iEventMonitor

Bluescape Browser Interface

Version 8.03

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Introduction

This documentation covers the Bluescape iEventMonitor browser interface only. This documentation is intended to provide you with information on how to configure the Apache HTTP server on your IBM i server to run the browser interface for iEventMonitor and instructions on using this browser based interface to the product.

Instructions for installing and maintaining the software can be found in the iEventMonitor User's Guide.

Overview

The Bluescape browser interface for iEventMonitor is a feature that allows you to administer iEventMonitor using a web browser. This requires that your IBM i use the Apache HTTP web server activated and configured to support iEventMonitor calls.

The Bluescape browser interface allows you to use the features of the browser to simplify and improve efficiency when working with iEventMonitor. Things like cut/paste, action buttons and browser field content prompts will help your use of iEventMonitor.

What's New in Release 8.03

Release 8.03 of Bluescape for iEventMonitor is an interim release that now supports these new features added to iEventMonitor:

- The new Product Watch (PW) is now supported in Bluescape.
- The new Temporary Storage Watch (TS) is now supported in Bluescape.

Using The Bluescape Interface

To use the browser interface for iEventMonitor, you must first configure the Apache HTTP server on your system and start the server instance for iEventMonitor. Please refer to the separate configuration section of this documentation for instructions on how to set this up.

To get started, just type in the following URL on your browser:

http://*yoursystem.com*:8077/iemlogon.htm

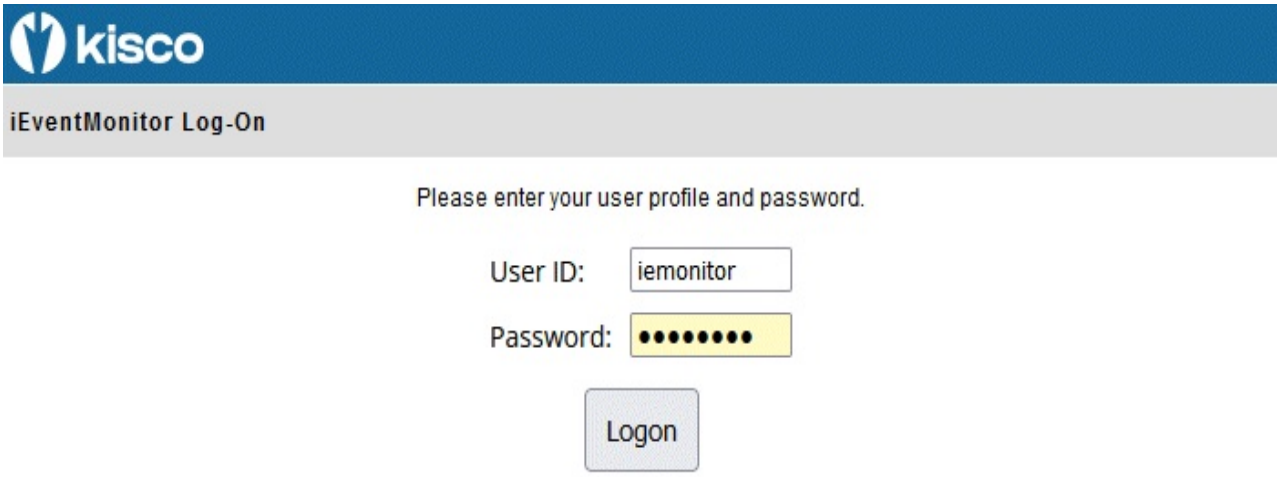
If you have secure HTTPS configuration completed, replace the "http" with "https".

Replace the "*yoursystemi.com*" with a reference to your IBM I TCP/IP address. You can use either a named address or a numerical address, such as "10.1.1.12".

If your IBM i system is configured for long passwords, then replace the iemlogon.htm with iemlogon2.htm.

Important note: The initial recommendation from Kisco Systems is to implement the web interface using the HTTP connection. This connection is not secure and it is recommended that you take precautions as your user profile and password will be passed as open text through your network. See the documentation for setup considerations for an HTTPS secure connection.

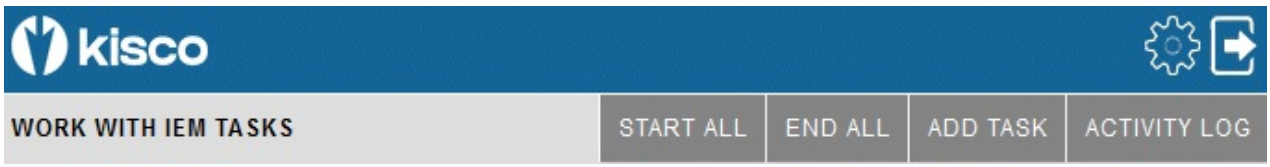
When you enter the above URL, the following will be displayed by your browser:



Log on to your system using a user profile that is authorized to use iEventMonitor.

Browser Navigation

The Bluescape browser interface will always have two navigation bars near the top of each display panel:



On the top blue line, you can always exit your Bluescape session by selecting the arrow icon on the right panel. This will give you a log off confirmation and give you a link to log back on.

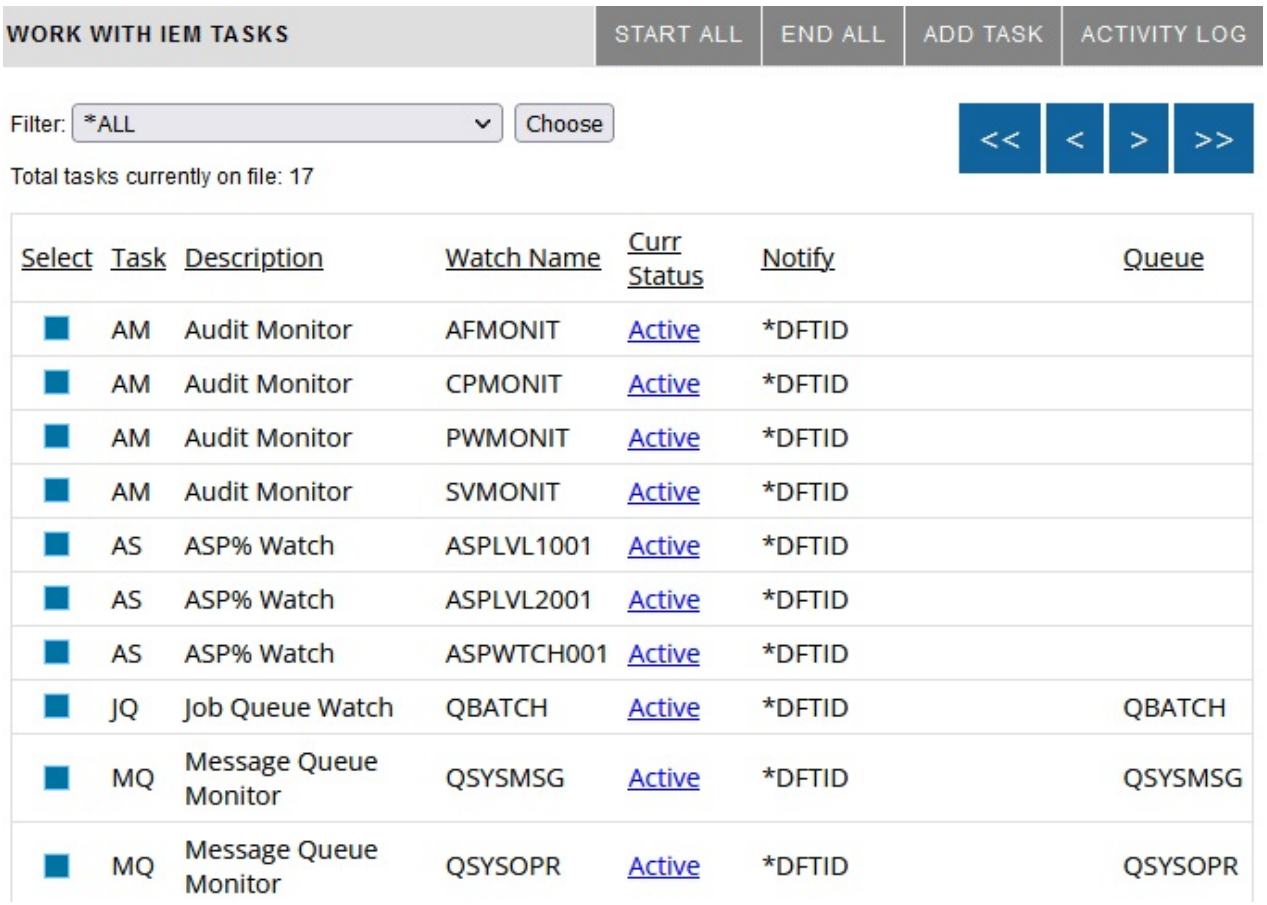
The gear icon will let you access the global settings for iEventMonitor. Please see the separate section of this documentation for information on how to control the settings.

The second gray line will always show a text description of the current display on the left. Then, on the right, optional dark gray action buttons will be displayed. These will change with each function that you access. The above example is taken from the initial display when you first sign on.

At any point during your use of the Bluescape browser interface, you browser's backup function is also available to you. Keep in mind, however, that this will not undo any changes that have been made along the way.

Initial Display Panel

When the logon is completed, the following starting point display will come up in your browser:



After a successful logon, a timer will start every time you select a function. If your session lies dormant for longer than the browser timeout setting, it will time out and the next time you try to start a process, you will be forced back to the logon page. The browser timeout value is shipped set to 60 minutes from Kisco, but can be changed using the global settings icon.

The number of detail lines that you see on this screen can be controlled from a value in the global settings. Please see that section of the manual. As shipped from Kisco, this is set to 15 lines per panel.

You can limit what is shown here using the filter. Select the type of task that you want to view and press the Choose button. The list will then be limited to the task code entries you selected. If you leave the filter set to *ALL, the list will include all tasks currently defined to iEventMonitor. You can use the blue arrow buttons to scroll through your list of files. The << button will always bring you back to the top and the >> button will always take you to the end. The < and > buttons will scroll one set back or forward as needed.

Each of the dark gray action buttons is described in a separate section in this documentation.

From this display, you can change the status of a task from active to inactive or back to active from inactive. To do so, just click on the Active or Inactive link and the status will be changed. You can also check to see the settings for a task by clicking on the small blue button on the lefthand

edge of the task display. If a task is active, you can just view the task settings but not be able to change them If the task is inactive, then you can either change settings or delete the task from the active list of tasks.

Initial Display Options

The following options are available along the top of the initial display. Each of the gray buttons will do the following:

START ALL	All tasks defined to iEventMonitor will be started. If they are already active, no action will be taken.
END ALL	All tasks defined to iEventMonitor will be stopped. If they are already inactive, no action will be taken. **Caution**: This process may take a while to complete on some systems depending on the tasks in use.
ADD TASK	Will display a list of possible tasks available for iEventMonitor so that a new task can be added to the software. See the Managing Tasks section of this user's guide.
ACTIVITY LOG	The iEventMonitor activity log will be displayed. See the Activity Log section of this user's guide.

Notification Addresses

Each monitor or watch feature in iEventMonitor includes an entry field for notification address. The following rules apply on each task.

To specify an email notification, enter the email address information that you want to use. You can stack multiple addresses in the field as long as the total length does not exceed 200 characters. Separate the addresses by a semi-colon (';') character. Do not leave any blank characters between addresses.

To specify a user profile, precede the profile with the # character. For example, to notify QSECOFR, enter the value #QSECOFR. When an alert is processed, the software will check to see if the user profile is logged into a terminal session and then send them a break message alert.

If you have Kisco Connect installed on your system, you can enter a cell number as an all numeric string. Any alerts will be sent as SMS text messages routed through Kisco Connect.

If you use the special value of *DFTID, then the notification addresses will be taken from the defaults set in the global settings.

Managing Tasks

When you select the ADD TASK button, the following list of possible new tasks will appear:

kisco

SELECT TASK GO BACK

Task Code	Task Description
AM	System Security Audit Monitor
AS	ASP% Disc Space Watch
CN	Connection Watch
CX	Check for Digital Certificate Expiration
DW	Device Watch
FM	Database File Monitor
JQ	Job Queue Watch
JW	Job Name Watch
LW	Lock-Wait Watch
MQ	Message Queue Monitor
MX	Mutex-Wait Watch
NW	Network Location Watch
OQ	Output Queue Watch
PW	Product Expiration Watch
TS	Temporary Storage Watch
TW	Thread-Wait Watch
UT	System Utilization Monitor
UW	User Profile Activity Watch
UX	User Profile Expiration Watch
WT	Watch For Specific Messages

If a task on the initial display is inactive and you select the blue box next to it, the details about that task will be shown so that you can either update settings or delete the task. If you want to add a new task, select the task code shown here and the associated update panel will be displayed.

