CHAPTER 6

Java Event List Configuration

This chapter covers how configure the Cisco Info Center Java Event List. You need only read this section if you have installed Java support for the Java Event List.

This chapter includes the following sections:

- "Introduction"
- "Configuration Procedure"
- "License File"
- "Creating HTML Pages"
- "Running the JELD Process in Background"

Introduction

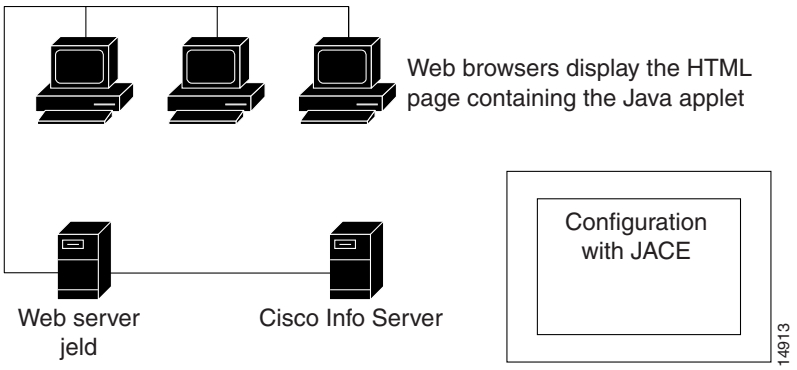
The Java Event List is used to distribute and manage Cisco Info Center events through the World Wide Web (WWW). The Java Event List uses a background server process, which obtains information from the Cisco Info Server.

The background process, called **jeld**, and a Web server should be installed on the same machine to overcome Java browser security issues.

When a Web browser makes a connection to the Web server, the server can send back an HTML page containing the Java applet to the browser. The applet then connects to the **jeld** and requests a configuration. The **jeld** retrieves the configuration from the Cisco Info Server, and this is used to display the Event List information in the Web browser.

The configuration information is stored in an Cisco Info Server database table and is configured using the JEL Advanced Configuration Editor (JACE).

Figure 6-1 Java Component



Configuration Procedure

The Java support components are, by default, installed in the **$OMNIHOME/java** directory. The configuration procedure for Java support covers the following steps:

1. Install a Web server and set up the communications to Cisco Info Center.
2. Copy the class files to the publication home directory of the Web server.
3. Set the **jeld** properties files.
4. Create configurations with JACE.
5. Create the HTML pages.
6. Run the background process, **jeld**.

These steps are described in detail in the following sections.

Web Servers

In order to use the Java Event List, you must have a Web server installed and configured to support Java applets. The Web server must be installed on the same machine as the Java support components. You can obtain free Web servers from the WWW.

For information about how to configure the Web server to support Java applets, for example, initialization of class files, see your Web server documentation.

You should configure the system that runs the Web server to connect to Cisco Info Center. To do this, you install a Cisco Info Admin Desktop on the machine that runs the Web server to check the connectivity requirements. See the *Cisco Info Center Installation and Configuration* guide for more information.

You also need to generate an **interfaces** file. This file contains information about which machines run the Cisco Info Servers and also the communications between those machines. See the *Cisco Info Center Installation and Configuration* guide for more information.

Publishing Class and Zip Files

Before you can create HTML pages for the WWW, you must publish the class and zip files on the Web server. The class files are in the **$OMNIHOME/java/jel** directory. This directory contains the following subdirectories:

- **classes** containing the Java class files
- **html** containing an example configuration of the applet.

Copy these directories to the publication home directory of your Web server. To test the applets, load the pages from the Web server.

For example, specify your server name with the following URL:

http://<*your-server-name*>**/html/index.html**

Setting the Properties File

The **jeld.props** properties file is located in the **$OMNIHOME/java/props** directory. You must modify this file to match your system configuration. An example properties file is shown below.

```
jeld.Cisco Info Server.host: omnihost
jeld.Cisco Info Server.port: 4100
jeld.Cisco Info Server.user: root
jeld.objectserver.password
jeld.objectserver.1.host: host
jeld.objectserver.1.port: 4100
jeld.objectserver.1.user: user
jeld.objectserver.1.password: encrypted_password
#jeld.objectserver.1.url
#
#JDBC driver properties
#
jeld.jdbc: com.sybase.jdbc.SybDriver
#
#Jeld server properties
#
jeld.listenport: 7575
jeld.maxconns: 3
#
#Jeld global security properties
#
jeld.isp: +*
jeld.hosts: +*
#
#Log file properties
#
jeld.logdir: /opt/Omnibus
jeld.logfile: jeld.log
```

The following sections explain the items in the properties file and how to set the values.

Info Server Connection Properties

The properties file provides three methods of connecting to an Info Server. These are:

1. Connection to a list of Info Servers. JELD tries each Info Server in the list until a connection is made. This is the preferred method.
2. Single connection to an Info Server. This method is provided for backward compatibility with previous versions.
3. Connection to a list of URLs. Each URL specifies fully an Info Server connection. JELD tries each URL in the list until it connects to an Info Server. This option is only for use by experienced integrators. It should not be used in normal implementations.

