectVideo Server software may be shut down. If this is the case, turn on the computer.
- The ObjectVideo Server software is not running, and you need to restart it (see “Starting and Stopping ObjectVideo Server Services” on page 134). After restarting the ObjectVideo Server services, click the **Refresh Configuration** icon in the Rule Management Tool or System Configuration Tool.
- You may have specified the wrong ObjectVideo Server host name, IP address, or port number, or the host name or IP address of the computer running the ObjectVideo Server software may have changed. Open the ObjectVideo Management Tool and verify that the **Server Address** and **Port** are correct.
- The ObjectVideo Server may be unavailable due to network issues. Check your network to ensure that all the components are operating normally. See Appendix B, “Diagnosing Network Problems,” on page 237 for more information.

**Note:** In many cases, an **Unknown** status is a transitional status before the Daemon Service determines the status of the ObjectVideo Server. You will frequently see the **Unknown** status appear just before an **Online** or **Offline** status.

**After Changing the ObjectVideo Server, Correct Configuration Not Displayed**

**Article Number:** 1362

**Found In:** Rule Management Tool and System Configuration Tool

**Product(s) Affected:**

- ObjectVideo VEW 2.5 or later (Standard, HiRes, FlowControl)
- ObjectVideo VEW 3.0 or later (Leader/Follower)
- ObjectVideo OnBoard 1.5 or later (100, 200)
- ObjectVideo OnBoard 3.0 or later (1000)
- ObjectVideo Forensics 2.5 or later

**Summary:**

I changed the **Server Address** and/or **Port** in the **Connection** tab of the ObjectVideo Management Tool, but the new configuration has not been displayed in the Rule Management Tool and System Configuration Tool.

**Solution:**

If the configuration has not been displayed, one of the following may have occurred:

- You entered the **Server Address** and/or **Port** incorrectly. Check to be sure that the exact **Server Address** for the computer running the ObjectVideo Server software was entered in the **Connection** tab of the ObjectVideo Management Tool. If the network is using dynamic IP addresses, a host name should have been used rather than an IP address. If you specify a host name and the network is not running a DNS server, you will need to add the host name and IP address of the computer running the ObjectVideo Server software to the Windows **hosts** file on the VEW/OnBoard client application computer (see “Adding a Host to a Hosts File” on page 140 for more information).

- You did not click **Apply** after entering the new **Server Address** and/or **Port** in the ObjectVideo Management Tool. Click **Apply** after making any changes.

- You did not refresh the configuration in the Rule Management Tool or System Configuration Tool. Changes are not displayed until the configuration is refreshed. Click the **Refresh Configuration** button in the Rule Management Tool or System Configuration Tool.

- You refreshed the configuration in the Rule Management Tool or System Configuration Tool before the ObjectVideo services began running. The ObjectVideo services are restarted automatically when any connection change is applied in the ObjectVideo Management Tool. When you click **Apply**, the ObjectVideo Management Tool automatically stops and restarts the

ObjectVideo services running on that computer. It only restarts services that were running when you clicked the **Apply** button. You will know that the services are restarted when the field next to each service in the ObjectVideo Management Tool says **Running**. After the services are running, Click **Configuration > Refresh** in the Rule Management Tool or System Configuration Tool.

- You did not change the **Server Address** and/or **Port** on all of the necessary computers. Changes made to the ObjectVideo Management Tool only affect the software running on that computer. Unlike the Rule Management Tool and the System Configuration Tool, the ObjectVideo Management Tool is not a distributed application. In other words, you cannot run the ObjectVideo Management Tool on one computer to change settings or manage Windows services on another computer. You must run the ObjectVideo Management Tool on the local computer to make configuration changes and manage services for the software on the local computer.

### Connection Failure Dialog Appears/Daemon Unavailable Connect Status Message

**Article Number:** 1407

**Found In:** Rule Management Tool and System Configuration Tool

**Product(s) Affected:**

- ObjectVideo VEW 2.5 or later (Standard, HiRes, FlowControl)
- ObjectVideo VEW 3.0 or later (Leader/Follower)
- ObjectVideo OnBoard 1.5 or later (100, 200)
- ObjectVideo OnBoard 3.0 or later (1000)
- ObjectVideo Forensics 2.5 or later

**Summary:**

The **Connection Failure** dialog appears and the **Connect Status** message is **DAEMON UNAVAILABLE**.

**Solution:**

If the **Connection Failure** dialog appears and the **Connect Status** message is **DAEMON UNAVAILABLE**, the Rule Management Tool or System Configuration Tool cannot locate a Daemon Service on the local machine. This can occur for the following reasons:

- The Daemon Service is not running, and you need to start it (see “Starting and Stopping the Daemon Service on a Client Application Computer” on page 138). After you start the Daemon Service, refresh the configuration in the Rule Management Tool or System Configuration Tool by clicking the **Refresh Configuration** button.
- The Daemon Service is not installed on the computer. Follow the instructions in “Installing the VEW/OnBoard Client Applications” on page 55 to install the Daemon Service (the Daemon Service is automatically installed when you take the steps required to install the Rule Management Tool and System Configuration Tool.)

  Make sure that you enter the correct installation key when prompted. If you do not enter a valid installation key, the Daemon Service will not be installed, and the Rule Management Tool and System Configuration Tool will not function correctly.

**No ISEs are Listed**

**Article Number:** 1360

**Found In:** System Configuration Tool

**Product(s) Affected:**

- ObjectVideo VEW 2.5 or later (Standard, HiRes, FlowControl)
- ObjectVideo VEW 3.0 or later (Leader/Follower)
- ObjectVideo OnBoard 1.5 or later (100, 200)
- ObjectVideo OnBoard 3.0 or later (1000)
- ObjectVideo Forensics 2.5 or later

**Summary:**

Only the ObjectVideo Server icon appears when the System Configuration Tool is opened, or some sensor icons are not displayed in the System Configuration Tool.


**Solution:**

If you run the System Configuration Tool and only the ObjectVideo Server icon appears, several problems may have occurred.

First, click the **Refresh Configuration** button.

If refreshing the configuration does not work, you can determine which problem has occurred by checking the **Connect Status** and **Server Status**. The **Connection Failure** dialog also appears in some cases. The table that follows describes these problems, their possible causes, and solutions.

**Table 20: System Problems and Solutions**

| Symptoms | Possible Cause | Solution |
|---|---|---|
| **Server Status** is **Online**<br>**Connect Status** is **Connected** | One or more ISEs are not connected to or communicating with the ObjectVideo Server. (This only occurs if the ObjectVideo Server and ISE software are installed on separate computers). | See "ISE Not Communicating with the ObjectVideo Server" on page 186. |
| | The ISE has a different installation key than the client software. | In the ObjectVideo Management Tool, check the **Installation Key** field on the **Connection** tab. Ensure that all the computers in your system have the same installation key. |
| | The ISE services were started when the ObjectVideo Server services were not running. (This only occurs if the ObjectVideo Server and ISE software are installed on separate computers.) | See "ISE Not Communicating with the ObjectVideo Server" on page 186. |

| Symptoms | Possible Cause | Solution |
|---|---|---|
| **Server Status** is **Offline**<br>**Connect Status** is **Connected** | The computer running the ObjectVideo Server software is shut down. | Reboot the computer running the ObjectVideo Server software and click **Configuration** > **Refresh** to refresh the configuration. |
| | The ObjectVideo Server software is not running. | See "Starting and Stopping ObjectVideo Server Services" on page 134 to verify whether the ObjectVideo Server services are running, and start them if necessary. Click **Configuration** > **Refresh**. |
| | A network connection problem is preventing the System Configuration Tool from connecting to the computer running the ObjectVideo Server software. | Resolve any networking issues. See Appendix B, "Diagnosing Network Problems," on page 237 for more information. Click **Configuration** > **Refresh**. |
| **Server Status** is **Unknown**<br>**Connect Status** is **DAEMON UNAVAILABLE** (the **Connection Failure Dialog** appears) | The Daemon Service on the Rule Management Tool computer is not running or is not installed on the computer. | See "Connection Failure Dialog Appears/Daemon Unavailable Connect Status Message" on page 182 for more information. |

**ISE Not Communicating with the ObjectVideo Server**

**Article Number:** 1367

**Found In:** Alert Console, Rule Management Tool, and System Configuration Tool

**Product(s) Affected:**

- ObjectVideo VEW 2.5 or later (Standard, HiRes, FlowControl)
- ObjectVideo VEW 3.0 or later (Leader/Follower)
- ObjectVideo OnBoard 1.5 or later (100, 200)
- ObjectVideo OnBoard 3.0 or later (1000)
- ObjectVideo Forensics 2.5 or later

**Summary:**

In the Alert Console, Rule Management Tool, and System Configuration Tool, the **Server Status** is **Online**, indicating communication with the ObjectVideo Server. However, one or more of the following has occurred to indicate communication failure between an ISE and the ObjectVideo Server:

- In the Alert Console, no alerts are being displayed for a particular sensor or a set of sensors on an ISE.
- In the Rule Management Tool, the sensors associated with a particular ISE are not displayed.
- In the System Configuration Tool, the ISE icon for the sensors is not displayed.

