

COMPREHENSIVE SERVICES

We offer competitive repair and calibration services, as well as easily accessible documentation and free downloadable resources.

SELL YOUR SURPLUS

We buy new, used, decommissioned, and surplus parts from every NI series. We work out the best solution to suit your individual needs.

 Sell For Cash  Get Credit  Receive a Trade-In Deal

OBSOLETE NI HARDWARE IN STOCK & READY TO SHIP

We stock **New, New Surplus, Refurbished, and Reconditioned** NI Hardware.



Bridging the gap between the manufacturer and your legacy test system.

 1-800-915-6216

 www.apexwaves.com

 sales@apexwaves.com

All trademarks, brands, and brand names are the property of their respective owners.

Request a Quote

 **CLICK HERE**

FP-1600

LOOKOUT™ 4.0 RELEASE NOTES

Welcome to Lookout 4.0. This edition of the Lookout HMI/SCADA package introduces easy TCP/IP-based networking for all your automation and control needs. Along with the new capabilities for easy networking, Lookout 4.0 also introduces new productivity tools such as the Lookout Object Explorer and the Lookout Connection Browser, to help you in developing and maintaining your Lookout processes. Updated Lookout objects such as the Pot, RadioButton, Pushbutton, Switch, TextEntry controls, and the HyperTrend all contribute to the power and efficiency of Lookout processes using your own network. With the capacity to export an ActiveX version of a client process, Lookout can help you monitor your processes using Internet Explorer.

The *Lookout 4.0 Release Notes* contain the following:

- Requirements for running Lookout 4.0
- A roadmap to where you can find answers to your questions about Lookout 4.0
- New features and corrections that did not make it into the print documentation
- Information on how experienced users of Lookout 3.8 can take advantage of new features and development techniques available in Lookout 4.0
- How to convert Lookout 3.8 processes to run under Lookout 4.0
- Information on compatibility issues between Lookout 4.0 and earlier versions of Lookout

For the most recent Lookout news and updates, point your browser to this site:

<http://www.natinst.com/lookout/>

Contents

Requirements	2
Installation	3
Corrections and Additions to the Documentation	4
Overwriting PLC Registers	4
Uninstallation Problems with Lookout.....	4
Registering Computers in Client Versions of Lookout	5
Client and Server Versions of Lookout and Driver Objects.....	6
Programmable Control of Panels.....	6
DDE Data Exchange Between Lookout and Excel	7
SQL Queries with Microsoft Excel	8
HyperTrend Size Considerations.....	8
Data Quality and Lookout Driver Objects.....	8
Using OPC with Lookout	9
Networking Your Computers	10
ODBC Information.....	10
PDF Documentation	10
For Experienced Users of Lookout.....	10
General Changes.....	11
Data Location	12
Alarms	12
Events	13
Networking.....	13
Connections	13
New and Improved Objects.....	14
Lookout on the Web	15
Security.....	15
Compatibility and Conversion with Lookout 4.0	15
Lookout 3.8 and Lookout 4.0 Compatibility	16
Converting Lookout 3.8 Processes to Lookout 4.0	17
Importing Old Security Files into Lookout 4.0	18
Redundancy	20

Requirements

Lookout requires the following:

- Pentium class PC running at 90 MHz or faster
- At least 32 MB RAM
- 45 MB free disk space, plus possibly 100 MB or more, depending on how much data you intend to log to the Lookout database, Citadel. You should also have about 50 MB of disk space for file swapping on Windows NT computers.

- Windows 98/95 or Windows NT version 4 or later
- Network card and TCP/IP networking installed on the computers you want to connect, if you intend to take advantage of Lookout networking

While minimum requirements for running Lookout will run Lookout processes, you may find that large processes which draw heavily on computer system resources will benefit from faster computers that have more RAM and disk memory than the minimum requirements. For example, if your Lookout processes 25,000 traces or more, you should use a Pentium 450 MHz computer with at least 256 MB of RAM.