Connection to List of Info Servers

The preferred method for the JELD to connect to an Info Server is for it to try to connect to each Info Server in a list until it makes a connection. This means that you can specify a fallback Info Server, or have the JELD retry the same one several times.

Each Info Server is specified in the properties file by a set of properties. Each property includes a number which identifies the position of the Info Server in the list. The property names for the first Info Server are:

```
jeld.objectserver.1.host:
jeld.objectserver.1.port:
jeld.objectserver.1.user:
jeld.objectserver.1.password:
```

The second Info Server has 2 instead of 1, and so on for subsequent Info Servers.

You can override the entries in the properties file from the command line. For more information, see the "JELD Command Line Utility" section on page B-2

Host Name

This entry contains the host name where the Cisco Info Server is located. For example, specify:

`jeld.objectserver.host:` <*omnihost*>

Where <*omnihost*> is the name of the host.

You can override this entry with the **jeld** command line option **-host**.

Port

This entry contains the port setting for the Cisco Info Server. For example, specify:

```
jeld.objectserver.port: 4100
```

You can override this entry with the **jeld** command line option **-port**.

User Name

This entry contains a user name (the suggested user name is `jeld`) for the Cisco Info Server. For example, specify:

```
jeld.objectserver.user: jeld
```

Password

This entry contains the **jeld** password for the Cisco Info Server. The password should be encrypted using the **nco_crypt** command. For example, specify:

`jeld.Cisco Info Server.password: <string>`

Where <*string*> is the encrypted password. To create an encrypted password, specify:

nco_crypt <*password*>

Where <*password*> is the unencrypted form of the password. The **nco_crypt** command displays an encrypted version of the password.

Single Connection to an Info Server

This option is provided for backward compatibility only. These lines are commented out in the example configuration file.

Use the following fields to specify a connection to a single Info Server.

```
jeld.objectserver.host:
jeld.objectserver.port:
jeld.objectserver.user:
jeld.objectserver.password:
```

Enter the Info Server details against these properties. The JELD tries to connect to the specified Info Server. If it cannot connect the first time, it tries a second time. If it cannot connect then, it returns a failure.

Info Server URL List

Note Only experienced integrators should use this connection method.

When you specify an Info Server URL list, the data from each URL is used to establish a connection to the Info Server. You can use this option you need to specify fully the connection to an Info Server. The property name is:

`jeld.objectserver.1.`*`url`*

In this property name, *`url`* is the address of the machine running the Info Server. It is not a web reference and does not include the `http:` prefix.

This property is commented out in the example configuration file. Replace the number 1 with the number 2 for the second Info Server, 3 for the third Info Server and so on.

JDBC Driver Properties

This option defines the way in which the connection to the Info Server is established:

`jeld.jdbc: com.sybase.jdbc.SybDriver`

It should not be changed or removed except under instruction from technical support.

JELD Server Properties

There are two JELD server properties: `listenport` and `maxconns`.

Listen Port

This entry contains the listen port number. For example, specify:

```
jeld.listenport: 7575
```

You can override this entry with the **jeld** command line option **-listenport**.

Maximum Connections

This entry contains the maximum number of connections supported by the **nco_jeld** process. For example, specify:

```
jeld.maxconns: 3
```

You can control the number of connections a single **jeld** process can handle, however, this does not override the number of available licences.

JELD Global Security Properties

There are two JELD global security properties: `ips` and `hosts`.

IPS

This entry is a list of the domains allowed to connect to the applet. For example, to allow only `10.0.0.1`, `10.0.0.5`, and `10.0.0.10` to connect to the applet, specify:

```
ips:+10.0.0.1 +10.0.0.5 +10.0.0.10 -*
```

To allow only machines in the domain `10.n.n.n` to connect, specify:

```
ips:+10.* -*
```

To allow any domain to connect, specify:

```
ips: +*
```

Hosts

This entry is a list of hosts allowed to connect to the applet. For example, to allow only `machine1`, `machine2`, and `machine3` to connect to the applet, specify:

```
hosts:+machine1 +machine2 +machine3 -*
```

To allow only `machine1` to connect, specify:

```
hosts:+*machine1 -*
```

To allow any machine to connect, specify:

```
hosts:+*
```

Log File Properties

There are two log file properties: `logdir` and `logfile`.

Log Directory

This entry contains the name of the directory in which the log file is located. For example, to ensure the log file is located in the **/opt/Omnibus** directory, specify:

```
jeld.logdir: /opt/Omnibus
```

Log File

This entry contain the name of a log file. The log file contains diagnostic information about the background process, **jeld**. For example, to use a log file called **jeld.log**, specify:

```
jeld.logfile: jeld.log
```

License File

The JELD license file is `$OMNIHOME/java/props/jeld.lic`.

The license file contains information about the IP address of the host on which the JELD is licensed to run, the license key, the number of licenses, and the expiry date of the JELD license. For example, a license file could look like the following:

```
jeld.license.key:string
jeld.license.address:IP_address
jeld.license.count: 3
jeld.license.expire:01/Feb/2000
```

To obtain a license file, email Micromuse Technical Support (support@micromuse.com). After they send you the information for a license, use the text editor of your choice to create a jeld.lic file and paste the information that they send you into the file. Then save the file in the `opt/Omnibus/java/props` directory.