**Note:** The scenarios listed above can only occur if the ObjectVideo Server and ISE software are installed on separate computers.

**Solution:**

One of the following is occurring:

- The computer that is running the ISE software may be shut off. If this is the case, start the computer.
- The computer running the ISE software may have the wrong ObjectVideo Server host name, IP address, or port number. Open the ObjectVideo Management Tool and verify that the **Server Address** and **Port** are correct.
- The computer running the ISE software may not recognize the host name of the ObjectVideo Server computer. This can occur if the network is not using a DNS server. Add the host name and IP address of the ObjectVideo Server to

the Windows **hosts** file on the ISE computer by following the instructions “Adding a Host to a Hosts File” on page 140.

- The ISE computer may not be connected to the network or other network issues may be taking place. Check the connectivity between the ISE computer and the other ObjectVideo system components. See Appendix B, “Diagnosing Network Problems,” on page 237 for more information.

- The ISE computer may have been started when the ObjectVideo services on the ObjectVideo Server computer were not running. The ISE is not able to obtain the license information from the ObjectVideo Server. Be sure the ObjectVideo services on the ObjectVideo Server are running (see “Starting and Stopping ObjectVideo Server Services” on page 134). Once the ObjectVideo Server services are running, reboot the ISE computer. Refresh the configuration in the System Configuration Tool. If sensors still do not appear in the System Configuration Tool, the sensors’ parameter models may have become corrupt. See “Deleting and Replacing Corrupt Parameter Files” on page 141 for more information.

**Note:** After trying each of the solutions above, click the **Refresh Configuration** button in the Rule Management Tool or System Configuration Tool, if the problem exists in one of those tools. This displays the latest configuration and allows you to verify whether the solution was successful.

### No Sensor Icons Are Listed or Sensor Icons Are Missing

**Article Numbers:** 1408

**Found In:** System Configuration Tool and Rule Management Tool

**Product(s) Affected:**

- ObjectVideo VEW 2.5 or later (Standard, HiRes, FlowControl)
- ObjectVideo VEW 3.0 or later (Leader/Follower)
- ObjectVideo OnBoard 1.5 or later (100, 200)
- ObjectVideo OnBoard 3.0 or later (1000)
- ObjectVideo Forensics 2.5 or later

**Summary:**

Some or all of the sensor icons are missing from the left side of the System Configuration Tool or Rule Management Tool window.

**Solution:**

**Note:** If you have the Rule Management Tool and System Configuration Tool installed on the same computer, you should first check the System Configuration Tool to see if ISE icons appear. The Rule Management Tool never displays ISE icons. If ISE icons do not appear in the System Configuration Tool, you will need to use the solutions in “No ISEs are Listed” on page 178.

The following problems may cause sensor icons to not appear:

- In ObjectVideo OnBoard, no sensors were created in the ObjectVideo Management Tool. See “Adding Sensors (ObjectVideo OnBoard)” on page 53 for instructions on how to create sensors.
- A sensor has been deleted by a user in the ObjectVideo Management Tool.
- A sensor's parameter model file has become corrupt. See “Deleting and Replacing Corrupt Parameter Files” on page 141 for more information.

### Sensor Synchronization Times Out and Operation Timed Out Message Appears

**Article Number:** 1374

**Found In:** Rule Management Tool and System Configuration Tool

**Product(s) Affected:**

- ObjectVideo VEW 2.5 or later (Standard, HiRes, FlowControl)
- ObjectVideo VEW 3.0 or later (Leader/Follower)
- ObjectVideo OnBoard 1.5 or later (100, 200)
- ObjectVideo OnBoard 3.0 or later (1000)
- ObjectVideo Forensics 2.5 or later

**Summary:**

It appears that the sensor synchronization did not complete and an **Operation timed out** message appears in the bottom center of the Rule Management Tool window or System Configuration Tool window.

**Solution:**

This message may appear when you load the configuration, refresh the configuration, or select a component from the left side of the window. If this message appears, the system is not communicating properly, and the most current configuration may not be displayed.

This message may be related to the **Connect Status** and **Server Status**. These statuses are displayed in the top-right corner of the Rule Management Tool and System Configuration Tool window.

Check the status, and then refer to the appropriate troubleshooting article:

- “Connection Failure Dialog Appears/Daemon Unavailable Connect Status Message” on page 182
- “Offline Server Status Message” on page 177
- “Unknown Server Status Message” on page 178

An operation timing out may also be related to the **Synch Wait (secs)** setting or **Config Wait (secs)** setting in the **Options** dialog’s **Connection** tab. The dialog is accessed from the Rule Management Tool or System Configuration Tool window by selecting **File > Options**.

The **Config Wait (secs)** setting determines how long (in seconds) the Rule Management Tool or System Configuration Tool waits for the local Daemon Service

to load the entire configuration (arrangement of components) from the ObjectVideo Server. The default value of this setting is 10 seconds. This value can be set from 1 to 300 seconds. When you are experiencing heavy network traffic, you may want to increase the wait time to prevent the operation from timing out.

The **Synch Wait (secs)** setting determines how long (in seconds) the Rule Management Tool or System Configuration Tool waits for the Daemon Service to synchronize rules, views, and other data with an ISE or sensor. The default value of this setting is 10 seconds. This value can be set from 1 to 300 seconds.

The Daemon Service synchronizes data when you select a sensor or an ISE for the first time during a session. During synchronization, the component properties are updated. While the Rule Management Tool or System Configuration Tool is waiting for this to take place, a **Synchronizing** status box appears. You can close this box without affecting the Daemon Service's loading of the data. If you close the status box or the Rule Management Tool or System Configuration Tool stops waiting, the Daemon Service continues loading the data in the background. When you are experiencing heavy network traffic, you may want to increase the wait time to prevent the operation from timing out.

**Bad Signal Sensor Status**

**Article Number:** 1499

**Found In:** Rule Management Tool and System Configuration Tool

**Product(s) Affected:**

- ObjectVideo VEW 3.0 or later (Standard, HiRes, FlowControl, Leader/Follower)
- ObjectVideo OnBoard 3.0 or later (100, 200, 1000)
- ObjectVideo Forensics 3.0 or later

**Summary:**

In the **Properties** tab, the **Status** field of the sensor lists the status as **Bad Signal**.

If the status is **Bad Signal**, there is a problem with the video signal. The video is not being checked against rules. Sensors that support forensics data may no longer generate useful primitives and video. The presence of any of the following conditions creates a **Bad Signal** camera status:

- Camera disconnected from the computer running the ISE software or the Video Analysis Device

  **Note:** In ObjectVideo OnBoard, if the Video Analysis Device is a camera, you will receive a **Lost Communication** sensor status when the camera is disconnected or turned off (see “Lost Communication Sensor Status” on page 193).

- Camera turned off
- Low dynamic range

Low dynamic range means that there is not enough contrast within the video images. This could be caused by any of the following:

- Poor or excessive illumination of the camera’s field of view
- The camera's field of view is out of focus
- Poor calibration of the camera

For instance, the camera’s field of view at night may have too little illumination or the glare of the sun could wash out the camera’s field of view. You can attempt to fix the contrast problem by using a camera with better contrast or changing the lighting conditions in the vicinity of the camera.

**Following Sensor Status**

**Article Number:** 1471

**Found In:** Rule Management Tool and System Configuration Tool

**Product(s) Affected:** ObjectVideo VEW 3.0 or later (Leader/Follower)

**Summary:**

In the **Properties** tab, the **Status** field of the sensor lists the status as **Following**.

**Solution:**

The **Following** status is the normal sensor status for a sensor monitoring a PTZ camera that has begun following an object in response to event detection. See the Rule Management Tool Help for more information on the follow object response type.

The sensor icon is accompanied by a cautionary yellow dot. In the **View** tab, the **Live View** switches to a view of the object being tracked. In the Rule Management Tool, the **Active View** is replaced by the **Following** signal status.

While the **Following** status does not indicate a problem, a sensor cannot detect any new events or store any useful forensics data while it is in this status.