Because Lookout can run 24 hours a day, your computer should have some form of AC power surge protection. An uninterruptible power supply (UPS) provides the ultimate protection. A UPS provides complete isolation between the AC power source and the computer and has backup battery power if there are blackouts and brownouts. A quality surge protector will protect your computer from most electrical surges and spikes if you do not need battery backup.



Caution If you are running Windows 95 with no service pack upgrades, you may experience difficulties in networking with Lookout 4.0. If your computer begins to behave erratically after networking with Lookout 4, you may need to install an updated `kernel32.dll` from Microsoft. You can download this upgrade from Microsoft using the following URL:

<http://www.our-town.com/win95maint/win95maint.htm>

More details on the underlying problem can be found at the following URL:

http://www.microsoft.com/Windows95/downloads/contents/WUAdminTool/S_WUNetworkingTools/W95Kernel32/Default.asp

Lookout is Y2K compliant and requires no special considerations for the year 2000.

Installation

Installing Lookout 4.0 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 Lookout with over a network.

Avoid installing Lookout 4.0 over Lookout 3.8 or earlier. Either uninstall Lookout 3.8, or put Lookout 4.0 in a new directory. You can transfer or copy Lookout 3.8 process files for converting. If you were using a pre-release version of Lookout 4, either a beta or the Lookout 4 Preview, you should uninstall before installing the release version of Lookout 4.0.

If you are replacing your current copy of Lookout with Lookout 4.0, and your previous version was purchased from National Instruments, your earlier registration keycode will work to maintain your I/O licensing. You must register your client connection levels separately, however. Get your client connection keycode (and an upgraded I/O point keycode as well, if necessary) by registering Lookout with National Instruments, using the *Lookout Registration Form* included in your Lookout package.

Lookout 3.8 can run on the same computer with Lookout 4.0, and a process in one can be networked to a process in the other using NetDDE. Start the earlier version of Lookout first, though, if you intend to run both versions on one computer.

See Chapter 1, *Installing Lookout*, in the *Getting Started with Lookout* manual for detailed information on installation, testing TCP/IP networking, registering Lookout to authorize your I/O points and client connections, and configuring the Lookout system options.

Corrections and Additions to the Documentation

This section contains information and corrections which did not make it into the Lookout manual set.

Overwriting PLC Registers

The nature of PLC communications creates the possibility of a race condition—a race in which the last change to a register wins. Allowing writes to a Lookout PLC register by any means other than through Lookout creates the possibility that crucial values might be overwritten. Reserving registers for use by Lookout only should eliminate this potential problem.



Caution National Instruments strongly recommends that you set aside registers in your PLCs for Lookout communications and that you do not allow any changes to be made to those registers except through Lookout.

Uninstallation Problems with Lookout

If you were using a pre-release version of Lookout 4, either a beta or the Lookout 4 Preview, you should uninstall before installing the release version of Lookout 4.0.

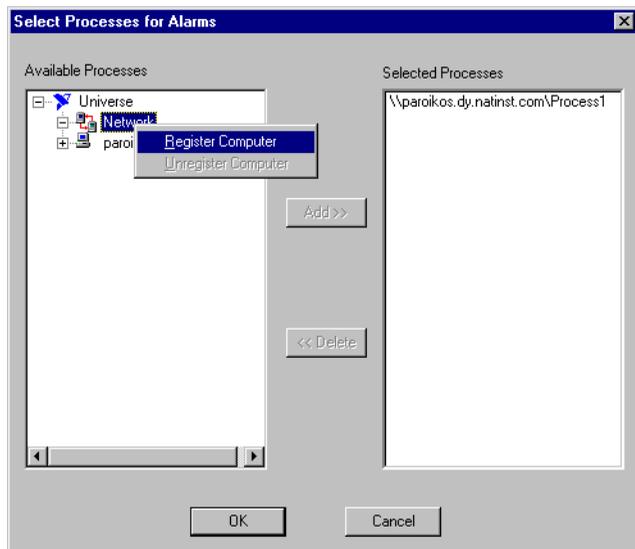
In some cases you may find your computer hanging during uninstallation, whether you uninstall from the Windows control panel or from the Lookout 4.0 installer. Rebooting your computer and then uninstalling again should resolve this problem.

