



Ocularis

Recorder Proxy Configuration Guide



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US patent # 8390684 B2 for Ocularis Client

Patents Applied For in the U.S. and Abroad

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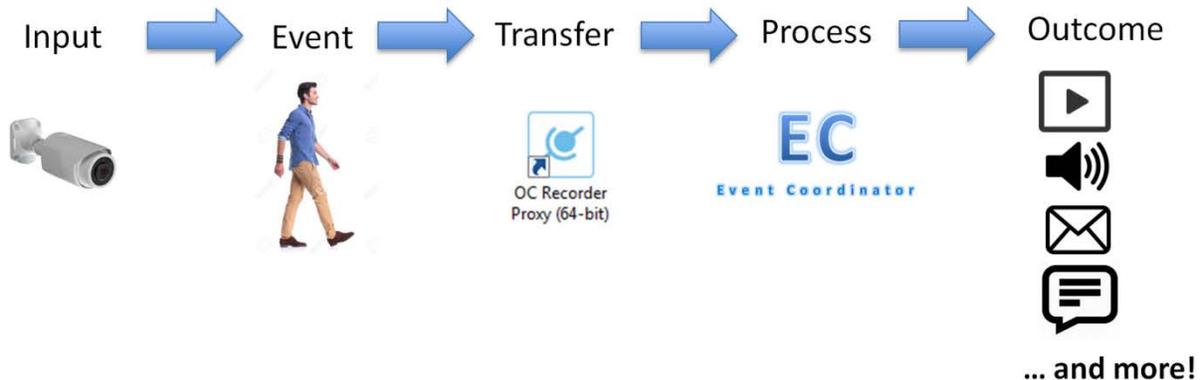
Introduction

Ocularis 5 is OnSSI's newest and most innovative and cost effective open platform Video Management Software (VMS) and is designed to enhance your security while simplifying your daily workload. The system is comprised of many separate components that work together as part of a complete scalable and easy-to-use video management solution.

One component of Ocularis is called the Recorder Proxy¹. This document details how to configure the Ocularis 5 Recorder Proxy.

Ocularis Event Flow

An event in Ocularis is some action that has occurred. Examples include: motion detected on a camera, a security card swiped in an access control system, tampering on a camera, a camera going offline, a zone running low on disk space, etc. Events that are important to you can be configured so that operators can be alerted and a record of the event, including recorded video, be saved.



A *recorder proxy* takes events that take place at the camera or recorder level and transfers these to the Event Coordinator service on Ocularis Base. Then the event can be distributed to interested parties via *Ocularis Client*, *Ocularis 5 Web* or *Ocularis 5 Mobile*. OpenSight users and third party integrations (e.g. Lenel's OnGuard, Software House's C•Cure, etc). can even be the recipient of alerting with Ocularis 5.

The response to the event can be one or any combination of the following:

- Play a sound in Ocularis Client
- Display video in a blank screen pane in Ocularis Client ("Blank Screen Monitoring")
- Move a PTZ camera to a predefined preset
- Send an email to a predefined recipient
- Turn on a light or play a siren
- Send an outgoing HTTP Request
- Send an outgoing Generic Event (TCP/UDP Data Packet)

¹ The Ocularis Recorder Proxy was formerly titled 'Ocularis Event Proxy'. The name changed in Ocularis v5.5.

- Update the alert counter in Ocularis Client, Ocularis Web and Ocularis Mobile
- Issue a notification alert on an Ocularis Mobile device

What is a Recorder Proxy?

A recorder proxy is software that, among many things, manages the flow of events from an Ocularis recorder to an Ocularis Base or other server. Ocularis Recorder Proxies are specific to the version and generation of Ocularis. Currently supported are the following recorder proxies:

Name	Type	Generation	Supported in
Ocularis Recorder Proxy	64-bit	5	5.5 and later
Ocularis 5 Event Proxy	64-bit	5	5.3, 5.4
RC-C/RC-I Event Proxy	64-bit	4	5.3 and later
RC-E/L Event Proxy	64-bit	4	5.3 and later

In Ocularis, a Recorder Proxy performs many tasks. These include:

- Forwarding events from an Ocularis recorder to Ocularis Base or other server
- Manages multiple streams from cameras on Ocularis recorders
- Optimizes which stream to use when using Ocularis Web or Ocularis Mobile
- Monitors camera presets for PTZ cameras configured on the recorder
- Notify Ocularis Base when a change is made on Ocularis recorders

So if you are using events in your system, you'll need to install the recorder proxy. If you are not using events but are using *Ocularis 5 Web* or *Ocularis 5 Mobile*, you need to install the recorder proxy. It is recommended to install a recorder proxy on all systems.

This document focuses on the recorder proxy included with Ocularis 5. Details on using legacy recorders with Ocularis 5 can be found at the end of this document.

Where to Install a Recorder Proxy

In Ocularis 5, there is one recorder proxy per master core server of the recorder. Therefore, in most Enterprise and Ultimate installations, only one recorder proxy is needed since there is typically only one master core. In Professional installations, however, where there is a master core and device manager on each recording server, a recorder proxy must be installed for each master core.

