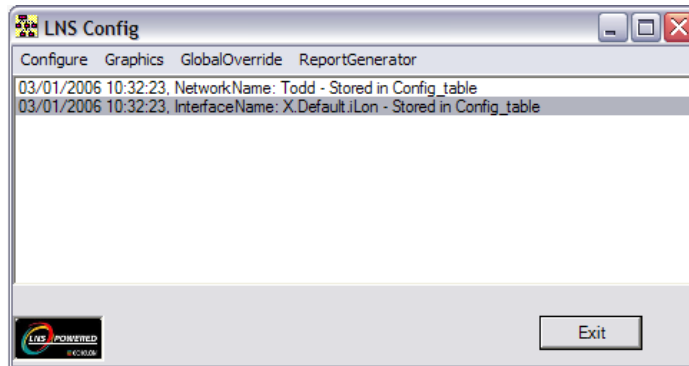

InetSupervisor -

LNSDriver_UsersGuide

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1.0 LNSConfig - general

The LNSConfig is used for the importing of *Lonworks* specific points and the auto generation of graphics for *Lonworks* devices. To start the LNSConfig click *Start*, then *Programs*, then *HMI*, then *LNSConfig*. Included in this guide also is the *LNSDriver* which is used to transfer point values to and from your *Lonworks* network.



2.0 Configure

2.1 Import Lonworks Points

This is used to import Lonworks variables and configuration properties.

1. Click *Start*, then *Programs*, *HMI*, *LNSConfig*.

2. Type your name and password (*default username is q, default password is q*) in the Login dialog box
3. Click **Configure**, then **Import LonWorks Points**.
4. Choose the desired channel then click **Load Variables** . This scans the *LNS Database* for available points (variables only) from all *LonWorks* devices, bringing these points into the **LNS Point Import Wizard**.
5. Click **Load CP's**. This will load all cofiguration properties in the same manner as the **Load Variables**.