The follower remains in **Following** status until it is done tracking the event. When the sensor stops following the object, its status is determined by how you set up the **Follow Object** response in the Rule Wizard:

- If the sensor is to **Return to Initial View** after tracking, then it will return to a **Known View** status.
- If the sensor is to **Remain in Current View** after tracking, then it will switch to an **Unknown View** status.

**Lost Communication Sensor Status**

**Article Number:** 1500

**Found In:** Rule Management Tool and System Configuration Tool

**Product(s) Affected:** ObjectVideo OnBoard 3.0 or later (100, 200, 1000)

**Summary:**

In the **Properties** tab, the **Status** field of the sensor lists the status as **Lost Communication**. The video is not being checked against rules. Sensors that support forensics data may no longer generate useful primitives and video.

**Solution:**

If the status is **Lost Communication**, the sensor running on the OnBoard ISE computer cannot communicate with the Video Analysis Device. This can occur for any of the following reasons:

- A video source has not been assigned to the sensor or an invalid video source was assigned to the sensor.
- The Video Analysis Device was turned off or unplugged.
- A network problem is preventing the sensor from communicating with the Video Analysis Device.

Take the following steps to fix the problem. After each step, validate whether the sensor's status has changed by clicking the **Refresh Configuration** button:

1. In the System Configuration Tool, make sure that a valid video source has been assigned to the sensor.

   The video source is specified below the **Source** field in the sensor's **Properties** tab. See "Assigning a Video Source to a Sensor" on page 60 for more information.

2. Make sure that the Video Analysis Device (i.e., the camera, DVR, or other device that detects events using ObjectVideo technology) is plugged in and turned on.

3. Verify that a network problem is not occurring. See Appendix B, "Diagnosing Network Problems," on page 237 for more information.

4. Turn off the Video Analysis Device and shut down the OnBoard ISE computer running the sensor that is having the problem. Turn the Video Analysis Device back on. Finally, turn the computer running the ISE back on.

5. If the problem is still not solved, contact customer support (see "Getting Support" on page 223)

**Searching for Known View Sensor Status**

**Article Number:** 1372

**Found In:** Rule Management Tool and System Configuration Tool

**Product(s) Affected:**

- ObjectVideo VEW 2.5 or later (Standard, HiRes, FlowControl)
- ObjectVideo VEW 3.0 or later (Leader/Follower)
- ObjectVideo OnBoard 1.5 or later (100, 200)
- ObjectVideo OnBoard 3.0 or later (1000)
- ObjectVideo Forensics 2.5 or later

**Summary:**

In the **Properties** tab, the **Status** field of the sensor lists the status as **Searching for Known View**.

**Solution:**

If the status is **Searching for Known View**, the system is currently searching the stored views to see if the camera's current field of view is a known view. A stored view is a surveillance camera field of view that has been designated in the system for monitoring by a sensor.

For example, this status may appear when a camera is moving or a camera has just stopped moving. This status is replaced by **Known View** or **Unknown View** once the camera's field of view has become stationary and the current field of view has been compared to the stored known views.

**Suspended Sensor Status**

**Article Number:** 1501

**Found In:** Rule Management Tool and System Configuration Tool

**Product(s) Affected:**

- ObjectVideo VEW 3.0 or later (Standard, HiRes, FlowControl, Leader/Follower)
- ObjectVideo OnBoard 3.0 or later (100, 200, 1000)
- ObjectVideo Forensics 3.0 or later

**Summary:**

In the **Properties** tab, the **Status** field of the sensor lists the status as **Suspended**.

**Solution:**

The video is being received, but the sensor processes that examine the video for events were stopped when a user clicked the **Suspend Processing** button. Sensors that support forensics data may no longer generate useful primitives and video.

To reactivate the sensor, click the **Resume Processing** button next to the sensor's **Status** field in the **Properties** tab.

**Unknown View Sensor Status**

**Article Number:** 1459

**Found In:** Rule Management Tool and System Configuration Tool

**Product(s) Affected:**

- ObjectVideo VEW 3.0 or later (Standard, HiRes, FlowControl, Leader/Follower)
- ObjectVideo OnBoard 3.0 or later (100, 200, 1000)
- ObjectVideo Forensics 3.0 or later

**Summary:**

In the **Properties** tab, the **Status** field of the sensor lists the status as **Unknown View**.

**Solution:**

The sensor does not recognize the camera's field of view as a known view. A known view is a live camera feed that matches a stored view. A stored view is a surveillance camera field of view that has been designated in the system for monitoring by a sensor.

Until the camera's field of view becomes a view the sensor recognizes as a known view, the sensor does not generate any new alerts. Sensors that support forensics data may no longer generate useful primitives and video.

An **Unknown View** status can have several causes:

- A scene change event has occurred to make the live camera feed unrecognizable to the sensor. A scene change event is any event in a known view that significantly changes the camera's field of view, such as the camera being panned, turned off, unplugged, jostled, or covered, or the lights being turned on or off within the field of view.
- ObjectVideo VEW sensors that have not been assigned a video source appear briefly in **Searching for Known View** status, and then become **Unknown View**. Assign a video source to the sensors using the instructions in "Assigning a Video Source to a Sensor" on page 60.
- You may not have created an initial view for a VEW Standard, VEW HiRes, or VEW Leader/Follower sensor. These sensors require that you create at least one view before they can detect any events. See "Creating a View" in the Rule Management Tool Help for more information.
- If a PTZ camera is being used, the camera may have been moved away from a known view. You can move the camera back to a field of view the sensor recognizes as a known view. If your sensor supports multiple views, you can also designate the current field of view as a known view. If your sensor does

not support multiple views, you can also force the field of view to become a known view. To force a view, click the **Force** button between the two snapshots in the upper portion of the **View** tab. When the **Force View** dialog appears, select a view from the list of stored views and click the **Force View** button. The **Forcing View** dialog is displayed until the view is successfully added.

- If a multiplexer is being used, the multiplexer may have switched to another camera that has no known view defined for it. You can switch to a camera that has a known view defined for it. If your sensor supports multiple views, you can also designate the current field of view as a known view. If your sensor does not support multiple views, you can also force the field of view to become a known view.

- If the camera is an outdoor camera, it is possible that nightfall or the sun rising may have caused the system to stop recognizing the view. This can happen if the view for the sensor was defined during dusk or dawn. In such a case, the system may compare the original view with the view from a different time of day and determine that they are not the same because of the lighting difference.

  For sensors that support multiple views, you can create two views using the Rule Management Tool. Create one view during the daytime and the other view during the nighttime. Some trial-and-error may be required. In some cases, you may need to create more than two views (for example, an additional twilight view and an additional dawn view).

  For sensors that support a single view, force the view so that the current field of view becomes the sensor's known view. You will need to force the view again if the lighting changes and the sensor enters an unknown view again.

  **Note:** This problem can occur if you are using a camera that does not support night vision. The ObjectVideo software's ability to detect events during the night may be diminished if you are using a camera that does not support night vision and there is inadequate artificial light. If you encounter this problem frequently, it is highly recommended that you use cameras that support night vision.

- If the system no longer recognizes the live camera feed as a known view (for example, an outdoor camera's feed after a heavy snowfall), you can force the view. You can also force a view if you want an ObjectVideo OnBoard sensor that only supports a single view to monitor a different field of view than the one the camera was in when the video source was assigned to the sensor.

**Unvalidated Sensor Status**

**Article Number:** 1502

**Found In:** Rule Management Tool and System Configuration Tool

**Product(s) Affected:**

- ObjectVideo VEW 3.0 or later (Standard, HiRes, FlowControl, Leader/Follower)
- ObjectVideo OnBoard 3.0 or later (100, 200, 1000)
- ObjectVideo Forensics 3.0 or later

**Summary:**

In the **Properties** tab, the **Status** field of the sensor lists the status as **Unvalidated**. In addition, a question mark appears beside one or more sensor icon(s) in the Rule Management Tool and System Configuration Tool. When a sensor is in an **Unvalidated** status, the sensor is unable to detect events in real time. A sensor that supports forensics data may no longer generate useful primitives and video. A VEW Leader/Follower sensor cannot follow an object involved in an event.

**Note:** If an **Unvalidated** sensor status appears immediately after system installation, the problem is license-related.

**Solution:**

The following list describes possible causes and solutions:

- You may not have installed licenses to use the ObjectVideo system. This may be the case if all of the sensors in your system have an **Unvalidated** status. Follow the instructions in “Installing Licenses” page 41 to install the appropriate licenses, and then restart all the ISE software in your system (see “Starting and Stopping the ISE Services” on page 136). After you do so, wait a few minutes, and then refresh the System Configuration Tool or Rule Management Tool by clicking the **Refresh Configuration** button.