Registering Computers in Client Versions of Lookout

To monitor alarms generated on other computers running Lookout on your network, a client version of Lookout must register computers running Lookout just as a server version of Lookout does.

Because client versions have no editing or development capability, you cannot register a computer using the Lookout Object Explorer or the Lookout Connection Browser. You must use the **Select Processes for Alarms** dialog box instead.

In order to register a computer using this dialog box, select **Alarms»Select Processes** from the **Lookout** menu. The **Select Processes for Alarms** dialog box appears.



Right-click on the Network node and select **Register Computer**. Complete the registration as described in the *Registering Computers* section of Chapter 4, *Networking*, of the *Lookout Developer's Manual*.

You can also register computers through the **Select Processes for Alarms** dialog box in Lookout server versions.

Client and Server Versions of Lookout and Driver Objects

Lookout comes in several variations of two basic versions, the server version and the client version.

The server versions of Lookout are used to develop Lookout processes and run those processes on computers with physical connections to field hardware. Server versions of Lookout come in various packages with different I/O and client connection licenses, either with development capabilities or as a run-time only server.

The client run-time version of Lookout is a run-time only version that is distributed free. You can purchase a client development version of Lookout that you can use to create and edit client processes.

Lookout client processes should be created to run on any computer, with no physical connections to field hardware. For this reason, any process that contains a Lookout driver object (any of the Lookout objects used to control PLCs and other industrial automation hardware) does not run in the client versions of Lookout. The client development version of Lookout does not include or allow the use of driver objects in creating or editing client processes.

Any process you create containing Lookout driver objects must be run in a Server version of Lookout.

Programmable Control of Panels

Lookout now allows you to control the size and location of your control panels programmatically.

The default size for a control panel is still set with the parameters for height and width in the **New Control Panel** dialog box. The default location for a control panel is where the panel was located when it was last moved or resized in edit mode.

Once you connect the size and location data members, however, these defaults are overridden by the values input through the connections.

Size and location values are interpreted as pixels. If your Lookout window, or your PC screen resolution, is smaller than the number of pixels input, your control panel may become too large to fit in the Lookout window, or may travel out of the window and be lost from view. Take the screen resolution and the size of your Lookout window into consideration when setting limits on the location data member inputs.

Data Member Name	Type	Read	Write	Description
Height	numeric	yes	yes	Height of the dialog box in pixels. Once connected, this data member overrides the Height parameter entered in the New Control Panel dialog box.
Width	numeric	yes	yes	Width of the dialog box in pixels. Once connected, this data member overrides the Width parameter entered in the New Control Panel dialog box.
X	numeric	yes	yes	Horizontal coordinate of the upper left corner of the control panel. The upper left corner of the Lookout window is the 0 point.
Y	numeric	yes	yes	Vertical coordinate of the upper left corner of the control panel. The upper left corner of the Lookout window is the 0 point.

DDE Data Exchange Between Lookout and Excel

In some cases you may experience difficulty in exchanging data with Microsoft Excel when using a data table to exchange values with a collection of cells.

The main symptom of this problem occurs when you change a single value in an Excel cell. In this case when Lookout updates the values in the data table, the changed value is correct, but the rest of the table values have been set to 0 instead of retaining their correct values.

To correct this problem, close Lookout. Use any text editor to open your `lookout.ini` file, located in your Lookout directory. Search for the [DDE] section. If there is no [DDE] section, you can create one. Enter `FirstFormat=1` and save the `.ini` file.

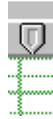
For more information on the `lookout.ini` file, see Appendix C, *The Lookout .INI File*, of the *Lookout Developer's Manual*.

SQL Queries with Microsoft Excel

If you are using Microsoft Excel 97 version SR-2, you may experience difficulties attempting to access the Citadel database. If you need to access the Citadel database with Microsoft Excel, National Instruments recommends use of a version other than the SR-2 version of Excel 97.