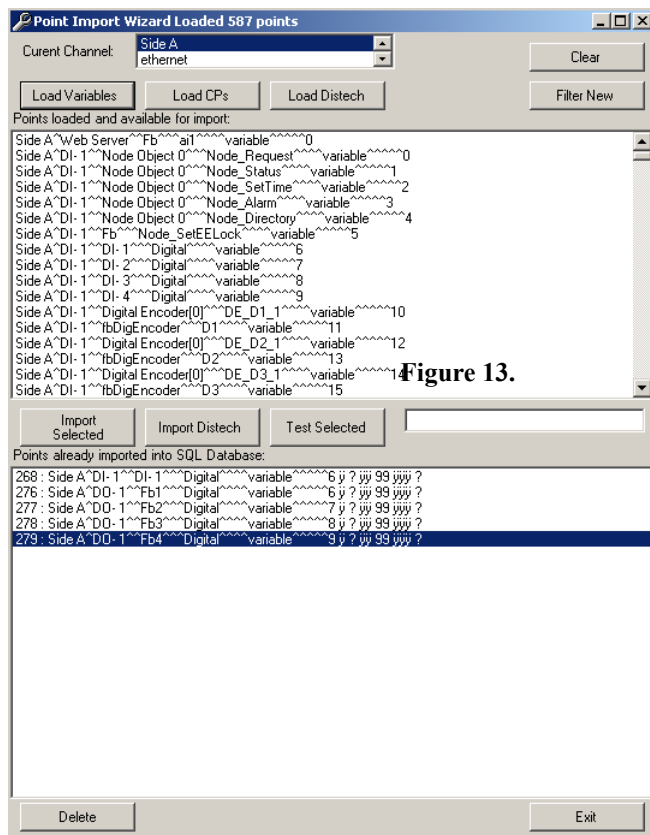


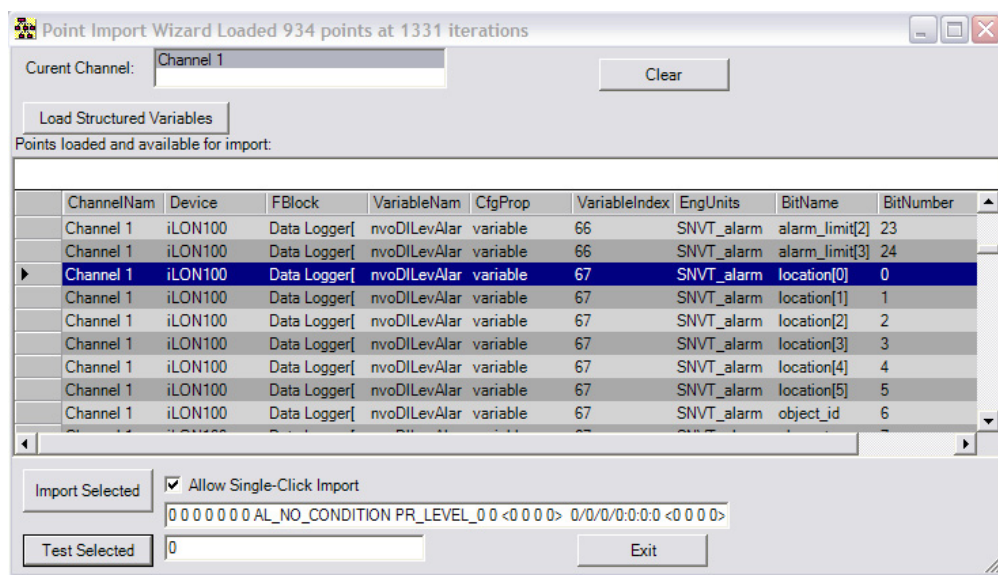
Figure 13.

6. Select a desired point by clicking on it and then click **Import Selected** (or press **Alt + s**). Multiple points can be selected for import by holding down the **Ctrl** key while clicking on, or click/hold-down and drag-
ging across, the desired points, then clicking **Import Selected**. Repeat this process for all desired points.
7. If you would like to delete an imported point, select it by clicking on it, then click **Delete** at the bottom left of the window.
8. Once all points have been imported, the database is ready for creating a project-specific web page.

2.2 Import Structured Points

This is used to import a specific bit from a structured Lonworks network variable.

1. Click **Start**, then **Programs, HMI, LNSConfig**.
2. Type your name and password (*default username is q, default password is q*) in the Login dialog box
3. Click **Configure**, then **Import Structured Points**.
4. Choose the desired channel then click **Load Structured Variables**. This scans the *LNS Database* for available points from all *LonWorks* devices, bringing these points into the **LNS Structured Point Import Wizard**.

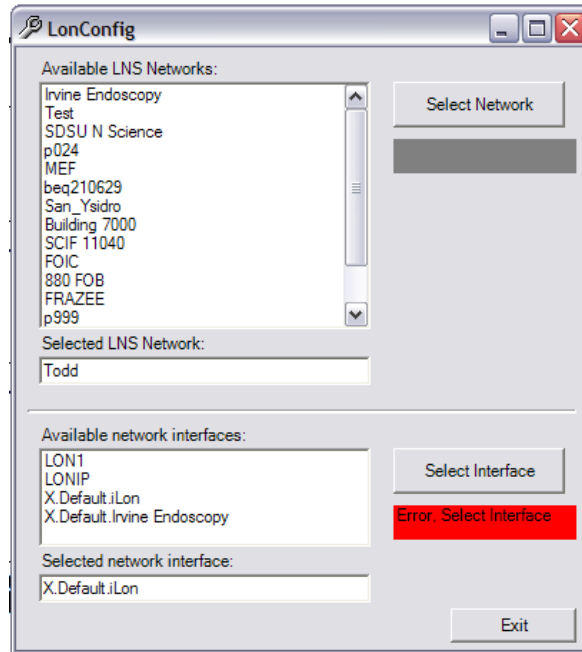


5. Highlight the bit you wish to import and click the button **Import Selected**. If you check mark **Allow Single-Click Import** the bits will import automatically when highlighted.

2.3 LON System

The LNSConfig will automatically select the network defined in the **Config Table** of *InetSupervisor*(*Inet_Users Guide*). Any network on the computer can be accessed by the *LNSConfig* by selection in the **LON System** utility.

1. Click **Start**, then **Programs, HMI, LNSConfig**.
2. Type your name and password (default username is **q**, default password is **q**) in the Login dialog box
3. Click **Configure**, then **LON System**.



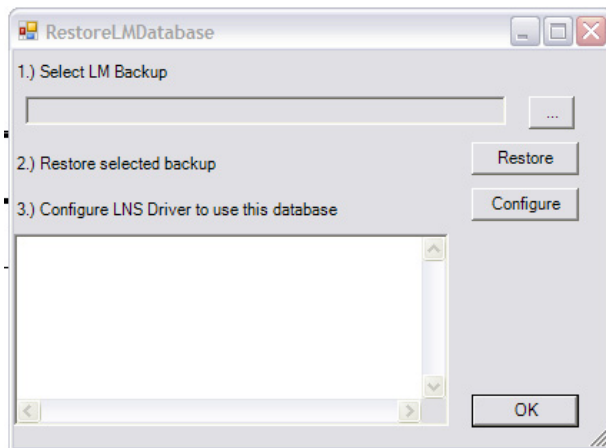
4. From here select the network database and network interface by high-lighting the desired network or interface and clicking the **Select Network** or **Select Interface** buttons.
5. **Restart** the **LONConfig** for changes to take effect.