- You may have added sensors to the ObjectVideo system for which you have not purchased or installed licenses. To purchase additional licenses, contact customer support (see “Getting Support” on page 223). Once you’ve received your new license file, install the licenses according to the instructions in “Installing Licenses” page 41.

- The sensor running on the ISE computer may not have responded during the time set for the synchronization. Increase the **Synch Wait (secs)** time in the Rule Management Tool or System Configuration Tool **Options** dialog (see “Sensor Synchronization Times Out and Operation Timed Out Message Appears” on page 189 for more information).

- The sensors on the ISE computer may be under a heavy load that makes them slow to respond to the Rule Management Tool and System Configuration

Tool. A system administrator should investigate by checking the sensor load, rebooting the computer running the ISE software, or contacting customer support (see “Getting Support” on page 223).

- If the sensor running on the ISE computer went down unexpectedly, the ObjectVideo Server may not immediately report that the sensor is gone and may still report it in the list of the sensors. Clicking the **Refresh Configuration** button should display the updated configuration.

**Loading Snapshot Graphic Appears Instead of a Camera Snapshot**

**Article Number:** 1368

**Found In:** Rule Management Tool and System Configuration Tool

**Product(s) Affected:**

- ObjectVideo VEW 2.5 or later (Standard, HiRes, FlowControl)
- ObjectVideo VEW 3.0 or later (Leader/Follower)
- ObjectVideo OnBoard 1.5 or later (100, 200)
- ObjectVideo OnBoard 3.0 or later (1000)
- ObjectVideo Forensics 2.5 or later

**Summary:**

In the **View** tab for a sensor or view (views only appear in the Rule Management Tool), no snapshots of the camera's video feed are displayed. **Loading Snapshot** graphics appear in place of camera snapshots

**Before Using this Solution:**

Before you perform the steps in this article, click **Configuration** > **Refresh** in the System Configuration Tool and Rule Management Tool and verify that the sensor icons still appear. If the sensor icons do not appear, see "ISE Not Communicating with the ObjectVideo Server" on page 186.

This troubleshooting article assumes that you are using Apache as the web server on the computer running the ObjectVideo Server software. If you are using a different web server, contact customer support (see "Getting Support" on page 223).

**Solution:**

Snapshots may not appear in the **View** tab for a sensor or view if there is a problem with the web server used to store the snapshots. **Loading Snapshot** graphics appear in the place of the snapshots. The web server hosts alert snapshots so that they are available to the Rule Management Tool and System Configuration Tool. **Loading Snapshot** graphics can be the result of any of the following:

- The web server is unable to connect to the network.
- The web server software is not running.
- An invalid document home directory or port number for the web server was specified when the ObjectVideo Server software was installed.

To diagnose and solve the web server problem:

1. Open a browser, such as Internet Explorer, on a computer running the Rule Management Tool.

2. Browse to **http://***server***/**.

   The *serve*r is the host name of the ObjectVideo Server. An Apache web page should appear.

3. Do one of the following:

   - If an Apache web page does not appear, you are unable to contact the web server. The client application computer may not be able to communicate with the web server because of a network problem (see Appendix B, “Diagnosing Network Problems,” on page 237 for more information).

     If you do not find a network problem, the Apache web server may not be running. On the computer running the ObjectVideo Server, select **Start** > **Control Panel** > **Performance and Maintenance** > **Administrative Tools > Services**, locate **Apache2** in the list of applications, and click **Start** or **Restart**. When the Apache server status is **Started**, proceed to step 15.

   - If an Apache web page does appear but snapshots still do not appear, proceed to step 4.

4. Open the Rule Management Tool.

5. Select the first sensor icon in the configuration.

6. Click the **View** tab.

7. Click the **Debug Log** button to open the debug log.

8. Double-click with your mouse anywhere on the debug log window to clear the log.

9. On the **View** tab, click the **Refresh** button that is between the **Live Camera Feed** and **Active View** snapshots (this is not the same button as the **Refresh Configuration** button on the toolbar).

   Log data appears in the debug log.

10. In the debug log, scroll to the first line that begins with the tag **<ImageUrl>**.

11. Select the text between the tags **<ImageUrl>** and **</ImageUrl>**.

    This is the location of the camera snapshot on the web server.

12. Copy the text by clicking Ctrl + C on your keyboard.

13. Paste the text (Ctrl + V) into a browser.

14. Do the following:

    - If a camera snapshot does not appear in the browser, proceed to step 15.

    - If a camera snapshot appears in the browser, contact customer support (see “Getting Support” on page 223).

15. When you entered the web server’s home directory and port during the installation of the ObjectVideo Server software, you entered the wrong directory and/or port or did not enter a **** at the end of the path. See “Changing the ObjectVideo Server Settings” on page 133.

16. After performing one of the solutions listed above, click the **Refresh Configuration** button to confirm that a camera snapshot is now displayed.

# Alert Console Troubleshooting

**Server Status is Offline, Lost Connection, or No Connection**

**Article Number:** 1320

**Found In:** Alert Console

**Product(s) Affected:**

- ObjectVideo VEW 2.5 or later (Standard, HiRes, FlowControl)
- ObjectVideo VEW 3.0 or later (Leader/Follower)
- ObjectVideo OnBoard 1.5 or later (100, 200)
- ObjectVideo OnBoard 3.0 or later (1000)
- ObjectVideo Forensics 2.5 or later

**Summary:**

One of the following **Server Status** messages appears in the lower left corner of the Alert Console: **Offline**, **Lost Connection**, or **No Connection**.

**Solution:**

If the ObjectVideo Server status is not **Online**, the ObjectVideo components are not communicating correctly, and the Alert Console is unable to receive new alerts.

The following list contains possible causes and their solutions:

- The ObjectVideo Server computer may not be running. Turn on the computer running the ObjectVideo Server software.
- The ObjectVideo Server services may not be running. See “Starting and Stopping ObjectVideo Server Services” on page 134 to verify whether the ObjectVideo Server services are running, and start them if necessary.
- There may be network trouble. Resolve any networking issues. See Appendix B, “Diagnosing Network Problems,” on page 237 for more information.

**Cannot Test Alert Sound**

**Article Number:** 1030

**Found In:** Alert Console

**Product(s) Affected:**

- ObjectVideo VEW 2.0 or later (Standard, HiRes, FlowControl)
- ObjectVideo VEW 3.0 or later (Leader/Follower)
- ObjectVideo OnBoard 1.5 or later (100, 200)
- ObjectVideo OnBoard 3.0 or later (1000)

**Summary:**

I do not hear anything when I select **Test Alert Sound** from the **Tools** menu.

**Solution:**

Check the volume of the computer's speaker(s). If the computer is using external speakers, check to make sure that the speakers are properly connected to the computer, the speakers are plugged in, and the power to the speakers is on.

In rare cases, if another application is using the computer's sound card when an audible alert is triggered, that application may prevent the Alert Console from playing the alert sound. If you suspect that this is the case, quit other applications that may be using the sound card.

**Cannot Find Video Source Alert**

**Article Number:** 1315

**Found In:** Alert Console

**Product(s) Affected:**

- ObjectVideo VEW 2.5 or later (Standard, HiRes, FlowControl)
- ObjectVideo VEW 3.0 or later (Leader/Follower)
- ObjectVideo OnBoard 1.5 or later (100, 200)
- ObjectVideo OnBoard 3.0 or later (1000)

**Summary:**

A **Cannot Find Source Video** alert appears instead of a snapshot.

**Solution:**

If a **Cannot Find Source Video** message appears instead of a snapshot (digital picture), the system was unable to retrieve a frame from the surveillance camera's video stream. The message does not mean that the system or the camera is not working. It only indicates that the sensor was unable to process the video stream and was unable to provide you with one of the snapshots of the event.

If this occurs frequently, open the Rule Management Tool and verify that the sensor monitoring the video feed is receiving a video signal. A **Bad Signa**l status indicates the video feed is not receiving a signal (see "Bad Signal Sensor Status" on page 191).

If you are receiving a video signal, stop the ISE services and restart them using the instructions in "Starting and Stopping the ISE Services" on page 136. If the problem continues and you are using ObjectVideo OnBoard, reset the Video Analysis Device.