Info Server Connection and Reconnection

This section describes how JELD makes a connection when it is configured to connect to a list of Info Servers, and how it reconnects if necessary. For more information about the Info Server connection see the "Info Server Connection Properties" section on page 6-4.

Initial Info Server Connection

When JELD is started, it tries to establish a connection to the first Info Server in the properties file. If it cannot, it tries to establish a connection to the second Info Server.

If you wish to try to connect to the same Info Server twice, enter the same details in the first and second Info Server properties.

There is no limit to the number of Info Servers that you can specify in the properties file or the number of times you can enter the details of the same Info Server.

Once a connection has been established, the JELD can respond to requests from the Java applet in the JEL.

Info Server Connection Failure

If the connection to the Info Server is broken, the JELD shuts down automatically. The JEL detects the shutdown of the JELD, report an error on the desktop and offers the user the option of reconnecting.

If the JELD is running under process control it can be restarted automatically. As a new process the JELD tries to establish a connection with an Info Server as described in the "Initial Info Server Connection" section on page 6-7.

A dialog box appears on the JEL to reconnect to the JELD. If the JELD has established a new Info Server connection, the JEL resynchronizes the data from the Info Server.

Fail Over Support

When you enter a list of Info Servers in the `jeld.props` file, the JELD attempts to connect to each Info Server in turn until a successful connection is made.

For the JELD to continue to operate after a failure, every Info Server listed in the `jeld.props` file must contain the same JELD configuration table, and the JELD must be restarted automatically under process control.

Configuration with the JACE Editor

For Java configuration, use the JEL Advanced Configuration Editor (JACE). JACE is a table-orientated editor that allows you to manage configurations. These configurations are stored in the **jel.jel_props** Cisco Info Server table, to which the **jeld** is connected. You must have super user privilege to use JACE.

For maximum flexibility, the configuration files include options to take particular settings from the HTML parameters. These parameters include, view name, fields, order, and filter.

Starting JACE

Before starting JACE, set OMNIHOME:

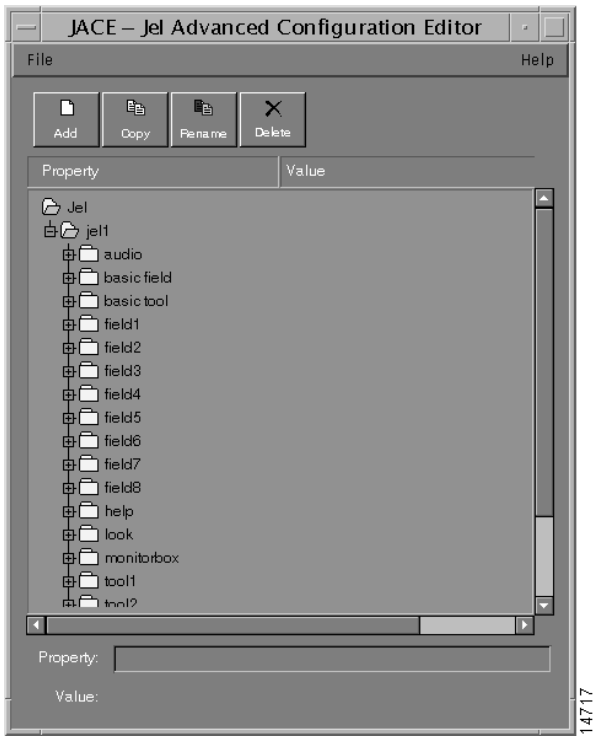
host# **setenv OMNIHOME=/opt/Omnibus**

To start JACE, specify the following command:

host# **$OMNIHOME/java/bin/jace**

Figure 6-2 shows the JACE display.

Figure 6-2 JEL Advanced Configuration Editor (JACE)



When you first start JACE, you should import the default configuration file **$OMNIHOME/java/misc/jel1.jace**.

The JACE display is in a tree format, made up of sets. A set is a group of property and name value pairs. The display shows a configuration, named `jel1`, which contains the default values for the sets. This configuration is used by default in the applet parameters in the HTML page, and is specified using the `config` parameter. For more information on the `config` parameter, see the "Configuration Parameter" section on page 6-21.

You can edit the **jel1** configuration or use it as the basis for new configurations.

Renaming a Configuration

To rename a configuration:

1. Click on the configuration you want to rename. For example, click on `jel1`.
2. Click on the **Rename** button. The Rename Configuration window is displayed, as shown in Figure 6-3.

Figure 6-3 Rename a Configuration in JACE

3. Specify the new name for the configuration.

Copying a Configuration

An entire configuration can be copied, including all sets and properties, or just one part of a configuration.

To copy a configuration:

1. Click on the configuration you want to copy. For example, click on `jel1`.
2. Click on the **Copy** button. The Copy Configuration window is displayed, as shown in Figure 6-4.