2.4 Restore LM Database

This is to restore a **Lonmaker** network onto your computer that has the LNS runtime environment but does not have **Lonmaker** installed

1. Click **Start**, then **Programs, HMI, LNSConfig**.
2. Type your name and password (default username is **q**, default password is **q**) in the Login dialog box

Click **Configure**, then **Restore LM Database**.



3. From here select the network database, click the **Restore** button. If you wish to the LNSDriver to use this network click the **Configure** button.

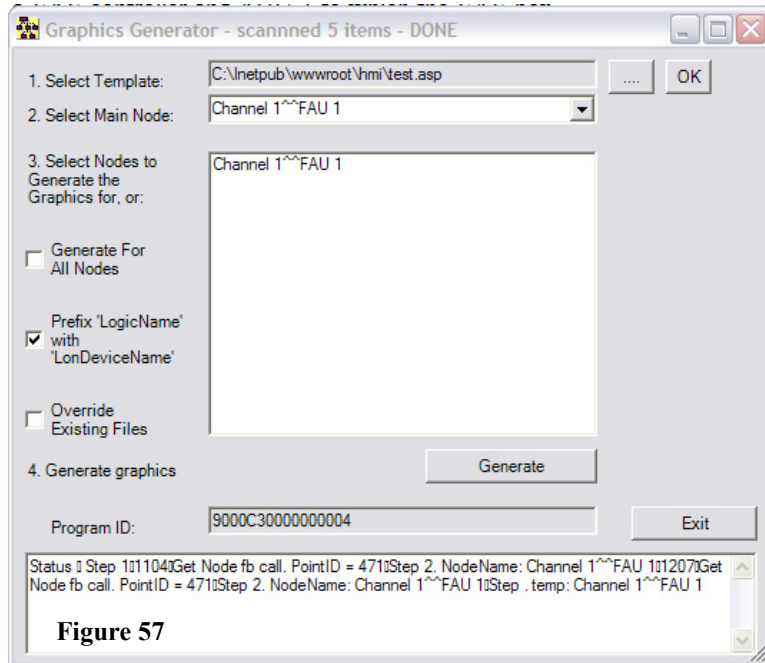
3.0 Graphics

3.1 Graphic Generator

Suppose we've created the graphics (Template) for a Variable Air Volume (VAV) box, that is, we've created an **.asp** page graphical interface in **Dreamweaver** as described in the **Creating Graphics** section. There are 99 VAV's on our project and they are fed by 3 Air Handling Units (AHU). Our **.asp** Template page will include points specific to a VAV controller and AHU-1 to which the VAV box belongs. Once the Template Graphics are complete, debugged, and properly mapped to points in the database, we can use the Graphics Generator to automatically import points and create graphics for all of the VAV's. It is critical that all points used in the **.asp** Template are fully defined, including alarm configuration, trending, logic names, alarm notification, and digital point configuration. The Graphics Generator will import points for all nodes based on these points used in the **.asp** Template. In this process, the Graphics

Generator will search the **LNS Database** for nodes with the same **Program ID** and create graphics based on the Template Graphic you initially created. The steps are as follows:

1. Create Template Graphic (*.asp page)
2. Launch the **LNSConfig** application. Click on **Graphics,GenerateGraphics**. The **GraphicGenerator** window will pop up(**Figure 57**).



3. Click **Browse...**, Select the Template **.asp** page you will use to generate graphics. then click **OK**.
4. Select the **Main Node** from the drop down box. This node will be used as a template to find other nodes. This will find other nodes with identical **Program IDs**. All nodes with identical **Program IDs** will be displayed in the large text box. Hold down the **Ctrl** key and click on nodes for which you want to generate graphics, or alternately, select the **Generate For All Nodes** checkbox to generate graphics for all listed nodes. All graphics will be generated and stored in the directory where the **.asp** Template is located. If the web page contains points linked to the Main Node then the Graphics Generator will import and configure the necessary points from the target nodes if they do not already exists. Graphic names will consist of the **.asp** Template name, channel name, and device name

4.0 Global Override

The ***Global Override*** is a utility that can, when given a network input variable, or config property name and value will override the same network input variable, or config property in all chosen devices with the same ***Program ID***.