System Security Audit Monitor - AM

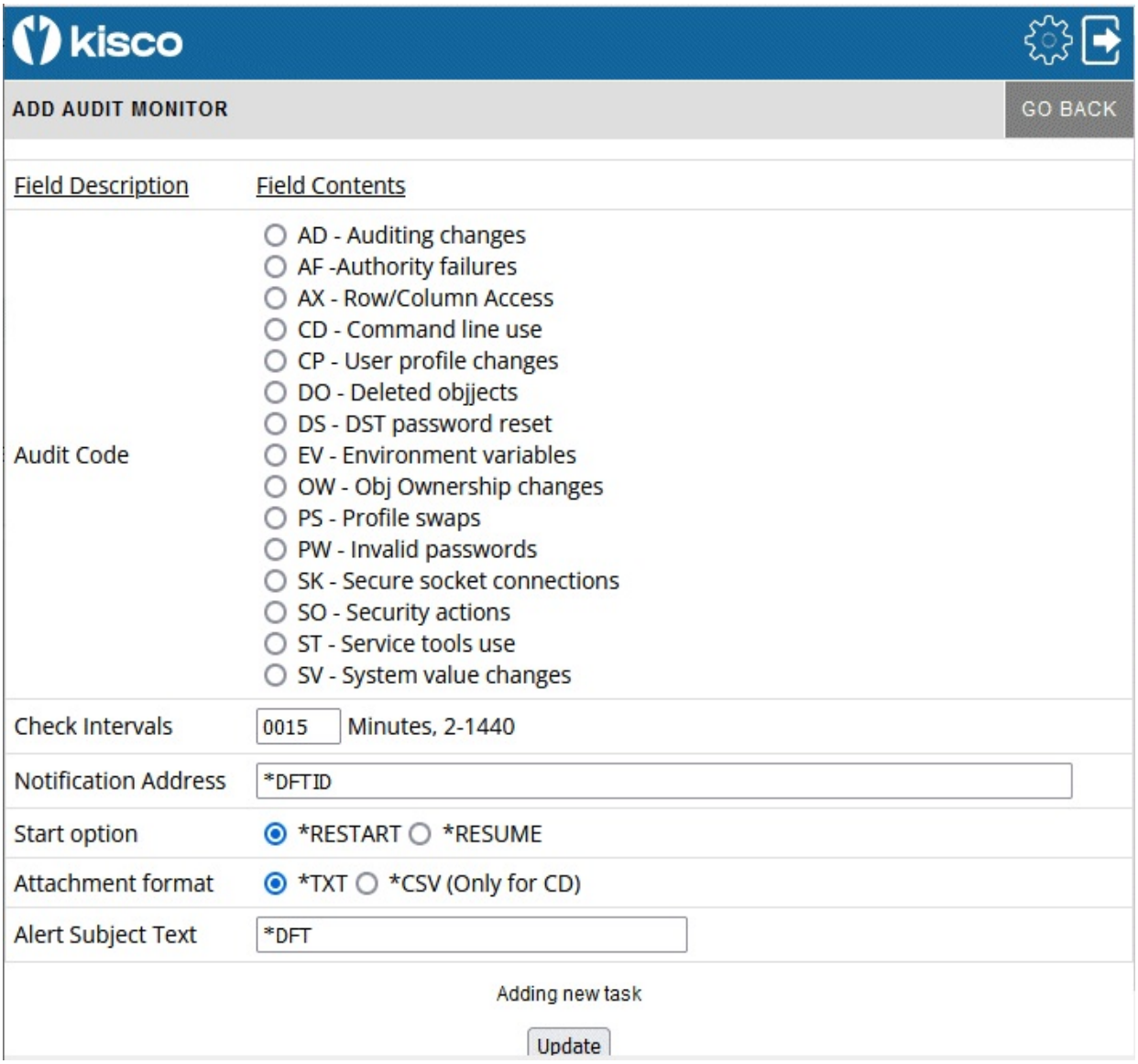
iEventMonitor has the ability to monitor your system for security events getting logged to the system security audit journal. You can set up audit monitors for one or more of specific security events. For each audit monitor, you can also specify how frequently you want the check for the audit journal entries.

iEventMonitor can issue alerts for the following audit events on your system:

Audit Code	Description
AD	Audit changes
AF	Authority failures
AX	Row and column access control
CD	Command line use for registered user profiles
CP	User profiles changed, created or restored
DS	DST password reset
EV	System environment variables
OW	Object ownership changes
PS	Profile swaps
PW	Invalid passwords
SK	Secure socket connections
SO	Server security user information actions
ST	Use of service tools
SV	System value changes

To make sure that the items above are correctly captured in the security audit journal, certain system values need to be set. See the User's Guide for more details.

When you select to add a new System Security Audit Monitor, or when you check how a current monitor is configured, the following panel will be shown:



The settings should be filled in as follows:

Audit Code	Select the type of audit monitor that you want from the list displayed.
Check Intervals	Enter the number of minutes to indicate how frequently you want this audit monitor to check for activity.
Notification Address	See the Notification Address(s) section of this manual on page 5.
Start option	*RESTART - will start fresh with checking current activity.
	*RESUME - will pickup where the last monitor task ended.

Attachment format	*TXT - an email alert will include an attachment in text format reporting some of the details for the event(s) monitored. *CSV - an email alert will include an attachment in CSV format reporting details for the event(s) monitored. This option is currently only available for audit code CD (Command line use).
Alert Subject Text	iEventMonitor will issue an alert with the default subject text if you leave this set to *DFT. If you want a unique alert subject text used, enter that value here and it will be used if an alert is issued.

Press the Update button to add/update this monitor when you are ready. The values entered will be edit checked. If any errors are found, this panel will be shown again with an appropriate error message. If all settings are acceptable, then the monitor will be added and the initial display will be shown again. The new monitor will appear as Inactive. It can then be started from the initial display.

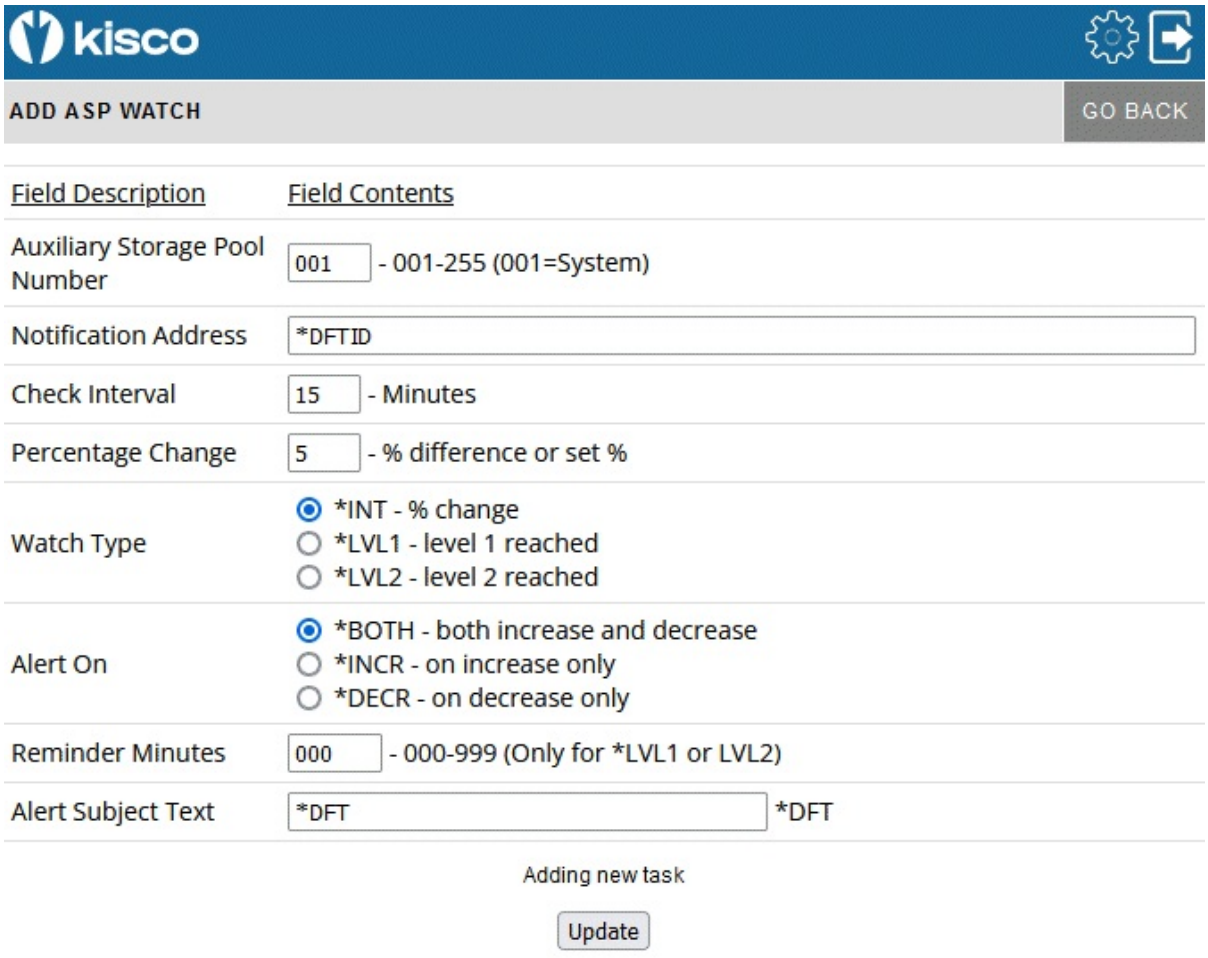
If you select it from the initial display, it will be shown on this panel with all of the current values. If the task is shows as Inactive, then you can make changes to any settings and press the Update button to record the changes. Another option, Remove This Task, will be shown on this panel that will let you remove the watch from the list running on your system. Selecting the remove option will delete the watch and bring you back to the Initial Display.

ASP% Disc Space Watch - AS

This task can be used to start up to three special watch functions that will monitor disc space utilization changes. The ASP % (Auxilliary Storage Pool) represents the amount of disc space that has been used. On the IBM i system, if this percentage reaches 100%, the system can abnormally terminate all processing, so it is critical that you know when this percentage is making unplanned changes.

The Interval ASP Watch function will periodically check on the ASP % for your system and when it changes by a rate that you set, an alert will be issued advising you of the change and reporting the new ASP % rate for you. This will let you react well in advance of a catastrophic event on your system. Alternately you start one or two Level ASP Watch Functions that will issue alerts when the ASP% exceeds specific given levels.

When you select to add a new ASP% Disc Space Watch, or when you check how a current watch is configured, the following panel will be shown:



The settings should be filled in as follows:

Auxiliary Storage Pool Number	Enter the ASP number that you want to watch. ASP number 001 is the default system ASP. This value must be entered as a 3 digit number in the range of 001 - 255. If you are setting an ASP Watch,

we recommend that you always include ASP #001 which is the system ASP. ASP numbers greater than 032 are iASP's

Notification Address — See the Notification Address(s) section of this manual on page 5.

Check interval — Enter the interval in minutes. This tells iEventMonitor how frequently you want the system to check the current status of the ASP (disc) utilization.

Percentage change — For an Interval Watch, enter the percentage change that you want to be notified about. The default value is 5%. Using this value, when the utilization on the ASP increases or decreases by 5%, a notice will be issued. If you need to react to a problem on your system, this should provide you with some advance warning.

For a Level Watch, set the specific ASP% level you want an alert issued for. For example, if you want an alert when the ASP% reaches 70% and another when it reaches 85%, set the *LVL1 (see below) to 70 and the *LVL2 to 85.

Watch type — Select one the the following. Only one watch of each type can be started:

*INT	An Interval Watch will be started.
*LVL1	The first Level Watch will be started.
*LVL2	The second Level Watch will be started.

Alert On — This option controls how the *INT watch type works.

Choose one of the following values:

*INCR	Whenever the disc utilization increases by the given percentage, an alert will be issued.
*DECR	Whenever the disc utilization decreases by the given percentage, an alert will be issued.
*BOTH	Whenever the disc utilization either increases or decreases

Reminder Minutes — When using the *LVL1 or *LVL2 Watch Type, you can ask iEventMonitor to send a reminder alert if the over level condition is not corrected after a period of time. If you do not want a reminder, leave this set to zero. Otherwise, enter the number of minutes before you want a reminder alert issued if the over limit situation has not been resolved. When using this option, keep in mind that the Check Interval setting will still control how often the level is checked. So, if you have the Check Interval set to 15 minutes and Reminder Minutes set to 25 minutes, the watch will check every 15 minutes.

Alert Subject Text	iEventMonitor will issue an alert with the default subject text if you leave this set to *DFT. If you want a unique alert subject text used, enter that value here and it will be used if an alert is issued.

Press the Update button to add/update this watch when you are ready. The values entered will be edit checked. If any errors are found, this panel will be shown again with an appropriate error message. If all settings are acceptable, then the monitor will be added and the initial display will be shown again. The new monitor will appear as Inactive. It can then be started from the initial display.

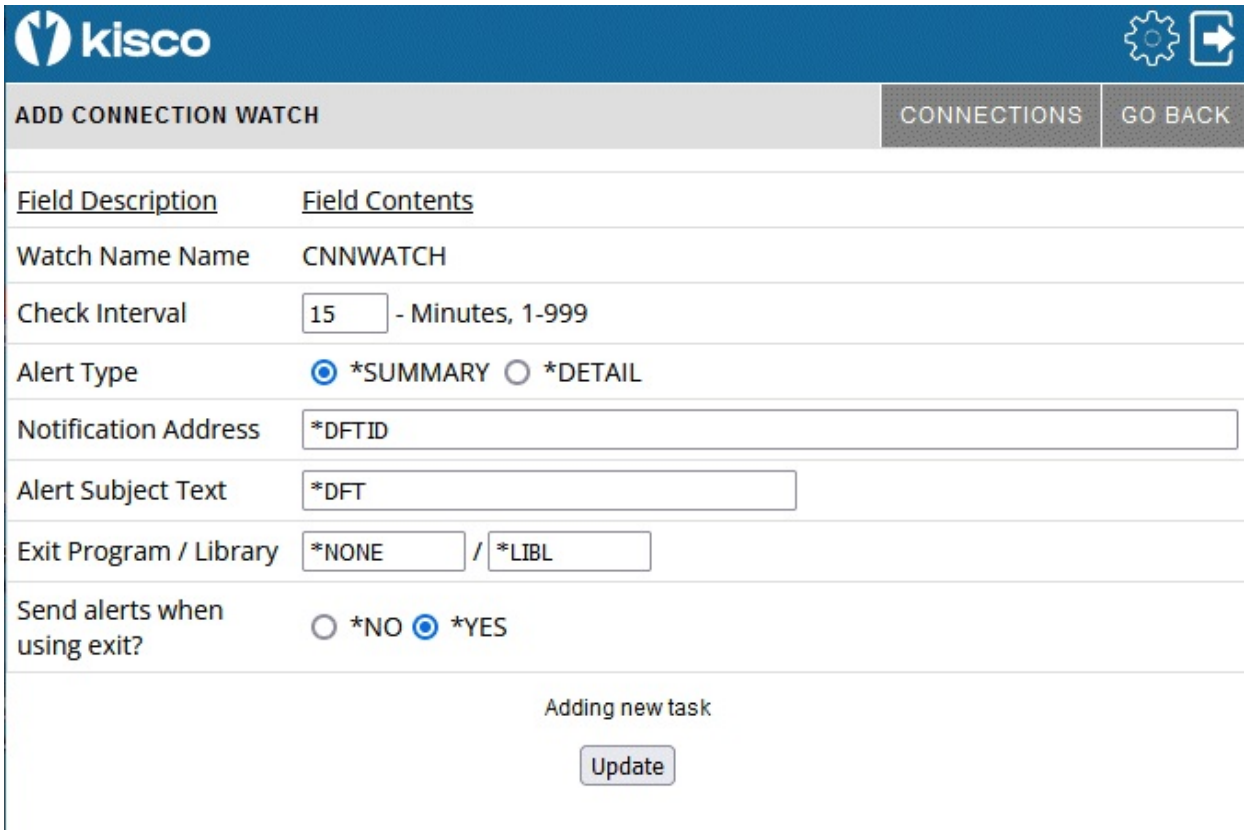
If you select it from the initial display, it will be shown on this panel with all of the current values. If the task is shows as Inactive, then you can make changes to any settings and press the Update button to record the changes. Another option, Remove This Task, will be shown on this panel that will let you remove the watch from the list running on your system. Selecting the remove option will delete the watch and bring you back to the Initial Display.