- The recorder proxy must be installed on a PC with connectivity to the master core. While not required, in cases where there are no slave cores, it is highly recommended to install the recorder proxy software on the same computer as the master core. In cases where there is a slave core installed at the 'Company' or root level, install the Recorder Proxy on the same computer as this slave core.
- Download the recorder proxy software from the Ocularis Component Downloads webpage located on Ocularis Base and install from there. For instructions on software installation, refer to the *Ocularis Installation & Licensing Guide* found on the OnSSI website.

The following desktop icon appears upon successful installation:



Note: Configuration of the recorder proxy requires administrator level access of the Windows user. You can right-click the icon and select 'Run as administrator'.

Missing Recorder Proxy

Until you install and configure the most up-to-date Recorder Proxy, you will see an icon adjacent to the server in *Ocularis Administrator*. Configure the proxy in order to eliminate this icon.

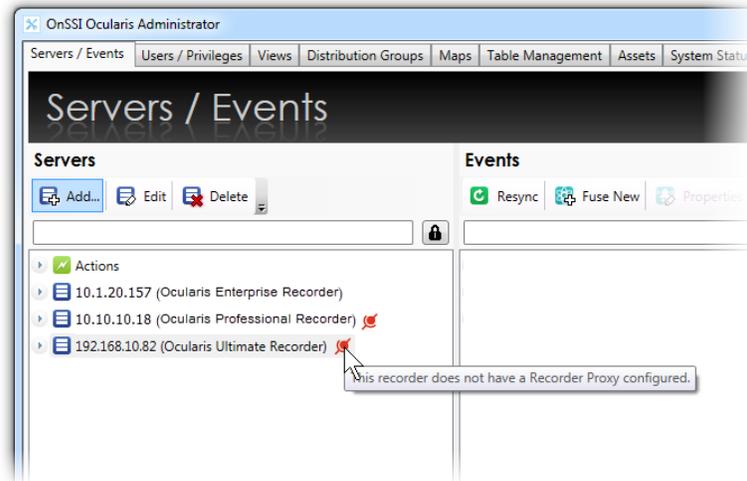


Figure 1 Missing or Outdated Recorder Proxy

How to Restart The Recorder Proxy

There may be a need to restart the Recorder Proxy. If, for instance, a camera name is changed on the recorder, the Recorder Proxy will update the name in the 'Servers' pane of the *Ocularis Administrator* 'Servers / Events' tab but the name change will not be reflected in the 'Events' pane. Restarting the Ocularis Recorder Proxy will update the name change in the 'Events' pane.

There are two primary ways to do restart the Recorder Proxy:

1. Using the software
2. Using Windows Services

Restart The Recorder Proxy Using the Software

1. Launch the recorder proxy application.
2. Click the **Restart Service** button.

Restart The Recorder Proxy Using Windows Services

Note: *While the product name was changed to 'Ocularis Recorder Proxy', the corresponding service is labeled 'OnSSI Ocularis Event Proxy'.*

1. Launch Windows Services on the computer which contains the recorder proxy.
 - One way to do this is to type **Services** in the search field of the Windows Start menu.
2. Scroll to the service name.

For Ocularis 5: **OnSSI Ocularis Event Proxy**

For Ocularis 4: **OnSSI RC-C RC-I Event Proxy** (for Ocularis CS or IS)

For Ocularis 4: **OnSSI RC-E RC-L Event Proxy** (for Ocularis ES or LS)

3. Right-click the service name and then select Restart.

To Configure the Ocularis 5 Recorder Proxy

1. Launch the recorder proxy from the desktop icon or the Windows Start menu. **Start** → **All Programs** → **OnSSI** → **Ocularis Recorder Proxy (64-bit)**



Figure 2 Ocularis Recorder Proxy

2. The **Recorder Settings** button is the only one enabled upon first launch. Click this button to enter recorder criteria.

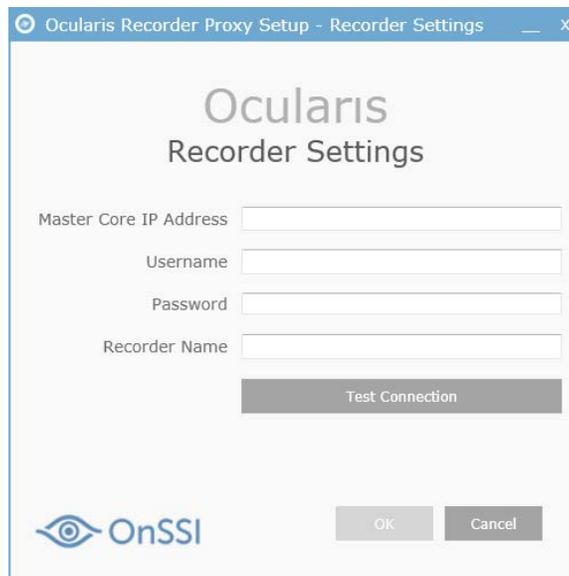


Figure 3 Recorder Settings

3. Enter the **Master Core IP Address** or hostname for the recorder's master core. Note that *localhost* is not supported.

