

LOOKOUT™ 5 RELEASE NOTES

Welcome to Lookout 5.0. This edition of the Lookout HMI/SCADA package introduces the new Historical Data Viewer along with new Lookout objects, the ability to run Lookout as an NT service, and easy-to-configure serial communications debugging.

The Historical Data Viewer is a new feature of National Instruments Measurement and Automation Explorer (MAX). With this new tool you can view your Lookout data or alarms and events, creating custom views that you can then save for easy reference. You can archive data, combine data from different databases, and export your data using default or custom-made export templates (including an HTML template that exports your data into an easy-to-browse Web page). Consult the Historical Data Viewer Online Help for more information on using this powerful new addition to Lookout.

The following new Lookout objects are included in this version:

- ActiveX Combobox: an option selection tool
- ActiveX Listbox: both an option selection tool and an advanced way to implement stacks or queues
- ActiveX Webbrowser: an easy-to-use Web browsing tool
- GE Fanuc Versamax driver: a protocol driver for GE Versamax PLCs
- Thermocouple: an object for converting thermocouple measurements into temperatures

With the new ability to run Lookout as an NT service, you can ensure that Lookout will start up and run if your Windows 2000/NT/XP computer restarts, even when there is no operator available to log in.

Serial port configuration now includes easy debugging options.

Lookout documentation has been consolidated into one printed volume for developers to use in addition to the online help reference for Lookout objects.

This version of Lookout features a number of improved examples with step-by-step instructions to help you understand the Lookout configurations involved.

For detailed information on the new features in Lookout 5, 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.

The *Lookout 5 Release Notes* contain the following information:

- Installation
- Known issues
- Bug fixes
- Compatibility and conversion issues

For the most recent Lookout news and updates, point your browser to <http://www.ni.com/lookout/>.

Contents

Installation	3
Installing onto Computers with Existing Versions of Lookout.....	4
Using Registration Information from Previous	
Lookout Versions	4
Uninstalling Lookout.....	4
Known Issues.....	5
Connection Browser Open with No Processes Visible	6
CWUI ActiveX 3-D Control License Problems.....	6
Missing Aggregate Definitions	6
FieldPoint Network Module Alarms	7
Logger Object and X Traces	7
Creating Control Object Displays with Direct Connections	7
Saving a Process with a Read-Only LKS File.....	7
Using Flat Browsing when Lookout is an OPC Server.....	7
Using Symbolic Links Correctly	7
Using the ! and NOT Expression Functions.....	8
Loader Pushbuttons and Action Verification	8
Aggregate Problems with Incorrect Computer Name	8
Creating Control Object Displays with Direct Connections	8
Connecting OPCClient Object to the LookoutOPCServer	8
Using the Correct Date Format in Pot Objects.....	9
Expression Displays that Automatically Resize.....	9
Accessing Microsoft Internet Explorer Home from	
Lookout Web Client	9
Including Custom Graphics when You Deploy	9

OPCCClient Fails with Remote Connection to OPC Server in Asynchronous Mode.....	9
PID Object Sample Pulse Parameter Type	9
Pulse Object Erratic Behavior	10
Access to Network Security Settings from Edit Object Connections Dialog Box.....	10
Scaling Data Members with Single Quotes and a Colon (:)	10
Web Clients and the Sequencer Object	10
Sequencer Stuck when Created with Dependencies in the Wrong State	10
ModbusDaniel Communication Failure Messages.....	11
ToshibaTSeries Sets PLC Values to 0.....	11
Invalid (expression) Object Entries	11
Stopping NI Services Manually Before Uninstalling Lookout.....	11
Lookout Webbrowser Visibility Problems	11
Pot Connected to an FP-2010 Can Fluctuate.....	11
Bug Fixes	12
Compatibility and Conversion Issues	16
Opening Older Process Files in Lookout 5.....	16
Lookout 3.8 and Lookout 5 Compatibility	16
Converting Lookout 3.8 Processes to Lookout 5	17
Importing Old Security Files into Lookout 5.....	19

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 must also 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 should also 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*, in the *Lookout Developer's Manual*.