HyperTrend Size Considerations

If you make a HyperTrend object too small, you may crowd the cursor marker (shown in the following illustration) out of the HyperTrend control bar. If your HyperTrend is not wide enough to display the HyperCursor marker, the HyperCursor will not function. To fix this problem, resize your HyperTrend object.



Data Quality and Lookout Driver Objects

While Lookout reports on data quality for all Lookout system objects, not all Lookout driver objects report data quality.

The following Lookout driver objects do report data quality:

- Allen-Bradley
- National Instruments FieldPoint
- GE Series 90
- DL205
- DL405
- Modbus
- Modbus MOSCAD
- National Instruments OPCClient
- Optomux
- S5 3964
- Siemens TI505
- Simatic S5
- Tesco
- Tiway

Using OPC with Lookout

This section details several issues you need to be aware of when using OPC with Lookout.

OPCClient Performance

National Instruments recommends that you use the OPCClient object to communicate with National Instruments Data Acquisition, SCXI, and FieldPoint products when possible for performance reasons.

Also, you will increase performance when you use Lookout with the OPCClient on the same computer as the OPC server application you are exchanging data with. You can then use the TCP/IP-based networking built into Lookout to pass this data across the network to other Lookout clients and servers.

Editing the OPCClient Database

When you open the OPCClient database to work with the OPC data members, you must manually set the data type for each data member when you select it. Lookout does not automatically set a data type for an OPCClient data member.

Security and OPC Client/Server

When you disable task switching as a security option by selecting **User cannot switch to another program** in the **System Options** dialog box, you disable all top level windows. This can cause problems with OPC servers under Windows 95 when someone with a security level lower than the level you set logs in to Lookout.

To fix this problem, add the following lines to your `lookout.ini` file using any text editor:

```
[Security]
DisableWindows=0
```

This `.ini` file setting fixes the OPC problem, but it does mean that an operator can switch to other applications if he can click on their windows or on their icons in the task bar. To maintain security, make sure you select the **Lookout will always be maximized** option in the **System Options** dialog box, and make sure that your Windows taskbar (accessed by selecting **Start»Settings»Taskbar**) is set to **Auto hide**, and that **Always on top** is disabled.

For more information on the `lookout.ini` file, see Appendix C, *The Lookout .INI File*, of the *Lookout Developer's Manual*.

Networking Your Computers

Under some circumstances you may need to network two computers yourself, or remove a computer or two from your network as a part of your development process. A short PDF document containing brief, basic instructions for simple networking setups can be found in your Lookout documentation folder in a file called `NWSetup.pdf`.

ODBC Information

While Lookout does install a Lookout ODBC driver, you must manually create your own data source in order to access the Citadel database using ODBC. Consult Chapter 8, *Structured Query Language*, of the *Lookout Developer's Manual* for information on how to create your Lookout data source.



Note Some applications are not completely ODBC compliant. If you plan to use Microsoft Query, Microsoft Access, or Microsoft Visual Basic, ensure that the maximum column name length does not exceed 62 characters. These applications cannot handle longer names. Applications that are completely ODBC-compliant can handle names up to 126 characters long. All traces whose names exceed the maximum column name length are excluded from queries.

Because Lookout objects may include network path information in their names, and because you can arrange Lookout objects in hierarchies inside your processes, you may find it easy to exceed the 62 and 126 character limitations of ODBC. Consideration given to naming and organizing objects can minimize the risk of encountering this difficulty.

PDF Documentation

The *Lookout Object Reference Manual* is available in Portable Document Format (PDF) on the Lookout CD in the `Documentation` directory. The Lookout installation gives you the option of copying the PDF files into the `Lookout/Documentation` folder on your hard drive. To view these files, you must have Adobe Acrobat Reader 3.0 or later installed. If you do not have Adobe Acrobat Reader installed, you can install it from the `Lookout/Documentation` directory by running `rs40eng.exe` or from the Adobe web site at www.adobe.com.

For Experienced Users of Lookout

In order to add easy and convenient networking to Lookout 4.0, a number of changes have been necessary in the way some things are done in Lookout.

Many of these changes are simple and easy to adapt to, such as the ability of Lookout 4.0 to run more than one process at a time, or the ability to

arrange your Lookout objects into folder hierarchies for easier maintenance and development.

A few changes connected to the flexibility necessary for networking may take a few minutes study to master.

This section briefly explores changes in Lookout 4.0, and directs you when necessary to more detailed information contained in the Lookout manuals and online help. You should also read the *Compatibility and Conversion with Lookout 4.0* section of these release notes for information involving specific compatibility and conversion issues.

Chapter 5, *Developer Tour*, of the *Getting Started with Lookout* manual demonstrates the new Lookout tools and capabilities in a series of simple exercises. Completing the exercises in this chapter is another way to quickly familiarize yourself with the new features of Lookout 4.0.

General Changes

As previously mentioned, Lookout now can run more than one process at a time. While there is no limit to the number of processes you can load, the more Lookout has to handle, the greater the demand it will make on your computer system resources.

You can now arrange Lookout objects in folder hierarchies to make maintenance and development easier. The new Object Explorer and Connection Browser tools make this sort of organization easy to accomplish. See the *Object Explorer* and *Connection Browser* sections of Chapter 2, *How Lookout Works* in the *Getting Started with Lookout* manual for more information on these two new Lookout tools.

Lookout data is now polymorphic, which means that you can, to some extent, connect output data of one type—numeric, logical, or text—to inputs requiring data of a different type. When possible, Lookout interprets the data received as the type of data the input requires. See the *Data Polymorphism* section of Chapter 2, *How Lookout Works*, in the *Getting Started with Lookout* manual.

Because you can now easily acquire and process data from across a network, Lookout has added a data quality mechanism. When data arrives in a Lookout client that has been corrupted, or when a data source falls off line, Lookout notifies you by placing a large red X over any display element for that data. Consult your alarm window for error messages.

Development versions of Lookout now install with no password set for the Administrator user account. When the Administrator account has no password, Lookout opens with the Administrator account active and without asking you to log in. This is a convenience for developers, but you

must make sure to set a password for the Administrator user account before giving anyone who should not have administrator privileges access to any version of Lookout using a `Lookout.sec` file with no Administrator password.



Note Server and client run-time versions of Lookout open with the (nobody) user account logged in, no matter what the password setting is for the Administrator account.

Data Location

Lookout stores historical, alarm, and event data in the Citadel database that operates as a background service on your Lookout computer. You can set the default Lookout location you want Citadel to store data in when you install Lookout and configure the basic system options. This default can be anywhere on your computer, or on any networked computer with Lookout 4 installed.

You can set a different location for database files for each process if you choose, overriding the Lookout default for that process.

You can override both the system option default for Lookout and the process default with the Loader object.

Lookout state files can also be saved under different names and different locations, according to settings you make when creating or modifying a process or when using a Loader object.

For more detailed information on data locations and how different elements of Lookout affect data location, see the *Setting System Options* section of Chapter 1, *Installing Lookout*, in the *Getting Started with Lookout* manual; the *Creating a Lookout Process* section of Chapter 4, *Using Lookout*, also in the *Getting Started with Lookout* manual; and the Loader object documentation in your online help or in the PDF *Lookout Object Reference* manual.

Alarms

Alarms and events are both displayed in the Lookout alarm window, and Lookout has added alarm filtering and printing options to make handling alarms easier.

You now select which processes you want Lookout to monitor alarms in, and your selection can include processes running on another instance of Lookout located on your Lookout network.

Lookout alarms are also arranged in a folder hierarchy. Every time you define an alarm area, Lookout creates a folder for that area. You can use

data members incorporated in that folder to track and acknowledge alarms in that area programmatically.

See Chapter 9, *Alarms*, of the *Lookout Developer's Manual* for more detailed information on Lookout alarms.

Events

Events are now stored in the Citadel database, along with alarms and logged data. To display events, select the **Events Only** or **Alarms & Events** display options in the **Alarm Filters** dialog box, accessed by selecting **Alarms»Filter Options**.

Networking

When you install Lookout 4.0 on computers connected by a network using TCP/IP protocols, you are ready to network your Lookout processes. All you have to do is use the Lookout Object Explorer to register the computers you want Lookout to communicate with on the network and begin developing your processes.

To test your network and make sure your computers can communicate, ping each computer on your network as described in the *Testing TCP/IP* section of Chapter 1, *Installing Lookout*, in the *Getting Started with Lookout* manual.

To work through examples using Lookout networking, see Chapter 5, *Developer Tour*, of the *Getting Started with Lookout* manual.

To make sure your data logging works correctly, make sure you time synchronize your Lookout processes as described in the *Time Synchronization* section of Chapter 4, *Networking*, in the *Lookout Developer's Manual*.

For a complete look at networking in Lookout 4.0, consult Chapter 4, *Networking*, in the *Lookout Developer's Manual*.

Connections

You can now make quick and easy connections that work over a network. For network connections to work properly, however, software must have proper path information to know where to find data and where to put data.

In the case of client processes that may move from computer to computer, and which may be loaded and unloaded, networking also requires that controls take their initial values from the servers those controls interact with.

The *Connecting Objects* section of Chapter 4, *Using Lookout*, in the *Getting Started with Lookout* manual covers the new way of making connection in Lookout, and in particular the new URL connections used by controls for a remote position source connection.

Lookout automatically selects a path for data when you make a connection, but you can also easily override that selection yourself. For a detailed explanation of paths and how to use them, see the *Path Names in Lookout* section of Chapter 4, *Using Lookout*, in the *Getting Started with Lookout* manual.

All the Lookout connections, including the new URL connections for objects and the Lookout Symbolic Link are demonstrated in the exercises of Chapter 5, *Developer Tour*, of the *Getting Started with Lookout* manual.

New and Improved Objects

Lookout 4.0 features several new and several improved objects for you to use in your processes.

One of the improvements is a help button located on the dialog boxes you use to create or modify a Lookout object. Clicking on the help button opens the Lookout online help topic for that object.

The Pot, Switch, Pushbutton, and TextEntry objects have all changed to accommodate networked client/server operations. The old versions of these controls, now called L3Pot, L3Switch, L3Pushbutton, and L3TextEntry, are still active in Lookout 4.0 for compatibility reasons, but you cannot create new instances of these objects.

Lookout now also has RadioButtons and a Sequencer object, along with a Waveform object. These objects have been available in recent Lookout maintenance releases, and so may be new to some Lookout users who have not installed a maintenance release.

Completely new in Lookout 4.0 and created especially for useful networking operations are the Loader, Monitor, and Symbolic Link objects. While these three objects are necessary for equipping your Lookout computer network with redundancy, you can also use them in other convenient ways. The symbolic link, for instance, not only stands in for an entire remote process, it is also handy as an intermediary when you need to make a URL connection involving a complex expression (you cannot enter a complex expressions in a URL field). With the Loader object, you can load one process file a number of times, giving each load a different process name and logging the data from that process to a unique destination, saving a unique state file as well.

In addition to the classic library of driver and protocol objects, Lookout now has an improved OPCClient object, support for the FieldPoint FP-1600 module, and a new DNP driver.

The *Lookout Object Reference* manual is now available in two forms: as an online WinHelp system you access through Lookout help and as a .pdf document which you can browse, copy from, or print using Adobe Acrobat. For complete details on new as well as improved Lookout objects, consult either of these references.

Lookout on the Web

In addition to running Lookout client processes in Lookout, you can also export an ActiveX version of a Lookout client process that will appear on an HTML page. You can then access this web client through Microsoft's Internet Explorer.

For details on exporting a Lookout web client to an HTML page, or downloading a Lookout client in your own browser, see Chapter 11, *Lookout Web Clients*, in the *Lookout Developer's Manual*.

