Lookout™ Release Notes

Version 5.1

Welcome to Lookout 5.1, the National Instruments human machine interface (HMI) and supervisory control and data acquisition (SCADA) software system. This document describes installation, new features, and known issues.

For detailed information on the new features in Lookout 5.1, consult your online and printed documentation. For the latest information not included in this document, refer to the readme.txt file on your Lookout CD.

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NATIONAL INSTRUMENTS™

System Requirements

Lookout requires the following:

- Pentium class or equivalent PC running at 90 MHz or faster

- At least 32 MB RAM

- 65 MB free disk space, plus possibly 100 MB or more, depending on how much historical data you intend to log to the Citadel storage system; you should also have about 50 MB of disk space for file swapping on Windows 2000/NT/XP computers

- Windows 2000, Windows NT version 4.0 (with Service Pack 6), Windows XP, or Windows Me/98; National Instruments strongly recommends using Windows 2000/NT/XP for optimum stability

- Monitor display setting of at least 800×600 pixels

- Network card and TCP/IP networking installed on the computers you want to connect, if you intend to take advantage of Lookout networking

Note Performance of Lookout depends on the number, size, and complexity of processes you are running. While the minimum requirements are fine for some processes, you should plan on using more powerful computer configurations for complex and data intensive applications.

- You must be properly set up on a network with TCP/IP protocols installed if you want to use the networking capabilities of Lookout. You must be able to ping any computer on your network that you intend to have as a part of your Lookout network. To test this, access a command prompt and enter the following command:

  `Ping compname`

  where `compname` is the name of the computer you want to ping.

  If TCP/IP is functioning properly on your computer, you should receive a response that looks something like the following example:

  Pinging *compname* [123.45.67.89] with 32 bytes of data:

  Reply from 123.45.67.89: bytes=32 time<10ms TTL=128

  Reply from 123.45.67.89: bytes=32 time<10ms TTL=128

  Reply from 123.45.67.89: bytes=32 time<10ms TTL=128

  Reply from 123.45.67.89: bytes=32 time<10ms TTL=128

If TCP/IP is not working properly on your computer, consult your system administrator. Refer to the *Lookout Developer's Manual* for more information on networking and network configuration with Lookout.

Tip If your computer does *not* have a command prompt available in the Windows **Start** menu or in **Start»Programs**, select **Start»Run** and enter `command.com` in the **Run** dialog box. This opens a command prompt you can use for the `ping` command.

Installation

Installing Lookout is more than just copying files to your computer. You must register Lookout for long-term use of your I/O points, and for instances of Lookout that are intended to run server processes, you also must register to activate your client connections. There are also a number of Lookout system configuration options you should set when you install. If you plan on networking with Lookout, you also should test to make sure TCP/IP is present and running on all the computers you intend to use.

For detailed information about requirements, installation steps and options, registration, keycodes, and licenses, refer to Chapter 1, *Introduction to Lookout*, of the *Lookout Developer's Manual*.

Installing onto Computers with Existing Versions of Lookout

- **(Lookout 3.8 or earlier)** Avoid installing Lookout 5.1 over Lookout 3.8 or earlier. Either uninstall Lookout 3.8, or put Lookout 5.1 in a new directory. You can then move or copy Lookout 3.8 process files to the Lookout 5.1 directory.

- **(Lookout 4.0 or later)** You can run these versions and Lookout 5.1 on the same computer.

Installing

Complete the following steps to install Lookout:

1. Run the Lookout `setup.exe`. If you are installing from a Lookout CD, insert the CD in your CD-ROM drive. If your computer has the AutoPlay feature enabled, the installation begins automatically. If your system does not use AutoPlay, run `x:\Lookout\setup.exe` where `x` is the letter of your CD-ROM drive.

2. Follow the onscreen instructions.

3. Reboot your computer.

Registering Lookout

If you purchased a previous version of Lookout from National Instruments, your earlier registration keycode will work to maintain your I/O licensing. However, you must register your client connections separately. Get your client connection keycode (and an upgraded I/O point keycode as well, if necessary) by registering Lookout with National Instruments. Refer to

Chapter 1, *Introduction to Lookout*, of the *Lookout Developer's Manual* for more information about registering Lookout and getting your keycode. Otherwise, you can use Lookout unregistered, which limits you to 50 I/O points for 30 days.