Installing onto Computers with Existing Versions of Lookout

- Lookout 3.8 or earlier: Avoid installing Lookout 5 over Lookout 3.8 or earlier. Either uninstall Lookout 3.8, or put Lookout 5 in a new directory. You can then move or copy Lookout 3.8 process files to the Lookout 5 directory.
- Lookout 4 and Lookout 4.5: You can run Lookout 4.0 and Lookout 5 on the same computer.
- Lookout 5 beta: If you were using a pre-release version of Lookout 5, you should uninstall before installing the release version of Lookout 5.

Using Registration Information from Previous Lookout Versions

If you are replacing your current copy of Lookout with Lookout 5, and your previous version was purchased 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.

Uninstalling Lookout

To uninstall Lookout, first stop the NI Windows services. Then select **Start»Settings»Control Panel**, and double-click **Add/Remove Programs**. In that window, you can uninstall Lookout.

When you install Lookout, you install portions of related National Instrument software to enable the full functionality of Lookout's features. If you uninstall Lookout, you may want to uninstall this other software as well.

Because this software may be shared by other National instruments programs and hardware, such as the LabVIEW Datalogging and Supervisory Control module, VI Logger, NI-DAQ, and so on, you may want to leave the shared software installed.

These shared applications include the following items in Add/Remove Programs:

- NI DSC Common Tools
- NI Historical Data Viewer
- NI Logos
- NI Measurement & Automation Explorer
- NI Server Explorer

Known Issues

The following known issues exist for Lookout 5. Internal tracking codes are shown in parentheses for applicable issues.

FieldPoint Alias with Japanese Characters

Lookout crashes when attempting to import FieldPoint aliases using Japanese characters. Lookout does not support international character sets at this time. Attempting to import Japanese characters from FieldPoint configuration files will fail. (21K5CU6S)

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.

Using ActiveX Controls in Web Client Processes

At this time the only ActiveX controls you can use in a process you intend to export for use by a Lookout Web Client are the National Instruments **Recommended** ActiveX controls provided as a part of Lookout.

Lookout Control Sources and Refresh Value Operations

A Lookout control with a **Local** source and a direct connection will not change if something acts to alter the value or status of the PLC or object it is connected to. Instead, Lookout will restore the control's 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 may 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 themselves 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 may open with no processes visible in the window. Close the Connection Browser and then reopen it. This will usually clear 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 will not function properly. It will appear in the Object Explorer as expandable, but it will not expand. (270DIAYZ)

FieldPoint Network Module Alarms

If you use the FieldPoint object to access the FieldPoint FP-2010 network module, you may receive transient bad data quality warnings that can fill your Alarms Window. We recommend accessing FieldPoint Ethernet network modules using National Instruments proprietary Logos protocol, by locating them in your Object Explorer or Expression Editor tree view. (28I7TN7M)

Logger Object and X Traces

There have been reports of the Lookout Logger object creating X traces—a trace that looks like an X—when logging over an extended period of time using large time zone offsets. (28FGMBBD)

Creating Control Object Displays with Direct Connections

When you right-click, drag, and drop a data member to create a control object display, the connection between the new display and the data member is a remote connection. If you do not want a remote connection to this data member, create the control object manually and connect it to the data member using **Object»Edit Connections**. (28QCRA9L)

Saving a Process with a Read-Only LKS File

If you attempt to save a process with a read-only .lks file, you will (correctly) get a message saying 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 will close without prompting you to save your recent changes. (270DANYZ)

Using Flat Browsing when Lookout is an OPC Server

If you are using Lookout as an OPC server, you must use OPC flat browsing to connect to Lookout protocol and driver objects when using the Lookout OPCClient object in a second instance of Lookout. Hierarchical browsing in these circumstances does not work. (2BF9MRE9)