**Health Monitor Alert: Attention! Lost communication with <host name or IP address>. The system may have stopped detecting new events. Contact customer support or your system administrator immediately.**

**Article Number:** 1149

**Found In:** Alert Console

**Product(s) Affected:**

- ObjectVideo VEW 2.0 or later (Standard, HiRes, FlowControl)
- ObjectVideo VEW 3.0 or later (Leader/Follower)
- ObjectVideo OnBoard 1.5 or later (100, 200)
- ObjectVideo OnBoard 3.0 or later (1000)
- ObjectVideo Forensics 2.0 or later

**Summary:**

In the Alert Console, I received a health monitor alert with the following message: **Attention! Lost communication with** <*host name or IP address*>**. The system may have stopped detecting new events. Contact customer support or your system administrator immediately.**

**Solution:**

The ObjectVideo Server cannot communicate with a computer on the system. The failure could occur on any computer in the ObjectVideo system except the computers running FAST, the Camera Placement Tool, and the Alert Backup Estimator (assuming no other ObjectVideo software is installed on the same computers). The *host name* or *IP address* is of the computer that the ObjectVideo Server cannot communicate with. The network is experiencing an outage or excessive latency because of an operating system or hardware issue. When this alert appears, the system may not be operating properly. See Appendix B, “Diagnosing Network Problems,” on page 237 for more information.

**Health Monitor Alert: Attention! Lost communication with the following ISE: <host name or IP address>. If this is unexpected, contact customer support or your system administrator.**

**Article Number:** 1504

**Found In:** Alert Console

**Product(s) Affected:**

- ObjectVideo VEW 3.0 or later (Standard, HiRes, FlowControl, Leader/Follower)
- ObjectVideo OnBoard 3.0 or later (100, 200, 1000)
- ObjectVideo Forensics 3.0 or later

**Summary:**

In the Alert Console, I received a health monitor alert with the following message: **Attention! Lost communication with the following ISE:** <*host name or IP address*>**. If this is unexpected, contact customer support or your system administrator.**

**Solution:**

If this health monitor alert is displayed, an ISE within the system has lost communication with the ObjectVideo Server. This means that new events are not being detected. Sensors that support forensics data may no longer generate useful primitives and video.

This may occur for the following reasons:

- The ISE computer is turned off. Turn on the computer.
- The Daemon Service may not be running on the ISE computer. Start the Daemon Service using the instructions in “Starting and Stopping the ISE Services” on page 136.
- The ISE computer has lost its connection with the network. Be sure that the ISE computer is properly connected to the network (see Appendix B, “Diagnosing Network Problems,” on page 237 for more information).

**Health Monitor Alert: Lost communication with a sensor.**

**Article Number:** 1416

**Found In:** Alert Console

**Product(s) Affected:**

- ObjectVideo VEW 2.5 or later (Standard, HiRes, FlowControl)
- ObjectVideo VEW 3.0 or later (Leader/Follower)
- ObjectVideo OnBoard 1.5 or later (100, 200)
- ObjectVideo OnBoard 3.0 or later (1000)
- ObjectVideo Forensics 2.5 or later

**Summary:**

In the Alert Console, I received a health monitor alert with the following message**: Lost communication with a sensor.**

**Solution:**

The system can no longer connect to a sensor. Within 5 to 10 seconds this health alert is usually followed by a **System Functioning Properly** health monitor alert that indicates that communication has been restored. If communication is not restored, use one of the following solutions to correct the problem:

- A surveillance camera may be unplugged or turned off. Verify that the camera is connected to the ISE computer or Video Analysis Device and turned on.
- The computer running the ISE software may be turned off. Turn on the computer.
- The number of active sensors may have changed. This would occur if the ObjectVideo Management Tool was used to reduce the number of active sensors on the ISE. Open the ObjectVideo Management Tool on the computer running the ISE software and verify that the number of active sensors matches the number of sensors that should be running on the ISE.
- The Daemon Service may not be running on the computer where the ISE software is installed. Start the Daemon Service using the instructions in “Starting and Stopping the ISE Services” on page 136.
- Verify in the ObjectVideo Management Tool that the ISE is communicating with the correct ObjectVideo Server. See the ObjectVideo Management Tool Help for more information.

**Health Monitor Alert: Attention! <sensor name> is not operating in a Known view when in follower mode.**

**Article Number:** 1472

**Found In:** Alert Console

**Product(s) Affected:** ObjectVideo VEW 3.0 or later (Leader/Follower)

**Summary:**

In the Alert Console, I received a health monitor alert with the following message**: Attention! <sensor name> is not operating in a Known view when in follower mode.**

**Solution:**

The health alert indicates that the PTZ camera the sensor is monitoring has begun following an object. In VEW Leader/Follower, PTZ cameras can begin following an object in response to a rule violation.

The sensor goes into **Following** status, and remains in that status until it is done tracking the object. While the **Following** status does not indicate a problem, a sensor in this status cannot detect any new events. Sensors that support forensics data may no longer generate useful primitives and video.

When the sensor stops following the object, its status is determined by how you set up the follow object response in the Rule Management Tool:

- If the sensor is to **Return to Initial View** after tracking, then it will return to a **Known View** status.

- If the sensor is to **Remain in Current View** after tracking, then it will switch to an **Unknown View** status. It will remain in that status until the sensor goes back into **Following** status in response to another rule violation. A health monitor alert does not appear when a sensor goes from an **Unknown View** status to a **Following** status.

# Leader/Follower Calibration Tool Troubleshooting

**Error: Communication Error**

**Article Number:** 1509

**Found In:** Leader/Follower Calibration Tool

**Product(s) Affected:** ObjectVideo VEW 3.0 or later (Leader/Follower)

**Summary:**

While attempting to run the Leader/Follower Calibration Tool, you receive the **Communication Error** dialog with the following message:

**ObjectVideo Daemon Service must be started for the Leader/Follower Calibration Tool to run.**

**Solution:**

This problem occurs if you attempt to run the Leader/Follower Calibration Tool on a computer where the Daemon Service is not in a **Running** state.

To correct the problem, do the following:

1. Open the ObjectVideo Management Tool:

   - In Windows 2000, select **Start** > **Programs** > **ObjectVideo** > **ObjectVideo Management Tool.**
   - In Windows XP, select **Start** > **All Programs** > **ObjectVideo** > **ObjectVideo Management Tool**

2. Click the **Start** button to the right of **ObjectVideo Daemon Service**.

   The status field next to **ObjectVideo Daemon Service** changes to **Running**.

# Parameter Configuration Tool Troubleshooting

**Error Message: Communication Failure**

**Article Number:** 1390

**Found In:** Parameter Configuration Tool

**Product(s) Affected:**

- ObjectVideo VEW 2.5 or later (Standard, HiRes, FlowControl)
- ObjectVideo VEW 3.0 or later (Leader/Follower)
- ObjectVideo OnBoard 1.5 or later (100, 200)
- ObjectVideo OnBoard 3.0 or later (1000)
- ObjectVideo Forensics 2.5 or later

**Summary:**

The red dot status symbol and/or the **Error: Communication Failure** message appear at the bottom of the Parameter Configuration Tool window.

**Solution:**

One of the following may have occurred:

- The Daemon Service is not running on the local computer. On the computer running the client applications, open the ObjectVideo Management Tool and click the **Start** button next to **ObjectVideo Daemon Service**.
- The Parameter Configuration Tool is incompatible with the versions of one or more of the other ObjectVideo software components running within your system. The version 3.0 Parameter Configuration Tool (installed with the ObjectVideo Integrator Toolkit 3.0) should only be used with ObjectVideo VEW 3.0 or ObjectVideo OnBoard 3.0 software. For example, if you are running the version 3.0 Parameter Configuration Tool, but you have a version 2.0 VEW/OnBoard client application installed on the local computer, the Parameter Configuration Tool will not be able to communicate properly with the Daemon Service.

  To correct this problem, check for the version number of each application (starting with the Parameter Configuration Tool computer) by selecting **About** from the **Help** menu. Uninstall any ObjectVideo software that is not compatible, and then install the compatible version of the software.

- See “Server Status is Offline, Lost Connection, or No Connection” section on page 204 for information on problems that can affect the system’s ability to communicate.

- Your network may be experiencing extreme latency. Identify and fix any issues that are slowing down the network. See Appendix B, “Diagnosing Network Problems,” on page 237 for more information.

# Object Sizing Tool Troubleshooting

**Error Message: Communication Failure**

**Article Number:** 1359

**Found In:** Object Sizing Tool

**Product(s) Affected:**

- ObjectVideo VEW 2.5 or later (Standard, HiRes)
- ObjectVideo VEW 3.0 or later (Leader/Follower)
- ObjectVideo OnBoard 1.5 or later (100, 200)
- ObjectVideo OnBoard 3.0 or later (1000)

**Summary:**

The red dot status symbol and/or the **Error: Communication Failure** message appear at the bottom of the Object Sizing Tool window.

