



## ISY-994iZ Series – OpenADR Configuration Guide

### 1) ISY Installation

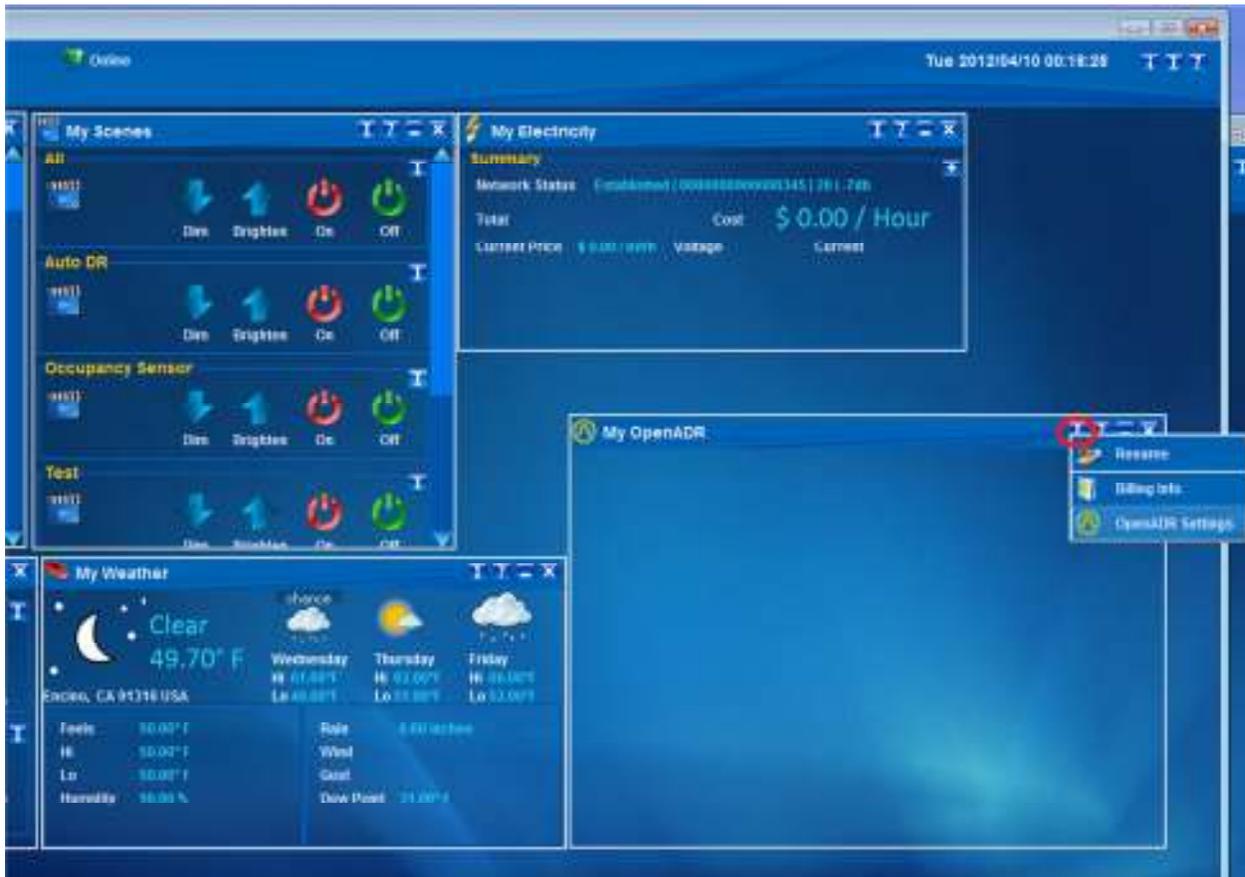
- a) Connect one of the included Cat5e cable to ISY's **Network** Port and to your network hub. **Note:** the network must *initially* be DHCP enabled.
- b) [Optional] Connect the second included Cat5e cable to ISY's **Port A** and the other end to the PLM  
Note: If your PLM is model number 2413S, you do need a power supply (not included)
- c) If you do not have Java installed, please install the latest for your platform. You may find the latest Java downloads at <http://www.java.com/getjava> . Please choose the latest JRE for your platform
- d) Go to <http://isy.universal-devices.com/99i/zs/dashboard.jnlp> ; when prompted to authenticate, enter **admin** for both user-id and password