Uninstalling Lookout

To uninstall Lookout, select **Start»Settings»Control Panel» Add/Remove Programs**. Select **National Instruments Software** and choose to remove **NI Lookout 5.1**.

What's New in Lookout 5.1

The following additions and changes are included in Lookout 5.1.

Support for International Character Sets

Lookout 5.1 supports international character sets such as Chinese, Korean, and Japanese, as follows:

- Text constants such as popup messages, descriptions, and labels support international characters.

- Tag values or data member values support international characters. Multi-byte character strings can be transferred from one object to another.

- Text values for data logging support international characters. Descriptions for alarms and events, including prefix and suffix, support international characters. However, alarm **Area** names do not. Logged international characters are stored in the Citadel historical database, and you can query this historical data in Lookout or using third-party ODBC clients.

- Parameters in Lookout text functions, such as `Find()`, support international characters.

- Lookout file and path names support international characters. However, Windows does not allow international characters as part of a computer name. Also, Citadel database logging paths cannot contain international characters.

- International characters cannot be used in any string that might be part of a tag name, including the name of a tag, process, object, folder, data member, or alias. For more information about valid tag names, refer to the naming guidelines in the *Steps to Create an Object* section of Chapter 5, *Creating Lookout Processes*, of the *Lookout Developer's Manual*.

- The Alarm Filters dialog box supports international characters in each field. However, if you input international characters in any field other than **Description**, no alarms will match your selection.

- Both the DataTable and SQLExec objects support international characters in SQL commands.

- The Spreadsheet object supports international characters for both file names and data fields.

- User Account Manager does not support international character sets, so user names, group names, and passwords must not include international characters.

- Text expressions support international characters.

- DDE text, with either a DDE server or client, supports international characters.

Function Browser Tool

The new function browser feature allows you to browse for Lookout operators and functions instead of manually typing them into a field. The function browser is available in two locations:

- When you choose **Insert»Expressions**, the **Edit Expression** dialog box appears with a new **Functions** button.

- When you choose **Object»Edit Connections**, the **Edit Connections** dialog box appears with a **Functions** button.

Place your cursor in the expression field where you want to paste a function or operator. Click the **Functions** button in this dialog box to open the function browser dialog box. When you choose a function or operator and click **OK**, your selection is pasted in at the current cursor position.

The function browser dialog box is shown in the following illustration.
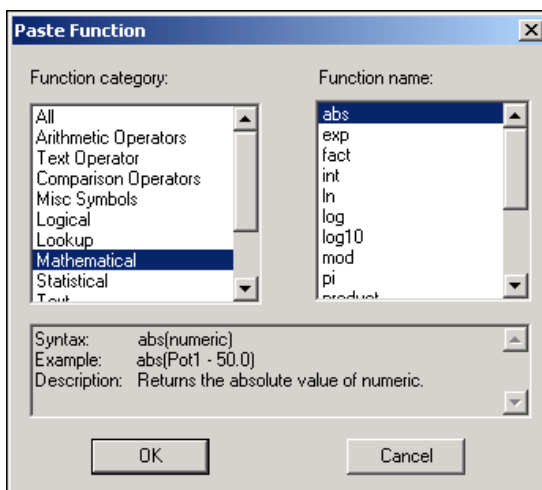
Tracer Object

Use the new Tracer object as a debugging tool to monitor and log Lookout messages passed from one object to another. The Tracer object reports every message connected to the **From** and **To** data members. You can monitor entire processes, all the objects in a folder, or a single data member. You can log these messages to a text file. For more information about the Tracer object, refer to the *Lookout Help*.

Hitachi_EH150 Object

Use the Hitachi_EH150 object to communicate with Hitachi EH-150 series devices using the serial or Ethernet protocol. For more information about the Hitachi_EH150 object, refer to the *Lookout Help*.

OPCClient Object Compatibility with OPC 2.0

The OPCClient object is now compliant with OPC version 2.0 and can be used with either version 1.0 or 2.0 of the OPC specification. The **OPC Version** parameter allows you to choose between OPC server versions 1.0 or 2.0.