Connection Watch - CN

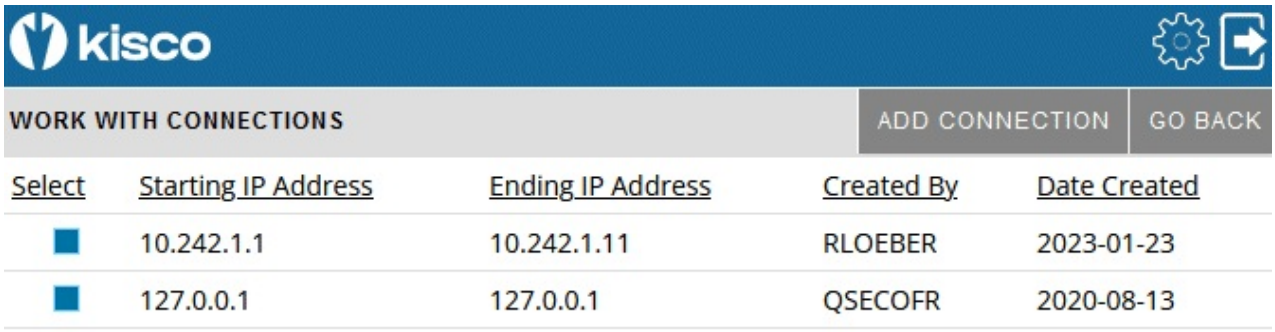
iEventMonitor includes a feature that lets you watch for "foreign" systems connecting to your system via network connections. It allows you to define the specific IP addresses that are allowed to connect and only issues alerts when a system not authorized tries to establish a connection.

The Connection Watch includes an optional Exit Program feature. Using this exit program, you can code your own program to deal with questionable network connection attempts. There are no parameters in the call to your exit program, but when it starts running, a physical database file will be present in the QTEMP library named UTIL30. This file will contain one record for each IP address included in the current alert. Your exit program can take any additional actions you may want to take including cancelling the connection using the ENDTCPCNN command. You will find a source physical file name QSAMPLE in the application library IEMLIB that contains a sample CL program named CNNEXIT that you can use to see how your own exit program might be implemented. We recommend that you develop and store your exit program in a library other than IEMLIB as a future upgrade from Kisco could remove your program from the system.

When you select to add a Connection Watch, or when you check how the current watch is configured, the following panel will be shown:



Before you start a Connection Watch, you should review the CONNECTIONS configuration. Select the CONNECTIONS gray box at the top of the panel and the following panel will be shown:

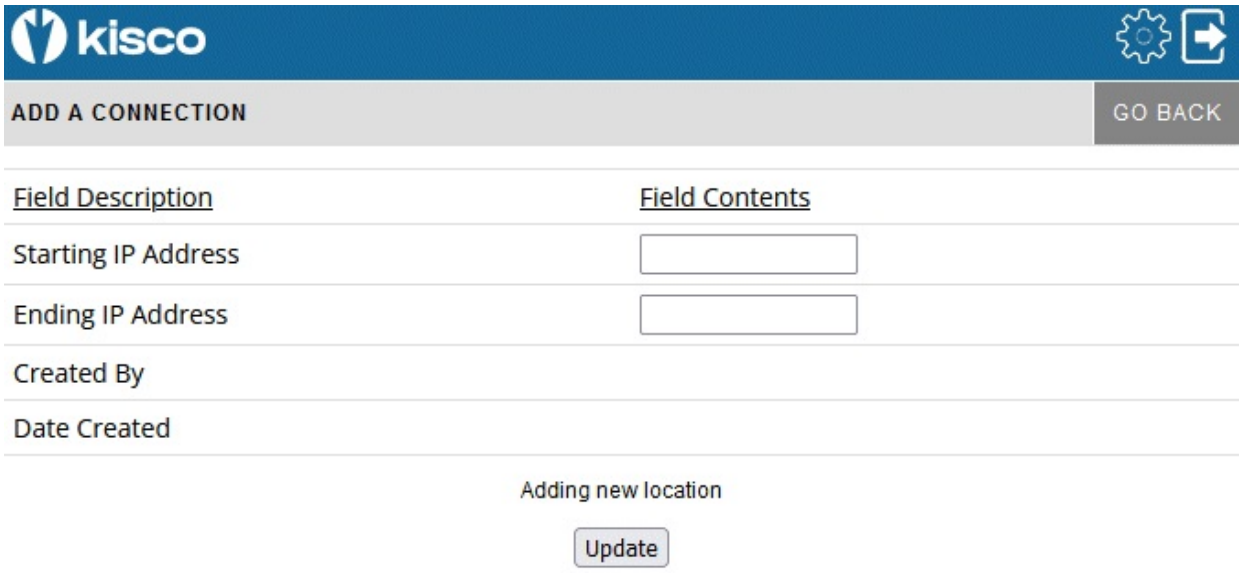


When the Connection Watch runs, it will check the active external connections to your system against this list and ignore any that are included in the list.

For example, if you define a range of IP addresses from 10.242.1.1 to 10.242.1.11 (as shown in the above example), then all of those addresses will be considered to be valid when they connect to your system. Any other addresses will result in an alert.

Note that the entry for 127.0.0.1 should be included in this list for all systems.

To add a new connection range, select the ADD CONNECTION gray box at the top of the panel.



The Starting IP Address and Ending IP Address must be a valid range and expressed in standard numerical IP4 address format.

To start the Connection Watch, fill in the settings on the initial display panel as follows:

Check Interval — Enter a value that represents how often you want the Connection Watch to check for current connections. The value entered will be the number of minutes.

Alert Type — Controls the type of alerts that will be issued.

Choose one of the following values:

*SUMMARY

Then the Connection Watch runs, if any questionable connections are found, then will be placed into a listing and sent as an email attachment. Kisco recommends that you use the *SUMMARY option when first starting to work with the Connection Watch feature.

*DETAIL

A separate alert notice will be issued for each questionable connection found when the Connection Watch runs. If none are found, no alert will be issued.

Notification address — See the Notification Address(s) section of this manual on page 5.

Alert Subject Text — iEventMonitor will issue an alert with the default subject text if you leave this set to *DFT. If you want a unique alert subject text used, enter that value here and it will be used if an alert is issued.

Exit program — If you want to call your own exit program during alert processing, enter the name of the program here. When a Connection Watch alert is issued, your program will be called for any additional processing that you may want to do. When your program is called, a database file will be available in the QTEMP library for the program session. The file will be named UTIL30. This file will contain one record for each IP address included in the current alert. Your exit program can take any additional actions you may want to take including cancelling the connection using the ENDTCPCNN command. You will find a source physical file name QSAMPLE in the application library IEMLIB that contains a sample CL program named CNNEXIT that you can use to see how your own exit program might be implemented. We recommend that you develop and store your exit program in a library other than IEMLIB as a future upgrade from Kisco could wipe your program from the system.

If you do not want to call an exit program, use the default value of *NONE.

Exit program library	If you are using an exit program, enter the name of the library where your exit program is stored.
Send alerts when using exit?	When you use an exit program, you can use this option to suppress the alerts issued automatically by iEventMonitor. This could be done to allow your exit program to decide whether or not the alert needs to be issued.

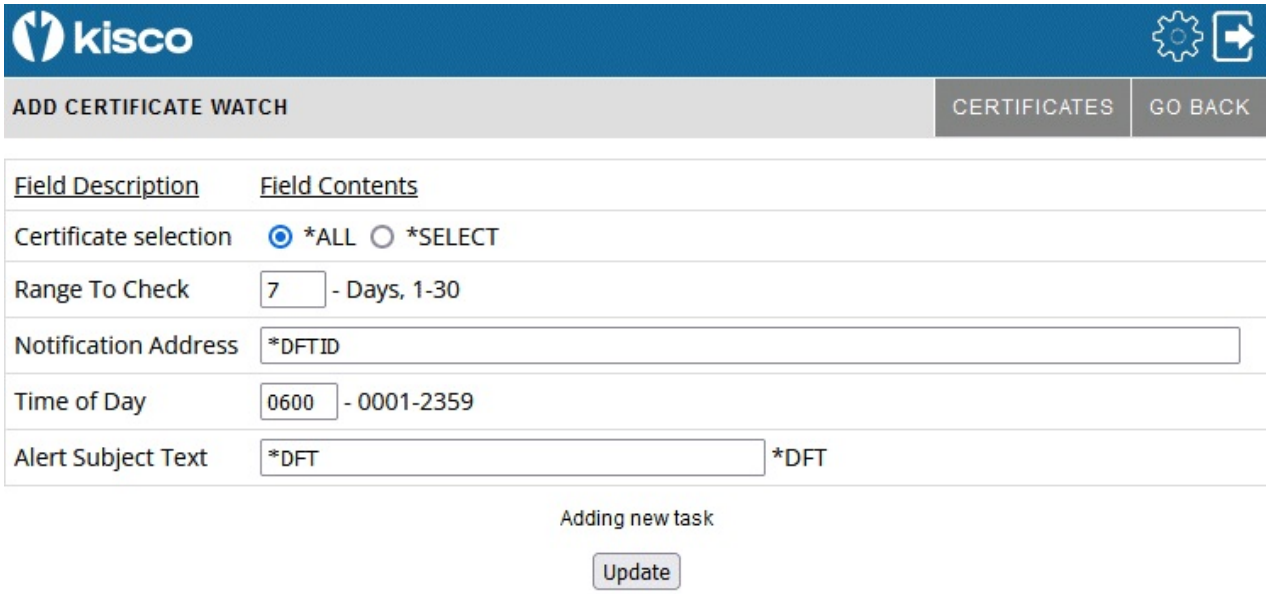
Press the Update button to add/update this watch when you are ready. The values entered will be edit checked. If any errors are found, this panel will be shown again with an appropriate error message. If all settings are acceptable, then the watch will be added and the initial display will be shown again. The new watch will appear as Inactive. It can then be started from the initial display.

If you select it from the initial display, it will be shown on this panel with all of the current values. If the task is shows as Inactive, then you can make changes to any settings and press the Update button to record the changes. Another option, Remove This Task, will be shown on this panel that will let you remove the watch from the list running on your system. Selecting the remove option will delete the watch and bring you back to the Initial Display.

Digital Certificate Expiration - CX

Many customers use digital certificates generated using IBM's Digital Certificate Manager (DCM) to enforce security on their system. iEventMonitor allows you to set a watch that will run once a day to scan all certificates on your system and issue an alert when one or more is close to expiring. When a certificate expires, an application will just stop working and it is often difficult to identify why it is failing.

When you select to add a Digital Certificate Expiration Watch, or when you check how the current watch is configured, the following panel will be shown:



Fill in the parameters as follows:

Certificate selection	Choose one of the following options: *ALL All certificates will be checked for expiration. *SELECT Only the certificate that you have specified in the certificate selection process will be checked.
Range To Check	Enter a value that represents how many days until the expiration date that you want to receive an alert.
Notification address	See the Notification Address(s) section of this manual on page 5.
Time of Day	Enter time of day when you want this watch to run. When you start the watch, it will run immediately. Once it has been started, then it will run once per day at the time that you specify.
Alert Subject Text	iEventMonitor will issue an alert with the default subject text if you leave this set to *DFT. If you want a unique alert subject text used, enter that value here and it will be used if an alert is issued.

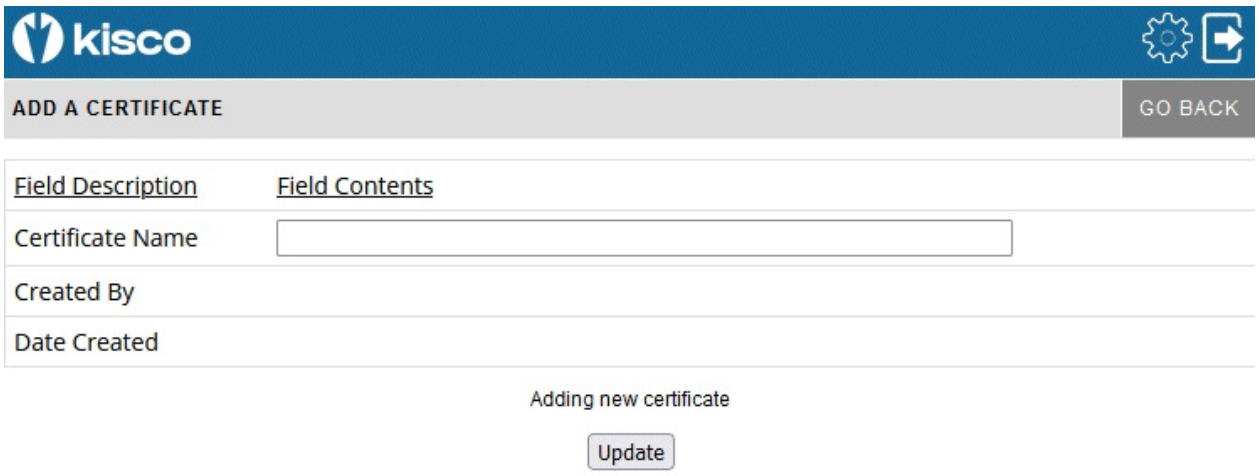
Press the Update button to add/update this watch when you are ready. The values entered will be edit checked. If any errors are found, this panel will be shown again with an appropriate error

message. If all settings are acceptable, then the watch will be added and the initial display will be shown again. The new watch will appear as Inactive. It can then be started from the initial display.

If you select it from the initial display, it will be shown on this panel with all of the current values. If the task is shows as Inactive, then you can make changes to any settings and press the Update button to record the changes. Another option, Remove This Task, will be shown on this panel that will let you remove the watch from the list running on your system. Selecting the remove option will delete the watch and bring you back to the Initial Display.