## 2) Configure OpenADR

a) Activate My OpenADR Portlet

The screenshot displays the iSY Dashboard interface. At the top left, the user is logged in as 'UDI Lab 994' and is 'Online'. A dropdown menu is open, showing options: 'New Portlet', 'Remove Portlets', 'My OpenADR', 'My Electricity', 'My Weather', 'My Devices', 'My Programs', 'My Thermostats', and 'My Scenes'. The 'My OpenADR' option is highlighted. The dashboard is divided into several portlets: 'My Devices' (showing 'Unlock' and 'Ceiling Timer' controls), 'My Scenes' (showing 'All', 'Auto DR', 'Occupancy Sensor', and 'Test' scenes with 'Dim', 'Brighten', 'On', and 'Off' buttons), 'My Thermostats' (showing 'INSIDEON THERMOSTAT' and 'RCS 0613A20040713B83' with temperature controls), and 'My Weather' (showing 'Clear 49.80° F' and a 3-day forecast for Encino, CA). A 'My Electricity' portlet is partially visible on the right side.

b) Adjust OpenADR Settings



OpenADR Settings

Enabled

Polling Interval (sec)

Profile

Server URL

User ID  Password

OpenADR 2.0 Settings

VTN Interaction Mode

Evaluation Interval (sec)

VTN ID

VEN ID

Party ID

Resource ID

Group ID

Market Context

Normal Mode Settings

Setpoint Offset \*  Duty Cycle %  Load Adj %

Moderate Mode Settings

Setpoint Offset \*  Duty Cycle %  Load Adj %

High Mode Settings

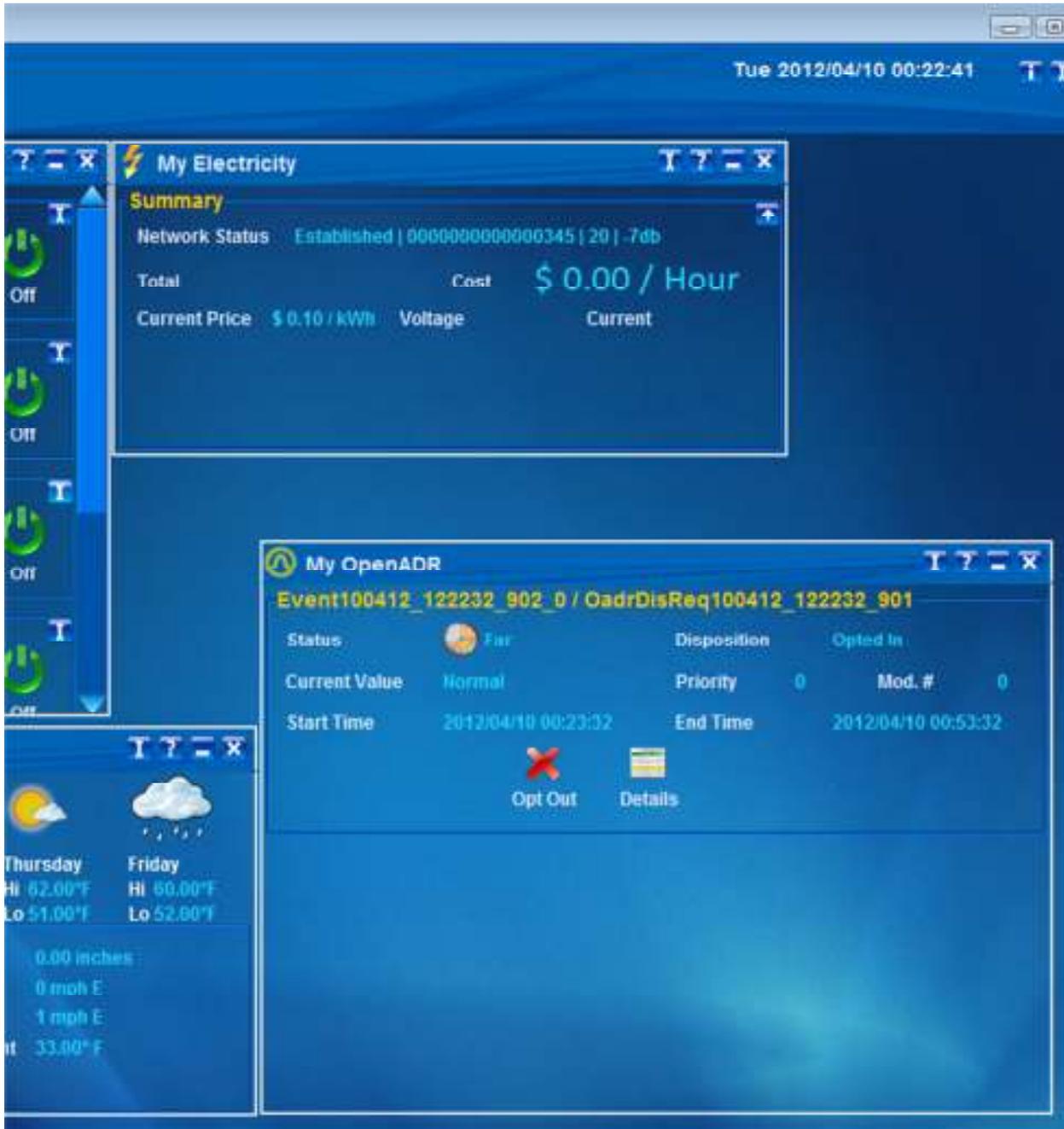
Setpoint Offset \*  Duty Cycle %  Load Adj %



