

**Ocularis**

---

S2 Control Service  
and  
S2 NetBox<sup>®</sup>  
Setup and Integration Guide



**On-Net Surveillance Systems, Inc.**  
One Blue Hill Plaza, 7<sup>th</sup> Floor, PO Box 1555  
Pearl River, NY 10965  
Phone: (845) 732-7900 | Fax: (845) 732-7999  
[www.onssi.com](http://www.onssi.com)



**S2 Security Corporation**  
One Speen St. Suite 300  
Framingham, MA 01701  
S2 Support: 508 663-2505  
[www.s2sys.com](http://www.s2sys.com)

Rev. code: 0005162017-1015-5.3.0.859

## Table of Contents

<b>Requirements for OnSSI S2 Control/S2 NetBox Integration.....</b>	<b>4</b>
<b>HARDWARE.....</b>	<b>4</b>
<b>SOFTWARE.....</b>	<b>4</b>
<b>LICENSES.....</b>	<b>4</b>
<b>SECURITY.....</b>	<b>5</b>
<b>CONFIGURATION.....</b>	<b>5</b>
<b>Setting up the OnSSI S2 Control and S2 NetBox Integration .....</b>	<b>6</b>
<b>1. COMPLETE THE SETUP OF THE ONSSI S2 CONTROL .....</b>	<b>6</b>
Install OnSSI Ocularis Base Server and OnSSI Ocularis Media Server.....	6
Install OnSSI Ocularis Administrator.....	6
Install OnSSI Ocularis Recorder .....	6
Install OnSSI Ocularis Event Proxy.....	6
Install the OnSSI S2 Control Service software .....	6
Complete OnSSI S2 Control Service Setup.....	6
Complete Windows Firewall Setup .....	7
Configure Cameras in the Ocularis Recorder.....	7
<b>2. POINT THE S2 NETBOX TO THE ONSSI S2 CONTROL SERVICE.....</b>	<b>7</b>
Configure the OnSSI NVR in the S2 NetBox .....	7
Configure the public settings.....	8
<b>3. VERIFY LIVE VIDEO FROM THE S2 NETBOX INTERFACE .....</b>	<b>8</b>
Verify that you can see OnSSI video from the NetBox interface .....	8
<b>4. SETUP AND VERIFY VIDEO MOTION DETECTION FROM ONSSI .....</b>	<b>8</b>
Verify that OnSSI VMD triggers S2 NetBox events .....	8
<b>5. SETUP AND VERIFY VIDEO RECORDING ACTIONS FROM S2 NETBOX.....</b>	<b>9</b>
Verify that S2 NetBox events record video .....	9
<b>6. SETUP AND VERIFY PTZ/PRESET ACTIONS FROM S2 NETBOX.....</b>	<b>9</b>
Verify that S2 NetBox PTZ camera works.....	9
Verify that S2 NetBox PTZ presets work.....	9
<b>7. INSTALL THE ONSSI SELF SIGNED CERTIFICATE. ....</b>	<b>9</b>
<b>Appendix on Network Port Setup .....</b>	<b>11</b>

## Requirements for OnSSI S2 Control/S2 NetBox Integration

The hardware, software, and licenses required for your OnSSI S2 Control/S2 NetBox Integration are listed below.

In addition to those items it will be necessary for you to have:

- Direct access to the OnSSI Base Server machine.
- Login user name and password to the S2 Network Controller with setup privileges.

### Hardware

At this release the OnSSI S2 Control Service is tested to work with the following devices:

- **S2 NetBox:** Software Version: 4.9.08 and Software Revision: 81956 or higher is required to use the OnSSI S2 Control Service described below.
- **PC with Windows 7™:** You will need an administrative account on the PC in order to install software.
- **Large Disk Drive:** The OnSSI web site at <http://www.OnSSI.com> has online calculators to assist you in estimating the disk capacity you will need for both the server and storage. The variables to be considered in selecting drive capacities include: number of cameras, frames per second, image size and resolution, days of storage required, and the number of recording hours per day.