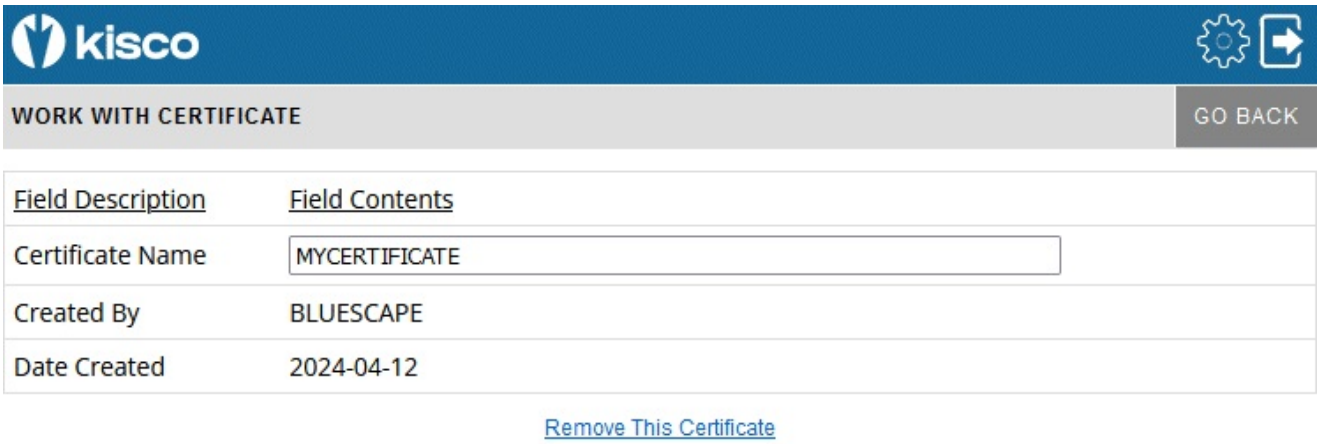
If you want to use the *SELECT option to only check specific certificates to be checked for expiration, use the CERTIFICATES gray button at the top of the panel. When you do, your current list of selected certificates will be shown:

To add a certificate, use the ADD CERTIFICATE gray button. The following panel will be shown:



Enter the name of your certificate and press the update button to record it. Keep in mind that the certificate name is case sensitive.

You can also remove a certificate from the list. When the list of certificates is shown, click on the blue box to the left of the certificate to be deleted. The panel on the following page will be shown.

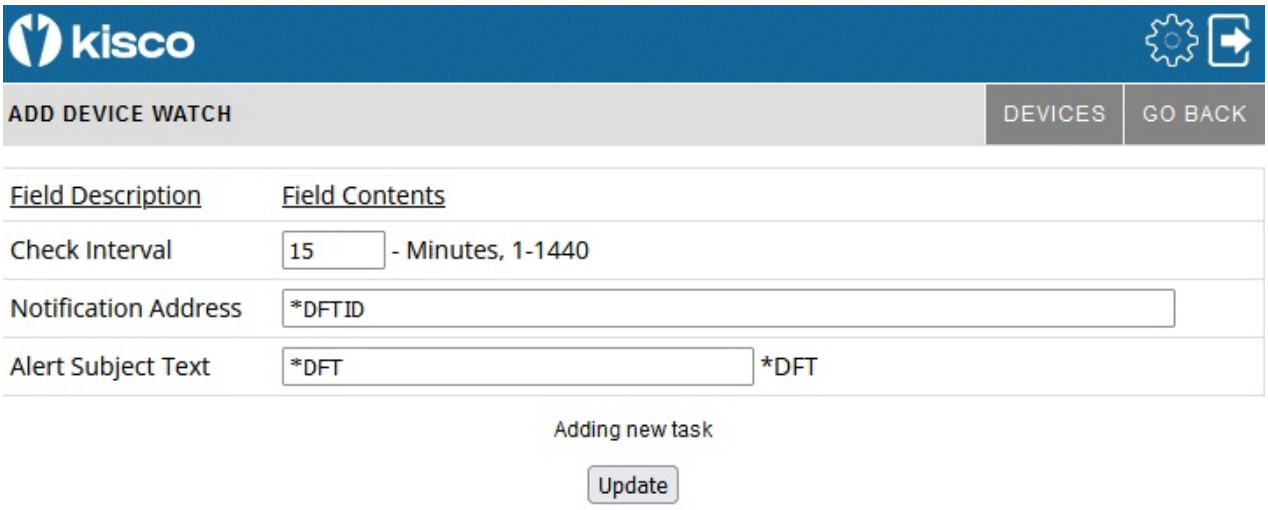


To delete the certificate, click on the “Remove This Certificate” link.

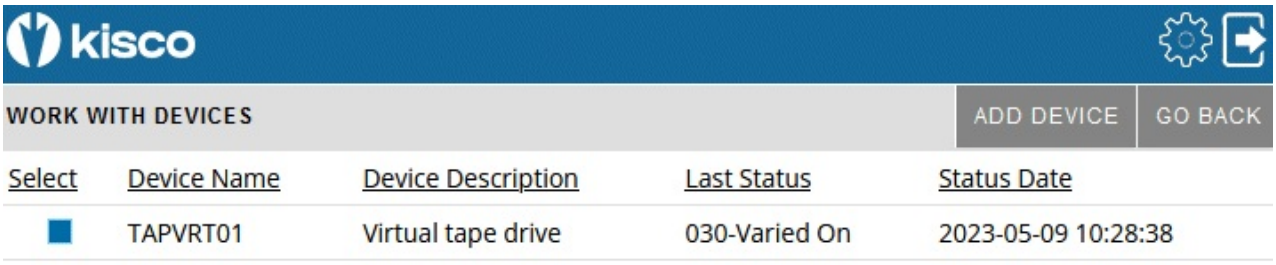
Device Watch - DW

If you have specific physical devices on your system that must be active and available for use on a regular basis, iEventMonitor includes a watch to make sure that they are in an available status. iEventMonitor allows you to set a watch that will run periodically to check the device status. When a device is not available, an alert will be issued.

When you select to add a Device Watch, or when you check how the current watch is configured, the following panel will be shown:

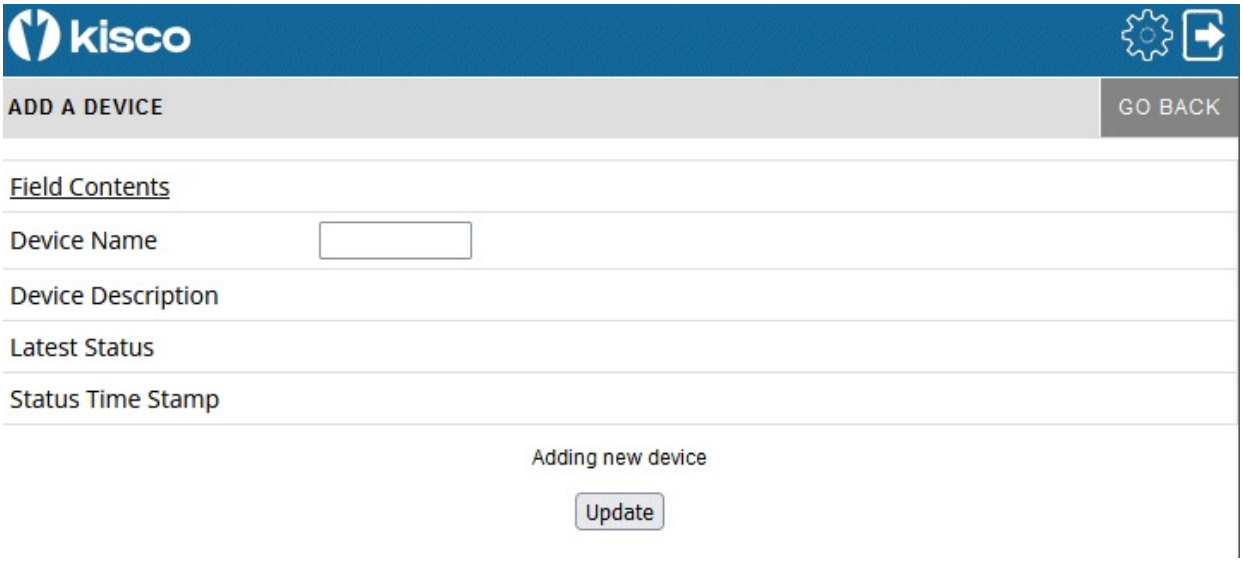


Before you can use this watch, you must first let iEventMonitor know which specific devices that you want to watch. This can be done by selecting the DEVICES gray button at the top of this panel. When you do, the following will be shown:



Any devices already registered are shown along with the last status that was detected for them and when that happened. To add a new device for monitoring, use the ADD DEVICE gray box at the top of the panel.

When the ADD DEVICE is selected, the following panel will be shown:



To add the new device, enter the device name and press the Update button. The new device name will be validated and then added. If the device name does not exist, an error will be reported.

Once you have your device or devices established, you can then start the Device Watch on the ADD DEVICE WATCH panel that started this process (see above).

Fill in the parameters as follows:

Check Interval	Enter a value that represents how often you want the Device Watch to run. The value entered will be the number of minutes.
Notification address	See the Notification Address(s) section of this manual on page 5.
Alert Subject Text	iEventMonitor will issue an alert with the default subject text if you leave this set to *DFT. If you want a unique alert subject text used, enter that value here and it will be used if an alert is issued.

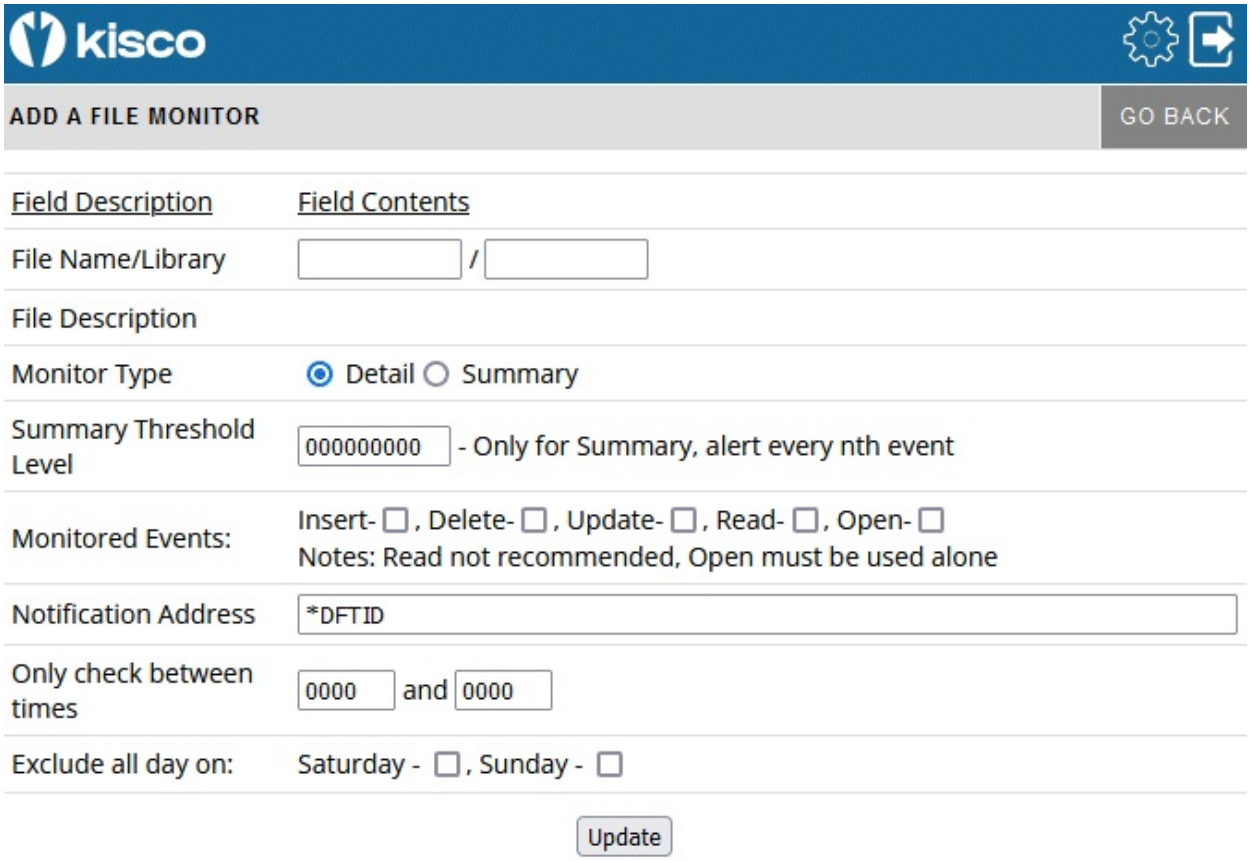
Press the Update button to add/update this watch when you are ready. The values entered will be edit checked. If any errors are found, this panel will be shown again with an appropriate error message. If all settings are acceptable, then the watch will be added and the initial display will be shown again. The new watch will appear as Inactive. It can then be started from the initial display.

If you select it from the initial display, it will be shown on this panel with all of the current values. If the task is shows as Inactive, then you can make changes to any settings and press the Update button to record the changes. Another option, Remove This Task, will be shown on this panel that will let you remove the watch from the list running on your system. Selecting the remove option will delete the watch and bring you back to the Initial Display.

Database File Monitor - FM

A Database File Monitor will "watch" an IBM i database file for selected types of process activity. You can configure your file monitor to look for record adds, record changes, record deletes, file opens or file record read processing. When any selected event occurs, iEventMonitor will send an alert with the details. You can specify for detailed information on each event or summary information after every *nth* event.

When you select to add a Database File Monitor, or when you check how the current watch is configured, the following panel will be shown:



To start a Database File Monitor, fill in the settings on the initial display panel as follows:

File Name/Library	Enter the name of the file and library to be monitored.
Monitor Type	Select the type of monitor you want to set up Detail - For every selected event, iEventMonitor will issue an alert. Summary - iEventMonitor will issue a summarized alert each time the Summary Threshold has been reached.
Summary Threshold Level	For summary monitors only. Enter the number of events between alerts.

Monitored Events: Check the file activity events that you want to include with this monitor.

Insert - Select if you want to monitor for records being added to the file.

Delete - Select if you want to monitor for records being deleted from the file.

Update - Select if you want to monitor for records being updated in the file.

Read - Select if you want to monitor for records being read from the file.

> **WARNING!!** - We strongly advise that you NOT use a Read monitor when you are running a Detail monitor. This could easily result in an excessive number of alerts being issued and possible system and/or application degradation.

Open - Select if you want to monitor for the file being opened. When you use this option, the following additional restrictions apply:

- It can be the only option specified. Insert, Delete, Update and Read must NOT be selected.
- The Monitor Type must be set to **Summary**
- The Summary Threshold Level must be set to zero

You will receive a file alert whenever a user accesses the file. The alert will not be repeated until either of the following conditions occur:

- A different user accesses the file.
- The same user accesses the file after the date has changed.

Notification Address: See the Notification Address(s) section of this manual on page 5.