Using the new **Reconnect Automatically** parameter, you can configure the OPCClient object to reconnect after the **ServerDown** data member goes HIGH. For more information about the OPCClient object, refer to the *Lookout Help*.

Toshiba Object OffHook Data Member

The ToshibaMseries and ToshibaTseries objects include a new OffHook data member. You can use the OffHook data member to have the PLC retain exclusive use of its assigned communication port. For more information about the Toshiba objects, refer to the *Lookout Help*.

$Alarm Object ClearEvent Data Member

The $Alarm object has a new data member, **ClearEvent**, that clears events in the Alarms Window programmatically when it transitions from False to True. For more information about the $Alarm object, refer to the *Lookout Help*.

ModbusOmni Object ASCII Data Members

The ModbusOmni object includes new 4001–4999 ASCII data members. For more information about the ModbusOmni object, refer to the *Lookout Help*.

Mitsubishi FX Object Expanded Data Member Range

The Mitsubishi FX object's D0–D2999 data member has been expanded to D0–D7999. For more information about the Mitsubishi object, refer to the *Lookout Help*.

FieldPoint Object New Data Members

The FieldPoint driver object includes new data members to support the latest FieldPoint hardware modules. For more information about the FieldPoint object, refer to the *Lookout Help*.

Known Issues

The following known issues exist for Lookout 5.1. Internal tracking codes are shown in parentheses for applicable issues.

User Cannot Change Passwords

Lookout 3.8 allowed users to change their own passwords. With Lookout 4.*x* and later, users cannot change their own passwords. However, if an Administrator sets up the password to expire, the user is prompted to change the password when it expires. (2UQDTDE9)

Pushbutton Behavior with Lookout WebBrowser

If a Pushbutton is connected to the `saveAs` data member of the Lookout WebBrowser ActiveX, it stays pressed in when you click it. To release it, click it again. (2V5DL402)

Deleting Objects in Connection Browser Causes Crash on Windows 98/Me

Deleting an orphan object at the bottom of the Connection Browser can crash Lookout. To avoid a crash, you can delete the object from Object Explorer. (2UN2RK00)

Cannot Change Position of Minimized Panel

If a panel is minimized, you cannot programmatically change its position. Changes to its `X` and `Y` data members are ignored. If you want to use pushbuttons to open a panel in more than one location, create two panels that look the same but open in different locations. (2UIEAACP)

ActiveX Pipe Control Appearance Changes

ActiveX pipe controls in Lookout show white lines around the object border. When you save and reopen the process, the RelX and RelY settings in the Property Pages are changed. (2UGH8TR3)

Old Alarms Filter Does Not Work in Clients

The **Old Alarms** settings in the Alarm Filters dialog box does not work in a Lookout client. The Lookout client does not save old alarms. (2QLDR6A3)

Tiway.cbx Does Not Limit Request Length to 70 Bytes for FACTS 405 Network

When using a TI 435 PLC with a 405 FACTS network, there is a 70 byte response limit. One Tiway object with multiple connections and I/O points might cause the PLC to go offline. The Lookout Tiway driver object does not enforce this limitation. To avoid exceeding the 70 byte response limit, create multiple Tiway objects, each of which requests only a few data members or values. (2NT882PE)

Listbox ActiveX Object Does Not Work in String Compares with =

When a Lookout Listbox ActiveX object is used in an expression with =, the expression does not evaluate correctly. For example, `ListBox1.properties.selectedItem="Text1"` is not TRUE when it should be. Use an `EXACT(Text1, Text2)` function instead, which returns TRUE when Text1=Text2. (2MGDMCI1)

Loading New Recipe Prevents State File Save

If you have edit access to a process in a development version of Lookout, loading a new recipe, which is a process change, prevents Lookout from saving the state file. Select **File»Save** to save the process after loading the recipe file, and Lookout will save the state file properly. Run-time versions of Lookout do not have this problem. (2ICAIECC)