4.1 Network Variables

1. To start the ***Global Override*** utility for variables, start the LNS config and click on ***GlobalOverride, Variables***.

2. The *Variable GlobalOverride* utility will start.

Network Variable Global Override

1.) Choose a Network Variable

GetChannels

Channels	Devices	Variables

Program ID FuncProfileName
Comitioned FunProfileProgName
VariableName
ProgName
Selector
DSFormatType
Index

2.) Modify the Value to be written:

Value

3.) Select Channels and devices to be written

GetDevices

Variables are written based on Device Program ID, and Variable Index of the Device/Variable selected in step 1.

WRITE

3. Click on the *GetChannels* button.

Network Variable Global Override

1.) Choose a Network Variable

GetChannels

Channels	Devices	Variables
Channel 1 Channel 2		

Program ID FuncProfileName

Comitioned FunProfileProgName

VariableName

ProgName

Selector

DSFormatType

Index

2.) Modify the Value to be written:

Value

3.) Select Channels and devices to be written

GetDevices

Variables are written based on Device Program ID, and Variable Index of the Device/Variable selected in step 1.

WRITE

4. All the channel's on network will show in the **Channels** list. Choose the channel of the device you wish to use as your template.

Network Variable Global Override

1.) Choose a Network Variable

GetChannels

Channels
Channel 1
Channel 2

Devices

Variables

Program ID

Comitioned

FuncProfileName

FunProfileProgName

VariableName

ProgName

Selector

DSFormatType

Index

2.) Modify the Value to be written:

Value

3.) Select Channels and devices to be written

GetDevices

Variables are written based on Device Program ID, and Variable Index of the Device/Variable selected in step 1.

WRITE

5. All the devices on that channel will show in the **Device** list. Choose the device you wish to use as your template.

Network Variable Global Override

1.) Choose a Network Variable

GetChannels

Channels

- Channel 1
- Channel 2

Devices

- LNS Network Interface
- FC H1-1 Rm101
- FC H1-2 Rm118B
- FC H1-3 Rm112
- FC H1-4 Rm114
- FC H1-5 Rm126
- FC H1-6 Rm130
- FC H1-7 Rm133
- BC H1-7 Rm203C
- BC H1-1 Rm125
- BC H1-2 Rm108
- BC H1-3 Rm121

Variables

Program ID

Comitioned

FuncProfileName

FunProfileProgName

VariableName

ProgName

Selector

DSFormatType

Index

2.) Modify the Value to be written:

Value

3.) Select Channels and devices to be written

GetDevices

Variables are written based on Device Program ID, and Variable Index of the Device/Variable selected in step 1.

WRITE

6. All the network variables for that device will show in the **Variables** list. Choose the variable you wish to use as your template.

Network Variable Global Override

1.) Choose a Network Variable

GetChannels

Channels	Devices	Variables
Channel 1	LNS Network Interface	0 nvoFileDirectory
Channel 2	FC H1-1 Rm101	1 nviDampCalib
	FC H1-2 Rm118B	2 nviRmStpnt
	FC H1-3 Rm112	3 nviSBHtgSP
	FC H1-4 Rm114	4 nviSBClngSP
	FC H1-5 Rm126	5 nviOcc
	FC H1-6 Rm130	6 nviAhuMode
	FC H1-7 Rm133	7 nviCValveOvr
	BC H1-7 Rm203C	8 nviHValveOvr
	BC H1-1 Rm125	9 nviDampOvr
	BC H1-2 Rm108	10 nviClrRunHrs
	BC H1-3 Rm121	11 nviOSATemp

Program ID: 9000C35014040405

Comitioned: 0

FuncProfileName

FunProfileProgName

VariableName

ProgName

Selector

DSFormatType

Index

2.) Modify the Value to be written:

Value

3.) Select Channels and devices to be written

GetDevices

Variables are written based on Device Program ID, and Variable Index of the Device/Variable selected in step 1.

WRITE

7. The variable value will show in the **Value** box. Modify the value to the new value you wish to use as your template. Click the **GetDevices** button.