Figure 6-4 Copy a Configuration in JACE

3. Specify a name for the configuration. The copied configuration is displayed in the JACE display.

Deleting a Configuration

To delete a configuration:

1. Select the configuration from the JACE display.
2. Click on the **Delete** button. The configuration is removed from the JACE display.

Adding a Set to the Configuration

You can create additional sets in the configuration. To add a set:

1. Select the configuration from the JACE display.
2. Click on the **Add** button. The Add Set to Configuration window is displayed, as shown in Figure 6-5.

Figure 6-5 Add Set to Configuration in JACE

3. Specify the name of the set. The set is displayed in the configuration in alphabetical order.

Deleting a Set

To delete a selected set and all the properties in it, do one of the following:

- Click the **Delete** button (shown in the left margin).
- Right click on the list to display the popup menu, then select **Delete Set**.

The set no longer appears in the JACE display.

Importing and Exporting Configurations

JACE allows you to import and export configurations for use on other machines. Configurations may be exported to ASCII readable files and those files can be imported, allowing for the backup of master configurations.

To import a configuration:

1. Select the **File** menu's **Import** option.
2. Select the configuration file to import, then click on the **OK** button. The configuration is displayed in the JACE display.

To export a configuration:

1. Select the configuration from the JACE display.
2. Select the **File** menu's **Export** option.
3. Specify a file name for the configuration. It is recommended you give the file name a **.jace** extension.

Using Multiple Configurations

The configuration mechanism allows multiple-named configurations to be stored for use by the applets.

To use a configuration, the configuration name is specified as an attribute of the `config` applet parameter in the HTML page. For more information on the config parameter, see the "Configuration Parameter" section on page 6-21.

Set and Property Management

The following sections describe how to use the JACE editor to manage sets and properties.

Copying a Set

You can copy a set, including all its properties, within the same configuration. To copy a selected set, do one of the following:

- Click the **Copy** button.
- Right click on the list to display the popup menu, then select **Copy Set**.

The Copy Set window opens. Enter a name for the new set and select **OK**. The copied set now appears in its alphabetical position in the configuration.

Renaming a Set

To rename a selected set, do one of the following:

- Click the **Rename** button (shown in the left margin).
- Right click on the list to display the popup menu, then select **Rename Set**.

The Rename Set window opens. Enter a name for the new set and select **OK**. The renamed set now appears in its alphabetical position in the configuration.

Adding a Property to a Set

To add a new property to a selected set, do one of the following:

- Click the **Add** button (shown in the left margin).
- Right click on the list to display the popup menu, then select **Add Property to Set**.

The Add Property window opens. Enter a name for the new property and select **OK**. The property now appears in its alphabetical position in the set.

Deleting a Property

To delete a property, do one of the following:

- Select the property then click the **Delete** button (shown in the left margin).
- Right click on the list to display the popup menu, then select **Delete Property**.

The property is deleted from the JACE display.

Renaming a Property

To rename a property in a set:

Step 1 Right click on a property and select **Rename Property** from the popup menu.

The Rename Property window opens.

Step 2 Enter the new property name in the Rename Property window and select **OK**.

The property appears in the set in alphabetical order.

Saving and Restoring Modifications

When you create or modify a configuration, set or a property, its icon in the JACE display indicates that it has unsaved changes. The modified icon appears against the property, the set and the configuration.

To save every modification in every configuration select the **Save All** button at the bottom of the JACE window.

To save the modification made to a single set, right click on the set to display the popup menu, then select **Save Set *setname*,** where ***setname*** is the set or option to be saved.

To restore every option in every configuration to its currently saved state select the button **Restore All** at the bottom of the JACE window.

To restore the modification made to a single set right click on the set to display the popup menu, then select **Restore Set *setname***, where *setname* is the set or option to be restored.

Once a configuration, set or property is saved or restored, the modified icon is removed.

Configuration Options

In this section, there is a table of properties for each `setname`.

The type of each property can be `String`, `Integer` or `Boolean`. All configuration options are included in the JEL template.

The Basic Field and Basic Tool sets are provided as models that you can copy and use as the basis of custom fields and tools.

Field Extension

A set exists for each field plus its extension. Example set names include:

- Field1
- Field2
- FieldAlerts

The names must correspond to the entries in the property `fields` in the view set.

Each set must contain a minimum group of properties. For example, the `basic field` set from the default configuration, contains the properties described in Table 6-1.

Table 6-1 Field Set Properties

Property	Type	Description
`field`	String	Sets the name of the field in the database table.
`title`	String	Sets the column title.
`width`	String	Sets the column width.

These three properties, when copied to a field set and completed, provide the minimum requirements for that set.

The two additional properties described in Table 6-2 can be added to the field set

Table 6-2 Additional Field Set Properties

Property	Type	Description
`justify`	String	Set this property to `L`, `R` or `C` to left, right or center justify the column text.
`justifytitle`	String	Set this property to `L`, `R` or `C` to left, right, or center justify the title text. If these properties are not set, the justification defaults to left.

View

The properties for the view set are described inTable 6-3.