Second DataTable Connected via DDE Does Not Shrink

A second DataTable connected to a source DataTable through DDE will not shrink when the source table shrinks. If the number of rows in the source DataTable is reduced, the second DataTable receives the new data but does not clear the extra rows of old data. To avoid this problem, use the `enable` data member to disable and re-enable the second DataTable whenever the source DataTable changes size. (25TEA49L)

Lookout Panel Function Keys Behave Like Pushbuttons

Lookout Panel function keys act like switches instead of pushbuttons. A data member stays active after being activated. (2EACD8PE)

Pager Message Does Not Work if # Required by Numeric Pager Service

The Pager object might not send a message to a numeric pager service that asks for # key at end of message. To send a message to a numeric pager that uses the # key to indicate the end of the message, put the phone number and message in the phone number field separated by commas, and leave the message field empty. (2ET9BFCC)

Moving Window Over Custom .wmf Graphic Distorts Image

If you drag another window over some custom `.wmf` graphics on a control panel, the graphic might appear partially erased. Minimize and restore the control panel to redraw the graphic. (2G39SQ26)

CitadelControl Object Does Not Log Over Network

You cannot use the CitadelControl object to log data remotely over the network. (29MCRKMV)

Displays that are Outside the Screen Area

If you move a display off the screen, you cannot delete it from Object Explorer due to remaining dependencies. Either edit the display coordinates in the `.lks` file or increase the screen size to make the display visible again. (1XF9K97F)

Lookout Control Sources and Refresh Value Operations

A Lookout control with a **Local** source and a direct connection does not change if something acts to alter the value or status of the PLC or object it is connected to. Instead, Lookout restores the control value to the PLC or object in the following circumstances:

- When the driver object is modified or I/O is reconfigured
- When the process is reloaded
- When communication is restored after a communications failure
- After 100 polls in some cases (this varies from driver to driver and might depend on `.ini` file settings)

If you operate a Lookout control with a **Remote** source connection, and the PLC register it is connected to cannot or does not change when Lookout writes the new value out to the PLC, the control snaps back to display the actual PLC register value or status. Whether or not this problem occurs depends on data transmission time between your Lookout computer and the field hardware. To prevent this problem, Lookout has built-in delays for most driver objects. The following driver objects do not have a built-in delay.

- AdvantechPCL
- DeltaTau
- Dynamic
- ProfibusDP
- ProfibusL2
- Reliance
- Sixnet
- Wizdom

The following two driver objects do not support remote source connections at all because the underlying protocols do not allow this sort of connection:

- Aquatrol
- DeviceNet

Another way to correct snap-back problems caused by slow communication is to adjust the SnapDelay setting that is available with some control objects. For Switch and Pushbutton objects, use the SnapDelay data member; for the Pot object, use the SnapDelay `lookout.ini` setting.

Connection Browser Open with No Processes Visible

Occasionally the Connection Browser might open with no processes visible in the window. Close the Connection Browser and then reopen it. This usually clears the problem. If for some reason it does not, close the Connection Browser again and make sure you select a process in your Object Explorer before reopening the Connection Browser.

CWUI ActiveX 3-D Control License Problems

If you load a Lookout 5 process with Lookout CWUI ActiveX 3-D controls and attempt to edit those controls, you can develop a problem with the license for those controls. To avoid this difficulty, load the Lookout 5 process and immediately save it in order to force the control license to update. You can then edit the controls with no problem.

Missing Aggregate Definitions

If you load a process that includes an Aggregate object, but the corresponding aggregate definition is unavailable, the Aggregate does not function properly. It appears in the Object Explorer as expandable, but it does not expand. (270DIAYZ)

Administrator Access Needed to Download Lookout Player

If you want to use the Lookout Web Client feature on a computer running Windows 2000/NT/XP, you must have administrator privileges to install the Lookout Player component of the Web Client. After the Lookout Player is installed, administrator privileges are not necessarily required to use the Lookout Web Client successfully.