Using Symbolic Links Correctly

NI recommends that you do not create a connection between two Symbolic Links. If you connect a Symbolic link in one process to a Symbolic Link in a process running in a different instance of Lookout, the connection will not work at all. Connecting a Symbolic Link to a Symbolic Link in another

process when both processes are running in the same instance of Lookout can work initially but will fail under a number of different circumstances. You should only connect to a Symbolic Link from within the process that contains it. (24KFPAO)

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)

Loader Pushbuttons and Action Verification

If you use a pushbutton to trigger a Loader object to unload a process, the unload will fail if you have entered text in the **Verify on** text field. The pop-up verification message aborts the unload operation. (261DOCCM)

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

Creating Control Object Displays with Direct Connections

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 will 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)

Connecting OPCClient Object to the LookoutOPCServer

You cannot connect the Lookout OPCClient object to the LookoutOPCServer. Lookout will hang if you do. (2D0AOOJT)
(2DCDQKMV)

Using the Correct Date Format in Pot Objects

You can enter dates into the Lookout Pot object, but it does not accept dates entered as yyyy-mm-dd. You must use the form yyyy/mm/dd instead. (2CG6TKTS) (2EE851E9)

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's 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)

Accessing Microsoft Internet Explorer Home from Lookout Web Client

There have been reports that Microsoft Internet Explorer hangs when sent Home from Lookout Web Client. This is an erratic problem that only rarely occurs. (28FGJNBD)

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 include all graphics, including custom graphics. (2D6F3BDF)

OPCClient Fails with Remote Connection to OPC Server in Asynchronous Mode

The Lookout OPCClient object does not work if you have a remote connection to a remote Lookout OPC server in asynchronous mode. Disable the use asynchronous OPC connection setting to fix this problem. (2CG9HCE9)

PID Object Sample Pulse Parameter Type

The **Sample Pulse** parameter of the PID object uses logical values. You can connect a numeric value, but the PID object will treat the input as a logical, pulsing every time it updates. (27K8EEYZ)

Pulse Object Erratic Behavior

The Lookout Pulse object may 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)

Access to Network Security Settings from Edit Object Connections Dialog Box

The right-click menu for a process or object in the Edit Object Connections dialog box contains an option to **Configure Network Security**. This feature is not available from this location, however, and selecting it does not invoke the security configuration dialog box. (2C88R2SP)

Scaling Data Members with Single Quotes and a Colon (:)

For driver object data members with a colon (:), Lookout places single quotes on the URL. Scaling does not work on these URLs. To address this problem, configure the data member to use an alias, where scaling works with no problems. (2EL94MB4)

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 may 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. (28FGCNBD)

Sequencer Stuck when Created with Dependencies in the Wrong State

There have been reports that the Sequencer object can get stuck in a state if certain dependencies are in the wrong condition at the time you create the object. This problem has not been successfully reproduced, however. If you do encounter this condition, creating the connection `Seq1.Goto1 = \ . . \ $keyboard . f10` will allow you to restart the Sequencer by pressing the <F1> key, which should result in proper functioning. (1WBC2EM6)

ModbusDaniel Communication Failure Messages

Problems have been reported with the `update` and `CommFail` data members of the `ModbusDaniel` object. When using the `ModbusDaniel` object without a Modbus Daniel device attached to the serial port, you can get the following error message instead of a `CommFail` alert:

```
Garbled communications response from Modbus
secondary(0):Response too short.
```

Additionally, the `update` data member may not update when the data is updated. Reverting to an earlier version of the `ModbusDaniel` object solves this problem. (2DOH63B4)

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)

Invalid (expression) Object Entries

There have been reports that using an invalid entry in an (expression) object can cause Lookout to crash. This has not been a reproducible error. (2ASFRFNE)

Stopping NI Services Manually Before Uninstalling Lookout

If your NI Windows services do not shut down when trying to uninstall Lookout, the uninstall may fail. Right-click the NI services icon in the system tray of the Windows taskbar, stop all services, then retry the uninstallation. (27KCBNYZ)