**Solution:**

One of the following may have occurred:

- The Daemon Service is not running on the local computer. On the computer running the client applications, open the ObjectVideo Management Tool and click the **Start** button next to **ObjectVideo Daemon Service**.
- See “Server Status is Offline, Lost Connection, or No Connection” section on page 204 for information on problems that can affect the system’s ability to communicate.
- Your network may be experiencing extreme latency. Identify and fix any issues that are slowing down the network. See Appendix B, “Diagnosing Network Problems,” on page 237 for more information.

# FAST Troubleshooting

**FAST Is Unable to Start Message**

**Article Number:** 1441

**Found In:** FAST

**Product(s) Affected:** ObjectVideo Forensics 2.5 or later

**Summary:**

When I attempt to start FAST, the following error message appears: **FAST cannot start because it is unable to obtain the software license. Please contact a system administrator or customer support for assistance.**

**Solution:**

FAST cannot connect to the license server. FAST must be able to connect to the license server in order to start. The license server runs on the ObjectVideo Server computer. One of the following may have occurred:

- FAST may not be able to connect to the license server because your computer is not connected to the network or there is another network problem. See Appendix B, “Diagnosing Network Problems,” on page 237 for more information.
- The computer running the ObjectVideo Server software may not be running. Turn it on.
- You may not have installed licenses to use the ObjectVideo system. Follow the instructions in “Installing Licenses” on page 41 to install the appropriate licenses. After the licenses are installed, stop and start the ISE services on each computer, as described in “Starting and Stopping the ISE Services” on page 136.
- The license server software on the ObjectVideo Server computer may not be running. See “Starting and Stopping the Sentinel LM License Management Service” on page 136 for instructions on starting the service.
- All of the licenses for FAST may be in use. FAST licensing allows a limited number of instances of FAST to be running at one time. The licenses are available on a first-come, first-served basis. To upgrade the system to support more simultaneous uses of FAST. See “Upgrading FAST” on page 146 for more information.
- If your computer is not currently connected to the network on which the license server is running but you previously checked out an authorization to open FAST, the authorization may have expired. You will need to reconnect to the network and check out an authorization to use FAST again. See “Checking Out an Authorization for Opening FAST Offline” on page 130 for more information.

# Forensics Store Service Troubleshooting

### Forensics Store Service Not Generating Forensics Data

**Article Number:** 1476

**Found In:** Forensics Store service

**Product(s) Affected:** ObjectVideo Forensics 3.0 or later

**Summary:**

For an ObjectVideo VEW sensor or ObjectVideo OnBoard sensor with metadata, forensics data (primitives and video) are not being generated in the forensics data directory.

**Solution:**

One of the following may have occurred:

- The Forensics Store service may not be running. See “To Start the Forensics Store Service” on page 128 for instructions on how to start the service.
- In the ObjectVideo Management Tool, the option to turn on forensics data generation for a sensor may not be selected. See “To Enable Forensics Data Storage” on page 128 for instructions on how to enable forensics for a sensor.
- The name of the forensics data directory may contain a space or the wrong forensics data directory may be specified on the computer running the ISE software. Rename the directory, and then run the ObjectVideo Management Tool. In the **Forensics Store** tab, change the **Store Base Directory** setting to match the renamed forensics data directory, and then click **Apply**.

# Maintenance Troubleshooting

### ObjectVideo Database Not Automatically Purged (Database Size Less than Maximum Allowable Size)

**Article Number:** 1141

**Found In:** ObjectVideo database

**Product(s) Affected:**

- ObjectVideo VEW 2.0 or later (Standard, HiRes, FlowControl)
- ObjectVideo VEW 3.0 or later (Leader/Follower)
- ObjectVideo OnBoard 1.5 or later (100, 200)
- ObjectVideo OnBoard 3.0 or later (1000)
- ObjectVideo Forensics 2.0 or later

**Summary:**

When you verified the purging of the ObjectVideo database (as explained in “Checking the Size of the Database” on page 118), you found that the database was not purged at the size set in the **Purge Database at This Size (MB)** field of the ObjectVideo Server installer. The database has not yet reached its maximum size limit (2 GB [2,000 MB] for an MSDE database).

**Solution:**

Contact customer support to determine why the purge has not taken place automatically (see “Getting Support” on page 223). You may be instructed to manually purge the database before it exceeds the maximum allowable size (2 GB for an MSDE database). If you are not using the MSDE database, contact customer support for information on maintaining the database.

Before purging the database, export important alerts to HTML files using the instructions in “Exporting Alerts to an HTML File” on page 116. If you do not create alert reports, you will not have any record of stored alerts.

Unlike automatically purging the database, manually purging the database permanently deletes all alerts in the database. Purging the database does not affect any of the system information (views, sensor groups, etc.) stored in the database. In addition, the purging script copies the alert data to a file in a directory on the computer running the ObjectVideo Server software.

The **backupObjectStore.bat** script enables you to purge the database. It is installed on the computer running the ObjectVideo Server software in **C:\Program Files\ObjectVideo\Server** by default.

The commands described in this troubleshooting article need to be run from the command prompt on the computer running the ObjectVideo Server software. To

access the command prompt in Windows, click **Start** > **Run**, type **cmd** in the **Open** field, and then click **OK**.

This troubleshooting article describes two approaches to purging the database:

- Purging the database and copying the data to a default location on the computer running the ObjectVideo Server software (**C:\Program Files\ObjectVideo\Server\Data**)
- Purging the database and copying the data to a location on the computer running the ObjectVideo Server software that you specify

Follow the instructions in the sections that follow to manually purge the database.

**Important:**

- If you allow the database to reach 2 GB in size, you will not be able to purge the database using the approach described in this section. If this occurs, contact customer support for assistance (see “Getting Support” on page 223).
- You should only purge the database while alert generation and other database activity are at a lull or not taking place. Purging is possible while the database is in use, but it is not recommended.

### Purging and Copying to the Default Location

By default, the purging script copies the ObjectVideo database data to the following directory on the computer running the ObjectVideo Server software:

**C:\Program Files\ObjectVideo\Server\Data**

Follow the instructions in this section to purge the database and copy the alert data to this directory.

### To Purge and Copy to the Default Location

1. From a command prompt on the computer running the ObjectVideo Server software, change directories to the ObjectVideo Server installation directory.

   To change directories, type the following in the command prompt window, and then press **Enter**:

   ```
   cd C:\Program Files\ObjectVideo\Server
   ```

   The command prompt displays the following:

   ```
   C:\Program Files\ObjectVideo\Server>
   ```

2. Type the following text in the command prompt, and then press **Enter**:

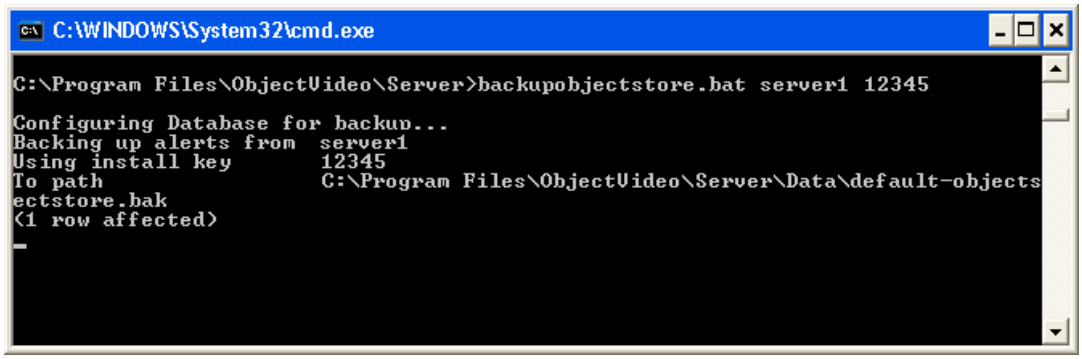
   backupObjectStore.bat *hostname installationkey*

The *hostname* is the host name of the computer running the ObjectVideo Server software, and the *installationkey* is the installation key used when installing the ObjectVideo Server software on that computer. Omit any hyphens in the installation key.

For example, if the ObjectVideo Server's host name is server1 and the installation key is 12345, you would type the following in the command prompt:

```
backupObjectStore.bat server1 12345
```

Text that resembles the following appears on the command prompt:




The alerts are copied to the **default-objectstore.bak** file in the **Data** directory.

3. Wait a few minutes for the process to finish.

4. In Windows Explorer, browse to the **C:\Program Files\ObjectVideo\Server\Data** directory, and then rename the **default-objectstore.bak** file.

   This ensures that, the next time you perform the purge, the file that is created does not write over the old file.