Pot Connected to an FP-2010 Can Fluctuate

When you change the value of a Pot object that is remotely connected to a published data member of the FieldPoint FP-2010, the Pot can fluctuate in value before it reaches its final state. To address this problem, try changing the `snapDelay` setting in the `lookout.ini` file. Refer to the *Lookout Help* for more information on this setting. (28I89I7M)

ToshibaTSeries Sets PLC Values to 0

If the ToshibaTSeries object does a write before a read, it sets all the PLC values to 0. (1V5HS5M0)

Web Clients and the Sequencer Object

If you use the Web Client to browse a Lookout process that uses a Sequencer, and you browse to another URL while the Sequencer is active, Lookout might stop the process and reset the Sequencer, inserting a huge wait value in the active sequence step. Avoid using the Web Client with Lookout processes that use a Sequencer object. (28FGCNBD)

Pulse Object Erratic Behavior

The Lookout Pulse object might operate erratically, including missing some pulses, if you use period or duration numbers that are not simple. Using an expression to calculate a pulse period or duration is one way to encounter this problem; using too precise a number such as 1.26 seconds is another way. (28B89NBD)

Including Custom Graphics when You Deploy

Remember that graphics are not included in Lookout source files (`.lks`). When you move processes from one computer to another, you must copy all graphics, including custom graphics. (2D6F3BDF)

Expression Displays that Automatically Resize

Lookout resizes expression displays when reopening a project. If an expression value has more characters than can be displayed in the given size of the expression display, it shows `####`. If you close the project and reopen it, Lookout automatically resizes the expression display so that the string stored in the state file fits. This can be a significant problem if, for example, an expression is displaying input that is several hundred characters long. (2AJCJQTM)

Web Client Alert Has Incorrect Slashes in URL

No matter what URL you enter in the Web Client export options, the slashes are always shown as forward slashes in a Web Client Alert. If you use back slashes with an http URL, the URL does not work, but the Lookout alert message displays the correct URL with forward slashes. If you are confused because the URL looks correct in an alert message, check the direction of the slashes in your export options. (28B9OI9L)

Aggregate Problems with Incorrect Computer Name

If you have the incorrect computer name entered in the System Options dialog box and you drag and drop an Aggregate object data member on a panel, you get bad quality (a red X) for the data member. Additionally, you might find that some data members you did not intend to expose in the Aggregate object are visible in the Object Explorer. Select **Options» System** and make sure the computer name matches the name in your Windows networking configuration. (246FA49L)

Using the ! and NOT Expression Functions

In Lookout expressions, the ! function has a transient TRUE value, but the NOT function does not. To negate an expression without a glitch, use NOT rather than !. (239957E9)

Saving a Process with a Read-Only LKS File

If you attempt to save a process with a read-only .lks file, you (correctly) get a message that Lookout cannot save. If you were closing the process, the process close is aborted. The asterisk next to the process name at the top left of the Lookout workspace disappears, and if you attempt to close the process again, Lookout closes without prompting you to save your recent changes. (270DANYZ)

Bug Fixes

The following bugs have been fixed for Lookout 5.1:

• The [Alarms] header=0 setting in the Lookout.ini file hides column headers in the Alarms Window. (257HGA26, 1T4CQBQH)

• Bad quality no longer received from network module FP-2010, when using the FieldPoint cbx in Lookout. (28I7TN7M)

• The FieldPoint object in Lookout has been updated to include the FP-20*xx* data members. (286G4B7M)

• Using an invalid entry in an (expression) object no longer causes Lookout to crash. (2ASFRFNE)

• A switch connected to the Lookout Webbrowser ActiveX control **Visible** property can now make the Web browser invisible and restore it to visible. (2CRI6MBD)

• You no longer get an error when using the ModbusDaniel object without a Modbus Daniel device attached to the serial port. Additionally, the update light comes on when the data is updated. (2DOH63B4)

• Scaling now works for driver object data members. (2EL94MB4)

- Right-clicking a process or object in the **Edit Object Connections** dialog box and choosing **Configure Network Security** works properly. (2C88R2SP)

- Connecting a numeric value to the **Sample Pulse** parameter of the PID object works correctly. (27K8EEYZ)

- The Pot object accepts dates entered as `mm/dd/yyyy`. (2CG6TKTS) (2EE851E9)

- IPASCII updates correctly, even when there is a heavy traffic. (2H7BIS9L)