### Software

- **OnSSI Ocularis Base Server:** v5.3
- **OnSSI Ocularis Media Server:** v5.3 (*must be installed on Ocularis Base system*)
- **OnSSI Ocularis Administrator:** v5.3
- **OnSSI Ocularis Event Proxy:** v5.3
- **OnSSI Ocularis Recorder:** v5.3
- **OnSSI S2 Control Service:** This service handles communications between the OnSSI Ocularis Base Server and the S2 NetBox. This service creates its own event log and will add itself to the Windows Firewall.
- **Web Browser:** Internet Explorer 10 or above is needed because of the use of an ActiveX component.
- **Microsoft .NET Framework 4.5:** It usually resides on Windows, and if not the installer will install it.

### Licenses

**S2 VMS license file:** In new systems, this feature is already enabled. To verify this, select **Support/Utility : About** and look for the line “**VMS**” in the list of licenses.

To order the Video Management System feature for an existing system, select **Support/Utility : About**, create a screen capture of the **About** page, and email the screen capture to [orders@s2sys.com](mailto:orders@s2sys.com), along with a purchase order for the VMS product you want to add. S2 Security will send you a Product Key and Activation key that are tied to the system license identifier. Once you

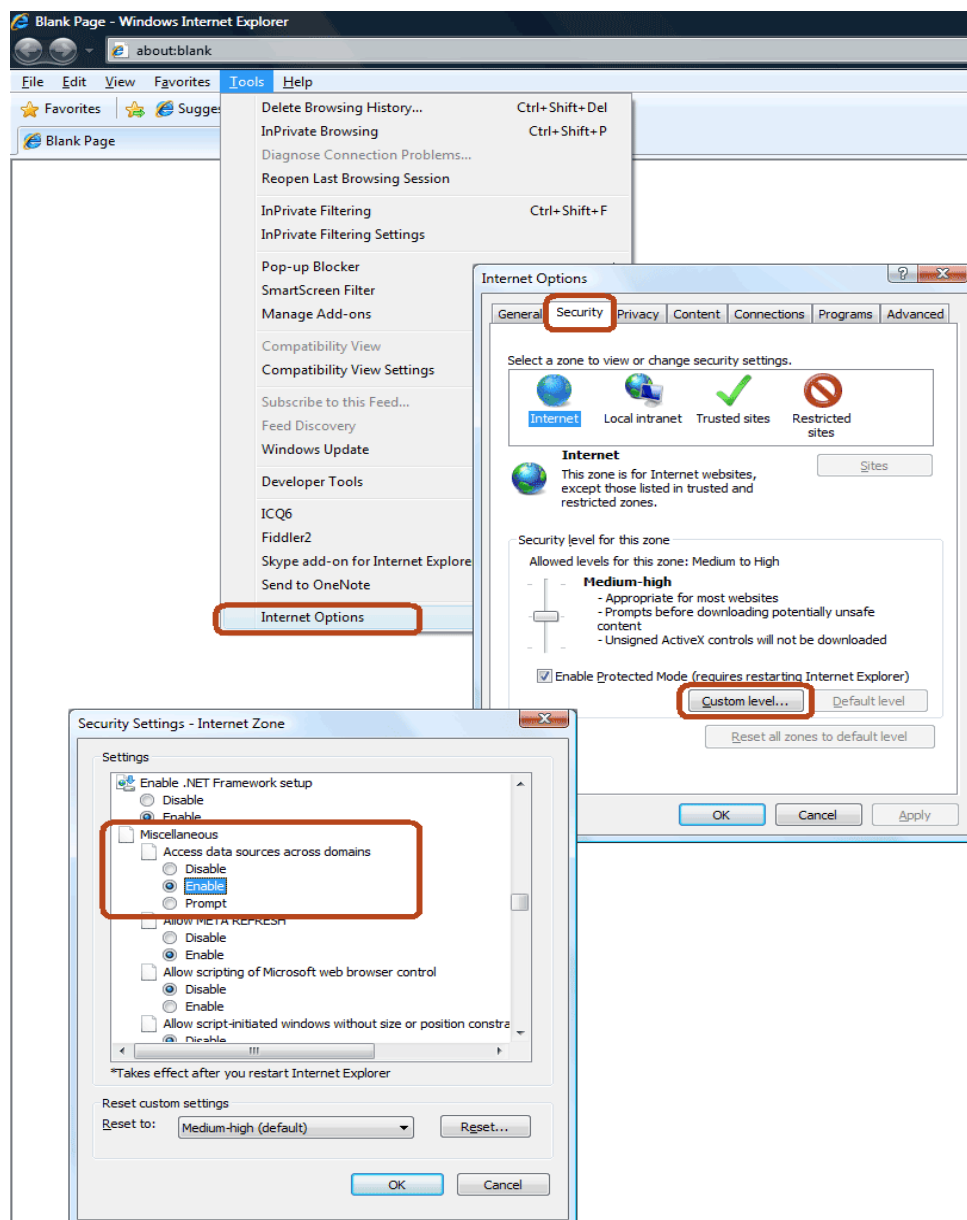
have received these keys, select **Setup : Site Settings : Software License**, enter the keys into the appropriate boxes, read and accept the terms of the license agreement, and then click **Apply**.