Security

Lookout 4.0 adds permissions security to the control security used by Lookout 3.8. You can now configure processes and elements of processes for network security quickly and easily.



Note For your user accounts to work consistently across your network, you must use the same `lookout.sec` file for all your installed copies of Lookout. After you have created your `lookout.sec` file, make a copy of it from your `WINDOWS\SYSTEM` directory. Place a copy of the file in the `WINDOWS\SYSTEM` directory of each of your Lookout computers.

See Chapter 6, *Security*, of the *Lookout Developer's Manual* for information on Lookout 4.0 security and how it integrates with Lookout 3.8 security.

Compatibility and Conversion with Lookout 4.0

You should be able to open all your Lookout 3.8 processes in Lookout 4.0 with little or no difficulty. Some minor adjustments may have to be made in some processes, and you will have to change redundancy using backup computers. This section covers compatibility and conversion issues for Lookout 4.0.

Lookout 3.8 and Lookout 4.0 Compatibility

The following list contains known compatibility issues and fixes for Lookout 4.0:

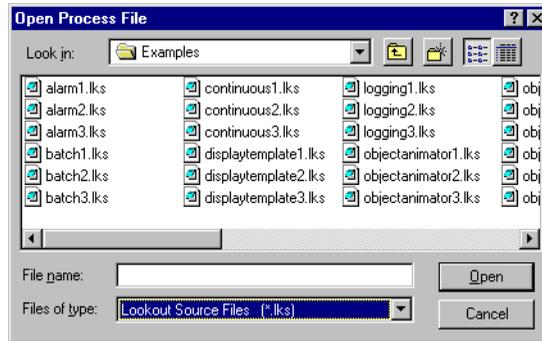
- Lookout 4.0 does not run on Windows NT version 3.51 or earlier—you must be using Windows NT 4.0 or later.
- Earlier versions of Lookout process files used the file extension `.1kp`, and state files used the extension `.1st`. Lookout 4.0 uses the `.14p` extension for process files and `.14t` for state files.

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

- Avoid installing Lookout 4.0 over Lookout 3.x.xx. Either uninstall your previous version of Lookout, or put Lookout 4.0 in a new directory, transferring or copying files for conversion.
- Lookout 3.x.xx can run on the same computer with Lookout 4.0, 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 4.0. You should maintain old Citadel files separately from Lookout 4.0 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 4.0

To load a Lookout 3.8 process file in Lookout 4.0, select **File»Open** and set the **Files of type** to Lookout Source Files (*.lks).



Select the file you want to convert and click on the **Open** button (or double-click on the file name). Lookout uses the built-in CBL compiler to recompile the 3.8 source file into a Lookout 4.0 process file.

Converting 3.8 files may require tweaks and fixes, as indicated in the following list:

- 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 4.0.

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 4.0 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 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 class from the old Lookout Evaluation Guide, you will have to replace it with the Lookout 4.0 Loader object, which is more flexible and

powerful than the old LKSwap object. Remember too that Lookout 4.0 can run multiple processes, so it is not necessary to shut one process down before running another.