4. Provide a **Username** and **Password** for an administrative account that is on the master core.
5. For **Recorder Name**, enter a label as you would like this event source to appear in the Events pane of the **Servers/Events** Tab in *Ocularis Administrator*. This field is optional. If left blank, the event source will be listed as:

IP_Address of Master Core (Ocularis Recorder) on IP_Address of Recorder Proxy

For example:

192.168.10.82 (Ocularis Recorder) on 192.168.10.82

6. Click **Test Connection**. Communication with the server is tested, user account authenticated and if successful, a pop-up message appears indicating as such.
7. Click **OK**.

Once the **Recorder Settings** pop-up is configured, the **Base Settings** button becomes enabled.



Figure 4 Base Settings button is enabled

8. Click **Base Settings**.

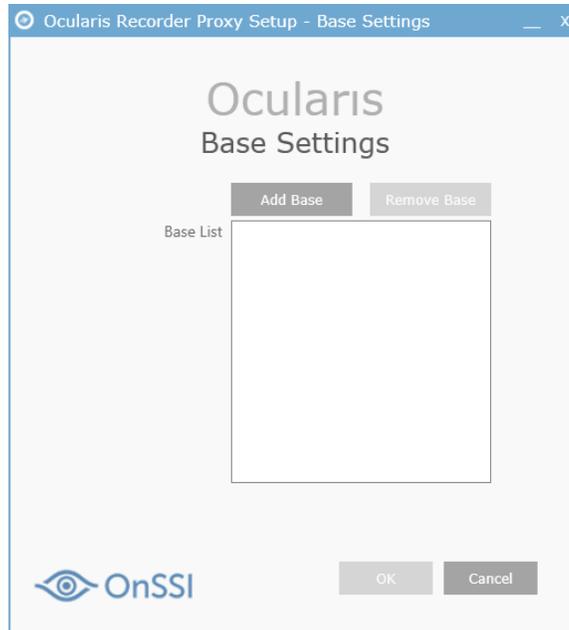


Figure 5 Base Settings

9. Click **Add Base**.



Figure 6 Add Base

10. Enter the IP address or hostname of Ocularis Base in the **Ocularis Base IP** field. Note that *localhost* is not supported.
11. Provide a **Username** and **Password** for an administrative account that is on the Base.
12. Select the type of **Authentication** to use for the above account. (Use the same authentication that you would use to login with *Ocularis Administrator*.)
13. Click **Test Connection**. Communication with the server is tested, user account is authenticated and if all is successful, a pop-up message appears indicating as such. The **Add** button is enabled.
14. Click **Add**. The Base List is updated.

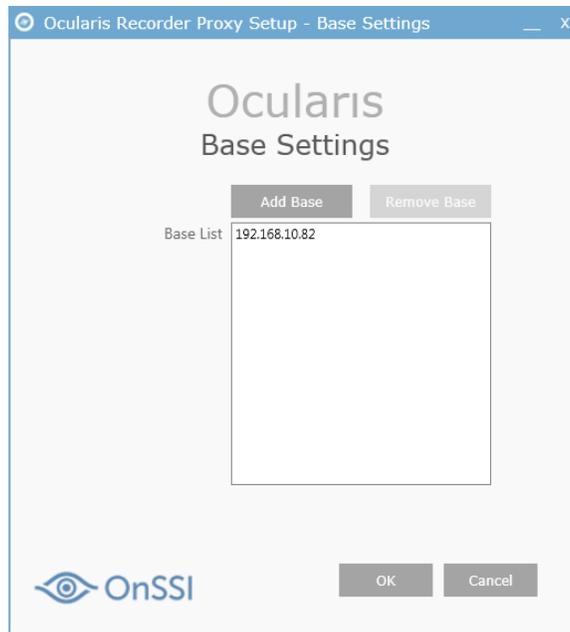


Figure 7 Base List

You can add multiple Bases to the Base List if you need to send events to additional servers (for example: OpenSight). If you need to remove a Base IP from the list, select it and click **Remove Base**.

Once you select a Base in the list, two checkboxes appear:

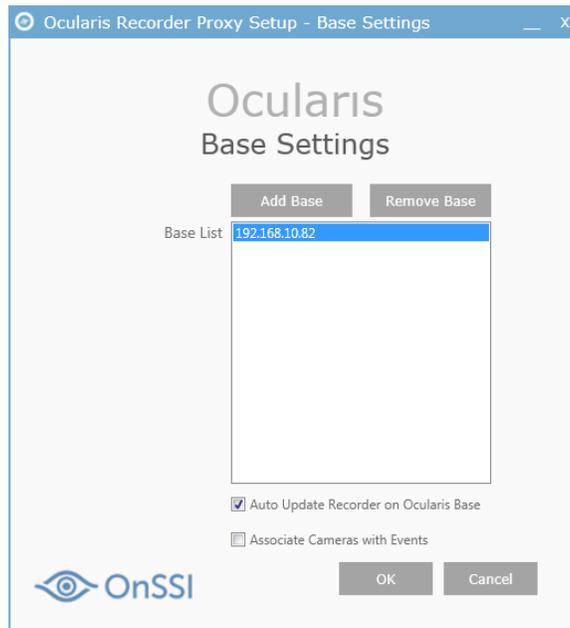


Figure 8 Advanced Checkboxes

Automatic Update of Ocularis Base

If the checkbox 'Auto Update Recorder on Ocularis Base' is checked, the proxy will notify Ocularis Base if there is a change made on the Ocularis Recorder (master core) configured in Figure 3. This effectively is equivalent to an administrator executing a right-click *Refresh server* in *Ocularis Administrator*. If many changes are made on the recorder, the system will wait 5 minutes until the next refresh in order to prevent

too many refreshes. This feature saves the administrator the task to manually update the server on the Base.