Save

Cancel

- c) Issue an Event
- d) Check the OpenADR Portlet
- e) Click on Details to see full event details



Event100412\_122322\_902\_0 / PING\_OadrDisReq100412\_122322\_205

Status	Active	Disposition	Opted In	Response Type	Always
Priority	0	Mod. #	0	Created Time	2012/04/10 00:23:32
Notification Time	2012/04/10 00:23:32	Ramp Up Time	2012/04/10 00:23:32	Recovery Time	2012/04/10 00:53:32
Start Before	0 (seconds)	Start After	0 (seconds)	Duration	1800 (seconds)
Start Time	2012/04/10 00:23:32	Actual Start Time	2012/04/10 00:23:32	End Time	2012/04/10 00:53:32

VTN Comment

Market Context <http://MarketContext1>



Current Value

ID	N/A	Type	float	Value	1.000000	Mode	Moderate
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Signal

ID	String	Type	level	Name	simple
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Intervals

ID	Duration	Start Time	End Time	Type	Value	Mode
0	900 (seconds)	2012/04/10 00:23:32	2012/04/10 00:38:32	float	1.000000	Moderate
1	900 (seconds)	2012/04/10 00:38:32	2012/04/10 00:53:32	float	2.000000	High

Targets

Groups

Devices



f) Use the Event Viewer to see the operational status of ISY and OpenADR events

The screenshot displays a software interface with a blue theme. At the top, the system clock shows "Tue 2012/04/10 00:24:41". A window titled "Event Viewer" is open, with a tooltip that says "Shows active events as they b...".

Below the Event Viewer, there is a section for "Electricity" with the following details:

- Status: Established | 0000000000000345 | 20 | -7db
- Cost: \$ 0.00 / Hour
- Price: \$ 0.10 / kWh
- Voltage: [unreadable]
- Current: [unreadable]

At the bottom, a window titled "My OpenADR" displays details for an event:

**Event100412\_122232\_902\_0 / PING\_OadrDisReq100412\_122322\_205**

Status	Active	Disposition	Opted In		
Current Value	Moderate	Priority	0	Mod. #	0
Start Time	2012/04/10 00:23:32	End Time	2012/04/10 00:53:32		

Below the table, there are two buttons: "Opt Out" (with a red X icon) and "Details" (with a list icon).

**Event Viewer**

Tue 04/10/2012 00:12:31 : [MOD-OADR2] Connecting to http://192.168.0.100:8080/OpenADR2/Simple/EiEvent

Tue 04/10/2012 00:12:36 : [MOD-OADR2] No Response from http://192.168.0.100:8080/OpenADR2/Simple/EiEve...