Table 6-3 View Set Properties

Property	Type	Description
`fieldsfromhtml`	Boolean	If set to `true` the field information for the JEL is taken from the HTML page applet parameter `fields` in the same format as JEL 1.x. If set to `false` the field information is taken from the property `filter` in the view set.
`fields`	String	The field information is taken from the field data in the configuration (see the "Field Extension" section on page 6-13). For example enter values `1,2,Alerts` to represents these field sets.
`namefromhtml`	Boolean	If this field is set to `true`, the view name is taken from the HTML page applet parameter `viewname` in the same format as JEL 1.x. If this field is set to `false`, the view name is taken from the property `name` in the view set.
`name`	String	Enter a string to specify the name of the view. This appears on the monitor box button, the inline-view message area and the float-view title bar.
`orderfromhtml`	Boolean	If this field is set to `true,` the order is taken from the HTML page applet parameter `order` in the same format as JEL 1.x. If this field is set to `false`, the view name is taken from the property `order` in the view set.
`order`	String	Specifies the ordering to be used for the view. For example, `Severity asc` for an ascending order by **Severity**.
`toolsfromhtml`	Boolean	If this field is set to `true`, the tools information is taken from the HTML page applet parameter `tools` in the same format as JEL 1.x. If this field is set to `false`, the tools information is taken from the tool data in the configuration (See the "Tool Number" section on page 6-16).
`filterfromhtml`	Boolean	If this field is set to `true,` the filter is taken from the HTML page applet parameter `order` in the same format as JEL 1.x. If this field is set to `false`, the view name is taken from the property `filter` in the view set.
`filter`	String	Specifies the filter to be used for the view. For example, `Serial>0.`
`filterrestriction`	String	If not null, the filter is prefixed and an AND clause is added with the specified restriction. This applies to HTML and configuration filters.

Access

The two properties required for JELD global security are defined in the access set, as described in Table 6-4.

Table 6-4 Access Set Properties

Property	Type	Description
host	String	Sets the host name to be used for validation. The default is "+*".
ips	String	Sets the IP address to be used for validation. The default is "+*".

Audio

The properties for the audio set are described in Table 6-5

Table 6-5 Audio Set Properties

Property	Type	Description
enabled	Boolean	If this field is set to true, the alerts sample is played when new alerts appear in the event list. If this field is set to false, the alerts sample is not played.
alertsample	String	This sets the sample to be played for audio alerts. It must be the URL for an audio file. The default is crash.au.

Basic Tool

The Basic Tool set is a template that you can copy and use as the basis of custom tools. The properties for the basic tools set are described in Table 6-6.

Table 6-6 Basic Tools Set Properties

Property	Type	Description
name	String	Set the name of the tool.
params	String	Set the parameters to be parsed to the URL.
type	String	Set one of the following four options: go - Opens a new browser window with the selected URL. one - Opens a new browser window for the first row in a selection and parses the parameters to the URL. curl- Opens a new browser window for the first row in a selection and parse the parameters to create the URL. If the parameter is within quotes the string is parsed. If the parameter is not enclosed within quotes the value of the parameter in the selected alert is parsed. all - Opens a new browser window for every selected alert and passes the parameters in the URL as arguments.
url	String	Set the URL of the page or Common Gateway Interface (CGI) script to display.

These four properties, when copied to a tool set and completed, provide the minimum requirements for that set. See "Configuring Tools" on page 23 for details of the possible values of the fields.

Tool Number

A set exists for each tool plus its number. Example set names include:

- Tool 1
- Tool 2
- Tool 3

The numbers must form a continuous numeric sequence. If a break occurs in the sequence only tools with numbers up to the break are used.

The properties within each set are the same as those in the basic tool set. Table 6-7 describes the properties for the tool number set.

Table 6-7 Tool Number Set Properties

Property	Type	Description
`name`	String	Set the name of the tool.
`params`	String	Set the parameters to be parsed to the URL.
`type`	String	Set one of the following four options: `go` - Opens a new browser window with the selected URL. `one` - Opens a new browser window for the first row in a selection and parse the parameters to the URL. `curl`- Opens a new browser window for the first row in a selection and parse the parameters to create the URL. If the parameter is within quotes the string is parsed. If the parameter is not enclosed within quotes the value of the parameter in the selected alert is parsed. `all` - Opens a new browser window for every selected alert and pass the parameters in the URL as arguments. See "Tools Parameter" on page 23 for examples.
`url`	String	Set the URL of the page or Common Gateway Interface (CGI) script to display.

Help

Table 6-8 describes the property for the help set.

Table 6-8 Help Set Property

Property	Type	Description
`url`	String	Set the URL of the help page. This defines the URL to browse when the help option is selected from the menu.

Look

The properties for the look set are described in Table 6-9.