If the checkbox 'Associate Cameras with Events' is checked and this is the first time adding this master core to the Base, the system will automatically add the server to the *Ocularis Administrator* **Servers/Events** tab and all cameras will automatically be associated with their corresponding events, saving you the time to map the cameras manually. This only works the first time you add the recorder to the Base. Note: it will map each camera to all available corresponding events.

15. When done, click **OK**. The **Event Filters** button is enabled.



Figure 9 Event Filters button is enabled

16. The last step is to select the events that you wish the proxy to forward to the Base IP(s) you listed. You must click the Event Filters button even if you are not using events. Click **Event Filters**.

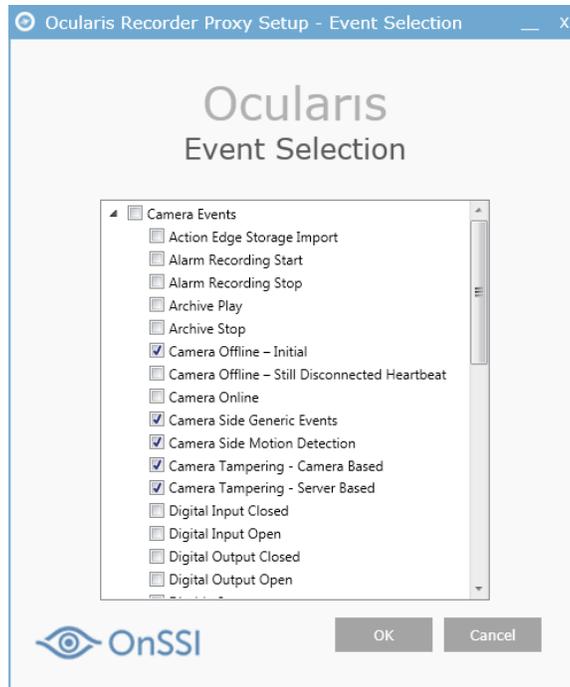


Figure 10 Select Events

The events you see listed are grouped by **Camera Events** and **System Events**. Check the events you want transferred from the recorder to the Base. Note: any alarm scenarios that you have configured on the recorder will automatically be transferred to the Base.

With v5.5 and later, the proxy will only forwards events that you have configured in Ocularis Base, thereby greatly improving the performance on the Base - especially on larger systems.

If the proxy is on a different server than Ocularis Base, this method also significantly decreases network traffic.

Note: Double-click the title bar of the pop-up to maximize the window.

17. Select the events you wish to monitor. By default, the following events are enabled in a fresh installation:

- Camera Offline - Initial
- Camera Side Generic Events
- Camera Side Motion Detection
- Camera Tampering - Camera Based
- Camera Tampering - Server Based
- Server Side Motion Detection

18. Click **OK**.

The Event Proxy Service may be stopped after configuration. If so, click the **Start Service** button.

Recorder Proxy Events Defined		
Camera Events:		
	Event Name:	Definition:
	Action Edge Storage Import	Edge Storage video was imported from the camera
	Alarm Recording Start	Alarm Recording (such as motion) started
	Alarm Recording Stop	Alarm Recording (such as motion) stopped
	Archive Play	This event does not apply to Ocularis
	Archive Stop	This event does not apply to Ocularis
	Camera Offline - Initial	Camera has gone offline
	Camera Offline - Still Disconnected Heartbeat	Camera remains offline
	Camera Online	Camera is now online
	Camera Side Generic Events	Generic camera event has been triggered
	Camera Side Motion Detection	Camera side motion event has been triggered
	Camera Tampering - Camera Based	Cameras has triggered tampering event
	Camera Tampering - Server Based	Server has triggered camera tampering event
	Digital Input Closed	Camera input has been triggered-closed
	Digital Input Open	Camera input has been triggered-open
	Digital Output Closed	Camera output has been closed
	Digital Output Open	Camera output has been opened
	Disable Stream	Camera stream has been disabled
	Enable Stream	A disabled camera stream has been enabled
	Export FTP	A DM, MDS or VA MD is not running and did not shutdown cleanly. If the system thinks that a DM should be running but is not, this event will trigger. This could happen when the system is restarted but is may also indicate a major error in the system because an entire DM/VA MD is no longer running.
	Invalid Status	
	Recording Start	Recording has started
	Recording Stop	Recording has stopped
	Reference Image Events	Reference Image Comparison event has been triggered
	Reference Image Restored	Reference Image is re-saved
	Server Side Motion Detection	Server side motion has been detected
	Video Analysis SMD Channel	Details unknown