Only check between times: This is an optional entry. If you leave it set to zeros, there will be no restriction on the time of day when the monitor will run. If you want to limit the time period when the monitor will be active, enter the time span when you want the monitor to run. Two fields are provided to allow you to span the time period from midnight to the next morning.

Exclude all day on: If you want the file monitor to be active on Saturday and Sunday, select the field for those days.

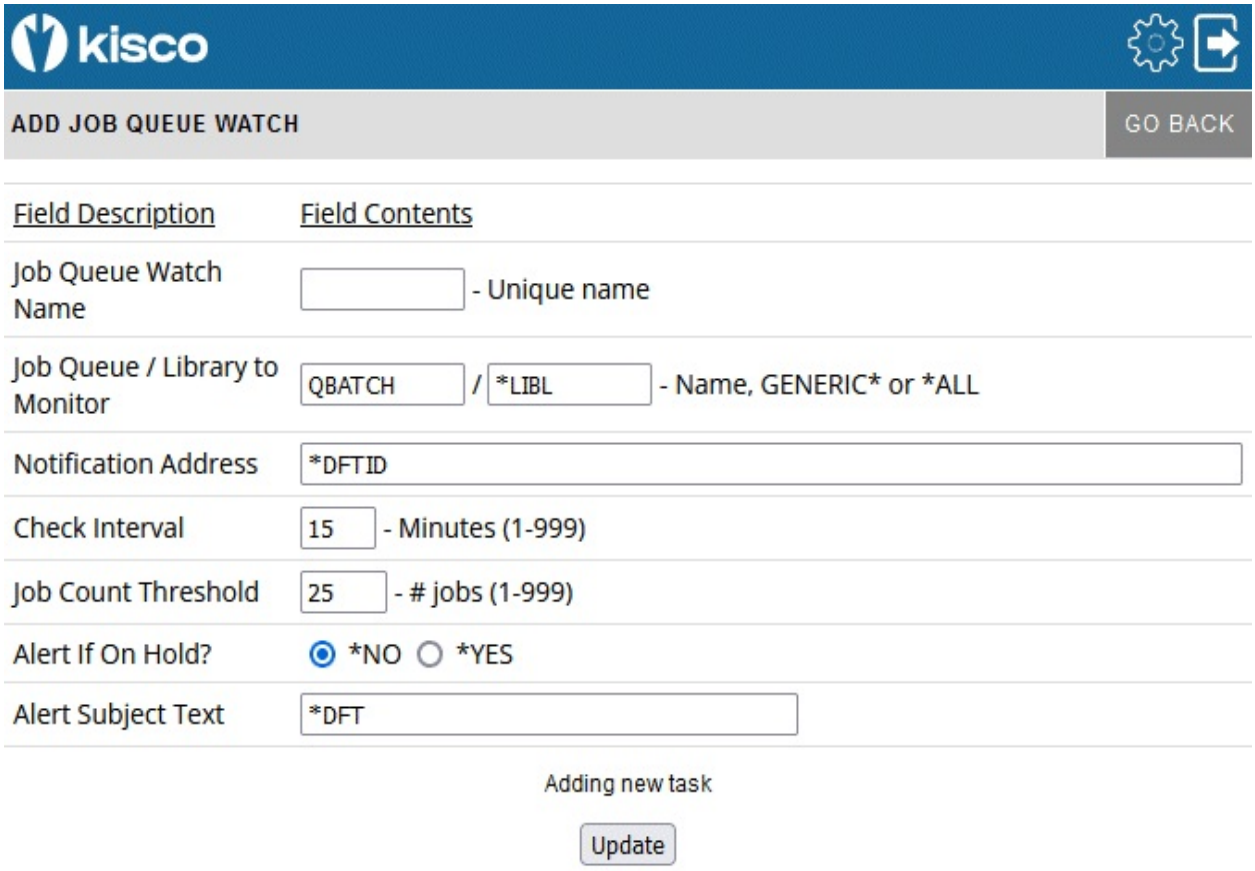
Press the Update button to add/update this monitor when you are ready. The values entered will be edit checked. If any errors are found, this panel will be shown again with an appropriate error message. If all settings are acceptable, then the monitor will be added and the initial display will be shown again. The new monitor will appear as Inactive. It can then be started from the initial display.

If you select it from the initial display, it will be shown on this panel with all of the current values. If the task is shows as Inactive, then you can make changes to any settings and press the Update button to record the changes. Another option, Remove This Task, will be shown on this panel that will let you remove the watch from the list running on your system. Selecting the remove option will delete the watch and bring you back to the Initial Display.

Job Queue Watch - JQ

For some customers, it is important that the job queues not get backed up with batch jobs that are not getting run. iEventMonitor allows you to set a watch on any job queue in the system. Once set, if the watched job queue exceeds the threshold of jobs waiting to run that you specify, an alert will be sent advising you of a potential issue. You can also be alerted when the job queue is placed on hold.

When you select to add a Job Queue Watch, or when you check how the current watch is configured, the following panel will be shown:



To start a Job Queue Watch, fill in the settings on the initial display panel as follows:

Job Queue Watch Name	Enter a unique name that will be assigned to this job queue watch task. This name will be used as part of the watch job name with the letters "IW" added before it. It will also be used when ending the job queue watch.

Job Que to monitor	Enter the name of the job queue and library that you want to watch or one of the following special values: *ALL — All job queues in the specified library will be watched. A specific library name must be used when *ALL is specified. GENERIC* — All job queues in the specified library with names that start with specified string will be watched. A specific library name must be used when *ALL is specified. When either of the special values is used, each job queue that qualifies will be watched. When ever any of these queues has an alert condition detected, an alert will be issued.
Notification address	See the Notification Address(s) section of this manual on page 5.
Check interval	Enter a value, in minutes, that indicates how frequently you want to check the job queue stack. The default value is 15 minutes but you can specify as low as 1 and as high as 999, but 15 minutes is a good setting to start with.
Job count threshold	Enter the number of jobs that you want to be advised about. When the job queue contains more than this number of jobs that are waiting to be run, an alert will be generated. This alert will be repeated at each check interval until either the monitor is stopped or the number of jobs waiting to run returns to a lower level.
Alert if on hold?	This value controls whether iEventMonitor will send out advisory alerts when this job queue is placed on hold. Select one of the following values: *NO — No job queue on hold alerts will be issued. *YES — An alert will be issued when this job queue is placed on hold. The alerts will continue until the job queue is released.
Alert Subject Text	iEventMonitor will issue an alert with the default subject text if you leave this set to *DFT. If you want a unique alert subject text used, enter that value here and it will be used if an alert is issued.

Press the Update button to add/update this watch when you are ready. The values entered will be edit checked. If any errors are found, this panel will be shown again with an appropriate error message. If all settings are acceptable, then the watch will be added and the initial display will be shown again. The new watch will appear as Inactive. It can then be started from the initial display.

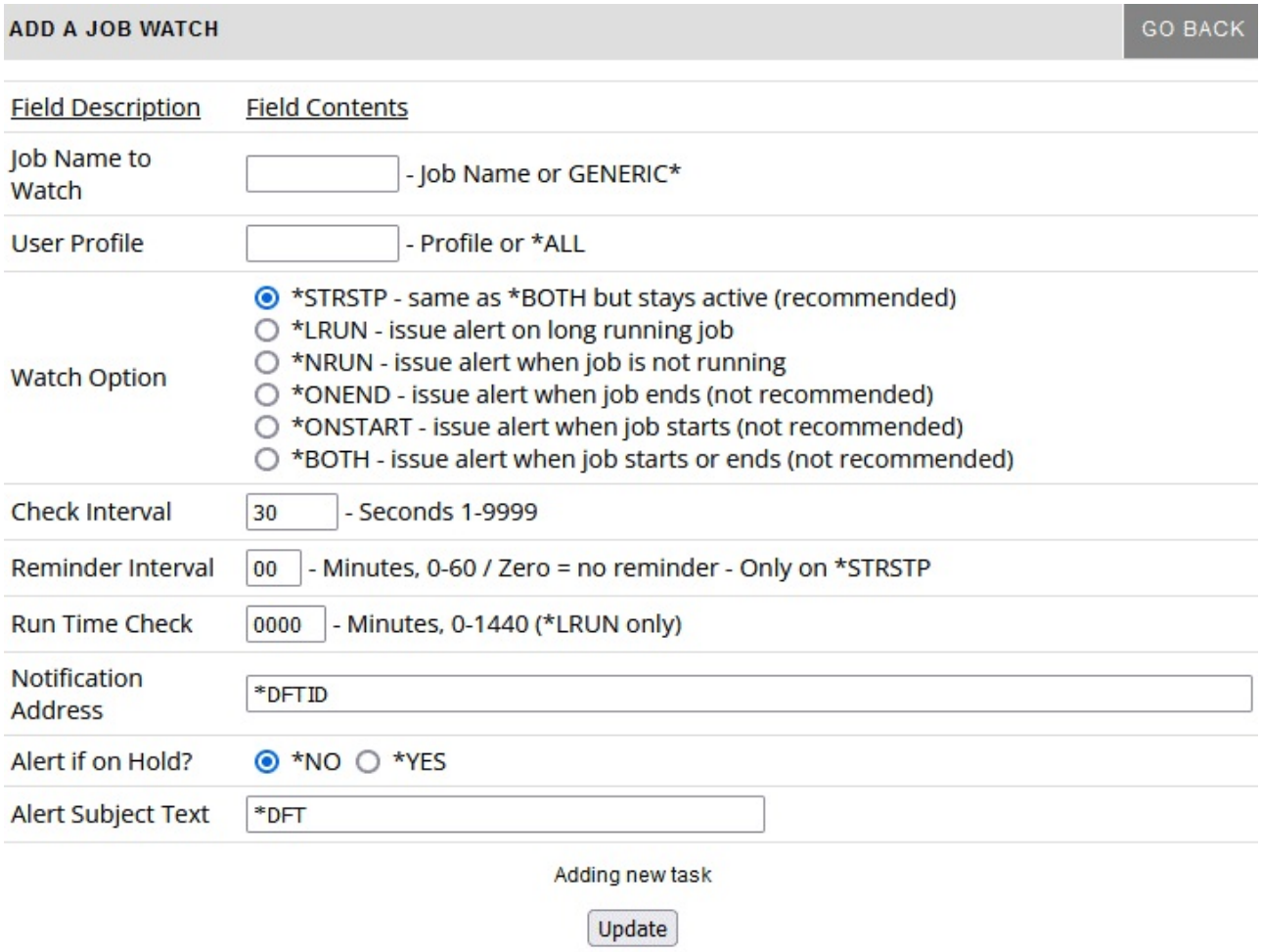
If you select it from the initial display, it will be shown on this panel with all of the current values.

If the task is shows as Inactive, then you can make changes to any settings and press the Update button to record the changes. Another option, Remove This Task, will be shown on this panel that will let you remove the watch from the list running on your system. Selecting the remove option will delete the watch and bring you back to the Initial Display.

Job Name Watch - JW

iEventMonitor includes options for you to watch specific jobs on your system. The option lets you be notified when a job starts on your system, when a job ends or both. You can watch a specific job name started by a specific user profile or you can watch for a job name that you specify using a GENERIC* reference. For example, if you want to make sure that the FTP server stays active on your system, you can set a watch for the job name QTFTP* ending and, if the FTP server stops running for any reason, you will receive an alert from iEventMonitor.

When you select to add a Job Name Watch, or when you check how the current watch is configured, the following panel will be shown:



To start a Job Name Watch, fill in the settings on the initial display panel as follows:

Job Name To Watch — Enter the specific job name that you want to watch or enter a GENERIC* job name ending with an asterisk character ('*'). The watch task will as look for job names that qualify based on this name.

Note: If you start a GENERIC* job watch, be aware that the notification email will only be sent when there are no longer

any jobs running that match the GENERIC* job name used. If you have several jobs running under a similar name and one ends but not all, you will not be notified.

User Profile — Enter the specific user profile that started the job you want to watch or use the special value of *ALL to check for the job running under any user profile.

Watch Option — Select the options offered:

*STRSTP — When you select this option, the job watch will check to see if the specified job (or jobs) is running. If it is currently running, then it will issue an alert when it ends. If it is currently not running, then an alert will be issued when it starts. In either case, the job watch will then stay active to report again if the job ends or starts.

Note: When you use the *STRSTP option, an additional setting applies. See "Alert if on Hold?" below.

*LRUN — The job watch will note when a job starts and then only issue an alert when the Run Time Check minutes have been exceeded. At that point, an alert will be issued indicating that the job is running longer than expected. If you select *LRUN, then the Run Time Check value cannot be set to zero.

*NRUN — The job watch will issue an alert when the job is not running. This can be used to alert when mission critical jobs are not running but should be running.

*ONEND — Select this option to send an alert when the specified job has ended. This assumes that the task is currently running. When an alert is issued, this watch will then terminate.

*ONSTART — Select this option when you want an alert sent with the specified job starts. This assumes that the task is not currently running. When an alert is issued, this watch will then terminate.

*BOTH — Select this option to send an alert when the specified job starts and then again when it ends. This assumes that the job is not currently running. Once both conditions have been met, the watch will terminate.

Check Interval — Enter how frequently you want to check for the job starting or ending, in seconds.

Reminder Interval — This setting is only valid on a Job Watch where the *STRSTP or *NRUN option is being used.

Enter the number of minutes that you want to lapse before a reminder alert is sent when the job being watched has stopped but not restarted yet. If you enter the value of zero, then no reminder alerts will be issued.

Notification address — See the Notification Address(s) section of this manual on page 5.

Run Time Check — This setting is only valid on a Job Watch where the *STRSTP or *LRUN option is being used along with a specific job name and a specific user profile.

Enter the number of minutes that you want to lapse before a reminder alert is sent if the job in question starts and then does not end. This value should be your expected run time. The alert will advise you that the job is running longer than expected.

A value of zero means that no alert will be issued.

Alert if on Hold? — This option lets iEventMonitor issue an alert when the watched job is put on hold. This option is only available when the *STRSTP Watch Option is Selected and the job name being watched is not GENERIC*.

Select one of the following options:

*NO — No alerts will be issued when the watched job is put on hold.

*YES — If the watched job is held, an alert will be issued. If it is subsequently released and then held again, a new alert will be issued.

Alert Subject Text — The job watch allows you to use an alternate alert subject when reporting alerts. To use the standard subject, just leave the special value *DFT in place.

To use an alternate subject text, enter up to 64 characters in this field. The field also supports three optional macro fields as follows:

&SYSNAME	The system name will be used
&JOB_NAMEX	The job name that issued the message will be used
&JOBNO	The job number that issued the message will be used if available.