Table 6-9 Look Set Properties

Property	Type	Description
authenticate	Boolean	If set to true the user must authenticate before each operation that modifies an alert. This property also adds the menu items **Authenticate** and **Deauthenticate** to the **File** menu in the JEL.
authenticatefirst	Boolean	If set to true the user must authenticate themselves before the JEL displays any data.
autorefresh	Boolean	If set to true the JEL is automatically refreshed at time intervals set by the refreshrate property of the look set. When this property is set to true the property manualrefresh is implicitly set to False.
background	String	Sets the background color of the JEL for all widgets where a background color is meaningful. All colors are specified in hexadecimal. The default is 708090.
fixedfont	String	Sets the font for the JEL dialogs. The default is Courier.
fixedfontsize	Integer	Sets the font size for the JEL dialogs. The default is 12.
font	String	Sets the font for the JEL. The default is Helvetica.
fontsize	Integer	Sets the font size for the JEL. The default is 12.
foreground	String	Sets the foreground color for windows. The default is ffffff.
frameheight	Integer	Sets the pixel height of the frame opened when JEL opens in float mode. The default is 256.
framewidth	Integer	Sets the pixel width of the frame opened when JEL opens in float mode. The default is 512.
inline	Boolean	If this field is set to true, the JEL operates in inline mode. If set to false JEL operates in float mode.
look3d	Boolean	If this field is set to true, the alert list grid has a 3-dimensional raised edge look. If set to false the grid has a flat 2-dimensional look.
manualrefresh	Boolean	If this field is set to true, the menu item **Refresh** is added to the JEL **File** menu. The data is only refreshed when this menu item is selected. When this property is set to true the property autorefresh is implicitly set to False.
menufont	String	Sets the font for menus (where the platform allows menu fonts to be set). The default is SansSerif.
menufontsize	Integer	Sets the menu font size (where the platform allows menu fonts to be set). The default is 12.
monitorbox	Boolean	If this field is set to true, a monitor box is displayed in float mode. If set to false, only a button with the view name is displayed in float mode.

Table 6-9 Look Set Properties (continued)

Property	Type	Description
refreshrate	Integer	Sets the refresh rate for the alert list in automatic refresh mode. The default is 10. This set is associated with the refresh utility.
refreshtoggle=	Boolean	If this field is set to true, the menu item **Refresh Mode** is added to the **File** menu and the **Refresh** button is always available. This item contains the buttons **Automatic Refresh** and **Manual Refresh**. Using these buttons the user can override the property settings autorefresh and manualrefresh in the look set.

Monitor Box

The following options are only relevant in float mode to control the appearance of the monitor box. The properties for the monitor box set are described in Table 6-10.

Table 6-10 Monitor Box Set Properties

Property	Type	Description
font	String	Sets the font used in the monitor box. The default is Helvetica.
fontsize	Integer	Sets the font size used in the monitor box. The default is 12.
height	Integer	Sets the height of the distribution meter in the monitor box. The default is 40.
highest	Boolean	If this field is set to true, the monitor box displays the highest severity in the current view.
lowest	Boolean	If this field is set to true, the monitor box displays the lowest severity in the current view.
metric	Boolean	If this field is set to true, the monitor box displays the metric in the JEL.
metricfield	String	Set the field name from the JEL which is to be used to calculate the metrics. The selected field must be an integer and exist in the JEL view.
metrictype	String	Sets the type of calculation which is to be performed on the data from the field selected in metricfield property. The metrics types available are: sum average max min

Table 6-10 Monitor Box Set Properties (continued)

Property	Type	Description
`style`	String	This property sets the way in which the current status on severity is shown. If it is set to `l`, the monitor box shows a lava lamp. If it is set to `h`, the monitor box shows a histogram. When a histogram is selected, the `height` value must be increased.
`total`	Boolean	If this field is set to `true`, the monitor box displays the total number of alerts in the current view.

Update Permissions

The update permissions set controls the way in which alerts can be modified. Authentication is required before you can change any of the options in this set.

The properties for the update permissions set are described in Table 6-11.

Table 6-11 Update Permissions Set Properties

Property	Type	Description
`acknowledge`	Boolean	If this field is set to `true`, the menu items **Acknowledge** and **Deacknowledge** are added to the **Alerts** menu.
`assign`	Boolean	If this field is set to `true`, the menu item **Assign** is added to the **Alerts** menu. The user can assign an alert to another user.
`assigngroup`	Boolean	If this field is set to `true`, the menu item **GroupAssign** is added to the **Alerts** menu. The user can assign an alert to another group.
`delete`	Boolean	If this field is set to `true`, the menu item **Delete** is added to the **Alerts** menu. The user can delete an alert.
`journal`	Boolean	If this field is set to `true`, the menu item **Add to Journal** is added to the **Alerts** menu. The user can make an addition to the journal.
`severity`	Boolean	If this field is set to `true`, the menu item **Prioritize** is added to the **Alerts** menu. The user can change the severity of an alert.
`takeownership`	Boolean	If this field is set to `true`, the menu item **Take Ownership** is added to the **Alerts** menu. The user can take ownership of an alert.

View Permissions

The view permissions set controls way alerts are viewed. The properties for the update permissions set are described in Table 6-12.