Lookout Webbrowser Visibility Problems

A switch connected to the Lookout Webbrowser ActiveX control `Visible` property can make the Web browser invisible, but it will not restore it to visibility. However, once the switch is on, you can type in a new URL and the browser will become visible again. (2CRI6MBD)

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. Consult your Lookout documentation for more information on this setting. (28I89I7M)

Bug Fixes

The following bugs have been fixed for Lookout 5:

- Lookout 5.0 features extended ranges for the I, Q, M, AI, AQ and R data members for GE_Series90 driver object. (28GFGLD8)
- The Hitachi driver objects has been improved so that address spaces WR200–WRF1FF and DR1FF–DRF1FE are now accessible. (27CDD4MV)
- The Omron driver object now supports baud rates of 56700 and 115200. (281EM0QU)
- A number of small difficulties with the Lookout OPC connection to FieldPoint modules have been repaired (28MFNR9L, 28NB199L, 28MCDR9L, 28MG229L, 28MGAU9L):
 - Lookout does not hang when some item is no longer available on FieldPoint OPC, nor will it generate a continuing stream of alarms.
 - Lookout is now able to reconnect with OPC FieldPoint in synchronous mode after the connection has been broken and restored.
 - FieldPoint OPC error messages in Lookout now include item names.
- The IDEC driver objects now have an `Of fHook` data member.
- The DNP object had data member addressing offset by the PLC. This addressing problem has been corrected. (26KCSJCM)
- A problem in the Mitsubishi and Mitsubishi_CLM driver objects with communication retries has been fixed. When the driver loses communication and retries, it no longer returns corrupted data frames. (29ADJNNE)
- Lookout now supports filtering of FieldPoint channel-specific error 2 as well as channel-specific error 1. This includes support for serial FieldPoint as well. (28TBJDEB)
- Several small difficulties with the Aggregate object have been fixed. Events created by an aggregate definition process now show up as having been logged by the Aggregate that owns them. A small memory leak that occurred when using an Aggregate that logs events has been fixed.
- A problem with the Report object leaking memory when it generated its HTML pages has been fixed. (299EF69L)
- Under some circumstances Lookout crashed when trying to copy and paste a HyperTrend display. This crash has been eliminated. (2B9BL39L)

- Under some circumstances the DNP driver object could crash when it returned an invalid object response. The object is now able to handle error frames and no longer crashes Lookout. (2AIG6UMV)
- In some cases on some OPC servers, the Lookout OPCClient object was unable to use hierarchical browsing. This difficulty has now been fixed, and you should be able to browse any OPC server hierarchically, if the server supports such browsing. (2ABDPRKF)
- Under some circumstances, a windowed ActiveX control kept focus even after someone clicked on the panel or a native Lookout control. This difficulty has been fixed. (2BUE3SBD)
- A dialog box bug in Modbus and ModbusSlave involving the 115200 baud rate has been fixed.
- Under some circumstances, data logged from an OPCClient object created a “stair step” appearance when viewed with the HyperTrend. The Lookout OPC Client now returns “asynchronous” for its data members so that Lookout interpolates when trending. (2C096HMV)
- The 115U model PLC has been removed from the S5_AS511 object. (1MKAIT9C)
- At times Lookout could crash if you deleted a connection to a data member in an Aggregate, if the data member in the definition process it represents was connected to a constant. This bug has been fixed. (2CL9AR9L)
- Under some circumstances, Lookout could crash if a process changed the HyperTrend’s active group while the process was loading. This condition has been fixed. (2977RHKF)
- The Lookout cursor sometimes flickered when someone was using windowed ActiveX controls. This bug has been fixed. (2CL976MO)
- The **National Instruments** category of ActiveX controls has been removed. When you create an ActiveX control, you will now see only the categories **Recommended** and **Other**. Recommended controls are those controls that have been tested by National Instruments and which are known to work well with Lookout. (28A7REX4)
 Additionally, an ActiveX version of the HyperTrend has been added to the list of **Recommended** ActiveX controls installed by Lookout. (28A7REX4)
- The Microsoft Webbrowser ActiveX control has been removed from the **Recommended** category. A version of this control inside a Lookout ActiveX wrapper has been substituted. This version of the control makes control properties available as Lookout data members for improved ease of use. (28A7REX4)