## Security

The web page portion of the integration uses an ActiveX control via HTTP protocol. The web browser which accesses the Video Viewer/ ActiveX control should only be used in a LAN or through a VPN if connecting remotely for security purposes.

## Configuration

Cross Domain Resourcing Sharing is required to connect and provide video from the Ocularis Media Server (OMS 3) if systems are not on the same domain. A setting in Internet Explorer will allow IE to access data sources across domains.



# Setting up the OnSSI S2 Control and S2 NetBox Integration

## 1. Complete the Setup of the OnSSI S2 Control

Refer to the OnSSI documentation for installation and setup of the Ocularis Base Server, Ocularis Administrator, Ocularis Media Server, Ocularis Recorder, Ocularis Event Proxy, cameras, and events.

For support contact OnSSI at <http://www.OnSSI.com> or call 845 732-7900. The procedures below recommend specific settings and actions known to improve the OnSSI S2 Control Service/S2 NetBox integration and behavior.

### Install OnSSI Ocularis Base Server and OnSSI Ocularis Media Server

1. *The Ocularis Base and Ocularis Media Server must be installed on the same system.*

**NOTE:** We recommend that the PC used for the OnSSI Ocularis Base Server and OnSSI Ocularis Media Server have a static IP address.

2. Obtain and install a licensed copy of the OnSSI Ocularis Base v5.3 system.
3. Using the *Ocularis Installation & Licensing Guide*, install Ocularis Base.
4. Obtain and install a copy of OnSSI Ocularis Media Server v5.3.
5. Using the *Ocularis Installation & Licensing Guide*, install Ocularis Media Server.

### Install OnSSI Ocularis Administrator

1. Obtain and install a licensed copy of OnSSI Ocularis Administrator v5.3.
2. Using the *Ocularis Installation & Licensing Guide*, install Ocularis Administrator.

### Install OnSSI Ocularis Recorder

1. Obtain and install a licensed copy of OnSSI Ocularis Recorder v5.3.
2. Using the *Ocularis Installation & Licensing Guide*, install the Ocularis Recorder.

### Install OnSSI Ocularis Event Proxy

1. Obtain and install a licensed copy of OnSSI Ocularis Event Proxy 5.3.
2. Using the *Ocularis Installation & Licensing Guide*, install the Ocularis Event Proxy.

### Install the OnSSI S2 Control Service software

**NOTE:** The **OnSSI S2 Control Service** must be installed on the same machine as the OnSSI Ocularis Base Server.

1. **OnSSI S2 Control Service.** Open the **OnSSI S2 Control Service** folder. Double-click the **OnSSI S2 Control Service Installer 5.3.49\*.exe**.
2. Complete the installation. The **OnSSI S2 Control Service** will put its version number into the Event Viewer log.