Table 6-12 View Permissions Set Properties

Property	Type	Description
`details`	Boolean	If this field is set to `true`, a user can view the alert and its details in information or reports. The details for the alert is also shown.
`fullreport`	Boolean	If this field is set to `true`, the user can view the full report information. The menu item **Report** is added to the **Alerts** menu.
`info`	Boolean	If this field is set to `true`, the user can view the alert information for the selected events. The menu item **Information** is added to the **Alerts** menu.
`journal`	Boolean	If this field is set to `true`, the user can display the journal details for the selected events. The menu item **Journal** is added to the **Alerts** menu.
`select`	Boolean	If this field is set to `true`, the **Edit** menu is added to the JEL. The items **Select All** and **Deselect All** are added to the **Edit** menu.

Admin

The property for the admin set is described in Table 6-13.

Table 6-13 Admin Set Property

Property	Type	Description
`include`	String	Specifies a configuration, *`string`*, to include.

The `include` option allows you to include all the values from another configuration into the current configuration.

Sets and properties can be added to the current configuration. The value of a property in the current configuration overrides the same property in the included configuration.

If a configuration includes another configuration that contains the admin set, the included configuration can point to the including configuration. This creates an loop that never ends. JACE cannot validate the included configuration when this occurs. It should be avoided.

Fail Over Support

For the JELD to continue to operate after a failover, every Info Server listed in the `jeld.props` file must contain the same JELD configuration table. You must copy any changes that you make to the JELD configuration table in JACE to all of the Info Servers in the `jeld.props` file.

For more information on this topic, see the "Connection to List of Info Servers" section on page 6-4.

Creating HTML Pages

To configure the JEL, you add applet parameters to the HTML pages. An example HTML file is provided in the following file:

`$OMNIHOME/java/html/jel1.htm`.

The following sections describe the available parameters and how to set their values.

The APPLET Tag

The `applet` tag defines where the code for the JEL is located and the class that should be run. It also defines the width and height of the applet in the HTML page. For example:

```
<APPLET CODEBASE="../classes" archive="jel.zip"
CODE="COM.micromuse.jel.Jel.class" WIDTH=200 HEIGHT=64>
```

For Netscape Communicator and other Java 1.1 compliant browser users, change the archive entry to `jel.jar`. For example:

```
<APPLET CODEBASE="../classes" archive="jel.jar"
CODE="COM.micromuse.jel.Jel.class" WIDTH=200 HEIGHT=64>
```

There must be a corresponding `</APPLET>` tag at the end of the applet.

Host Parameter

The `host` parameter allows you to specify a host to which the applet connects directly. The applet can connect only if the host has no access control. Use this tag with caution. For example:

```
<param name="host" value="host">
```

Configuration Parameter

The `config` parameter allows you to specify the configuration to use. The configuration is defined with JACE, as described in the "Configuration with the JACE Editor" section on page 6-8. For example

```
<param name="config" value="jel1">
```

Port Parameter

The `port` parameter allows you to specify the port number. For example, enter:

```
<param name="port" value="7575">
```

This parameter defaults to 7575.

ViewName Parameter

The `ViewName` parameter is a string that labels the button and window that appear in float mode. For example:

```
<param name="ViewName" value="High Severity">
```

This parameter is used when the configuration `namefromhtml` is set to true.

Order Parameter

The `Order` parameter is the SQL text of an `ordered by` clause. For example:

- `Severity desc` orders by descending severity
- `Severity asc` orders by ascending severity

You can specify multiple orders, with precedence going from left to right, by separating entries with a comma. For example, enter:

```
<param name="Order" value="Severity desc, Serial asc">
```

This parameter is used when the configuration `orderfromhtml` is set to true.

ViewFields Parameter

The `ViewFields` parameter controls the display of fields. For example, enter:

```
<param name="ViewFields" value="Serial,,Serial,R,10|Node,,Node,,16|
Summary,,Summary,,64|Severity,,Sev,,10|Acknowledged,,Ack,,3|FirstOccurence,,First,,16|Owne
rID,,Owner,,16">
```

The fields are listed in the following format:

```
FieldName,Justify,Title,JustifyTitle,Width [| FieldName,Justify,Title, JustifyTitle,Width
]...
```

The fields are as follows:

- *`FieldName`* is the field from the Info Server
- *`Justify`* is the justification of the field name. If omitted the default is left.
- *`Title`* is the text to appear above the column when it is displayed,
- *`JustifyTitle`* is the justification of the column title. If omitted the default is left.
- *`Width`* is the number of characters.

The vertical bar character (|) is used to separate the entries.

If you do not include the `Severity` field, no severity coloring appears. If you do not include the `Acknowledged` field, no acknowledgment shading appears. This feature allows you to prevent severity and acknowledgment information appearing in the event list. This parameter is used when the configuration `fieldsfromhtml` is set to true.

Filter Parameter

The `Filter` parameter allows you to define the filter. This is the value of an SQL `where` clause and can contain any valid filter text. For example, enter:

```
<param name="Filter" value="Severity>3">
```

This parameter is used when the configuration `filterfromhtml` is set to true.