Note: For the macros to work, they must be coded EXACTLY

as shown in all upper case characters.

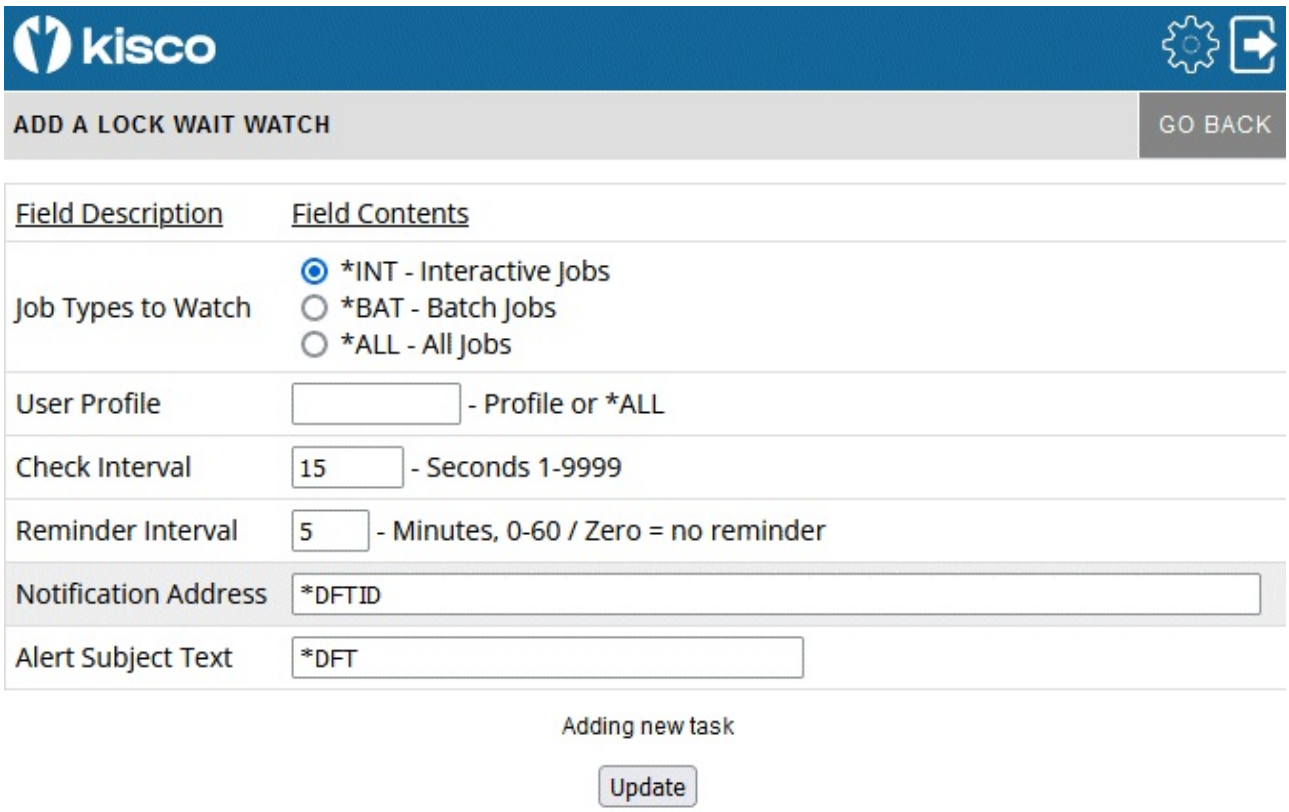
Press the Update button to add/update this watch when you are ready. The values entered will be edit checked. If any errors are found, this panel will be shown again with an appropriate error message. If all settings are acceptable, then the watch will be added and the initial display will be shown again. The new watch will appear as Inactive. It can then be started from the initial display.

If you select it from the initial display, it will be shown on this panel with all of the current values. If the task is shows as Inactive, then you can make changes to any settings and press the Update button to record the changes. Another option, Remove This Task, will be shown on this panel that will let you remove the watch from the list running on your system. Selecting the remove option will delete the watch and bring you back to the Initial Display.

Lock Wait Watch - LW

This feature watches for Lock Wait status (LCKW) to be reported for a job running for the indicated type and user profile. Once the task has reported lock-wait status for a full interval specified, then an alert will be issued.

When you select to add a Lock Wait Watch, or when you check how the current watch is configured, the following panel will be shown:



To start a Lock Wait Watch, fill in the settings on the initial display panel as follows:

Job Types To Watch — Indicates the type of jobs to be watched on your system.

Select from the following values:

*INT Just check for lock waits on interactive jobs.

*BAT Just check for lock waits on batch jobs.

*ALL Check for lock waits on all jobs.

User Profile — You can check for lock waits for a specific user profile or *ALL user profiles.

Check Interval — Enter how frequently you want to check for jobs in lock wait status, expressed in seconds.

Reminder Interval	Enter the number of minutes that you want to lapse before a reminder alert is sent after an initial alert has been issued. If you enter the value of zero, then a reminder will be sent for each Check Interval value seconds that you have set in the previous parameter setting.
Notification address	See the Notification Address(s) section of this manual on page 5.
Alert Subject Text	iEventMonitor will issue an alert with the default subject text if you leave this set to *DFT. If you want a unique alert subject text used, enter that value here and it will be used if an alert is issued.

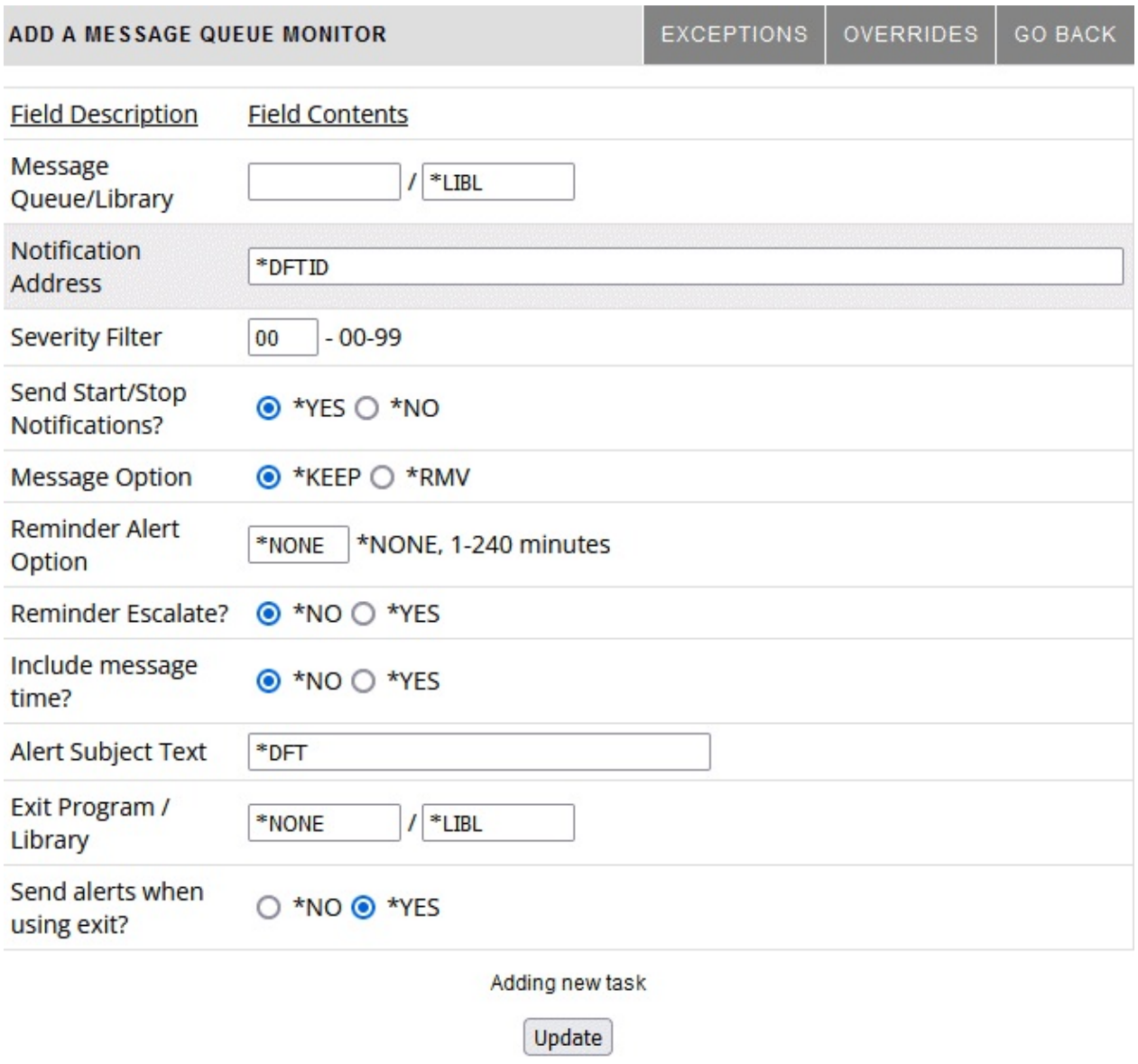
Press the Update button to add/update this watch when you are ready. The values entered will be edit checked. If any errors are found, this panel will be shown again with an appropriate error message. If all settings are acceptable, then the watch will be added and the initial display will be shown again. The new watch will appear as Inactive. It can then be started from the initial display.

If you select it from the initial display, it will be shown on this panel with all of the current values. If the task is shows as Inactive, then you can make changes to any settings and press the Update button to record the changes. Another option, Remove This Task, will be shown on this panel that will let you remove the watch from the list running on your system. Selecting the remove option will delete the watch and bring you back to the Initial Display.

Message Queue Monitor - MQ

iEventMonitor lets you monitor any message queue on your system including the QSYSOPR system operator message queue. When a message arrives at the message queue that qualifies for an alert, iEventMonitor will issue an alert.

When you select to add a Message Queue Monitor, or when you check how a current monitor is configured, the following panel will be shown:



To start a Message Queue Monitor, fill in the settings on the initial display panel as follows:

Message Queue/Library	Enter the name of the message queue to be monitored along with the library where it is stored.
Notification address	See the Notification Address(s) section of this manual on page

5.

In addition, you can use the special value of *ROUTE, then the notification addresses will be determined by entries in the Route Table. Routes can be set up using the ROUTING gray box at the top of the panel. If the specific message ID does not find a match on the Route Table, then the *DFTID will be used.

Severity filter

Lets you ignore messages below a given severity level. For QSYSOPR, we recommend setting this value to 50. If you want to see every message, use the value 00.

Send Start/Stop Notifications?

Select the *YES option to sent out an alert when the message monitor is started and ended. Select *NO if you do not want these messages sent.

Message option

Select the default value *KEEP if you want to keep the message on the message queue after the alert has been sent. To cause these messages to be removed from the message queue, select the*RMV option.

Reminder Alert Option

This option tells iEventMonitor to issue reminder alerts when inquiry messages have been detected and they have not been responded to in a given period of time.

Choose one of the following values:

*NONE — No reminder alerts will be issued.

1-240 — A variable number of minutes between reminder alerts. iEventMonitor will wait for the number of minutes specified and then check to see if the message has been answered. If not, a reminder alert will be issued. The reminder alerts will be repeated until the message is answered or the job in question has ended.

Reminder Escalate?

When set to *YES and a reminder alert is issued, in addition to the default alert notification addresses, another set of alert addresses will also be used. Before using this, make sure that the "Escalation Notification Addrs" setting is updated in the Global settings.

When set to *YES, any reminder alerts will be issued to the escalation addresses specified in the Global Settings in addition to the default notification addresses already set.

Include message time?

Select one of the following values:

*NO — The message time from the message queue entry will not br shown in the alert.

*YES The message time from the message queue entry will be shown in the alert. This may be useful for installations monitoring multiple systems across multiple time zones.

Alert Subject Text

The message queue monitor allows you to use an alternate alert subject when reporting message queue alerts. To use the standard subject, just leave the special value *DFT in place.

To use an alternate subject text, enter up to 64 characters in this field. The field also supports three optional macro fields as follows:

&MSGIDX	The message ID being alerted will be used
&SYSNAME	The system name will be used
&JOB_NAMEX	The job name that issued the message will be used
&JOBNO	The job number that issued the message will be used
&JOBID	A 28 characters value will be substituted in the following format: nnnnnn/uuuuuuuu/jjjjjjjj job number/user/job name **Make sure that you leave 22 positions following the &JOBID macro to allow for the values to be posted.**
&SEV	The severity level of the message will be used

Note: For the macros to work, they must be coded EXACTLY as shown in all upper case characters.

Press the Update button to add/update this monitor when you are ready. The values entered will be edit checked. If any errors are found, this panel will be shown again with an appropriate error message. If all settings are acceptable, then the monitor will be added and the initial display will be shown again. The new monitor will appear as Inactive. It can then be started from the initial display.

If you select it from the initial display, it will be shown on this panel with all of the current values. If the task is shows as Inactive, then you can make changes to any settings and press the Update button to record the changes. Another option, Remove This Task, will be shown on this panel that will let you remove the watch from the list running on your system. Selecting the remove option

will delete the watch and bring you back to the Initial Display.

User Exit Program Feature

The iEventMonitor message queue monitor includes the ability to call a user exit program when a message queue monitor is triggered. When a message is detected that meets the criteria for issuing an alert message, iEventMonitor will check to see if a user program has been specified. If there is one, then that program will be called before the alert is issued. An option is also included to suppress the alert notification from iEventMonitor if you want to stop the alert message from being sent.

When the user exit program is called, a single parameter is passed with a parameter length of 4,000 characters. The layout of the parameter is fixed as follows:

Start	End	Length	Description
1	10	10	Message Queue being monitored
11	20	10	Library name as specified in the start
21	24	4	Message key - binary value
25	31	7	Message ID
32	163	132	Message text
164	165	2	Severity level
166	245	80	Message sender - see IBM documentation for details - includes information about the job that generated the message
246	250	5	Message 2 length
251	3250	3000	Variable message text 2
3251	4000	750	Not used - reserved for future implementations

Three additional parameters are available when starting the monitor as follows:

Exit Program / Library — Enter the name of the user exit program and library that you want to call. If you do not want to use an exit program, leave the special value of *NONE in place.

Send alerts when using exit? — Select one of the following values:

*NO No alerts will be issued by iEventMonitor.

*YES iEventMonitor alerts will be issued as normal.