System Events:		
	Core Master Unreachable	Master Core is not reachable
	Core Slave Reachable	Slave Core is now reachable
	Core Slave Unreachable	Slave Core is not reachable
	Core Started	Core server has started
	Database Backup Failed	Backup of Core configuration database has failed
	Database Load Emergency Shutdown	The database of a core service is almost full (at 90%). To prevent data corruption, the core will shutdown and is no longer usable. The administrator must take measures to get the core in a good state again (add a database volume, delete events, reduce event storage time, etc.). Although this could happen on any core it is most likely on the master, because only the master stores all events.
	Database Load Warning	The database of a core service has reached a high level (70%). The core will continue to work, but the administrator should investigate and possibly take measures to avoid a "Database Load Emergency Shutdown". Although this could happen on any core it is most likely on the master, because only the master stores all events
	Device Manager Cannot Start	Device Manager Service could not start
	Multimedia DB Automated Export	Video data was automatically exported using the Video data export feature
	Multimedia DB Cannot Mount Zone	A DM/MDS was not able to mount a configured zone.
	Multimedia DB Cannot Start MDS	The MDS could not start. This is a generic error that means "The DM/MDS does not work".
	Multimedia DB Edge Storage Recording Fetched	MDS Services has retrieved video from a Edge Storage device
	Multimedia DB Almost Full	Storage Zone is almost full
	Multimedia DB Zone Space Full	Storage zone is full. Video may be deleted
	Server Time Changed	A DM detected that the Windows time changed by more than one hour. This may result in all kind of problems, mainly for recordings.

Ocularis Recorder Proxy Help

To view the application documentation, click the '?' icon in the lower right corner of the main proxy setup screen.

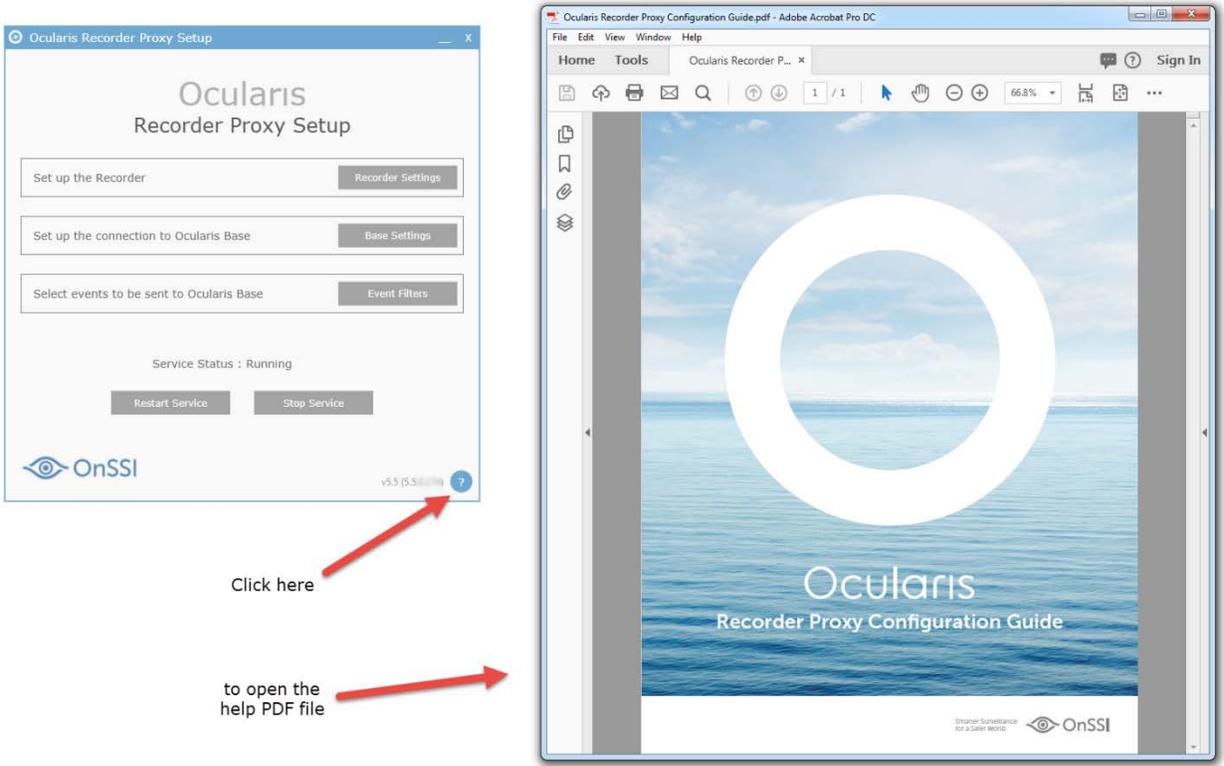


Figure 11 Accessing Recorder Proxy Help

Appendix A - Recorder Proxy for Legacy Recorders

Mix and Match Systems

In the case where legacy recorders are used with Ocularis 5 (aka 'Mix and Match'), a new proxy was issued for these recorders for customers who are using v4 recorders in the v5 Base environment. Updates to these version 4 proxies can be downloaded from our website at <http://onssi.com/software-downloads/>. Scroll to the section titled 'Proxies' and download the corresponding proxy for your legacy system:

For Ocularis CS or Ocularis IS: RC-C/RC-I Event Proxy

For Ocularis LS or Ocularis ES: RC-E/L Event Proxy

You need to update the version 4 proxies if:

- the computer it is currently running on is shared by another Ocularis v5 component. The new proxy is a 64-bit application
- you intend to use Ocularis Web or Ocularis Mobile for cameras on legacy recorders
- you wish to take advantage of multiple live streams (Ocularis LS and ES only)

Ocularis CS and Ocularis IS event proxies need to be installed on the same computer as the recording server. Ocularis LS and Ocularis ES event proxies can be installed anywhere with network connectivity to the Management Server. However, we do recommend installing these on the Management Server computers.