- The ScanData object now saves the phone number. (2HSA4D7E)

- You can use the new `clearEvent` data member of the Alarm object to programmatically clear all the events in the Alarms Window. (20OES8CM)

- The Aquatrol object is now relayable if you are using it with repeater in a noisy environment. (2HTFLIE9)

- Saved `.l4p` files no longer crash when updated from Lookout 4.0.1. (2HO8P4UQ)

- The Pager object no longer hangs when talking with TAP compliant pager system. (2DOGD6B4)

- Lookout does not crash on startup in the `OPClient.cbx`. (2ILD07E9)

- Data transfers do not hang when using the Mitsubishi object with a high number of I/O points. (2K18SFUQ)

- If you do not want operators to access a Web browser from Lookout, use the **User cannot switch to another program** setting in the System Options dialog box. (2JJ9LU7E)

- Printing alarms and events from the **File** menu no longer crashes `Lookout.exe` with an access violation. (27JE21E9)

- The problems addressing registers in an Allen Bradley PLC 2 have been resolved. (1ZP8F0G6)

- Images appear correctly when nested in an Aggregate. (2KFAUHUQ)

- Lookout interprets DataSocket string arrays correctly. (2KFFKR9L)

- Within Industrial Automation OPC Servers, the Applicom driver can read and write. (2K1AOH7E)

- Lookout does not crash if a client attempts to subscribe with a bad URL. (28NFMRFN)

- A Pot value, its expression, and the logged value stay in sync when you have set a deviation. Use the `Lookout.ini` file setting. In the `[Database]` section, the `LogResolution` sets the resolution of datalogging (default is Deviation/2). A value of `0`= always log data as precisely as possible. (2IL7QLE9)

- Function keys need not be pressed twice to activate the Pot enterValue dialog box. (2KLA051Z)

- Report objects do not keep old connections. (2H77FD26)

- Lookout no longer crashes when using the NIDeviceNetExplicit driver. (2MBEE5OM)

- Lookout sends correct lifespan information to Citadel. (2LSEE3ZU)

- Lookout does not hang when saving a state file to an unavailable remote machine. (1O2F8U9I)

- Password expiration behaves as expected. (2OJ7PPE9)

- The ModbusDaniel object writes to the registers properly. (2JS9NPB4, 2LTD4JE9)

- Mitsubishi consistently reports **`Incorrect frame check sum (FCS)`** with `D` data members. (2QODCEE9)

- SLC500 (5/04) updates ST registers correctly. (2Q1BOF9L)

- The `Commfail` data member on the Pager object behaves correctly. (2IH9RPPE)

- Allen Bradley Micrologix options listed are only those supported. (2NOE9FPE)

- Alarm **Journal** printouts have correct format for system time events, without extra carriage returns. (2S4H788W)

- You can now justify the text on a digital Pot object. (1SEFRDRM)

- Importing graphics from Image Navigator when you have two instances of Lookout no longer causes dialog box problems. (2GCEHHMO)

- The Modbus stack overflow crash has been resolved. (2M9G54B4)

- If a non-numeric data member is configured to be logged as numeric, Lookout checks the deviation value. (2O7DQE9L)

- Pager object no longer crashes when the message sent is ether `" "` or `04` (without quotation marks). (2UAAQ4K4)

- The MitsubishiFX object **FX Mode** setting, either **Direct** or **Multi-drop**, is loaded correctly from a `.lks` file. (2UN9EVW3)

Compatibility and Conversion Issues

Opening Older Process Files in Lookout 5.1

(Lookout 4.5 and 5.0) If you are upgrading from Lookout 4.5 or 5.0, you should be able to open the `.l4p` process file without recompiling.

(Lookout 4.0) To open Lookout 4.0 processes in Lookout 5.1, open the `.lks` file instead of the `.l4p` file when you load a process. As soon as the process opens, save it to update the `.l4p` file.

(Lookout 3.8) If you are upgrading from Lookout 3.8, open the `.lks` file in Lookout 5.1, then save the process to create a new `.l4p` file. Some minor adjustments might have to be made in some processes, and you will have to change redundancy using backup computers. Refer to the following sections for more information about compatibility and conversion issues when upgrading from Lookout 3.8.

Lookout 3.8 and Lookout 5.1 Compatibility

The following list contains known compatibility issues and fixes for Lookout 5.1 that might affect Lookout 3.8 users who are upgrading.

- Lookout 5.1 does not run on Windows NT version 3.51 or earlier—you must be using Windows NT 4.0 or later.

- Earlier versions of Lookout process files used the file extension `.lkp`, and state files used the extension `.lst`. Lookout now uses the `.l4p` extension for process files and `.l4t` for state files.

  If you want to continue to run your old 3.8 processes in a 3.8 version, save backups of the files. Otherwise, recompiling a 3.8 process in Lookout 4 or later will create (if you save) new `.lks`, `.l4p`, and `.l4t` files. Lookout also creates new security files using the `.lka` extension.

- Avoid installing Lookout 5.1 over Lookout 3.*x.xx*. Either uninstall your previous version of Lookout, or put Lookout 5.1 in a new directory, transferring or copying files for conversion.

- Lookout 3.*x.xx* can run on the same computer with Lookout 5.1, and a process in one can be networked to a process in the other using DDE. If you intend to run both versions at one time, start the earlier version of Lookout first.

- Lookout 3.8 Citadel files cannot be used by Lookout 5.1. You should maintain old Citadel files separately from Lookout 5.1 database files.

- Events are now stored with alarms and process data in the Citadel database.

- The default location for data logged with the Spreadsheet object is the `Lookout` directory. The `Lookout` directory is also the default for any spreadsheet files you might export from the DataTable object or `.csv` (comma separated value) files you might create with the Print Alarms dialog box. If you do not want these files to be created in the `Lookout` directory, enter a complete path (including file name) for the location where you want the file created.

Converting Lookout 3.8 Processes to Lookout 5.1

To load a Lookout 3.8 process file in Lookout 5.1, select **File»Open** and set the **Files of type** to Lookout Source Files (`*.lks`), as shown in the following illustration.
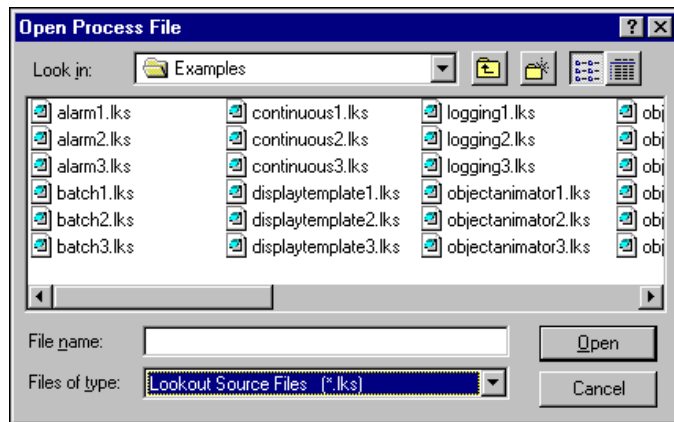
Select the file you want to convert and click the **Open** button (or double-click the file name). Lookout uses the built-in CBL compiler to recompile the 3.8 source file into a Lookout 5.1 process file.

Converting 3.8 files might require the following adjustments:

- Lookout 3.8 versions of the Pot, Switch, Pushbutton, and TextEntry objects that are remoted convert as L3Pot, L3Switch, and so on, and continue to function as they formerly did. You cannot create new 3.8 objects like these through Lookout 5.1.

  Because remote position source connections have changed in response to the demands of networking, you might find you want to replace L3 versions of these controls with the new Lookout 5.1 versions, especially if you want these controls to operate over a network. Delete the old controls and replace them with new controls using the same names. The Connection Browser and Object Explorer can help you

track all the connections that might need to be re-established if you decide to make these replacements.

- ODBC/SQL limitations: With the introduction of networking and hierarchical arrangement of objects within processes, it is easy to exceed the 62 character limit that exists in Microsoft Access and Microsoft Query. Even fully-compliant ODBC programs are limited to 126 characters, so some consideration of these limitations when assigning computer, process, and object names is necessary if you intend to use SQL queries.