When a user exit progam is specified, iEventMonitor will check to make sure it is a valid program in the library reference provided. If the program is valid, it is the user's responsibility to make sure that it completes successfully. iEventMonitor will check for a CPF0000 error and attempt to continue processing if one is issued from the exit program, but other errors could cause the monitor to fail. Kisco recommends extensive testing before putting a user exit program into full production use.

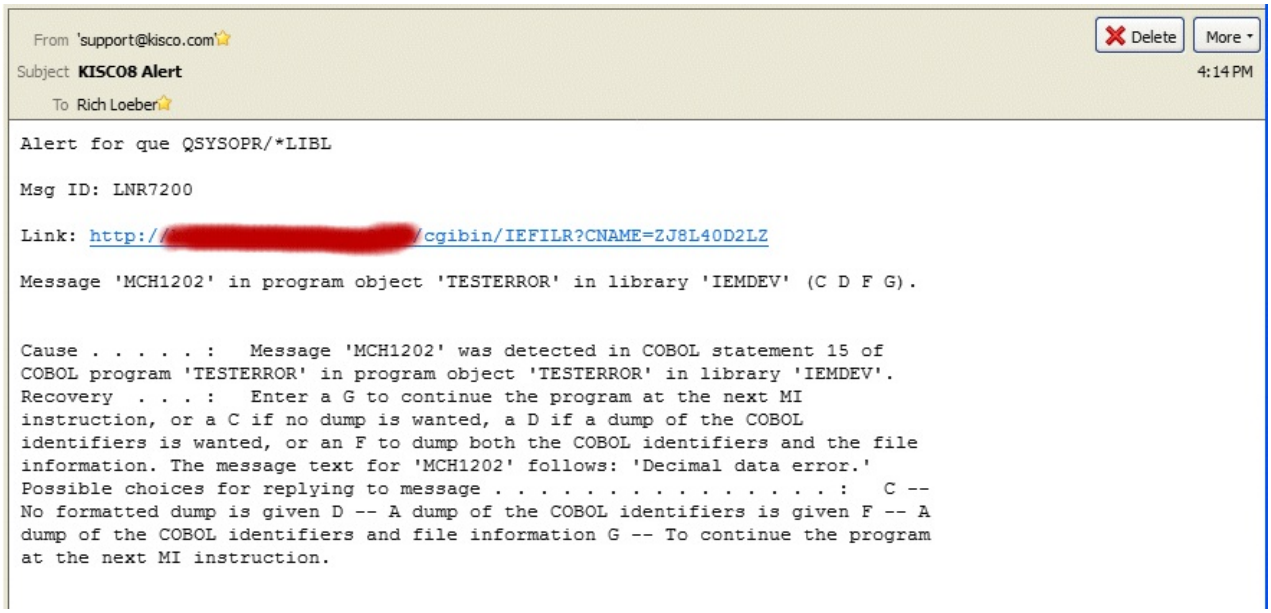
Suppressing Duplicate Message Queue Alerts

An active application on your system could get into a looping condition issuing identical messages to your monitored message queue in a very high volume over a short period of time. This could, in turn, result in iEventMonitor clogging your email system with unnecessary duplicate alerts. To avoid this situation, the message queue monitor will suppress such duplicate alerts within a given time period. When the software is initially installed, this default setting will be set to five minutes. The setting can be controlled from the Global Settings. Changing the setting to zero minutes will turn the suppression feature off.

Responding To Error Messages

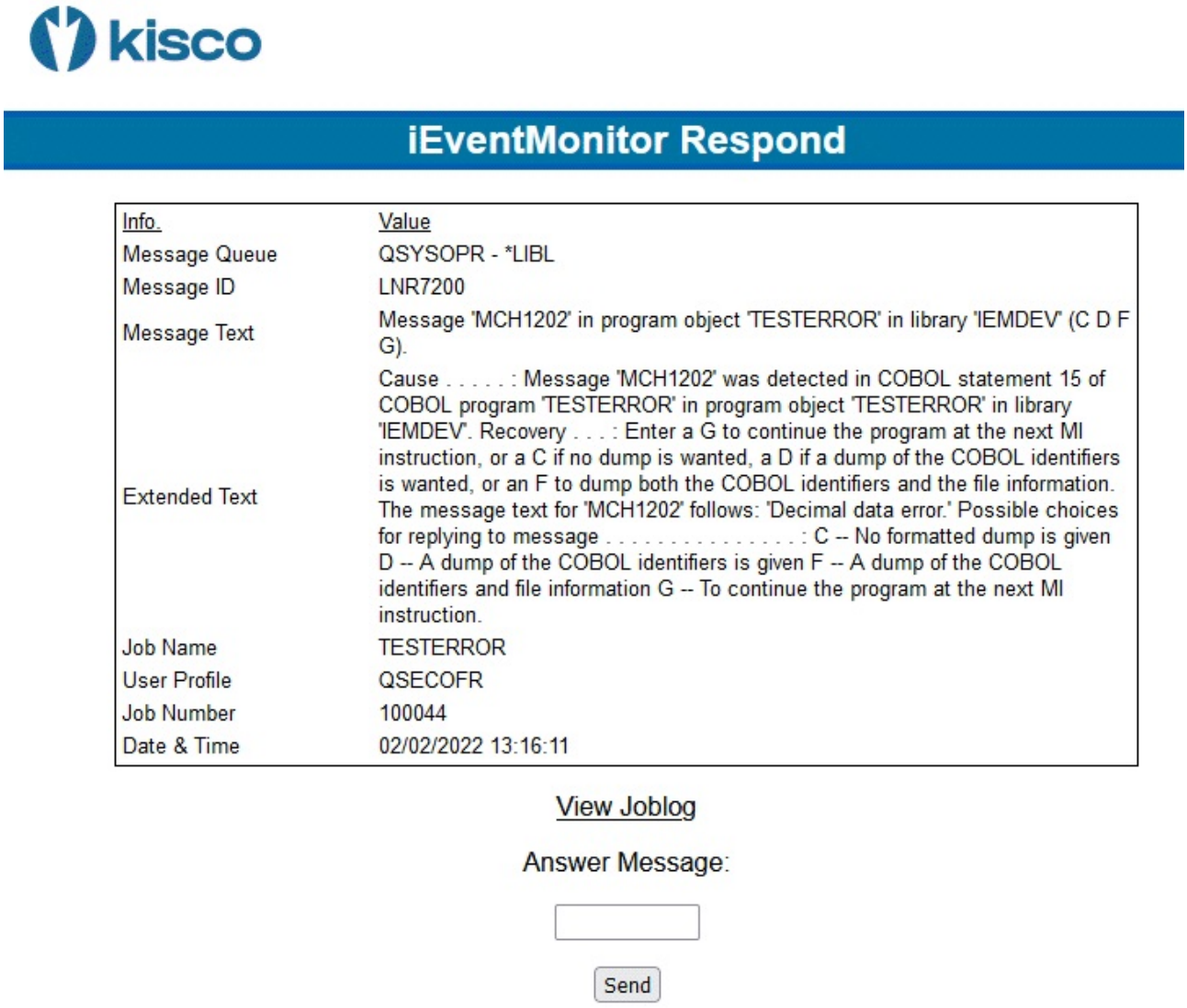
You can use iEventMonitor to respond to error messages. This feature can be activated in the Global Settings controls. When active, if a message is received at a message queue that calls for a response, an HTTP link will be included in the alert issued from iEventMonitor. When you follow this link, either from an email message or a text message, a web page will be shown that will provide details about the error message.

A typical email message might look like this:



See the next page for more information.

When you click on the link, the following web page will be shown:



On this web page, you can click on the "View Joblog" to see the joblog for the error message. This may be important to view before you answer the message. Once you have decided what the proper response for the message is, just enter it in the box at the bottom of the page and press the Send button. The message will be answered on your system.

If a problem occurs while processing your message response, you may receive an error feedback display. Errors that can occur include:

- This link is no longer available for use - indicates that the link has already been cleared from the system. All links are cleared on your system whenever iEventMonitor is restarted using the STRIEM command.
- Blank reply not processed - the message answer was left blank.
- Reply not processed, already answered - the message was answered already by a local source

on your system.

- Reply not processed, message now gone - the message is no longer available to be answered.
- Your error respond session has encountered an internal error - indicates an internal error of some kind. If this happens, contact Kisco Systems.

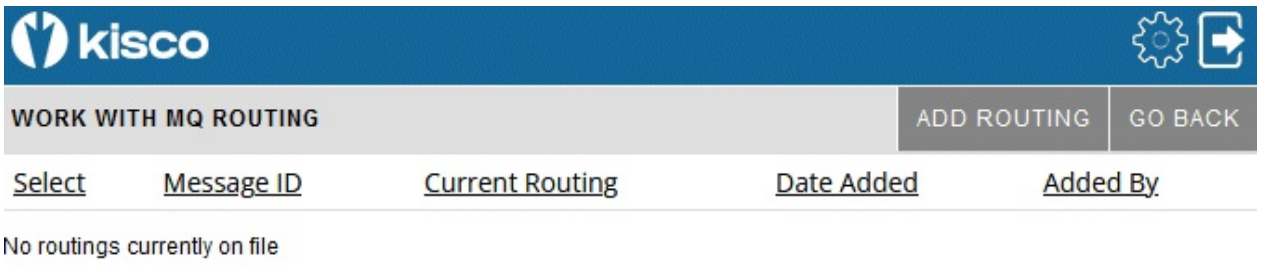
Note: If you want to respond to an error message based on a text message to your cell phone, this is possible with certain conditions taken into effect. Keep in mind that the amount of information included in a text is limited to a fixed number of characters for most text services. To limit the number of characters on the text, please consider the following:

- In the Global Settings, keep the text entries for the following setting as short as possible:
  - Change the "Text Friendly Alerts?" setting to *YES
  - Support Name Description
  - Default Alert Subject
  - IEM Browser Respond IP
- Also in the Global Settings, specify *NO for Include Job Info in Alert?
- When you configure the message queue monitor, specify *NO for Include message time?

These steps will result in a shorter text message and provide you with a useable link to follow. When you do follow the link, all of the information about the error, including the joblog, will be available.

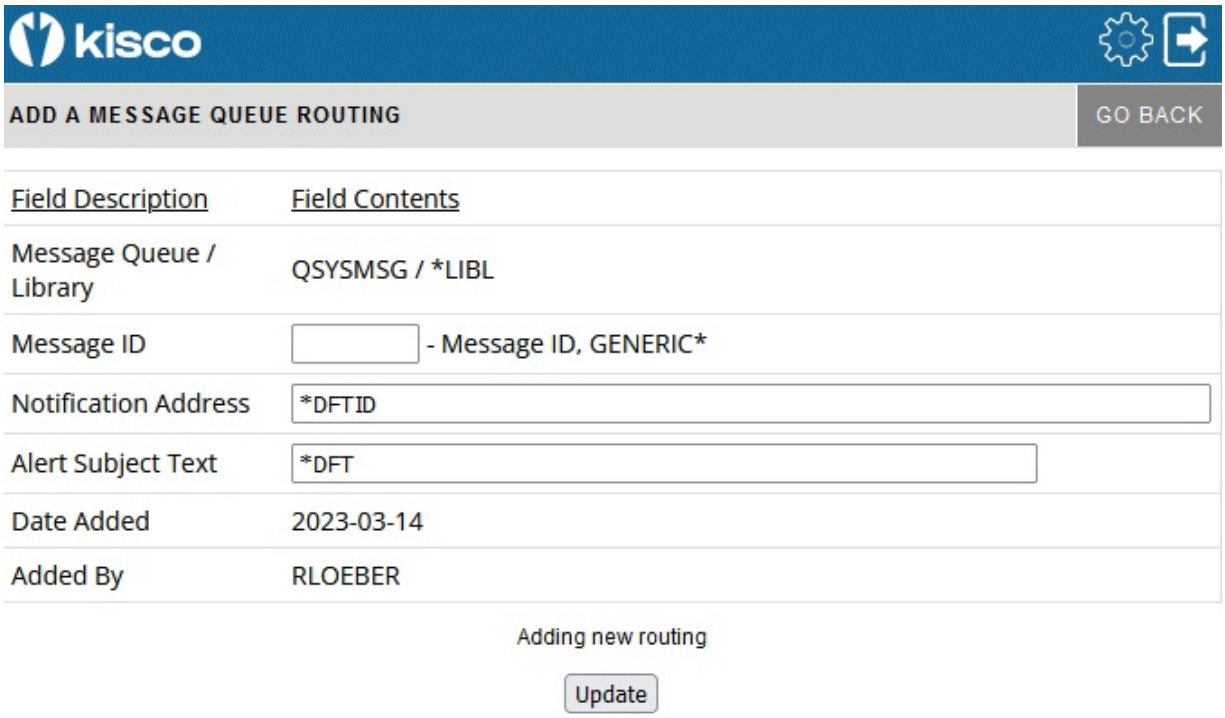
Message Routing

Your installation may want alerts issued to specific individuals for specific messages posted to a monitored message queue. The Message Routing process in iEventMonitor allows you to set this up. Routing instructions are message queue specific. To see if there are any routings in effect, select the gray button at the top of the panel marked ROUTING. The following panel will be shown:



If any routings already exist for this message queue monitor, they will be shown and can be selected for maintenance and review purposes. To add a new routing, select the ADD ROUTING gray button at the top of the panel.

The following panel will be shown to add a new routing instruction:



Fill in the fields as follows:

Message ID	Enter the message ID that you want this routing to apply to. The message ID must be in standard 7 character IBM i OS message format of AAAXXXX. IEventMonitor will accept a message ID with an asterisk as a wild card character. For example, if you enter a value of ABC1*, then any message that is received that starts with ABC1 will be routed using this routing rule.
Notification Address	See the Notification Address(s) section of this manual on page 5.
Alert Subject Text	Enter a specific alert subject that you want for this routing. If you want to use the standard default alert subject, use the special value *DFT.

