Importing LON Devices from an IzoT Net Server/IzoT CT using IzoT Net Export (iNex)

ⓘ This section only pertains to <u>LON devices using IMM.</u> This section is not applicable if you are only using BACnet or Modbus devices, or DMM for LON devices.

You can use the SmartServer IoT on a network managed by the IzoT Commissioning Tool (CT), or other IzoT Net Server or LNS tool. Such a network is called an *LNS network*. To use the SmartServer IoT on an LNS network, you export the network information from the LNS network to the SmartServer IoT.

The IzoT Net Export tool is a software utility for use with a Microsoft Windows computer that also hosts the IzoT Net Server. This tool relays definitions from an IzoT Net Server database to the SmartServer IoT. Once the export is complete, you can use the SmartServer IoT to monitor and control the devices defined in the LNS network; you can use applications written for IAP/REST or IAP/MQ to perform these tasks.

Since the network remains under the management of IzoT Net Server, you must perform any changes to the network infrastructure, such as adding or removing devices, using an IzoT Net Server-based tool, and then you must repeat the export.

You can import LON device interface and LON device definitions from an IzoT Net Server if you will be using your SmartServer on a LON network managed by an IzoT Net Server or LNS Server. For example, if you installed LON devices with IzoT CT or LonMaker tool, your LON network is managed with the IzoT Net Server or LNS Server, and the LON portion of your network is not managed with the SmartServer.

You cannot import LON datapoints that use changeable types if the types have been modified. If you import any devices with such datapoints, they will be imported with the original type defined for the device, not the modified type. For more information on how to use IzoT CT, see the IzoT CT User's Guide.

You can export non-overlapping portions of a single IzoT Net Server or LNS Server network to multiple SmartServers. To export a single IzoT Net Server or LNS Server network to multiple SmartServers, create an IzoT Net Server or LNS Server subsystem for each SmartServer containing the portion of the network to be handled by the SmartServer. Each of these subsystems can only contain one SmartServer, but you may have multiple subsystems, each with a different SmartServer.

To import LON devices from an IzoT Net Server or LNS Server, follow these steps:

1. Switch off SmartServer LON network management as described in (Optional) Switch Off LON Management.

2. Open your IzoT CT network using a SmartServer Remote Network (RNI), IP-852, or IP-70 interface and follow these steps to update the drawing.

    a. Verify the network interface in your drawing is attached to the correct channel. For example, you can use an SmartServer RNI attached to an FT or TP-1250 LON channel, an IP-852 interface attached to an IP-852 channel, or an IP-70 interface attached to an IP-70 channel.

    b. If you are not using an IP-70 channel to connect to the SmartServer, create an IP-70 channel in your IzoT CT drawing to represent the IP-70 channel that is internal to the SmartServer.

    c. Add a LON channel in your IzoT CT drawing for each of the U60s that you have attached to your SmartServer, or select an existing LON channel in your IzoT CT drawing for each U60. For example if you have a U60 FT attached to your SmartServer, create or select an FT channel in IzoT CT.

    d. Create a subsystem to contain all the devices and routers to be exported to the SmartServer, and move all of your devices and routers to be exported to that subsystem. If your network has multiple SmartServers, each SmartServer must be in a different subsystem, and all the devices to be exported to a SmartServer must be in the same subsystem with the SmartServer, or in a subsystem contained within the subsystem with the SmartServer. For example, if a network has three SmartServers in three subsystems called "Building 1", "Building 2", and "Building 3", all the Building 1 devices have to be in the Building 1 subsystem, or in a subsystem contained with the Building 1 subsystem such as "Building 1.Floor 6.Room 6050.". The export tools builds unique names that include the network, subsystem path, and device names so you should limit the characters in each name element.

    e. In each top-level subsystem, add a reference to each channel to be used in the subsystem and then add a SmartServer IoT device to the IP-70 channel.

    f. Add an IzoT CT Router shape for each LON channel attached to the SmartServer, except the IP-70 channel. Attach one side of each router to the LON channel associated with each of your U60 or U70 LON network interfaces. If you are using IP-852, attach one side of one of the routers to the IP-852 channel. Attach the other side of each of the routers to the IP-70 channel. Enter a unique name for each router.

    g. Add a SmartServer IoT device to your IzoT CT drawing, specifying the **SmartServer IoT.xif** file as the interface. Add the SmartServer IoT device to the IP-70 internal channel.

    h. Commission the SmartServer routers using IzoT CT, starting with the SmartServer router closest to your network interface and work out to the furthest router, and then commission the SmartServer IoT device. To commission a router, right-click the router and then click **Commissioning** -> **Commission**. When prompted to press the Service button for one of the routers on the SmartServer, open the SmartServer Configuration Page, click the **Features** tab for the IP-852 router or the **System** tab for the LON routers, and then click the **Service Pin** button for the interface.

    i. Right-click the SmartServer IoT device and then click **Commissioning** -> **Commission**. When prompted to press the Service button for the SmartServer, open the SmartServer Configuration Page, click the **System** tab, and then click the **Service/Connect** button near the top of the page.

    j. Commission any LON devices that you created on the SmartServer using custom applications if you have one deployed.

3. To enable exporting your IzoT Net or LNS database to the SmartServer, open a console interface to your SmartServer, log in as the **apollo** user, and enter the following command at the Linux console prompt: `sudo ufw allow 1883`. This opens the IAP port (1883) on your SmartServer.

4. Click here to download the IzoT Net Export Utility and then move it to your LonWorks **bin** directory. This is in **Program Files (x86)\LonWorks\bin** by default, but may be in a different location on your computer.

5. Import any user defined Resource File Set (***.XML**) files using the **Import Device Type** action on the CMS Device Types widget.

6. Open the Windows console application and start the IzoT Net Export utility with the following **inex** command.

```
inex /n:"<Network Database Name>" /e:"Target Subsystem"/mqtt://<SmartServer Hostname>/<Segment ID> /direct:
ine
```

Parameter	Description
Network Database Name	LNS network name
Target Subsystem	LNS subsystem that you want to export
SmartServer Hostname	SmartServer hostname
Segment ID	Install code that is printed on the SmartServer IoT label

⚠️ **Using the IzoT Net Export Tool (iNex)**

The IzoT Net Export tool (iNex) supports a number of commands and switches. You can view a summary of available commands and switches by running the IzoT Net Export tool in a Windows console with the **/help** switch. If you specify a network name and export specification without a command, the IzoT Net Export tool defaults to execute the **export** command.

Double quotes are required when an argument includes a space character, such as **"Subsystem 1"**.

Contexts are not supported with the iNex tool.

ⓘ **Examples**

SmartServer IoT device in Subsystem 1

```
inex /n:"myDrawing" /e:"Subsystem 1"/mqtt://smartserver-17q3kd2/17q3kd2 /direct:ine
```

SmartServer IoT device in Subsystem 2, which is inside Subsystem 1

```
inex /n:"myDrawing" /e:"Subsystem 1.Subsystem 2"/mqtt://10.1.2.3/T6tWyfzj /direct:ine
```

7. You can optionally close the external IAP port. To close the port, open a console interface to your SmartServer, log in as the apollo user, and enter the following command at the Linux console prompt: `sudo ufw delete allow 1883`. This closes the IAP port on your SmartServer.

8. Repeat this procedure for each SmartServer in your network and repeat it for all SmartServers whenever you make changes to the IzoT CT drawing.

9. Copy the **inex** commands for each SmartServer to a text box in your IzoT CT drawing for future use.