To Configure the RC-C/RC-I Event Proxy

The following describes the functionality of the RC-C/RC-I Event Proxy. Refer to Figure 12.

<i>Field</i>	<i>Description</i>
Name	This is the name to represent the event proxy source. It will appear in the Events pane of the Server / Events tab of <i>Ocularis Administrator</i> . You may edit this field. Use a label to help identify the event proxy in the case where you may have more than one installed. The default value is: <IP Address> (RC-C/RC-I) where IP address is the IP address of the PC on which the event proxy is installed.
Base Server IPs (comma delimited)	Enter the IP address of the Ocularis Base you want the proxy to forward the events to/communicate with. You may forward events to multiple Bases or other servers. In this case, separate each with a comma. For example: 192.168.10.82, 192.168.11.185
Recorder Settings	
Recorder IP	Enter the IP address of the RC-C or RC-I Recording Server.

Field	Description
NetCentral Port	Enter the NetCentral Port as configured in the <i>Management Application</i> . NetCentral is the service that sends events from an RC-C or RC-I recorder. The default port number is 1237.
NetCentral User Name	Enter the NetCentral User Name as configured in the RC-C or RC-I <i>Management Application</i> . This account name may be different than the account used to administer the system.
NetCentral Password	Enter the password for the NetCentral account as configured in the RC-C or RC-I <i>Management Application</i> .
Recorder Server Port	Enter the communication port used by the RC-C or RC-I recording server as configured in the RC-C or RC-I <i>Management Application</i> under 'Server Access'. The default port number is 81.
Recorder Server User Name	Enter an administrator account from the RC-C or RC-I recording server as configured in the RC-C or RC-I <i>Management Application</i> under 'Users'. The default value is 'Engine1User'. Note: if you upgrade an older proxy to this one, be sure to change this field to an actual administrator account on the recorder.
Recorder Server Password	Enter the password for the account above.
Service	
Status	The status of the event proxy service is shown underneath the text 'Service'. If the service is stopped, the word 'Stopped' appears in red. If the service is running the text 'Started' appears in green.
Start	Click this button to start the event proxy service.
Stop	Click this button to stop the event proxy service.
Settings	
Save	Click this button to save any changes.
Advanced	Click this button to open a pop-up for Advanced Settings. You can set the number of minutes to wait before stopping events with no event coordinator connection. The default value is 2. You can check the box to avoid using the event coordinator in the event you are sending events to non-OnSSI systems. See Figure 13.
View Log	Click this button to open a pop-up that displays event communication. This is useful for troubleshooting. See Figure 14.
Build Number	Underneath the OnSSI logo the version and build number is displayed. This is helpful for troubleshooting or when contacting OnSSI Tech Support.
OK	Click OK to accept changes and close the dialog.

Field	Description
Cancel	Click Cancel to close the dialog without saving anything.