- A bug in which a remoted Switch was not updating anything connected to its `value` data member during initialization has been fixed. (2CTASVTS)
- A bug that sometimes resulted in Lookout failing to import certain data members from a FieldPoint `.iak` file has been fixed. (2DABT59L)
- If you had a HyperTrend object with certain parameters left blank or of the wrong type, Lookout could crash while compiling the `.lks` file. This problem has been fixed. (2DN880UQ)
- The background color of the XBarR and XChart objects was changing when the line color changed. This unwanted behavior has been eliminated. (2AIBCMMV)
- Lookout would sometimes crash if you had a process with nested Symbolic Links in an expression such as `([a]/[b])` This difficulty has been fixed. (2CTASVTS)
- Several difficulties have been resolved in the Modbus driver.
 - A sporadic crash during reconfiguration that resulted from uninitialized variables has been fixed.
 - The occasional improper startup when the remote connection was used with Modbus ethernet has been fixed.
 - The Modbus optimized write feature has been enabled. (2DPAJJ9L, 2A3BD4PJ, 2BUFRK85)
- Under some circumstances Lookout could crash when attempting to compile a `.lks` file that contained an ActiveX object. The underlying cause for this crash has been fixed. (2CUD5IEO)
- A possible memory leak that occurred when creating or modifying a HyperTrend with a large number of groups and traces has been fixed.
- The event message that is generated when a Lookout user is automatically logged off has been reformatted to make it easier to understand. (2CJ82DY5)
- The National Instruments User Account Manager now correctly displays Japanese characters in Japanese versions of Microsoft Windows. (24I8IJFN)
- You can now set a security level for whether a user is allowed to exit Lookout, in the **Options»System** dialog box. (2F5G1MUQ)
- A bug in which a variable display copied from one panel failed to function when pasted onto another panel has been fixed. (2F4BHUMV)
- Under some circumstances, Lookout could crash when attempting to open a process (`.l4p`) file that had been corrupted. Lookout now handles corrupt process files more gracefully. (29ME2M9L)

- A bug that prevented Lookout from appending the `.14p` extension to the file name while saving on Windows 9x, if file extensions were turned off in the Windows Explorer, has been fixed. (2FDF1EMV)
- If a Lookout source file (`.1ks`) contained a certain kind of invalid path, Lookout would crash while compiling the file. This bug has been fixed, and Lookout now returns an error message about the path problem instead of crashing. (29LDF5KF)
- If the **message** parameter of the Alarm object had not received a value by the time the first alarm happened, Lookout could crash. This bug has been fixed.
- The order in which graphics appear in the **Insert»Graphic** dialog box is now alphabetical. (2749A2BD)
- Lookout now warns you if you attempt to display a data member in the HyperTrend and that data member is not being logged. (2BJAHB9L)
- You can now export the Lookout Combobox, Listbox, and Webbrowser ActiveX controls to a Web Client. (2CQFQDE9)
- Lookout now incorporates `.iak` file support for FP-2000, FP-2010, FP-1601, and FP-SG-140.
- A bug which prevented the **Group** deadband from displaying correctly in the Lookout OPCClient object has been fixed.
- A crash that sometimes happened after renaming a process has been fixed. (2AS9A3E9)
- Under some circumstances, an ActiveX control on a popup panel could fail to redraw and show new values. This problem has been fixed. (2E9AO8E9)
- The ActiveX Webbrowser control did not properly display in a Report object HTML page because it is a windowed ActiveX control. Printing and report generation has now been fixed for ActiveX controls. (2F6984E9)
- A problem with disabled ActiveX verbs for certain ActiveX controls has been fixed. Also, some ActiveX verbs that were being called incorrectly are now working properly. (2FFHNIZU)
- If you changed recipes in the runtime version of Lookout, it would appear to enable the Save feature and cause other inconsistent behavior. This has been fixed. (23CEHM9L)
- License changes now do not take effect until after you restart Lookout. This prevents small anomalous behaviors.
- A problem that could cause Lookout running on a multi-processor computer to crash while editing a process in the Connection Browser has been fixed. (2FP9FTMO)