Network Variable Global Override

1.) Choose a Network Variable

GetChannels

Channels	Devices	Variables
Channel 1	LNS Network Interface	0 nvoFileDirectory
Channel 2	FC H1-1 Rm101	1 nviDamperCalib
	FC H1-2 Rm118B	2 nviRmStpnt
	FC H1-3 Rm112	3 nviSBHtgSP
	FC H1-4 Rm114	4 nviSBClngSP
	FC H1-5 Rm126	5 nviOcc
	FC H1-6 Rm130	6 nviAhuMode
	FC H1-7 Rm133	7 nviCValveOvr
	BC H1-7 Rm203C	8 nviHValveOvr
	BC H1-1 Rm125	9 nviDamperOvr
	BC H1-2 Rm108	10 nviClrRunHrs
	BC H1-3 Rm121	11 nviOSATemp

Program ID: 9000C35014040405
Comitioned: 0

2.) Modify the Value to be written:

Value: OC_OCCUPIED

3.) Select Channels and devices to be written

GetDevices

FuncProfileName:
FunProfileProgName:
VariableName: nviOcc
ProgName: nviOcc
Selector: 16378
DSFormatType: SNVT_occupancy
Index: 5

Variables are written based on Device Program ID, and Variable Index of the Device/Variable selected in step 1.

WRITE

9. When the target devices have been selected click the **WRITE** button to override the variables with the new value.

Network Variable Global Override

1.) Choose a Network Variable

GetChannels

Channels	Devices	Variables
Channel 1	LNS Network Interface	0 nviFileDirectory
Channel 2	FC H1-1 Rm101	1 nviDamperCalib
	FC H1-2 Rm118B	2 nviRmStpnt
	FC H1-3 Rm112	3 nviSBHtgSP
	FC H1-4 Rm114	4 nviSBClngSP
	FC H1-5 Rm126	5 nviOcc
	FC H1-6 Rm130	6 nviAhuMode
	FC H1-7 Rm133	7 nviCValveOvr
	BC H1-7 Rm203C	8 nviHValveOvr
	BC H1-1 Rm125	9 nviDamperOvr
	BC H1-2 Rm108	10 nviClrRunHrs
	BC H1-3 Rm121	11 nviOSATemp

Program ID: 9000C35014040405

Comitioned: 0

FuncProfileName:

FunProfileProgName:

VariableName: nviOcc

ProgName: nviOcc

Selector: 16378

DSFormatType: SNVT_occupancy

Index: 5

2.) Modify the Value to be written:

Value: OC_OCCUPIED

3.) Select Channels and devices to be written

GetDevices

Channel 1 - BC W2-2 Rm114

Channel 1 - FC B1-1

Channel 1 - FC B1-2

Channel 1 - FC B1-3

Channel 1 - FC B1-4

Channel 1 - FC B2-1

Channel 1 - FC H1-1 Rm101

Channel 1 - FC H1-2 Rm118B

Channel 1 - FC H1-3 Rm112

Channel 1 - FC H1-4 Rm114

Channel 1 - FC H1-5 Rm126

Channel 1 - FC H1-6 Rm130

Channel 1 - FC H1-7 Rm133

Channel 1 - FC W2-1 Rm101

Channel 1 - FC W2-2 Rm117

Channel 1 - FC W2-3 Rm102

Channel 1 - FC W2-4 Rm105

Channel 1 - FC W2-5 Rm112

Channel 1 - FC W2-6 Rm108

Channel 1 - FC W2-7 Rm105

Variables are written based on Device Program ID, and Variable Index of the Device/Variable selected in step 1.

WRITE

4.2 Config Properties

The **Config Properties Global Override** utility works just like the **Network Variable Global Override**, only it works on configuration properties of a device. Please refer the above section for details.

5.0 Report Generator

The **Global Variable Report Generator** is a utility that can, when given a list of devices and network variables will generate an XML file with a snap shot of all the listed device's choose variable values. This XML file can then be imported into a spreadsheet editor (such as Microsoft Excel) or other program to make graphs or tabulate data or just have the raw data reviewed natively.

5.1 Variables

1. To start the **Variable Report Generator** utility for variables, start the LNS config and click on **ReportGenerator, Variables**.

2. The *Variable Report Generator* utility will start.

The screenshot shows a Windows-style application window titled "VariableReport". The window has a blue title bar with standard minimize, maximize, and close buttons. The main content area is divided into sections. The first section, "1.) Choose a Network Variable", contains a "GetChannels" button and three large empty rectangular boxes labeled "Select a Channel:", "Select a Device:", and "Select Variables:". Below these boxes are several input fields: "Program ID", "Comitioned", "FuncProfileName", "FunProfileProgName", "VariableName", "ProgName", "Selector", "DSFormatType", and "Index". The second section, "3.) Select Channels and devices to report", contains a "GetDevices" button and a large empty rectangular box. A prominent red button labeled "READ" is located in the bottom right corner of the window.