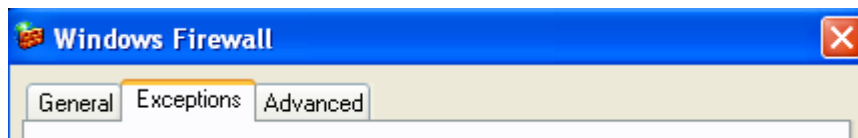
### Complete OnSSI S2 Control Service Setup

1. From the **Control Panel** open the **Administrative Tools**.
2. Open the Services applet and find the **OnSSI S2 Control Service**.

3. Verify that the service has started. If it has not, click the [Start](#) link to start the service.
4. Open the **Event Viewer** applet from the **Administrative Tools** and select the **OnSSI S2 Control Service Log**.
5. Right-click and select **Properties** to open the Property page for that event log.
6. In the **Log Size** section select **Overwrite events as needed**.
7. Click **Apply** and then click **OK** to save the changes.
8. To verify that the **OnSSI S2 Control Service** has put an entry in the log, click **OnSSI S2 Control Service Log** in the **Event Viewer**.
9. Three events should appear in the S2 OnSSI Log. Double-click these events to display the Event Properties window. The descriptions of these events will be, **OnSSI S2 Control Service (5.3.49.\*\*\*) is starting. S2 OnSSI OVID/1.1 Request Listener is started**, and **Successfully connected to 192.168.0.101 - Ocularis Base Server**.

### **Complete Windows Firewall Setup**

1. Open the **Windows Firewall** applet from the **Control Panel**.
2. Select the **Exceptions** tab and make sure that the **OnSSI S2 Control Service** is selected in the list of exceptions.



### **Configure Cameras in the Ocularis Recorder**

1. Configure all cameras including PTZ presets.  
S2 limits camera names to 64 characters and preset names to 31 characters.
2. We recommend that each camera be set to store images **Always** in the **Image storage settings** section. This ensures that video is always available for any time period including both before and after events.

## ***2. Point the S2 NetBox to the OnSSI S2 Control Service***

### **Configure the OnSSI NVR in the S2 NetBox**

1. In the security application, select **Configuration : Video : NVRs : Configure OnSSI NVR**.
2. Enter the IP address of the Ocularis Base into the **IP Address** field.
3. Replace the entries in the **Username** and **Password** fields (which default to "Name" and "Pass," respectively) with the secure username and password you established for Ocularis Base system.  
**NOTE:** The username and password you enter here must exactly match the username and password you established in the Ocularis Base system. The name and password are case sensitive.
4. Click **Check Connection**.  
**In the Discovered Information** section that appears, the serial number and camera count are filled in automatically.

5. Click **Save**.

In the **Discovered Information** section, click the **List VMS Cameras** link and verify that the list of cameras is correct and complete. These cameras were set up during the configuration of the NVR(s) through its own web interface.

#### **Configure the public settings**

1. In the security application, select **Configuration : Video : NVRs : Configure OnSSI NVR**.
2. **Public IP Address**: This IP address automatically fills in when you save a new NVR configuration.
3. **Public HTTP port**: This port number defaults to 80. This port must map to the Ocularis Base Server Port.

**NOTE**: If this address or port is on another subnet or behind a firewall you may have to change this to the external public address of the router or firewall. The network administrator will have to setup the port translation for communications and video to and from this address.

4. **Combine VMD events arriving within seconds**: Video Motion Detection (VMD) events occurring within the specified number of seconds are combined into one network controller event.

**Example**: If you set this field to 60 seconds, additional motion detection events will not be reported by the network controller unless at least 60 seconds has passed since the last motion detection on that camera.

5. Click **Save**.

### ***3. Verify live video from the S2 NetBox interface***

#### **Verify that you can see OnSSI video from the NetBox interface**

1. Select **Monitor : Cameras**.
2. Select a camera configured in the Ocularis Base system.
3. You will be prompted to download the **OnSSI ActiveX control**. This is required.