Compatibility and Conversion Issues

Opening Older Process Files in Lookout 5

Lookout 4.5 process files: If you are upgrading from Lookout 4.5, you should be able to open the `.14p` process file without recompiling.

Lookout 4.0 process files: To open Lookout 4.0 processes in Lookout 5, open the `.1ks` file instead of the `.14p` file when you load a process. As soon as the process opens, save it to update the `.14p` file.

Lookout 3.8 process files: If you are upgrading from Lookout version 3.8, open the `.1ks` file in Lookout 5, then save the process to create a new `.14p` file. Some minor adjustments may 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 Compatibility

The following list contains known compatibility issues and fixes for Lookout 5 that may affect Lookout 3.8 users who are upgrading.

- Lookout 5 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 `.1kp`, and state files used the extension `.1st`. Lookout now uses the `.14p` extension for process files and `.14t` for state files.

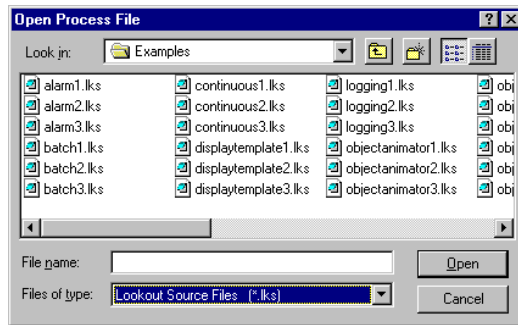
If you want to continue to run your old 3.8 processes in a 3.8 version, save backups of the files. Otherwise, recompiling a 3.8 process in Lookout 4 or greater will create (if you save) new `.1ks`, `.14p`, and `.14t` files. Lookout also creates new security files using the extension `.1ka`.

- Avoid installing Lookout 5 over Lookout 3.x.xx. Either uninstall your previous version of Lookout, or put Lookout 5 in a new directory, transferring or copying files for conversion.
- Lookout 3.x.xx can run on the same computer with Lookout 5, 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. You should maintain old Citadel files separately from Lookout 5 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

To load a Lookout 3.8 process file in Lookout 5, 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 process file.

Converting 3.8 files may 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.

Because remote position source connections have changed in response to the demands of networking, you may find you want to replace L3 versions of these controls with the new Lookout 5 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 may 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 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 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:

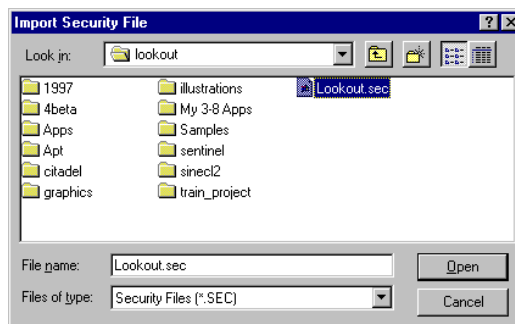
```
\\machine\process\Alarm
```
- Your custom built Lookout 3.8 `.cbx` files should run in Lookout 5 as long as they were developed using the Lookout Object Developer Toolkit. If you have problems with a custom `.cbx`, contact National Instruments technical support for help in resolving the problem.
- 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 better to use Lookout 5. 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

If you are upgrading from Lookout 4.0 or Lookout 4.5, 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 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 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.