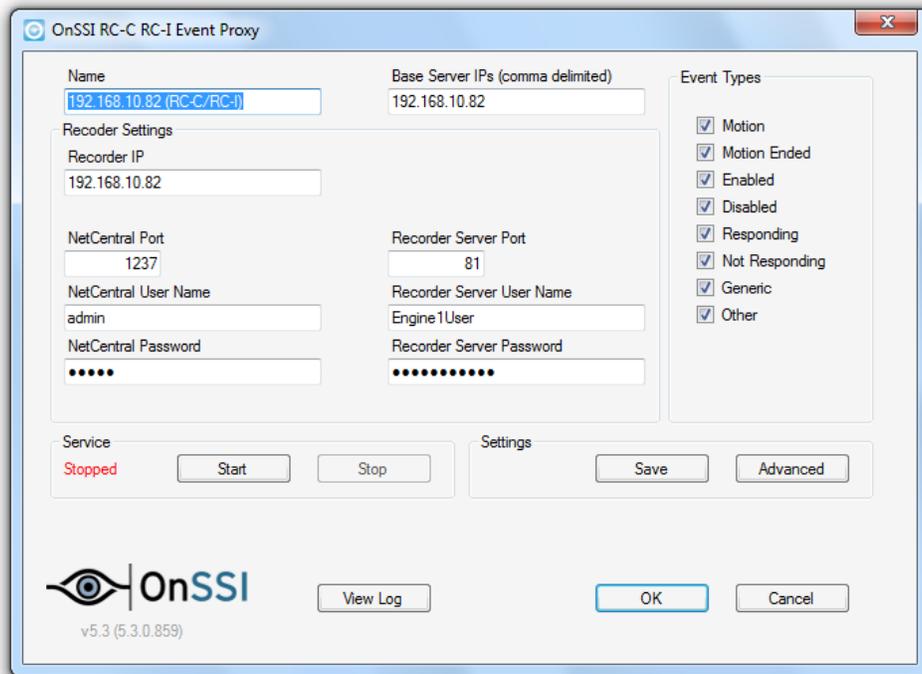


Figure 12 RC-C/RC-I Event Proxy

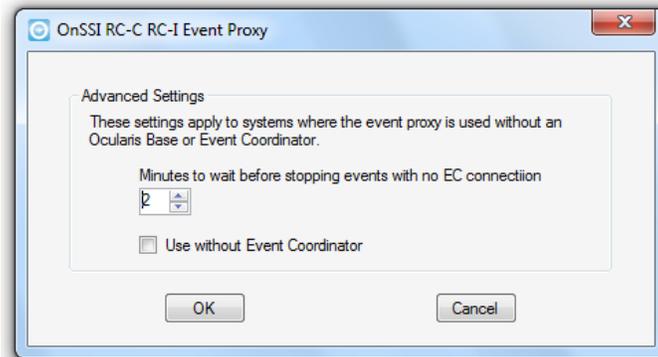


Figure 13 Advanced Settings

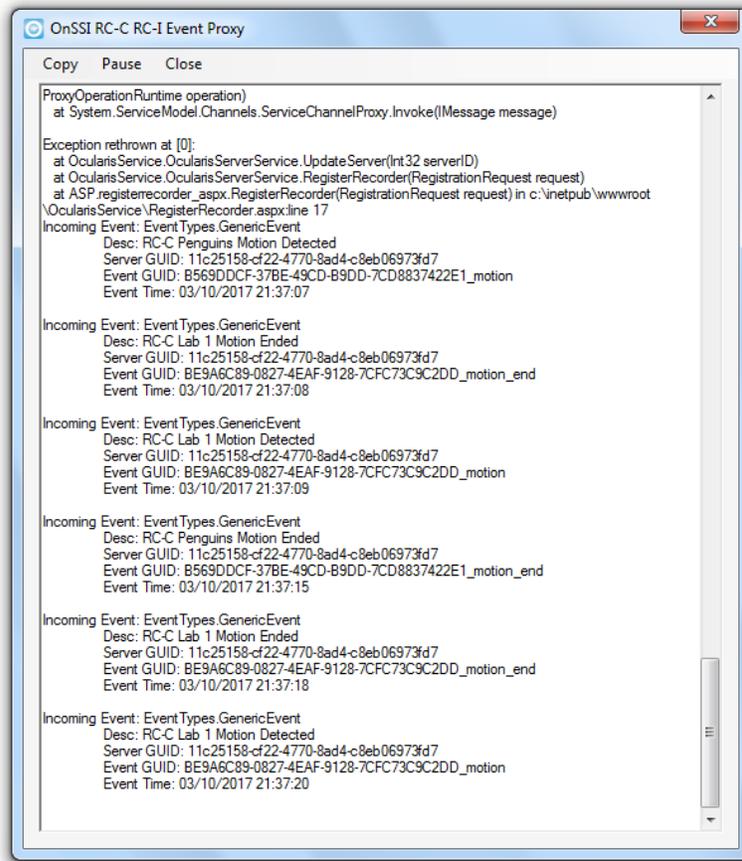


Figure 14 View Log - Sample

To Configure the RC-E / RC-L Event Proxy

The following describes the functionality of the RC-E/RC-L Event Proxy. Refer to Figure 15.