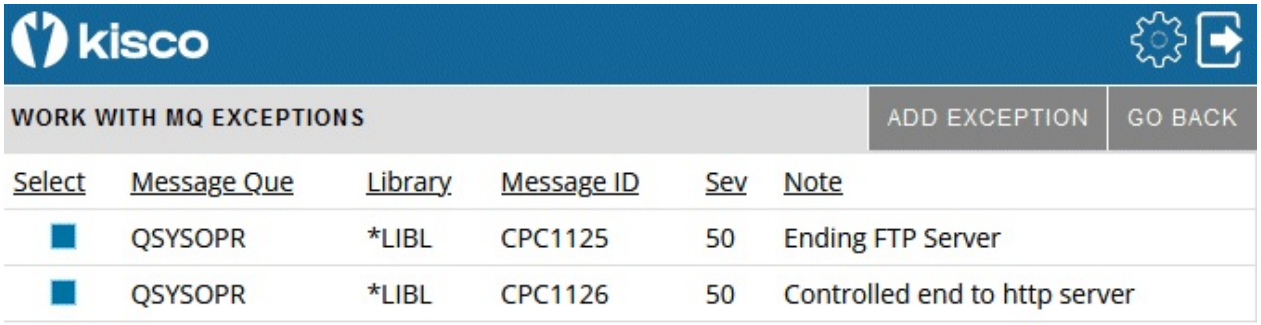
Press the Update button to add/update this routing when you are ready. The values entered will be edit checked. If any errors are found, this panel will be shown again with an appropriate error message. If all settings are acceptable, then the routing will be added and the initial display will be shown again.

If you select it from the initial display, it will be shown on this panel with all of the current values. Another option, Remove This Routing, will be shown on this panel that will let you remove the routing. Selecting the remove option will delete the routing and bring you back to the Initial Display.

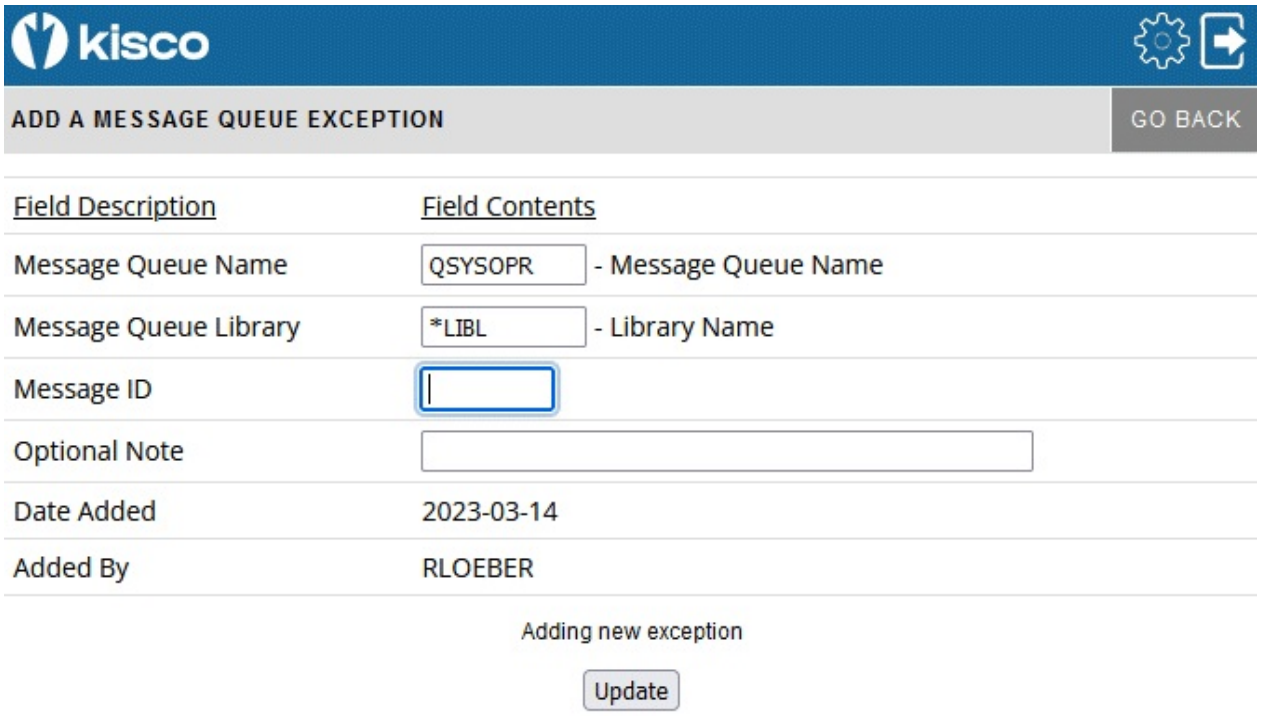
Message Exceptions

The iEventMonitor message queue monitor allows you to ignore specific messages from processing by the monitor for a specific message queue. Using this feature, you can select to ignore messages for paper changes on printers and other hardware related situations. You can set these up using the EXCEPTIONS gray box at the top of the panel.

When you select this option, a list of current exceptions will be presented:



You can change an existing setting by selecting it or you can add a new exception by selecting the ADD EXCEPTION box at the top of the panel. Either selection will show the following panel:



Complete the fields as follows:

Message ID	Enter the 7 character message ID that you want to ignore.
Note	Enter any descriptive information for the entry that you want.

Press the Update button to add/update this exception when you are ready. The values entered will be edit checked. If any errors are found, this panel will be shown again with an appropriate error message. If all settings are acceptable, then the exception will be added and the initial display will be shown again.

If you select it from the initial display, it will be shown on this panel with all of the current values. Another option, Remove This Exception, will be shown on this panel that will let you remove the routing. Selecting the remove option will delete the routing and bring you back to the Initial Display.

Message Overrides

iEventMonitor also has additional controls that allow for flexibility to the message queue monitor function. These add controls by job name, user profile, program name and time.

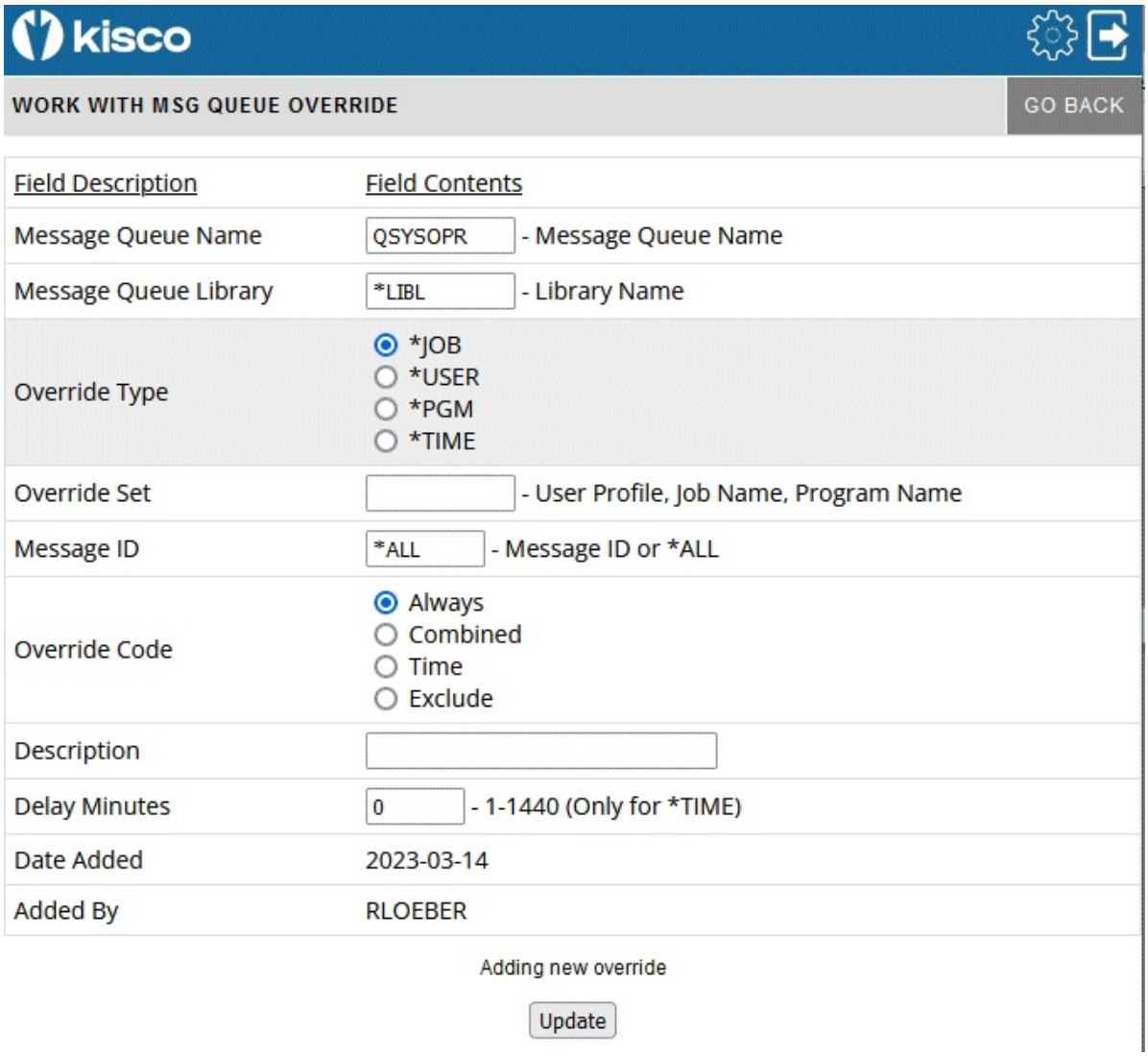
With these options, you can override the control by message severity and have iEventMonitor either always alert messages that arrive at the message queue or always suppress the alert The criteria used can be the user profile that sent the message, the job name that sent the message, the name of the program that sent the message or a time override on repeating a message. In each category, you can instruct iEventMonitor to either always alert messages that match or never alert messages that match.

When iEventMonitor checks for these overrides, it will always check for the user profile first, then the job name and lastly the program name. If any override is found, the first one found will apply. If no overrides are found, then the logic of using the message severity code will apply and the message ID will be checked against the Message ID Control table. You can set these up using the OVERRIDES gray box at the top of the panel.

When you select this option, a list of current overrides will be presented:

You can change an existing setting by selecting it or you can add a new exception by selecting the ADD EXCEPTION box at the top of the panel.

Either selection will show the following panel:



Complete the fields as follows:

Override Type	Select one of the values as follows: *JOB - The override set is a job name *USER - The override set is a user profile *PGM - The override set is a program name *TIME - The override set is for a time delay on repeated messages
Override Set	Enter the override set to be checked against the message received. If you entered *USER above, enter the user profile here. If *JOB, enter the job name. If *PGM, enter the program name.

Message ID	Enter the value *ALL for most entries. If you want to override a specific message ID handling for a given job (Override Type *JOB), then you can enter that message ID here. For example, if you want to suppress just a given error message from a job, you can do that here. To suppress all messages from a given job, use the *ALL value.
Override Code	Select one of the values as follows:

Always	Always alert the qualifying message
Combined	Combines Always alert with message ID Exceptions. If the message should always be reported but there is an active ID Exception for it, it will be suppressed.
Time	Use this value for a time exception. See also the "Delay Minutes" setting below.
Exclude	Never alert the qualifying message

Override Description	Enter your own description for the override condition.
Delay Minutes	For a Time exception, enter the number of minutes that you want to suppress the message for. This will prevent a regularly occurring message from being alerted over and over. A value of 1 to 1440 may be entered.

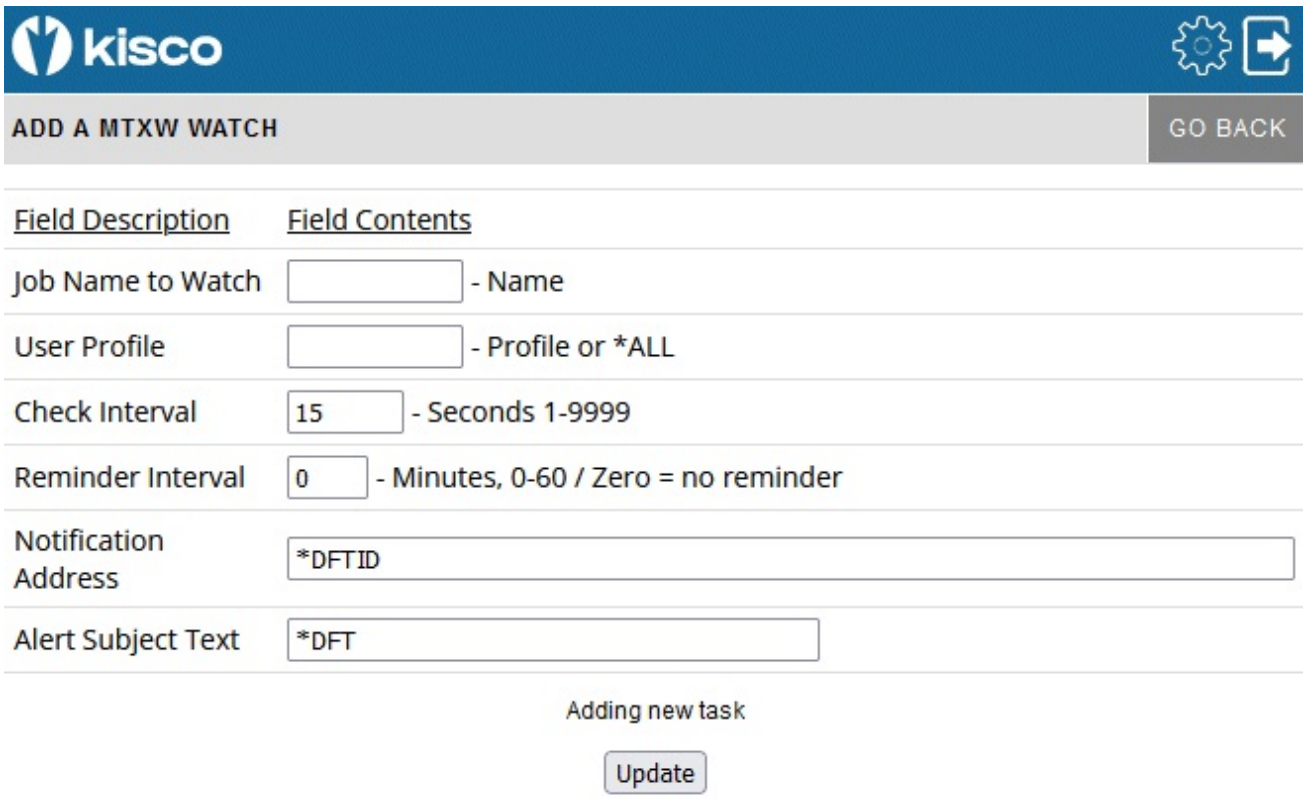
Press the Update button to add/update this override when you are ready. The values entered will be edit checked. If any errors are found, this panel will be shown again with an appropriate error message. If all settings are acceptable, then the override will be added and the initial display will be shown again.

If you select it from the initial display, it will be shown on this panel with all of the current values. Another option, