



Wonderware
ArchestrA Log Flag
Editor User's Guide

All rights reserved. No part of this documentation shall be reproduced, stored in a retrieval system, or transmitted by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of Invensys Systems, Inc. No copyright or patent liability is assumed with respect to the use of the information contained herein. Although every precaution has been taken in the preparation of this documentation, the publisher and the author assume no responsibility for errors or omissions. Neither is any liability assumed for damages resulting from the use of the information contained herein.

The information in this documentation is subject to change without notice and does not represent a commitment on the part of Invensys Systems, Inc. The software described in this documentation is furnished under a license or nondisclosure agreement. This software may be used or copied only in accordance with the terms of these agreements.

© 2014 by Invensys Systems, Inc. All rights reserved.

Invensys is a Schneider Electric company.

Invensys Systems, Inc.
26561 Rancho Parkway South
Lake Forest, CA 92630 U.S.A.
(949) 727-3200

<http://www.wonderware.com>

For comments or suggestions about the product documentation, send an e-mail message to ProductDocumentationComments@invensys.com.

All terms mentioned in this documentation that are known to be trademarks or service marks have been appropriately capitalized. Invensys Systems, Inc. cannot attest to the accuracy of this information. Use of a term in this documentation should not be regarded as affecting the validity of any trademark or service mark.

Alarm Logger, ActiveFactory, ArcestrA, Avantis, DBDump, DBLoad, DT Analyst, Factelligence, FactoryFocus, FactoryOffice, FactorySuite, FactorySuite A², InBatch, InControl, IndustrialRAD, IndustrialSQL Server, InTouch, MaintenanceSuite, MuniSuite, QI Analyst, SCADAAlarm, SCADASuite, SuiteLink, SuiteVoyager, WindowMaker, WindowViewer, Wonderware, Wonderware Factelligence, and Wonderware Logger are trademarks of Invensys plc, its subsidiaries and affiliates. All other brands may be trademarks of their respective owners.

Contents

	Welcome	5
	Documentation Conventions	5
	Technical Support	6
Chapter 1	Overview of Log Flags.....	7
	Understanding Log Flags	8
	Default Log Flags	8
	Custom Log Flags	10
	Introducing the ArcestrA Log Flag Editor	11
	Component List	12
	Log Flags View	12
	Component View	13
Chapter 2	Using the ArcestrA Log Flag Editor	15
	Starting the ArcestrA Log Flag Editor	16
	Controlling Logged Messages	17
	Enabling Log Flags for a Single Component	18
	Enabling Global Log Flags	18
	Enabling Log Flags for Multiple Components	19
	Using Shortcut Menus	20
	Using the Log Flags View Shortcut Menu	20
	Using the Component List View Shortcut Menu	21

Saving Log Flag Settings to a File	21
Saving Log Flag Settings	22
Importing Log Flag Files	22
Using the ArcestrA Log Flag Editor on a Remote Node	23
Index.....	25

Welcome

The ArcestrA Log Flag Editor is a utility of the ArcestrA Log Viewer. You can use the ArcestrA Log Flag Editor to assign a flag value to each category of messages issued by an ArcestrA component. By switching flags on or off, you control which categories of messages are saved to the Wonderware Logger.

You can view this book online or you can print it, in part or whole, by using the Adobe Acrobat Reader's print facility.

Documentation Conventions

This documentation uses the following conventions:

Convention	Used for
Initial Capitals	Paths and file names.
Bold	Menus, commands, dialog box names, and dialog box options.
Monospace	Code samples and display text.

Technical Support

Wonderware Technical Support offers a variety of support options to answer any questions on Wonderware products and their implementation.

Before you contact Technical Support, refer to the relevant section(s) in this documentation for a possible solution to the problem. If you need to contact technical support for help, have the following information ready:

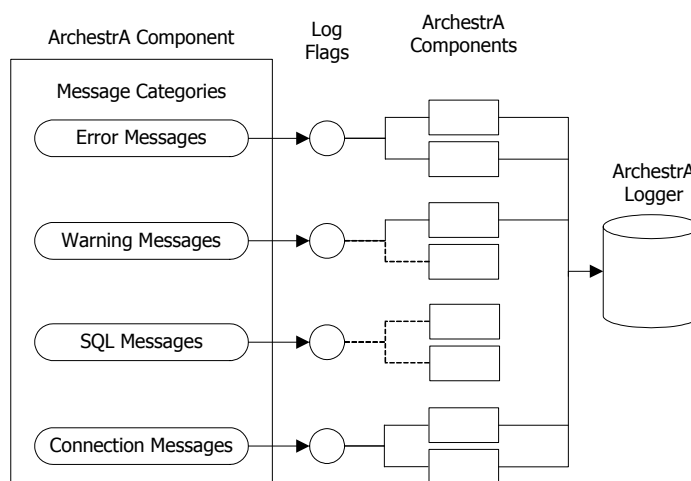
- The type and version of the operating system you are using.
- Details of how to recreate the problem.
- The exact wording of the error messages you saw.
- Any relevant output listing from the Log Viewer or any other diagnostic applications.
- Details of what you did to try to solve the problem(s) and your results.
- If known, the Wonderware Technical Support case number assigned to your problem, if this is an ongoing problem.

Chapter 1

Overview of Log Flags

You can use the ArcestrA Log Flag Editor to assign a flag value to each category of messages issued by an ArcestrA component. By switching flags on or off, you control which categories of messages are saved to the Wonderware Logger.

The following figure summarizes how log flags control whether component messages are logged or not. Also, you can use log flags to assign message categories to other ArcestrA components.



Most categories of messages are not logged. Typically, a component issues only error, warning, and informational messages. Most other message categories remain inactive.

The ArcestrA Log Flag Editor is primarily a troubleshooting tool. When a component begins logging error messages, you can use log flags to activate other message categories and begin saving additional diagnostic messages to the Wonderware Logger.

Understanding Log Flags

Each message sent to the Wonderware Logger by an ArcestrA component belongs to a specific message category. Each message category has an associated log flag.

The status of a log flag indicates whether messages that belong to the message category are logged or not. When a log flag is active, the messages from the category are logged. Conversely, an inactive log flag prevents messages from being logged.

There are two types of log flags:

- **Default log flags**
All ArcestrA components include default log flags, which are associated with standard message categories.
- **Custom log flags**
Custom log flags apply to unique message categories that are used by only a few ArcestrA components.

Default Log Flags

All ArcestrA components include a set of default log flags for standard categories of messages. For example, all ArcestrA components can produce error, warning, and informational messages. These standard message categories have associated default log flags.

The following table lists default log flags for the standard ArcestrA message categories.

Default Log Flag	Description
Error	The Error log flag determines if error messages are logged. By default, the Error log flag is active for all ArcestrA components.
Warning	The Warning log flag determines if warning messages are logged. A warning message indicates that an unexpected event occurred, but the ArcestrA component was able to recover. By default, the Warning log flag is active for all ArcestrA components.

Default Log Flag	Description
Info	<p>The Info log flag determines if informational messages are logged.</p> <p>An informational message describes the outcome of normal program events.</p> <p>By default, the Info log flag is active for all ArcestrA components.</p>
Trace	<p>The Trace log flag determines if trace messages are logged. Trace messages describe internal object states, variable values, and other low level data from the component.</p>
Scan On Demand	<p>The Scan On Demand log flag determines whether scan on demand-related MxConnection calls, reference counts, and suspend counts are logged. Also, the Scan On Demand log flag determines whether the routing of scan on demand messages to on-engine and off-engine objects are logged.</p>
SOD_BRO	<p>The SOD_BRO log flag determines whether tracing is enabled between the Lmx and the BRO.</p>
SOD_BROProxy	<p>The SOD_BROProxy log flag enables tracing when an interface is used to route a scan on demand message between a primitive and another primitive within the current object.</p>
SOD_PrimProxy	<p>The SOD_PrimProxy log flag determines whether tracing is enabled for the scan on demand interface between the BRO or a BRO proxy and a primitive proxy.</p>
Start-Stop	<p>The Start-Stop log flag determines if messages are logged that show when a component is started or stopped.</p>
Entry-Exit	<p>The Entry-Exit log flag determines if messages are logged that show when a program function was invoked.</p>

Default Log Flag	Description
ThreadStart-Stop	The ThreadStart-Stop log flag determines if messages are logged that indicate a program thread has started or stopped.
SQL	The SQL log flag determines if SQL messages are logged. Typically, SQL messages show SQL query strings issued by the component.
Connection	The Connection log flag determines if communication messages are logged. Communication messages describe the status of network connections between ArcestrA components.
Ctor-Dtor	The Ctor-Dtor log flag determines if constructor/destructor messages are logged. These messages describe the status of objects as they are created and deleted from memory.
RefCount	The RefCount log flag determines if reference count messages are logged. Reference messages show the counts from objects that manage their life span by counting their clients.

For more information about setting log flags, see "Controlling Logged Messages" on page 13.

Custom Log Flags

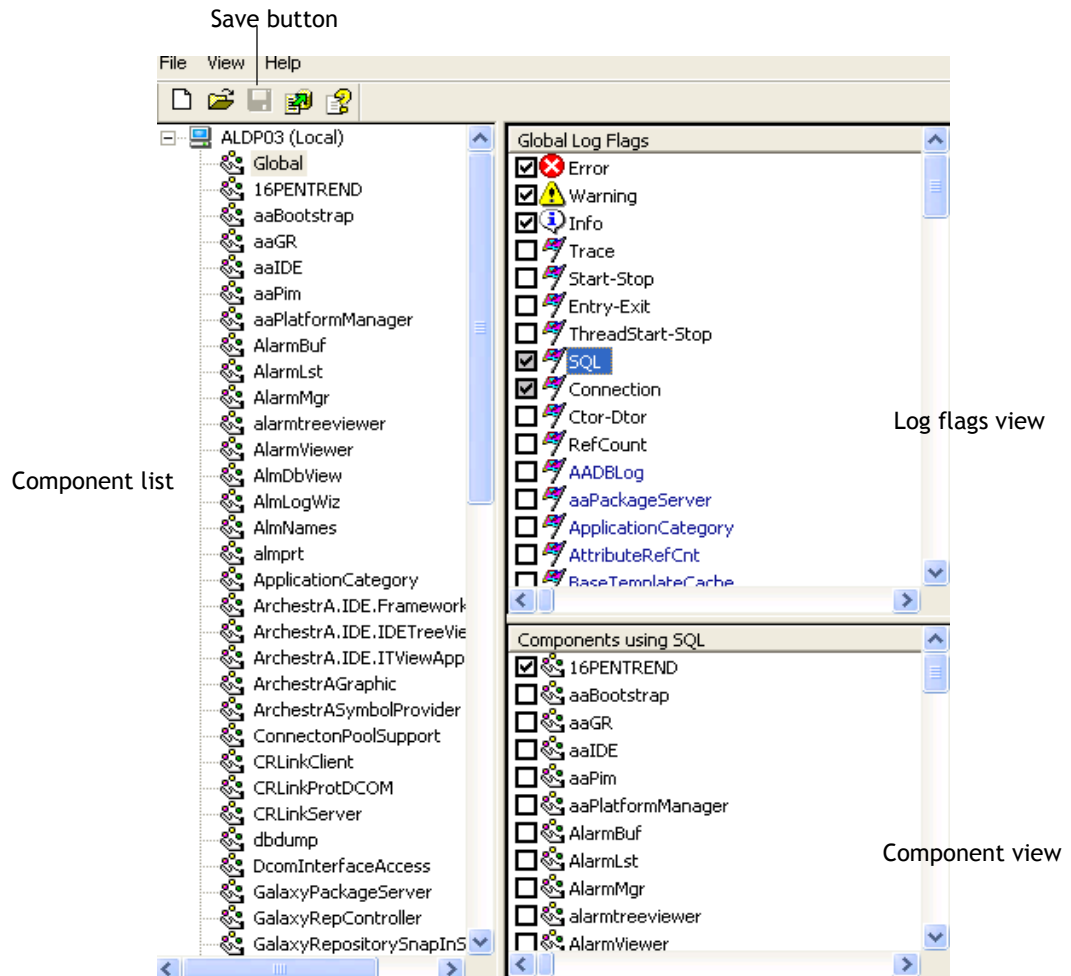
Most ArcestrA components have unique messages that do not belong to a default log flag category. In those cases, you must create custom log flags and assign them to unique component messages.

Several components can share a custom log flag if they send similar messages that fit into that category and if they assign those messages to the custom log flag. Another component cannot use a custom log flag if it did not assign a message to that log flag.

For more information about creating custom log flags, see "Using Shortcut Menus" on page 16.

Introducing the ArcestrA Log Flag Editor

The ArcestrA Log Flag Editor lists all ArcestrA components installed on the node you selected. You enable or disable message logging by setting the log flags associated with the selected component's message categories.



To work with the ArcestrA Log Flag Editor

- 1 Select an ArcestrA component from the Component List.
- 2 Set the status of log flags assigned to the component from the Log Flags View.
- 3 Assign any additional ArcestrA component to the log flags you selected.
- 4 Click the **Save** button.

Component List

The left pane of the main window shows the list of ArcestrA components installed on the node you selected from the ArcestrA Log Viewer. The root of the component list is the node you selected from the ArcestrA Log Viewer list.

After you select a component, only those log flags associated with that component's message categories appear in the Log Flags View pane. You can select **Global** from the component list and show all log flags associated with all message categories in the Log Flags View pane.

The ArcestrA Log Flag Editor does not dynamically update the component list. You must restart the ArcestrA Log Flag Editor to show a new component installed on the node. When you remove an ArcestrA component from the selected node, you must use the ArcestrA Log Flag Editor's **Remove Component** command to remove it from the component list.

Log Flags View

The top right pane of the ArcestrA Log Flag Editor dialog box is the Log Flags view. This view shows all log flags associated with the message categories of the component selected from the Component List.

Note: The log flags shown in this view correspond to the items shown in the Log Flag column of the ArcestrA Log Viewer.

To log component messages

- ◆ Select the check box of a log flag to log component messages that belong to that message category.

The title of the view shows the name of the component you selected. The Log Flags view lists the default log flags in black text followed by the custom log flags in blue text.

Component View

The bottom right pane of the main window is the Component view. This view shows all components with messages associated with the log flag selected in the Log Flags view. You can use the Component view to select only those components that log messages of the log flag type selected.

The Log Flags view and Component view dynamically interact depending on your selections. For example:

- Select a log flag (just the log flag name) and all components with messages associated with that log flag appear in the Component view.
- Select a log flag's check box and the check boxes of all components in the Component view are enabled. Clear the log flag's check box and the check boxes of the components are cleared.
- Select a log flag's check box and the check boxes of all components in the Component view are enabled. Clear one component's check box and the log flag's check box appears shaded, indicating that at least one component that uses this log flag is disabled.

Chapter 2

Using the ArcestrA Log Flag Editor

You can use the ArcestrA Log Flag Editor to manage the messages saved to the Wonderware Logger.

ArcestrA Log Flag Editor tasks include the following:

- Starting the ArcestrA Log Flag Editor
- Enabling log flags for a single component
- Enabling global log flags
- Enabling log flags for multiple components
- Using shortcut menus
- Saving log flag settings to a file
- Using the ArcestrA Log Flag Editor on remote nodes

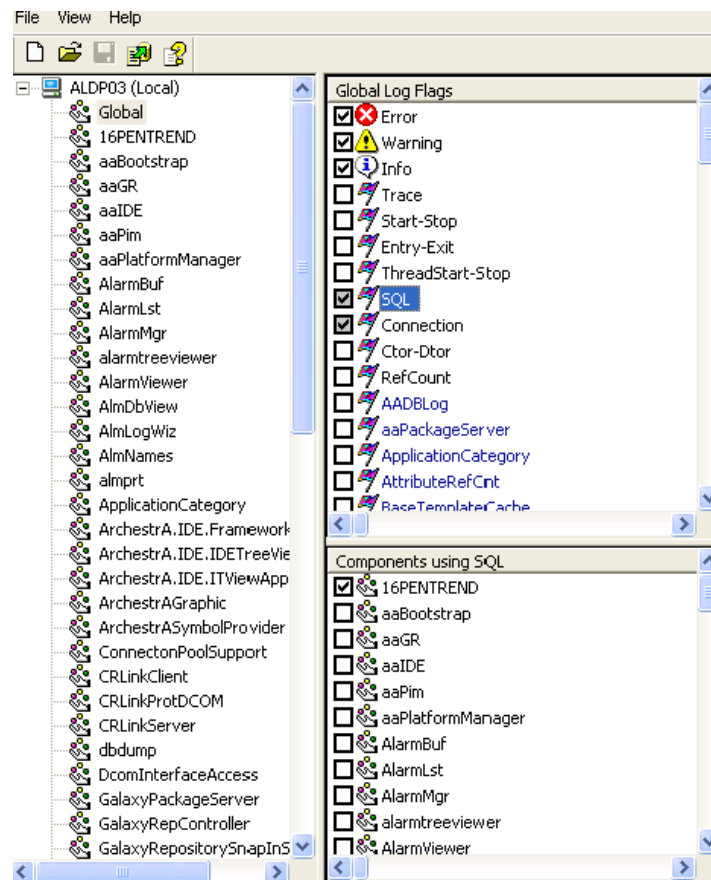
Starting the ArcestrA Log Flag Editor

You can access the ArcestrA Log Flag Editor utility from the ArcestrA Log Viewer. This procedure explains how to start the ArcestrA Log Flag Editor from a node in which the ArcestrA System Management Console has been installed.

To start the ArcestrA Log Flag Editor

- 1 Log on to a computer where the ArcestrA System Management Console has been installed.
- 2 Open the ArcestrA System Management Console. ArcestrA Log Viewer appears as an option in the left pane of the console window.
- 3 Click ArcestrA Log Viewer.
- 4 Expand the ArcestrA Log Viewer list to show ArcestrA nodes.
- 5 Select the node from the ArcestrA Log Viewer list that you want to enable with logging flags.
- 6 On the **Action** menu, click **Log Flags**.

The ArcestrA Log Flag Editor dialog box appears with a list of ArcestrA components associated with the node you selected.



Controlling Logged Messages

The Arcestra Log Flag Editor provides several ways to select messages for logging.

- You can enable log flags for an individual Arcestra component.
- You can set global log flags that apply to all Arcestra components.
- You can set log flags for multiple components, but not on a global basis.

You can select a specific component from the Component List view to specify which categories of messages are logged for that component.

To enable a log flag

- ◆ Select its check box.

To disable a log flag

- ◆ Clear its check box.

You can select **Global** in the Component List view to enable a log flag for all components. If the check box for a log flag appears shaded, that log flag is enabled for at least one component, but not globally.

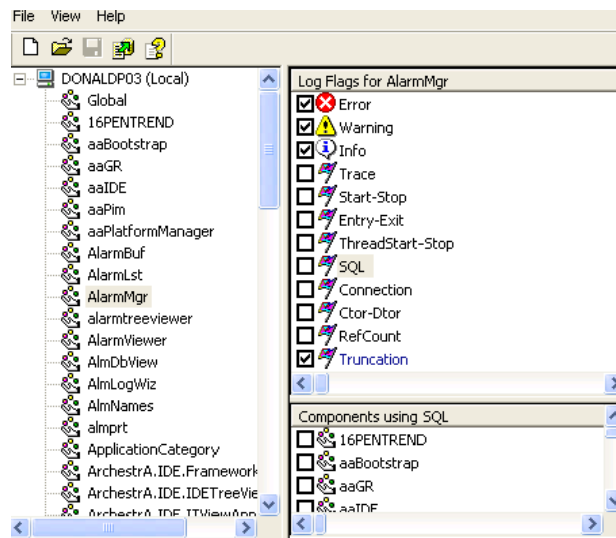
Enabling Log Flags for a Single Component

This section describes how to set log flags for a single ArcestrA component. The scope of the log flags apply to the message categories of a single ArcestrA component.

Log flags for the Error, Warning, and Info message categories are active for all components. When you select a component, you should see these log flags already set.

To set log flags for a single component

- 1 Select a component from the Component List view. The Log Flags view shows the log flags for the component you selected.
- 2 In the Log Flags view, select the check boxes of the log flags you want to enable.



- 3 On the **File** menu, click **Apply**. All component messages from the selected categories are logged.

Enabling Global Log Flags

You can globally enable log flags to log the messages from all components installed on the selected node.

To use log flags on a global basis

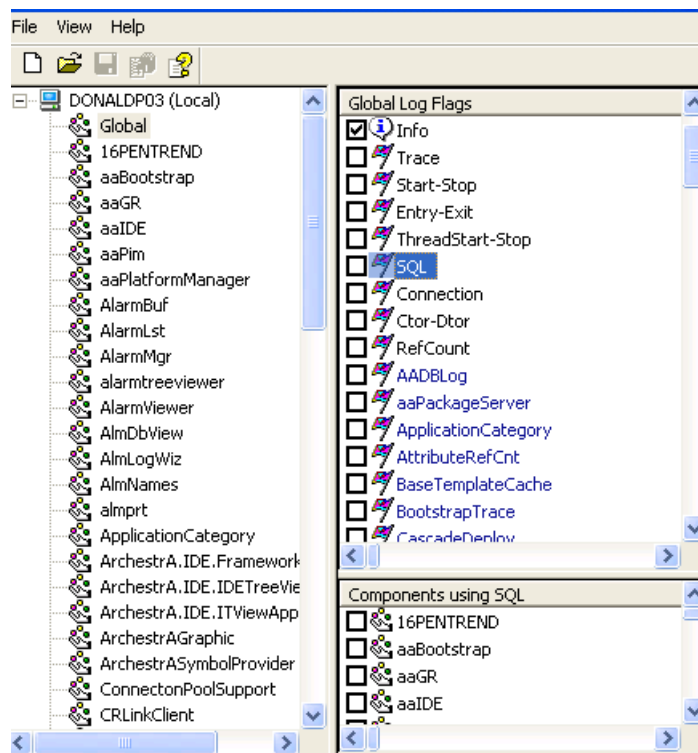
- 1 In the Component List, select **Global**. The Log Flags view shows the log flags from all ArcestrA components installed on the selected node.
- 2 In the Log Flags view, select the check box of the log flag you want to enable.
- 3 On the **File** menu, click **Apply**. All messages associated with the selected log flag are logged.

Enabling Log Flags for Multiple Components

If you want to log messages for multiple components, you can enable the log flags globally and select only those log flags for the components whose messages you do not want logged.

To enable log flags for multiple components

- 1 In the Component List, select **Global**. The Log Flags View shows the log flags for all ArcestrA components installed on the selected node.
- 2 In the Log Flags View, click the name of the log flag you want to enable. The Component View shows all components that use the selected log flag.



- 3 In the Component View, select only the check boxes of the components for which you want to enable the selected log flag. The check box for the selected log flag appears shaded, indicating that at least one component that uses this log flag is enabled.
- 4 On the **File** menu, click **Apply**. All messages from the enabled components that are associated with the selected log flags are logged.

Using Shortcut Menus

The ArcestrA Log Flag Editor includes two shortcut menus. Each menu includes a set of commands that apply to either log flags or ArcestrA components. You can show both shortcut menus by right-clicking in a view area of the ArcestrA Log Flag Editor dialog box.

Using the Log Flags View Shortcut Menu

After right-clicking in the Log Flags view, a shortcut menu shows the following commands:

- **All Flags ON**

This command enables all log flags shown in the view for the component selected in the Component List.

- **All Flags OFF**

This command disables all log flags shown in this view for the component selected in the Component List.

- **Add Custom Flag**

Use this command to create a new custom log flag. The new custom log flag appears at the bottom of the list of the Log Flags view.



Assign another name to the custom log flag.

You cannot use the **Add Custom Flag** command to create a functioning log flag. The ArcestrA Log Flag Editor updates the permanent set of log flags for each component when you install new ArcestrA components on the selected node.

You can create a custom flag to add a custom flag that exists on another computer, save the log flag settings to file, and then use the file to control messages on that other computer (if you could not do so remotely).

- **Remove Custom Flag**

Use this command to remove a custom log flag from the Log Flags view. Select the custom log flag from the list and right-click within the Log Flags view to show the shortcut menu. Select the **Remove Custom Flag** command. You are prompted to confirm the deletion.

Using the Component List View Shortcut Menu

After right-clicking in the Component List view, a shortcut menu shows the following commands:

- **Add Component**

This command adds a new component to the Component List view. The new component appears at the bottom of the Component List view. You should assign another name to the new component.

You can not use the **Add Component** command simply to create a functioning component. The ArcestrA Log Flag Editor only updates the Component List with new components when you install new ArcestrA components on the selected node.

You can use this command to add a component that exists on another computer, save the log flag settings to file, and then use the file to control messages on that other computer (if you could not do so remotely).

- **Remove Component**

This command deletes a component from the list. You are prompted to confirm the deletion before the component is removed. Right-click anywhere in the Component List to show this command, although it is unavailable for **Local** or **Global** selections.

If you remove a component from the list that exists on your computer, it reappears in the list when you restart the Wonderware Logger and ArcestrA Log Flag Editor. Typically, you remove components from the ArcestrA Log Flag Editor after you remove ArcestrA components from the computer.

Saving Log Flag Settings to a File

The ArcestrA Log Flag Editor provides the capability to save your current log flag settings to a file. Generally, you save current log flag settings to a file when you want to:

- Back up commonly used log flag settings
- Store special-purpose log flag settings
- Use log flag settings on another computer

After you save the log flag settings, you can import the file settings to another instance of the ArcestrA Log Flag Editor. The components and log flags shown in the ArcestrA Log Flag Editor reflect those of the selected node.

When you use the ArcestrA Log Flag Editor to edit a log flag settings file, the name of the file appears in the tree view root. The title bar and status bar continue to show the node to which you are currently connected. You can apply the file's settings to the selected node or click the **New** command on the **File** menu to return to the selected node's active configuration.

Saving Log Flag Settings

You can save the current settings of the ArcestrA Log Flag Editor to a file. After you save the file, you can copy these settings to the ArcestrA Log Flag Editor on another computer.

By default, the ArcestrA Log Flag Editor saves the file with name of the node where the ArcestrA System Management Console is installed. You must save the file with an `.aaLGF` extension.

To save log flag settings to a file

- 1 Open the ArcestrA Log Flag Editor dialog box.
- 2 Set all components and log flags as desired.
- 3 On the **File** menu, click **Save As**. The Microsoft **Save As** dialog box appears.
- 4 In the **Save As** dialog box, enter a path and name for the file. The file name must use the `.aaLGF` extension.
- 5 Click **Save**.

Importing Log Flag Files

You can import log flag settings from a file to an ArcestrA Log Flag Editor session. The imported log flag settings exist for the duration of the current ArcestrA Log Flag Editor session. The original log flag settings return after you close and then re-open the ArcestrA Log Flag Editor. But, you can edit the imported log flag settings from the session and save them to a file again.

Note: You can open a log flag settings file by right-clicking it from Windows Explorer and clicking **Edit** on the shortcut menu. Also, you can apply new log flag settings from a file to the selected node by double-clicking it from Windows Explorer. You are prompted to confirm that you want to apply the log flag settings.

To open a log flag settings file

- 1 From Windows Explorer, navigate to the folder where the file containing log flag settings is located.
- 2 Right-click the file name to show an action menu.

- 3 On the **action** menu, click **Apply**. A dialog box asks you to confirm that you want to apply the log flag settings to the node.
- 4 Click **Yes**. Another dialog box appears and confirms that the log flag settings have been successfully applied to the node.

Using the ArcestrA Log Flag Editor on a Remote Node

You can connect to a remote ArcestrA Log Flag Editor from your local node. After you connect to the remote node, you can use the remote ArcestrA Log Flag Editor to complete all standard tasks as if they were done on a local computer.

To use the ArcestrA Log Flag Editor on a remote node

- 1 Open the ArcestrA System Management Console installed on your local node.
- 2 Click ArcestrA Log Viewer.
- 3 On the **Action** menu, click **Connect** and then **Remote**. The **Connect** dialog box appears.
- 4 In the **Computer Name** box, enter the node name of the remote computer and click **OK**. The ArcestrA Log Viewer list refreshes and shows the remote node.
- 5 Select the remote node from the ArcestrA Log Viewer list.
- 6 On the **Action** menu, click **Log Flags** to open the ArcestrA Log Flag Editor dialog box. The node name of the remote ArcestrA Log Flag Editor appears in the title bar.

Index

A

Add Component command 21
Add Custom Flag command 20
All Flags OFF command 20
All Flags ON command 20

C

commands
 Add Component 21
 Add Custom Flag 20
 All Flags OFF 20
 All Flags ON 20
 Remove Component 21
 Remove Custom Flag 20
Component List
 description 12
 selecting components 18
Component view
 description 13
 selecting components 19
custom log flags
 creating 20
 description 10

D

default log flags 8–10

L

log flags
 applying to all components 18
 custom 10
 default 8–10
 description 8
 importing settings 23
 saving settings to a file 22
 setting for a single component 18
 setting for multiple components 19
Log Flags view
 description 12
 enabling flags for multiple components 19

R

remote nodes 24
Remove Component command 21
Remove Custom Flag command 20

S

shortcut menus 20

T

technical support, contacting 6