Tue 04/10/2012 00:12:36 : [MOD-OADR2] Warn: Current Event is null

Tue 04/10/2012 00:25:54 : [MOD-OADR2] Warn/eiResponse: requestID is Null

Tue 04/10/2012 00:25:59 : [MOD-OADR2-OPT] No pending opt for event[Event100412\_122232\_902\_0]

Tue 04/10/2012 00:25:59 : [MOD-OADR2] Status: Active, Mode: Moderate

Tue 04/10/2012 00:25:59 : [MOD-OADR2] Price: 0.100

Tue 04/10/2012 00:25:59 : [MOD-OADR2] Start Time: 2012/04/10 12:23:32 AM

Tue 04/10/2012 00:25:59 : [MOD-OADR2] End Time: 2012/04/10 12:53:32 AM

Tue 04/10/2012 00:25:59 : [Garage ] Auto DR : Process event

Tue 04/10/2012 00:25:59 : [Garage ] Auto DR : Device not configured for DR

Tue 04/10/2012 00:25:59 : [RCS 0013A2004071] Auto DR : Process event

Tue 04/10/2012 00:25:59 : [RCS 0013A2004071] Auto DR : No changes for device

Tue 04/10/2012 00:25:59 : [INSTEON Thermost] Auto DR : Process event

Tue 04/10/2012 00:25:59 : [INSTEON Thermost] Auto DR : No changes for device

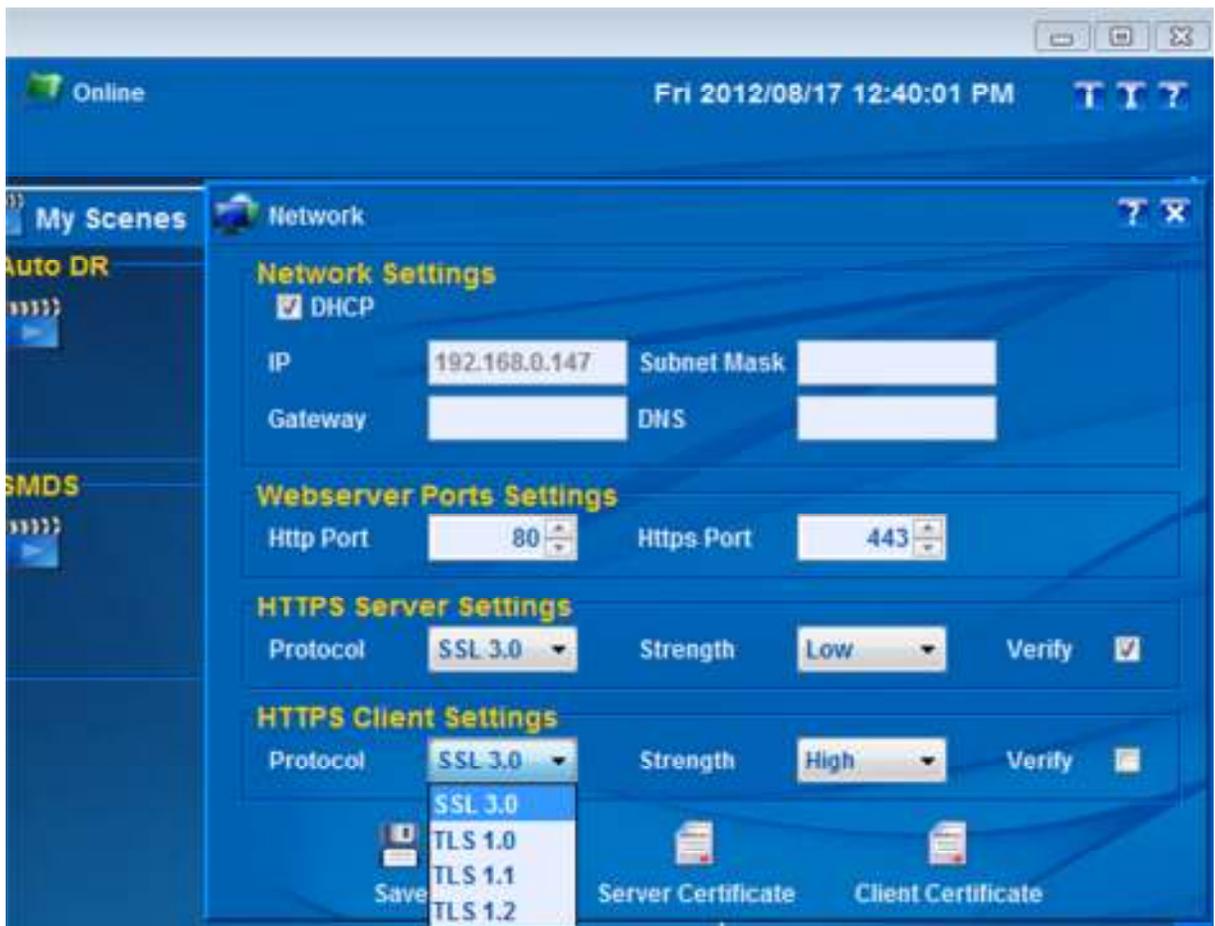
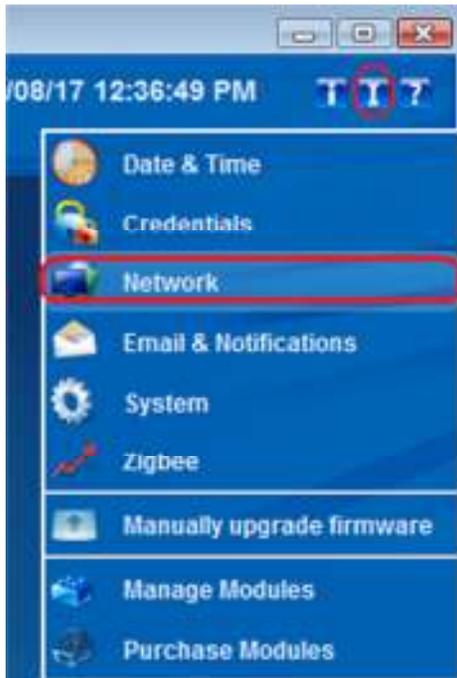
Clear Level **3. Device communications events**  Auto Scroll