**NOTE**: If the Client PC that connects to the S2 Netbox does not have internet access, the OnSSI Auga ActiveX Installer will have to be run on the Client machine to register the ActiveX control.

You will see a status message in the control when it connects to the Ocularis Base system.

4. Verify that you can see live video from this OnSSI connected camera.

**NOTE**: When accessing a camera view for the first time, a self signed certificate can be installed to ensure the identity of the remote OMS server. See section 7 for instructions.

### ***4. Setup and verify Video Motion Detection from OnSSI***

#### **Verify that OnSSI VMD triggers S2 NetBox events**

1. Ensure that you have configured VMD events on the Ocularis Recorder and Ocularis Base system. You can set the field of motion and sensitivity per camera.
2. Select **Configuration : Alarms : Events** and define an S2 event.
3. Select **Configuration : Alarms : Virtual Inputs** and assign your S2 event to an OnSSI connected camera **Video Motion Event**. Make sure the **Virtual Input** is either **Always**



- Armed** or using a currently active time specification. Also verify that both the **Virtual Input** and the **Video Motion Event** are **Enabled**.
4. Select **Monitor : Monitoring Desktop** and create motion on that camera.
  5. Verify that your S2 event was triggered.

## 5. Setup and verify video recording actions from S2 NetBox

### Verify that S2 NetBox events record video

1. Select **Configuration : Alarms : Events** and define an S2 event with a **Record Video** action. Be sure to select an OnSSI connected camera.
2. Assign a trigger to this record video event. You can select **Configuration : Alarms : Inputs** and assign the event to the **Off-normal Event**, or you can select **Configuration : Access Control : Portals** and assign the event to the **System-wide : Held** state of a portal.
3. Select **Monitor : Monitoring Desktop** and trigger the event.
4. Verify that the event was triggered and click the video icon to view the recorded video.

## 6. Setup and verify PTZ/preset actions from S2 NetBox

### Verify that S2 NetBox PTZ camera works

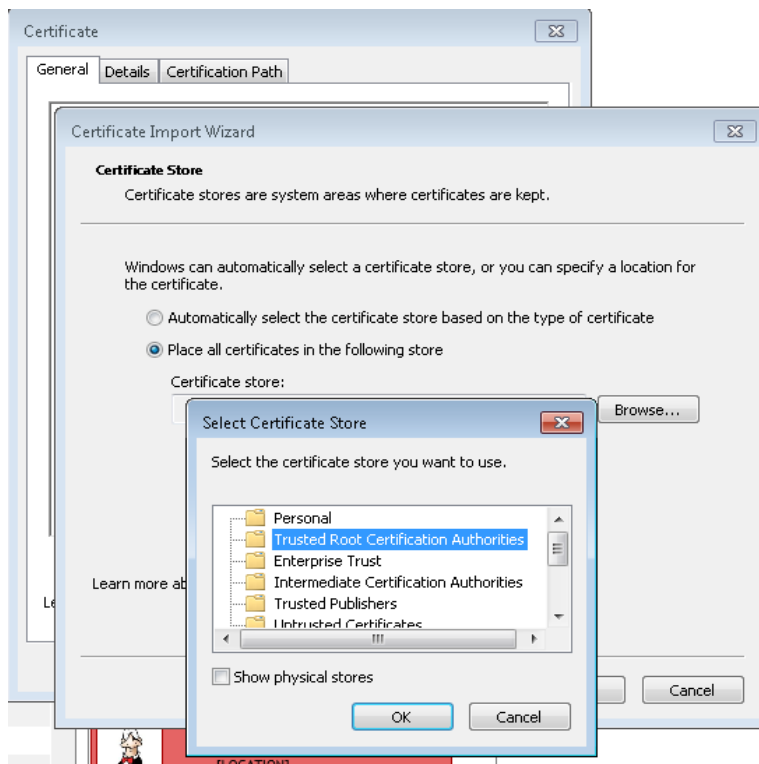
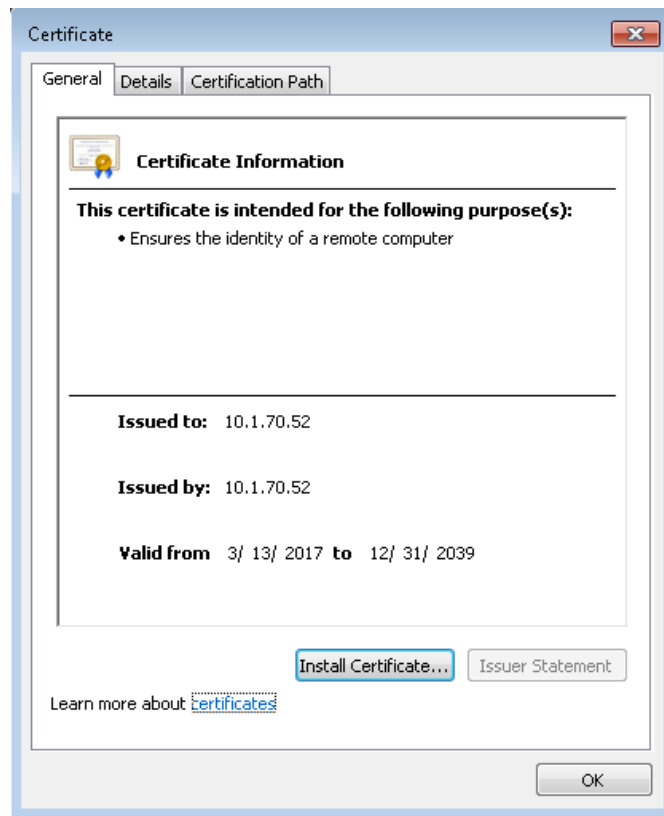
1. Select PTZ camera.
2. Move the camera with PTZ commands.
3. Verify that the PTZ move was triggered.

### Verify that S2 NetBox PTZ presets work

1. Select PTZ camera with configured presets.
2. Move the camera with preset commands.
3. Verify that the preset move was triggered.

## 7. Install the OnSSI self signed certificate.

1. When the *Security Alert* dialog appears, select *View Certificate*.
2. On the *Certificate* dialog, select *Install Certificate*.
3. When the *Certificate Import Wizard* starts, select *Next*.
4. In the next screen, select 'Place all certificates in the following store', browse to 'Trusted Root Certification Authorities' and click OK.
5. *In Completing the Certificate Import Wizard*, select *Finish*.
6. *If a warning dialog appears*, select *Yes/Ok*.
7. A dialog stating *The import was successful* appears. Select *Yes/Ok* to exit it, and the underlying dialogs.



## Appendix on Network Port Setup

The **OnSSI S2 Control Service** software installed above adds itself to the list of applications allowed to open ports on the Firewall.

- Port 3010 is opened by the **OnSSI S2 Control Service** software for the S2 NetBox to initiate configuration communications to and from the Ocularis Base Server, as well as to send commands to the Ocularis SDK to control cameras.
- Port 80 must be open for the Ocularis Base Server.

**NOTE:** If you change this port, you will have to change the **Image Server Port** default on the **Configure OnSSI NVR** page of the security application, as noted in the procedure above.

**If the S2 NetBox and the Ocularis Media Server are on different subnets then routers and firewalls need the following ports open:**

- Open port 3010 on the router in front of the Ocularis Base Server for the S2 NetBox to initiate configuration communications to the Ocularis Base Server, as well as to send commands to the Ocularis SDK such as, “start/stop recording” and “move to preset.”
- Open port 3010 on the router in front of the S2 NetBox for the Ocularis Base Server to report video motion events to the S2 NetBox.
- Open port 80 on the router in front of the Ocularis Base Server for the browser to pull a video feed from the Ocularis Base Server. If you changed this port you will have to open the port you specified there.

**If the Ocularis Base Server is behind a NAT router, the S2 NetBox must also be behind that same NAT router.**