Tools Parameter

The `Tools` parameter defines tools that call CGI scripts (or other web-based tools) according to the value of fields in selected alerts. The parameter's value consists of a list of tool definitions:

```
<param name="Tools" value="
Tool1(type)(BaseURL)([CGIParam,Value,CGIParam,Value...)
Tool2(type)(BaseURL)([CGIParam,Value,CGIParam,Value...)
.
.
">
```

Each tool is defined on a single line in the following format:

```
NameforMenu(type)(BaseURL)(CGIParam,Value,CGIParam,Value...)
```

For example:

```
Ping multiple hosts (all)(http://armagnac/cgi-bin/ncping)(Node,Node,Serial,Serial)
```

This parameter is used when the configuration `toolsfromhtml` is set to true.

See the "Configuring Tools" section on page 6-23 for details of the parameters.

Configuring Tools

You can specify tools for use with alerts displayed in a Java event list. Each tool consists of a URL that points to a web based application, for example a CGI script or page relevant to the alert. You can configure tools either in the JACE, as part of the JEL configuration, or in the HTML for a Java event list web page. If you define tools in the web page, the JEL configuration must have the `toolsfromhtml` set to true for a Java event list to use them.

Each tool consists of the following:

- A name
- A base URL
- A type
- Parameters derived from the alert

Tool Name

The name of the tool is displayed in the **Tools** menu title bar. In a tool defined in JACE, it is defined in the `name` property of the tool. In a tool defined in an applet, it is defined in the first (`NameForMenu` tag) parameter of the tool definition.

Base URL

You must specify a base URL that forms the stem of the URL for each tool. The rest of the tool's URL is derived from the parameters in a way that depends on the tool's type. See the "Tool Type" section on page 6-24 and the "Tools Parameters" section on page 6-24 for details.

In a tool defined in JACE, the base URL is defined in the second (`url`) property of the tool. In a tool defined in an applet, it is defined in the second (`BaseURL`) tag.

Tool Type

The tool can be one of the following types:

- **go** to pass no parameters and open a browser window with the BaseURL page
- **one** to work on only one selected alert, open a browser window and call the BaseURL page with the appropriate expanded parameters
- **curl** to construct a URL and open a browser window with the constructed URL
- **all** to work on one or more selected alerts. A browser window opens for each alert, calling the BaseURL and appropriate expanded parameters.

In a tool defined in JACE, the tool type is defined in the `url` property of the tool. In a tool defined in an applet, it is defined in the third (`type`) tag.

Tools Parameters

A tool can have no parameters, or any number. In a tool defined in JACE, the parameters are defined as a single string in the `params` property of the tool. In a tool defined in an applet, they are defined in the fourth tag.

Tools of Type Go

Tools of type `go` have no parameters. In a tool defined in JACE, the `params` property should be empty. In a tool defined in an applet, the fourth parameter should be null:

```
Show Home Page(go)(http://armagnac/)()
```

Tools of Type One

Tools of type `one` have one or more parameters, each of which that consists of the name of a parameter used by the tool, and its value. The list of parameters is itself a single parameter in the tool definition:

```
Ping a single host(one)(http://armagnac/cgi-bin/ncping)(Node,Node,Serial,Serial)
```

The contents of the final parentheses in these examples are the same as the value of the `params` parameter in a tool defined in JACE.

The name/value pair is passed to the script at the URL. The value of each named parameter is taken from the specified field in the alert. In this example, the script expects a `Node` parameter, and runs with the value of the `Node` field in the first alert. The value of the `Serial` field in each alert is similarly passed to the script as the value of a `Serial` parameter. The name of the parameter does not have to be the same as the name of the field from which it takes its value, although this helps in tracking values.

Tools of Type All

Tools of type `all` have one or more parameters, defined in the same way as for tools of type `one`:

```
Ping multiple hosts(all)(http://armagnac/cgi-bin/ncping)(Node,Node,Serial,Serial)
```

In this example, the script expects a `Node` parameter, and runs with the value of the `Node` field in the each selected alert. The value of the `Serial` field in each alert is similarly passed to the script as the value of a `Serial` parameter.

Tools of Type Curl

A tool of type `curl` accesses a URL constructed from the values of the third and forth parameters. The third parameter is a base URL, for example, `http://armagnac/info`. The fourth parameter is a list of values which can be either taken from fields in the alert or passed as strings, included in quotes.

For example, if you have a directory structure that contains appropriate HTML pages for each type of alert, the following file could contain instructions for dealing with a critical (severity 5) alert involving a disk failure on the node `demo`:

```
http://armagnac/info/demo5/Disk/help.html
```

To access this URL when the relevant alert occurs, the tool definition is:

Help(curl)(http://armagnac/info/) (Node,Severity,"/help.html")

Running the JELD Process in Background

To run the `jeld` process in background, enter the following:

```
$OMNIHOME/java/bin/jeld&
```

The JELD process can also be run under process control. For information on process control, see Chapter 2, "Process Control."

You can then open the HTML page in a web browser. The page displays the configuration settings. Figure 6-6 shows the web browser with a configuration modified to show the metric and a histogram in the monitor box.

Figure 6-6 Example HTML Page