- 0. None
- 1. Status/Operational events
- 2. More info
- 3. Device communications events**

Encino, CA 91316 USA

Feels	49.00° F	Humidity	53.00 %
Hi	50.00° F	Wind	0 mph E
Lo	49.00° F	Gust	1 mph E
		Dew Point	32.00° F

### 3) Configure Network Security



**Protocol:** A maximum protocol level supported by client or server. Please note that if you use TLS 1.2 and if the peer is requesting TLS 1.0, then ISY will downgrade to TLS 1.0.

**Strength:** The symmetric key strengths. Each strength has an ordered/priority list of cipher suites that ISY will use to determine its operations. The priority is from high to low (top to bottom):

***High:***

SSL\_RSA\_WITH\_AES\_128\_SHA2  
SSL\_RSA\_WITH\_AES\_256\_SHA2  
SSL\_RSA\_WITH\_AES\_128\_SHA  
SSL\_RSA\_WITH\_AES\_256\_SHA

***Medium:***

SSL\_RSA\_WITH\_AES\_128\_SHA  
SSL\_RSA\_WITH\_AES\_256\_SHA  
SSL\_RSA\_WITH\_RC4\_128\_SHA  
SSL\_RSA\_WITH\_RC4\_128\_MD5

***Low:***

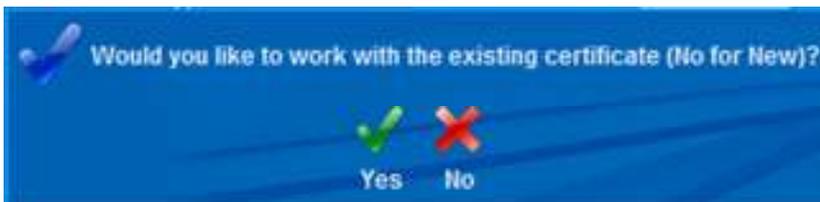
SSL\_RSA\_WITH\_RC4\_128\_MD5  
SSL\_RSA\_WITH\_RC4\_128\_SHA  
SSL\_RSA\_WITH\_AES\_128\_SHA