3. Click on the **GetChannels** button.

The screenshot shows the 'VariableReport' application window. The title bar is blue with standard Windows window controls. The main area has a light beige background. At the top, it says '1.) Choose a Network Variable'. Below this, there is a 'GetChannels' button, which is circled in red. Underneath the button are three empty rectangular boxes labeled 'Select a Channel:', 'Select a Device:', and 'Select Variables:'. To the right of these boxes are several input fields: 'FuncProfileName', 'FunProfileProgName', 'VariableName', 'ProgName', 'Selector', 'DSFormatType', and 'Index'. Below these fields are two more input fields labeled 'Program ID' and 'Comitioned'. At the bottom left, there is a section titled '3.) Select Channels and devices to report' with a 'GetDevices' button and a large empty rectangular box. In the bottom right corner, there is a red button labeled 'READ'.

4. All the channel's on network will show in the **Channels** list. Choose the channel of the device you wish to use in your report.

The screenshot shows the 'VariableReport' application window. The title bar includes standard Windows window controls. The main content area is divided into several sections:

- 1.) Choose a Network Variable**: This section contains a 'GetChannels' button and three selection areas: 'Select a Channel:', 'Select a Device:', and 'Select Variables:'. The 'Select a Channel:' list is circled in red and contains 'Channel 1' and 'Channel 2'.
- 3.) Select Channels and devices to report**: This section contains a 'GetDevices' button and a large empty list box.
- Form Fields**: On the right side, there are several input fields for 'FuncProfileName', 'FunProfileProgName', 'VariableName', 'ProgName', 'Selector', 'DSFormatType', and 'Index'. In the center, there are fields for 'Program ID' and 'Comitioned'.
- READ Button**: A prominent red button labeled 'READ' is located in the bottom right corner.

5. All the devices on that channel will show in the **Device** list. Choose the device you wish to use in your report.

VariableReport

1.) Choose a Network Variable

GetChannels

Select a Channel:

- Channel 1
- Channel 2

Select a Device:

- LNS Network Interface
- FC H1-1 Rm101
- FC H1-2 Rm118B
- FC H1-3 Rm112
- FC H1-4 Rm114
- FC H1-5 Rm126
- FC H1-6 Rm130
- FC H1-7 Rm133
- BC H1-7 Rm203C
- BC H1-1 Rm125
- BC H1-2 Rm108
- BC H1-3 Rm121

Select Variables:

FuncProfileName

FunProfileProgName

VariableName

ProgName

Selector

DSFormatType

Index

Program ID

Comitioned

3.) Select Channels and devices to report

GetDevices

READ

6. All the network variables for that device will show in the **Variables** list. Choose the variable's you wish to have in your report. You can hold the **Shift** and **Ctrl** buttons to modify you selections.

The screenshot shows the 'VariableReport' application window. The title bar is blue with the text 'VariableReport' and standard window controls. The main area is titled '1.) Choose a Network Variable'. It contains three lists: 'Select a Channel:' with 'Channel 1' and 'Channel 2'; 'Select a Device:' with 'LNS Network Interface' and a list of FC and BC units; and 'Select Variables:' which is circled in red and contains a list of 11 variables from '0 nvoFileDirectory' to '11 nviOSATemp'. Below these lists are input fields for 'Program ID' (9000C35014040405), 'Comitioned' (0), 'FuncProfileName', 'FunProfileProgName', 'VariableName', 'ProgName', 'Selector', 'DSFormatType', and 'Index'. At the bottom right is a large red 'READ' button.

VariableReport

1.) Choose a Network Variable

GetChannels

Select a Channel:

- Channel 1
- Channel 2

Select a Device:

- LNS Network Interface
- FC H1-1 Rm 101
- FC H1-2 Rm 118B
- FC H1-3 Rm 112
- FC H1-4 Rm 114
- FC H1-5 Rm 126
- FC H1-6 Rm 130
- FC H1-7 Rm 133
- BC H1-7 Rm 203C
- BC H1-1 Rm 125
- BC H1-2 Rm 108
- BC H1-3 Rm 121

Select Variables:

- 0 nvoFileDirectory
- 1 nviDamperCalib
- 2 nviRmStprnt
- 3 nviSBHtgSP
- 4 nviSBChgSP
- 5 nviOcc
- 6 nviAhuMode
- 7 nviCValveOvr
- 8 nviHValveOvr
- 9 nviDamperOvr
- 10 nviClrRunHrs
- 11 nviOSATemp

Program ID: 9000C35014040405

Comitioned: 0

FuncProfileName

FunProfileProgName

VariableName

ProgName

Selector

DSFormatType

Index

3.) Select Channels and devices to report

GetDevices

READ

7. Click the *GetDevices* button.

VariableReport

1.) Choose a Network Variable

GetChannels

Select a Channel:

- Channel 1
- Channel 2

Select a Device:

- LNS Network Interface
- FC H1-1 Rm101
- FC H1-2 Rm118B
- FC H1-3 Rm112
- FC H1-4 Rm114
- FC H1-5 Rm126
- FC H1-6 Rm130
- FC H1-7 Rm133
- BC H1-7 Rm203C
- BC H1-1 Rm125
- BC H1-2 Rm108
- BC H1-3 Rm121

Select Variables:

- 0 nvoFileDirectory
- 1 nviDamperCalib
- 2 nviRmStprnt
- 3 nviSBHtgSP
- 4 nviSBCIngSP
- 5 nviOcc
- 6 nviAhuMode
- 7 nviCValveOvr
- 8 nviHValveOvr
- 9 nviDamperOvr
- 10 nviClrRunHrs
- 11 nviOSATemp

Program ID: 9000C35014040405

Comitioned: 0

FuncProfileName

FunProfileProgName

VariableName

ProgName

Selector

DSFormatType

Index

3.) Select Channels and devices to report

GetDevices

READ

8. All the devices on the network that match the **Program ID** of the template device will show in the list below the **GetDevices** button. Choose the devices you wish add to your report. You can hold the **Shift** and **Cntrl** buttons to modify you selections.

The screenshot shows the 'VariableReport' application window. It has a blue title bar and standard Windows window controls. The main area is divided into sections for configuring a report.

1.) Choose a Network Variable

- GetChannels** button
- Select a Channel:** A list box showing 'Channel 1' and 'Channel 2'.
- Select a Device:** A list box showing various devices like 'LNS Network Interface', 'FC H1-1 Rm 101', etc.
- Select Variables:** A list box showing variables like '1 nviDamperCalib', '2 nviRmStpnt', etc.
- Program ID:** A text field containing '9000C35014040405'.
- Comitioned:** A text field containing '0'.
- FuncProfileName:** An empty text field.
- FunProfileProgName:** An empty text field.
- VariableName:** An empty text field.
- ProgName:** An empty text field.
- Selector:** An empty text field.
- DSFormatType:** An empty text field.
- Index:** An empty text field.

3.) Select Channels and devices to report

- GetDevices** button
- A large list box containing a long list of channels and devices, such as 'Channel 1 -> FC H1-1 Rm 101', 'Channel 1 -> FC H1-2 Rm 118B', etc. This list box is highlighted with a red circle.
- READ** button

9. When the target devices have been selected click the **READ** button to generate the report with containing the selected devices and variables.

The image shows the 'VariableReport' software window. It has a blue title bar with the text 'VariableReport' and standard window controls. The main area is divided into sections for configuration and selection.

1.) Choose a Network Variable

This section contains three lists and several input fields:

- Select a Channel:** A list with 'Channel 1' and 'Channel 2'. 'Channel 1' is selected.
- Select a Device:** A list with 'LNS Network Interface' and a scrollable list of devices including 'FC H1-1 Rm101', 'FC H1-2 Rm118B', 'FC H1-3 Rm112', 'FC H1-4 Rm114', 'FC H1-5 Rm126', 'FC H1-6 Rm130', 'FC H1-7 Rm133', 'BC H1-7 Rm203C', 'BC H1-1 Rm125', 'BC H1-2 Rm108', and 'BC H1-3 Rm121'. 'FC H1-1 Rm101' is selected.
- Select Variables:** A list with 12 variables including '1 nviDamperCalib', '2 nviRmStpnt', '3 nviSBHtgSP', '4 nviSBCInqSP', '5 nviOcc', '6 nviAhuMode', '7 nviCValveOvr', '8 nviHValveOvr', '9 nviDamperOvr', '10 nviClrRunHrs', '11 nviOSATemp', and '12 nvoCHWValve'. '2 nviRmStpnt', '3 nviSBHtgSP', '4 nviSBCInqSP', '5 nviOcc', '6 nviAhuMode', '7 nviCValveOvr', '8 nviHValveOvr', and '9 nviDamperOvr' are selected.
- Input fields:** 'FuncProfileName', 'FunProfileProgName', 'VariableName', 'ProgName', 'Selector', 'DSFormatType', and 'Index' are empty. 'Program ID' is '9000C35014040405' and 'Comitioned' is '0'.