### Purging and Copying to an Alternate Location

If you do not wish to copy the alert data to the default location (**C:\Program Files\ObjectVideo\Server\Data**) when you purge the ObjectVideo database, do the following:

1. Using Windows Explorer or the command prompt, create the alternate directory in which you want to store the alert data (if it does not already exist).

2. From a command prompt on the computer running the ObjectVideo Server software, change directories to the ObjectVideo Server installation directory.

   To change directories, type the following in the command prompt window, and then press **Enter**:

   ```
   cd C:\Program Files\ObjectVideo\Server
   ```

The command prompt displays the following:

```
C:\Program Files\ObjectVideo\Server>
```

3. Type the following text in the command prompt, and then press **Enter**:

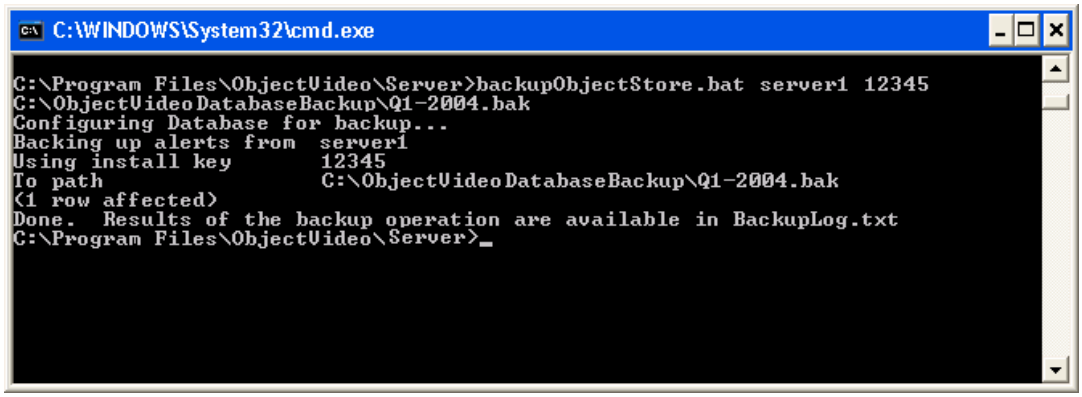
   backupObjectStore.bat *hostname installationkey path*

   The *hostname* is the host name of the computer running the ObjectVideo Server software, and the *installationkey* is the installation key used when installing the ObjectVideo Server software on that computer. Omit any hyphens in the installation key. The *path* is the directory path and file name (no spaces) to which you want to copy the alert data.

   For example, if the ObjectVideo Server's host name is server1, the installation key is 12345, and you want to copy to **C:\ObjectVideoDatabaseBackup\Q1-2004.bak**, you would type the following in the command prompt:

   ```
   backupObjectStore.bat server1 12345 C:\ObjectVideoDatabaseBackup\Q1-2004.bak
   ```

   Text that resembles the following appears on the command prompt:




**Notes:**

- Alternate directory paths and file names containing spaces are not supported.
- You must carefully type the exact file name and location, or the operation will not succeed.
- Running **backupObjectStore.bat** with no arguments displays help text for the script.
- Once the ObjectVideo database has been purged, you should confirm the purge has been successful by checking the size of the database. For more information, see "Checking the Size of the Database" on page 118. Since groups, views, and other sensor information are not purged, the ObjectVideo database may still contain data after the purge.

### ObjectVideo Database Not Automatically Purged (Database Size Exceeds Maximum Allowable Size)

**Article Number:** 1142

**Found In:** ObjectVideo database

**Product(s) Affected:**

- ObjectVideo VEW 2.0 or later (Standard, HiRes, FlowControl)
- ObjectVideo VEW 3.0 or later (Leader/Follower)
- ObjectVideo OnBoard 1.5 or later (100, 200)
- ObjectVideo OnBoard 3.0 or later (1000)
- ObjectVideo Forensics 2.0 or later

**Summary:**

The database was not purged at the size set in the **Purge Database at This Size (MB)** field of the ObjectVideo Server installer. The database has exceeded the maximum size limit (2 GB for the MSDE database). When you checked the size of the ObjectVideo database (as explained in “Verifying a Purge Has Occurred” on page 117), the database size was equal to or more than 2 GB.

**Solution:**

If the ObjectVideo database has exceeded the maximum size limit, you must contact customer support for instructions on how to purge the database (see “Getting Support” on page 223).

# Getting Support

## Sales

If you are purchasing the software from ObjectVideo Sales, use the following methods to obtain software components or licenses:

- Call 703-654-9300.
- Send an e-mail message to sales@objectvideo.com.

## Customer Support

Before contacting customer support, refer to the “Troubleshooting” (page 156) chapter of this document to see if the problem you are encountering is described there.

If ObjectVideo Customer Care is providing your customer support services, use one of the following methods to contact them:

- Go to http://www.objectvideo.com/customercare.
- Send an e-mail message to support@objectvideo.com.

# Appendix A: Prerequisite Software

Third-party software is required for most ObjectVideo software. In most cases, an installer for each of the third-party applications is included on the installation CD of the ObjectVideo component that requires the software. This appendix lists the required software and describes how to install it. It consists of the following sections:

- "ObjectVideo Server and ISE Software Requirements" on page 225 lists the software required for the ObjectVideo Server and ISE software.
- "Client Application Software Requirements" on page 226 lists the software required for the ObjectVideo client applications.
- "Installing Prerequisite Software" on page 227 provides step-by-instructions for installing the prerequisite software.

**Note:** ObjectVideo and its partners pre-install software before ObjectVideo-certified computers are delivered for deployment. See "ObjectVideo Server and ISE Hardware Requirements" on page 17 for more information.

# ObjectVideo Server and ISE Software Requirements

The table that follows lists the prerequisite software required to run the ObjectVideo Server and ISE software and the page on which the installation instructions are provided. The prerequisites vary based on whether you are running the ObjectVideo Server software only, the ISE software only, or both the ObjectVideo Server and ISE software on the computer. The third-party requirements apply to both ObjectVideo VEW and ObjectVideo OnBoard systems.

**Note:** Contact customer support for instructions on installing the Conexant Video Capture Card Driver.

**Table 21: ObjectVideo Server and ISE Software Requirements**

| Required Software | ObjectVideo Server Computer | ISE Computer | Server/ISE Computer | Page |
|---|---|---|---|---|
| Apache HTTP Server 2.0 | ✓ | | ✓ | 228 |
| Conexant BtPCI WDM Video Capture Card Driver 5.3.2.0 | | ✓ | | N/A |
| Microsoft .NET Framework 1.1 | ✓ | ✓ | ✓ | 233 |
| Microsoft DirectX 9.0b | ✓ | ✓ | ✓ | 231 |
| Microsoft Message Queuing (MSMQ) | | ✓ | ✓ | 232 |
| Microsoft SQL Server Desktop Engine (MSDE) | ✓ | | ✓ | 234 |
| MPEG-4 Video Compressor | | ✓ | ✓ | 236 |

## Client Application Software Requirements

The following table shows the prerequisite software applications required by each of the ObjectVideo client applications and the page on which the installation instructions are provided.

**Table 22: Client Application Software Requirements**

| Required Software | VEW / OnBoard Client Applications | FAST | ObjectVideo Integrator Toolkit | Page |
|---|---|---|---|---|
| Java Runtime Environment 1.4.2_03 | | ✓ | | 229 |
| Microsoft .NET Framework 1.1 | ✓ | ✓ | ✓ | 233 |
| Microsoft Data Access Components (MDAC) 2.7 | ✓ | | | 230 |
| Microsoft DirectX 9.0b | | ✓ | | 231 |
| Windows Media Player 9 | | ✓ | | 235 |
| MPEG-4 Video Compressor | | ✓ | | 236 |

## Installing Prerequisite Software

This section describes how to install the third-party software required for the ObjectVideo components. See the previous sections in this appendix for information about where to install the prerequisite software.

The order in which you install the prerequisite software does not matter. Usually, each application's installer will prompt you to reboot the computer after the installation is complete. However, if you are installing multiple applications, you may postpone rebooting the computer until all prerequisite software is installed for that computer.

**Note:** You must be logged in as a Windows user with Administrator privileges to install new software.

# *Installing the Apache HTTP Server*

The ObjectVideo Server software requires Apache HTTP Server 2.0 to function properly.

If you are already running an HTTP server other than Apache and wish to keep it after installing Apache, temporarily stop the non-Apache server while you are installing Apache and the ObjectVideo Server. Also ensure that there is no port conflict between the two HTTP servers. For example, if the non-Apache server is assigned to port 80, you will either have to reassign it to another HTTP port (like port 8080) or assign Apache to an HTTP port other than 80. If assigning Apache to a port other than 80, ensure that you point to that port during the ObjectVideo Server installation process.