**Verify:** Whether or not client/server authentication should be performed on the peer.

#### 4) **Certificate Management**

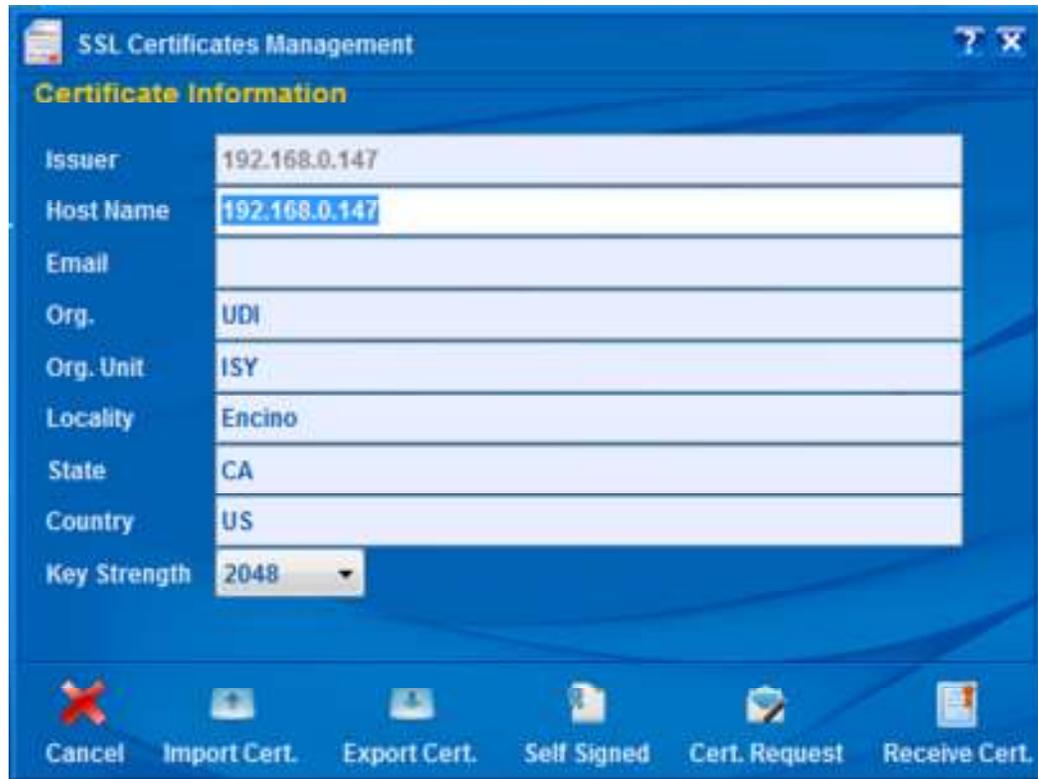
The operations for Server Certificates and Clients Certificates are identical. As such, in this section only Server Certificates are discussed.

In the Network Dialog (see section 3), click on the Server Certificate. You will be prompted by:



**Yes:** This will load the certificate store from ISY for which you must have a valid password that you had setup before.

**No:** This will recreate a new certificate store and overwrites any previous certificate information. The requested password is the password you would like to use to access the store in the future (see Yes).



The screenshot shows a Windows-style dialog box titled "SSL Certificates Management". The "Certificate Information" section contains the following fields:

Issuer	192.168.0.147
Host Name	192.168.0.147
Email	
Org.	UDI
Org. Unit	ISY
Locality	Encino
State	CA
Country	US
Key Strength	2048

At the bottom of the dialog, there are six buttons: Cancel, Import Cert., Export Cert., Self Signed, Cert. Request, and Receive Cert.

**Import Cert.:** If you have a PKCS12 (pfx) format file which includes both the Certificate as well as the Private Key, then choose this option import both. ISY will be rebooted for the changes to take effect.

**Export Cert.:** Use this button to export an existing certificate in PEM format.

**Self Signed:** If you wish to create a self signed certificate, make sure to enter and/or update (in case you are working on an existing certificate) all the necessary information in the fields and *then* click on the **Self Signed** button.

**Cert. Request:** If you wish to have your certificate signed by a CA, you need to create a CSR. To create a CSR, make sure to enter and/or update (in case you are working on an existing certificate) all the necessary information in the fields and *then* click on the **Cert. Request** button.

**Receive Cert.:** If you have already made a Cert Request and have now been given an actual certificate based on your Cert Request (CSR), then click on the **Receive Cert** button to import the Certificate into ISY.