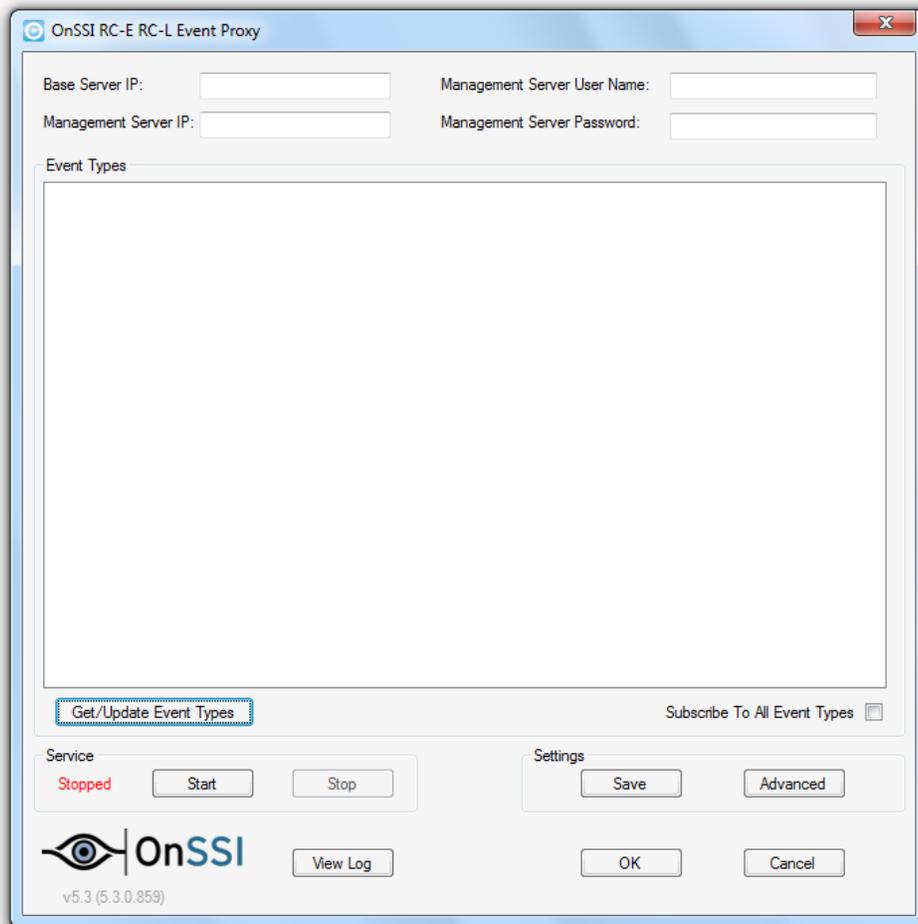


Figure 15 RC-E / RC-L Event Proxy

Field	Description
Base Server IP	Enter the IP address of the Ocularis Base you want the proxy to forward the events to.
Management Server IP	Enter the IP address of the RC-E or RC-L Management Server.
Management Server Username	Enter an administrative account as configured in the <i>Management Client</i> of RC-E or RC-L.
Management Server Password	Enter the password for the above account.

Field	Description
Get/Update Event Types	Once the above criteria has been entered, click this button to download event types from the Management Server. Events will appear in the Event Types screen. See Figure 16. Check each event that you would like to keep track of. Events are grouped by: Device, External, Hardware, Recorder and System.
Subscribe To All Event Types	This checkbox will select or deselect checkboxes for all event types.
Service	
Status	The status of the event proxy service is shown underneath the text 'Service'. If the service is stopped, the word 'Stopped' appears in red. If the service is running the text 'Started' appears in green.
Start	Click this button to start the event proxy service.
Stop	Click this button to stop the event proxy service.
Settings	
Save	Click this button to save any changes.
Advanced	Click this button to open a pop-up for Advanced Settings. You can set the number of minutes to wait before stopping events with no event coordinator connection. The default value is 2. You can check the box to avoid using the event coordinator in the event you are sending events to non-OnSSI systems. See Figure 13.
View Log	Click this button to open a pop-up that displays event communication. This is useful for troubleshooting.
Build Number	Underneath the OnSSI logo the version and build number is displayed. This is helpful for troubleshooting or when contacting OnSSI Tech Support.
OK	Click OK to accept changes and close the dialog.
Cancel	Click Cancel to close the dialog without saving anything.

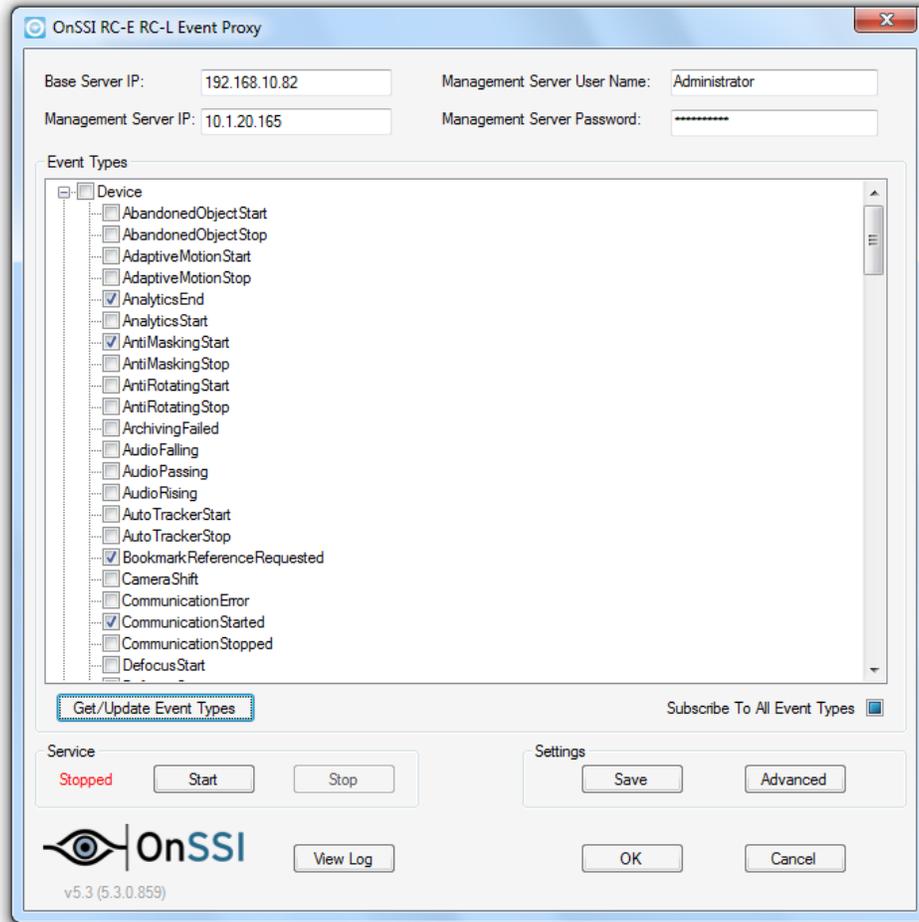


Figure 16 RC-E / RC-L Event Types

Contact Information

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Marketing:	marketing@onssi.com	845.732.7900 x 5