## To Install the Apache HTTP Server

1. In the Windows Control Panel, open **Add or Remove Programs**.
2. Scroll through the list of currently installed programs, and see if **Apache2** appears in the list.
   - If **Apache2** is not listed, proceed to step 3.
   - If **Apache2** is listed, you do not need to install it.
3. On the ObjectVideo Server installation CD, double-click the **apache_2.0.54-win32-x86_no_ssl.exe** file in the **Apache** folder.
4. Follow the instructions on the screen to install the software.
5. Select **Start** > **Control Panel** > **Performance and Maintenance** > **Administrative Tools** > **Services**.
6. Locate **Apache2** in the list of services.
7. Confirm that the **Status** is **Started**.

   If the **Status** is not **Started**, right-click the **Apache2** service and select **Start**.

## *To Install the Java Runtime Environment*

FAST requires Java Runtime Environment 1.4.2_03 to function properly.

1. In the Windows Control Panel, open **Add or Remove Programs**.

2. Scroll through the list of currently installed programs, and see if **Java 2 Runtime Environment, SE v.1.4.2_03** appears in the list.

   - If **Java 2 Runtime Environment, SE v.1.4.2_03** is not listed, proceed to step 3.

   - If **Java 2 Runtime Environment, SE v.1.4.2_03** is listed, you do not need to install it.

3. Use Windows Explorer to browse to the installation CD.

4. In the **JavaRuntime** folder, double-click **j2re-1_4_2_03-windows-i586-p.exe**.

   The Java Runtime Environment installer may take some time to start.

5. Follow the instructions on the screen to install the software.

## *To Install MDAC*

The VEW/OnBoard client applications require MDAC 2.7 to function properly.

**Note:** In Windows XP, MDAC is usually installed during the installation of Microsoft .NET Framework 1.1. If you are using Windows 2000, MDAC requires a separate installation.

To install MDAC, take the following steps:

1. Use Windows Explorer to browse to the VEW/OnBoard client applications installation CD.

2. In the **MDAC** folder, double-click **mdac_typ.exe**.

3. Follow the instructions on the screen to install the software.

## *To Install Microsoft DirectX*

The ObjectVideo Server, ISE, and FAST software require Microsoft DirectX 9.0b to function properly.

1. Select **Run** from the **Start** menu.
2. In the **Open** field, type **msinfo32** and click **OK**.

   The **System Information** window opens.
3. Do one of the following:

   - In Windows XP, select **DirectX Diagnostic Tool** from the **Tools** menu.
   - In Windows 2000, select **Tools** > **Windows** > **DirectX Diagnostic Tool**.
4. In the **System Information** area at the bottom of the window, verify that the Microsoft DirectX version number is 9.0b or higher. If the version number is not 9.0b or higher, proceed to step 5.
5. Use Windows Explorer to browse to the installation CD.
6. Double-click the **dxsetup.exe** file found in **DirectX** folder.
7. Follow the instructions on the screen to install the software.

## *To Install MSMQ*

The ISE software requires MSMQ to function properly.

1. In the Windows Control Panel, open **Add or Remove Programs**.

2. Click the **Add/Remove Windows Components** button.

   The Windows Components Wizard screen opens.

3. Do one of the following:

   - If **Message Queuing** is not selected, select it and proceed to step 4.

   - If you attempt to select **Message Queuing** and are prompted to enter the Windows XP installation CD, insert the CD and follow the directions to enable message queuing.

4. Click **Next**.

5. The **Configuring Components** screen appears while message queuing is enabled, followed by the **Completing the Windows Components Wizard** screen.

6. Click **Finish**.

## *To Install the Microsoft .NET Framework*

The ObjectVideo Server, ISE, FAST, and the ObjectVideo Integrator Toolkit software require Microsoft .NET Framework 1.1 to function properly.

1. In the Windows Control Panel, open **Add or Remove Programs**.

2. Scroll through the list of currently installed programs and see if **Microsoft .NET Framework 1.1** appears in the list.

   - If **Microsoft .NET Framework 1.1** is not listed, proceed to step 3.

   - If **Microsoft .NET Framework 1.1** is listed, you do not need to install it.

3. Use Windows Explorer to browse to the installation CD.

4. In the **DotNET** folder, double-click **dotnetfx.exe**.

   The installer may take some time to start.

5. Follow the instructions on the screen to install the software.

## *To Install MSDE*

The ObjectVideo Server software requires MSDE to function properly.

1. In the Windows Control Panel, open **Add or Remove Programs**.
2. Scroll the list of currently installed programs, and see if **Microsoft SQL Server Desktop Engine** appears in the list:
   - If **Microsoft SQL Server Desktop Engine** is not listed, proceed to step 3.
   - If **Microsoft SQL Server Desktop Engine** is listed, you do not need to install it.
3. Use Windows Explorer to browse to the ObjectVideo Server installation CD.
4. In the **MSDE** folder, double-click **setup.exe**.
5. Follow the instructions on the screen to install the software.

## *To Install Windows Media Player 9*

FAST requires Windows Media Player 9 to function properly.

1. In Windows XP, click **Start** > **Run**.
2. Type **wmplayer.exe** in the **Open** field.
3. Click **OK**.
4. Do one of the following:
    - If Windows Media Player opens, select **About Windows Media Player** from the **Help** menu to see the version number. If you have never run Windows Media Player on the computer, you may have to complete the Windows Media Player installation before you have access to the **Help** menu. You will be prompted to complete the installation. If the version number is **9.0** or greater, you do not have to install Windows Media Player. If the version number is less than **9.0**, proceed to step 5.
    - If Windows Media Player does not open, proceed to step 5.
5. Use Windows Explorer to browse to the installation CD.
6. Do one of the following:
    - In Windows 2000, double-click the **MPSetup.exe** file found in **WindowsMediaPlayer\Win2000**.
    - In Windows XP, double-click the **MPSetupXP.exe** file found in **WindowsMediaPlayer\WinXP**.
7. Do one of the following:
    - If a dialog appears indicating that Windows Media Player 9 is already installed, no further action is necessary.
    - Follow the instructions on the screen to install the software.

## *To Install the MPEG-4 Video Compressor*

ObjectVideo ISE and FAST both require the MPEG-4 Video Compressor to function properly.

1. Use Windows Explorer to navigate to the **SYSTEM32** folder where Windows is installed (usually **C:\WINDOWS\SYSTEM32**).

2. Determine if you have the **MPG4C32.dll** file in this folder.

3. If you have this file, the proper video compressor has already been installed. If you do not have this file in this location, proceed to step 4.

4. Use Windows Explorer to browse to the installation CD.

5. In the **VideoCompressors** folder, double-click **wmtools.exe**.

6. Follow the instructions on the screen to install the software.

# Appendix B: Diagnosing Network Problems

As you deploy ObjectVideo components, ensure that your network is free of possible problems that can interrupt the operation of the ObjectVideo system. To do this, first check whether you can reach each node on your network by pinging each node. In Windows, you can do this by going to **Start** > **Accessories** > **Command Prompt** and typing the following:

**ping** *IP address or host name* **<Enter>**

For example, to ping a computer with the IP address **10.0.0.1**, you would type the following:

**ping 10.0.0.1 <Enter>**

If you do not know a computer's IP address, you can find it on the Command Prompt of that computer by typing **ipconfig**.

A successful ping test should include four packets sent and four received, with none lost.

**Note:** In ObjectVideo OnBoard, the Video Analysis Devices are also assigned IP addresses. You should ping them to be sure they can be reached.

If you cannot ping a node, check the following:

- Is the target device turned on?
- Is there a break in the connectivity to that device? This includes the transmission medium (e.g., cabling, connectors, wireless network, etc.).
- Is the target device correctly configured for IP internetworking?
- Does the target device have a firewall? A firewall blocking the ping test (i.e., by blocking Internet Control Message Protocol [ICMP] traffic) may also be blocking essential ObjectVideo system communication (port 8076) traffic.
- Can you ping the IP address but not the host name? If this is the case, your problem is DNS-related.
- Are the network proxies set correctly? For HTTP communications, make sure that you bypass the proxy for local addresses.

If you can ping a node but receive excessive response time (latency), check the connection path for the source of latency or lost packets. You can view the connection path by typing **tracert** *IP address or host name* **<Enter>** in the Windows Command prompt. The output of this command shows each node or "hop" from the source of your ping to the device you are targeting. Check each hop in the path to find the origin of latency or lost packets.

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