- The old LKSwap CBX no longer works. If you used this special object from the old Lookout Evaluation Guide, you will have to replace it with the Lookout Loader object, which is more flexible and powerful than the old LKSwap object. Lookout 5.1 can run multiple processes, so it is not necessary to shut one process down before running another.

- Fonts are preserved when converting Lookout 3.8 process files to Lookout 5.1 using the .lks file, but font code page information is lost. This appears to mostly affect international users whose languages use a different code page than the US code page.

- The $Alarm object syntax in a .lks file has changed. The full URL for a $Alarm object will be as follows:

  `\\machine\process\$Alarm`

- Your custom built Lookout 3.8 .cbx files should run in Lookout 5.1 as long as they were developed using the Lookout Object Developer Toolkit. If you have problems with a custom .cbx, contact National Instruments technical support for help in resolving the problem.

- The Lookout HyperTrend object now accesses data through a URL connection. The data source for that connection must be logged to the Citadel database for the HyperTrend to display the data.

- When you convert a process with a Lookout 3.*xx* HyperTrend in it, Lookout automatically creates a named expression to make the URL connection to. Lookout automatically logs this named expression to the Citadel database. To maintain your converted HyperTrend objects, you must use or replace these named expressions.

- If you have Lookout 3.8 processes that use the NI DAQ or NI SCXI objects, and you have a version 6.5.1 or earlier of NI-DAQ installed on your computer, you must upgrade to NI-DAQ 6.5.2 or later to use Lookout 5.1. You can download the current version of NI-DAQ software from the National Instruments Web site.

  If your Lookout process will be running on the same computer as your National Instruments Data Acquisition or SCXI hardware, we recommend that you edit your process to use the OPCClient object to connect to NI-DAQ for performance reasons.

Importing Old Security Files into Lookout 5.1

If you are upgrading from Lookout 4.0 or later, Lookout converts your security file automatically when you open it with the National Instruments User Account Manager. If you are upgrading from Lookout 3.8, you can import the user account information into Lookout 5.1 using the User Account Manager, as follows:

1. In edit mode, select **Options»User Manager** from the Lookout menu. The User Account Manager dialog box appears.

2. Select **User»Import Security File**. The following dialog box appears.
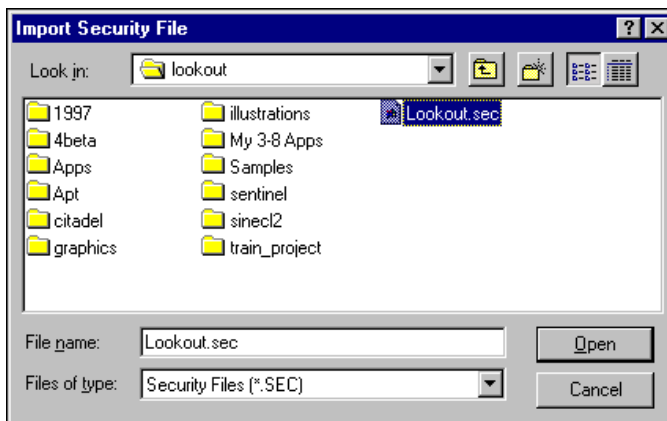
3. Navigate to your old Lookout 3.8 security file `lookout.sec`, and select it. Lookout 3.8 kept the `lookout.sec` security file in the `Lookout` directory.

4. Click the **Open** button.

5. If you have already created any user accounts in an earlier version of Lookout that are the same as accounts you used in Lookout 3.8, you will receive a message informing you that a user account with that name already exists. You may replace your recently created account, or choose not to use the old account information.

6. Exit the User Account Manager.

Note   Unlike Lookout 3.8, Lookout 5.1 maintains the `lookout.sec` security file in the Windows `System` directory. To implement the accounts that you have defined when you deploy your process, you must use the same `lookout.sec` file for each copy of Lookout running on your network. Copy your `lookout.sec` file to the Windows `System` directory in every computer you intend to run Lookout on.

More Information and Updates

For the most recent Lookout news and updates, visit `ni.com/lookout`.

To download the newest patches and other updates, visit `ni.com/downloads`.