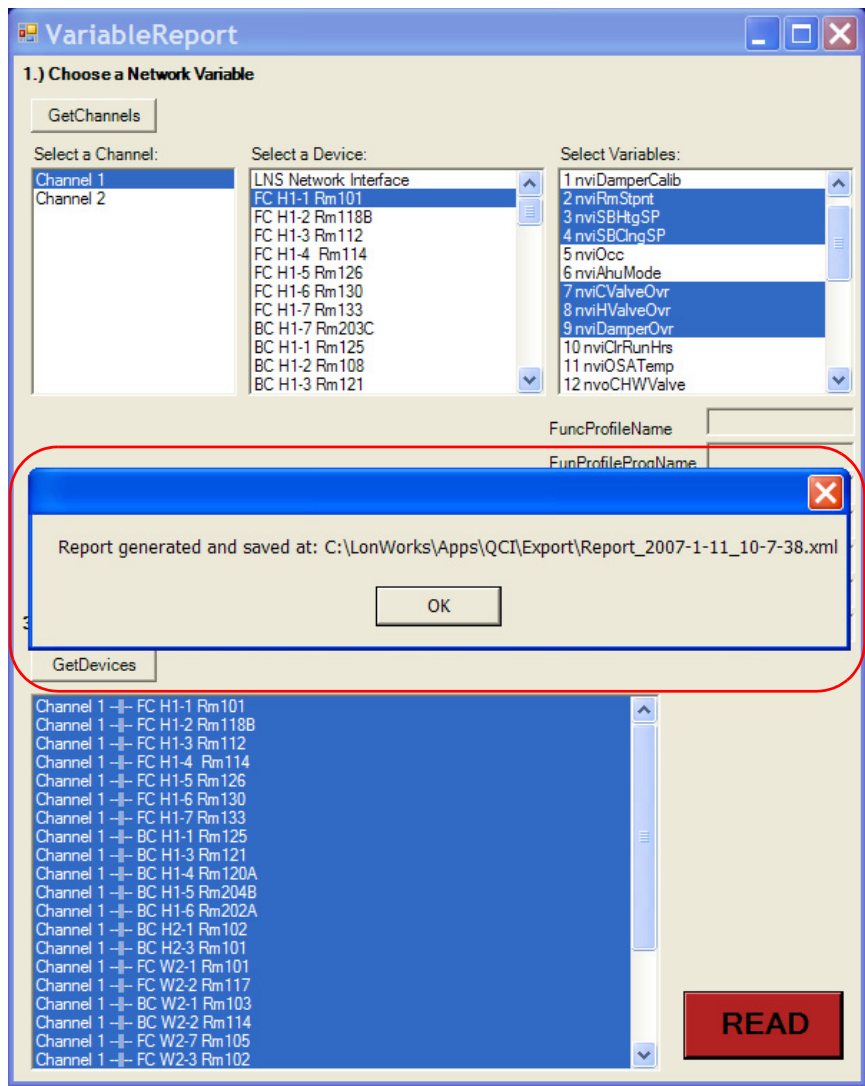
3.) Select Channels and devices to report

This section contains a 'GetDevices' button and a large list of selected items, each preceded by a minus sign in a square box. The list includes:

- Channel 1 - FC H1-1 Rm101
- Channel 1 - FC H1-2 Rm118B
- Channel 1 - FC H1-3 Rm112
- Channel 1 - FC H1-4 Rm114
- Channel 1 - FC H1-5 Rm126
- Channel 1 - FC H1-6 Rm130
- Channel 1 - FC H1-7 Rm133
- Channel 1 - BC H1-1 Rm125
- Channel 1 - BC H1-3 Rm121
- Channel 1 - BC H1-4 Rm120A
- Channel 1 - BC H1-5 Rm204B
- Channel 1 - BC H1-6 Rm202A
- Channel 1 - BC H2-1 Rm102
- Channel 1 - BC H2-3 Rm101
- Channel 1 - FC W2-1 Rm101
- Channel 1 - FC W2-2 Rm117
- Channel 1 - BC W2-1 Rm103
- Channel 1 - BC W2-2 Rm114
- Channel 1 - FC W2-7 Rm105
- Channel 1 - FC W2-3 Rm102

A red circle highlights a large red button labeled **READ** in the bottom right corner of the window.

10. When the report is done being created a pop up box will display with the location of the XML file.



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