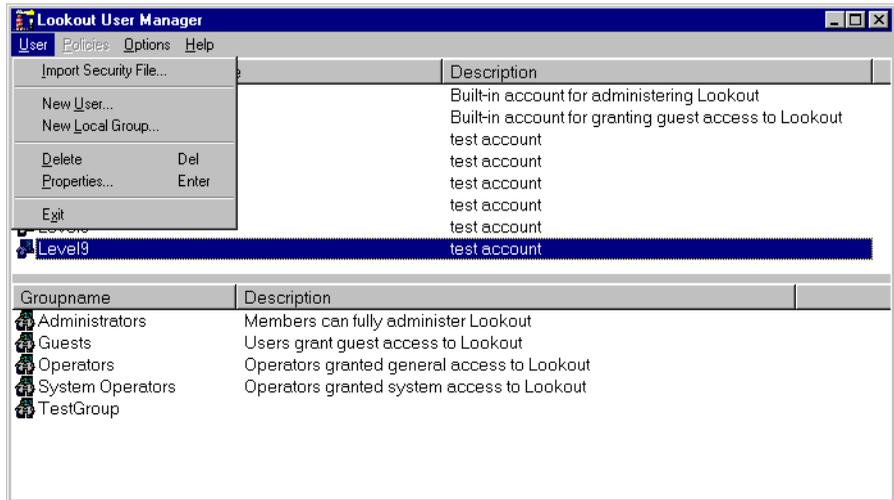
- Fonts are preserved when converting Lookout 3.8 process files from 4.0 using the `.lks` file, but font code page information is lost. This appears to mostly affect international users whose languages use a different code page than the US code page.
- The `$Alarm` object syntax in an `.lks` file has changed. The full URL for a `$Alarm` object will always be as follows:
`\\machine\process\Alarm`
- Your custom built Lookout 3.8 CBXs should run in Lookout 4.0, 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 NIDAQ or NISCXI 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 4.0. You can download the current version of NI-DAQ software from the National Instruments web site, at www.natinst.com.

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.

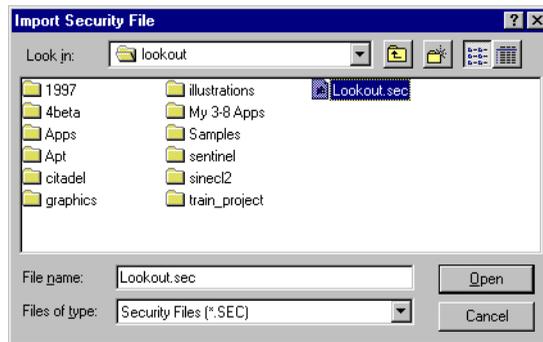
Importing Old Security Files into Lookout 4.0

You can import the user account information from your Lookout 3.8 processes into Lookout 4.0 using the Lookout User Manager.

1. Select **Options»User Manager** from the Lookout menu. You must be in edit mode for the User Manager item to appear in the **Options** menu. The **User Manager** dialog box appears.



2. Select **User»Import Security File** from the **User Manager** dialog box. 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 on the **Open** button.
5. If you have already created any user accounts in Lookout 4.0 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 Manager.



Note Unlike Lookout 3.8, Lookout 4.0 maintains the `lookout.sec` security file in the Windows `System` directory.

The Lookout 4.0 User Manager creates a unique identification number for each user account. This means that to maintain identical accounts, 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.

Redundancy

In Lookout 3.8 you used NetDDE to arrange for a standby computer to take over your process if the primary computer failed.

All your NetDDE-based processes still work in Lookout 4.0, and your redundancy processes will also work. The method of switching control of your process from one computer to another has changed, however. You no longer set the name of a standby computer in the **System Options** dialog box. Instead, you install Lookout on your backup computer and create a monitor process with a Monitor and Loader object, just as you would for Lookout 4.0 processes as described in the *Setting up the Standby Process and Computer* section of Chapter 10, *Redundancy*, in the *Lookout Developer's Manual*.

You must also configure the process options so that your processes will save and use the most current state files in the event of a failure of the primary computer, as well as when the primary computer comes back on line. Configuring the state information for processes is also described in detail in the *Setting up the Primary Process and Computer* section of Chapter 10, *Redundancy*, in the *Lookout Developer's Manual*.

Your DDE-based client process works the same in Lookout 4.0 as it did in Lookout 3.8. You must therefore keep the naming conventions for primary and secondary computers using NetDDE redundancy that you used in Lookout 3.8.

While we now recommend that you use the new TCP/IP networking with Lookout, the old documentation for DDE-based networking is contained in Appendix A, *Networking With DDE*, in the *Lookout Developer's Manual*. Consult this appendix for maintaining old NetDDE processes.

The process of making sure that your computers have a trusted share for DDE use, making sure NetDDE is running, and allowing file sharing is the same for Lookout 4.0 as it was for Lookout 3.8.

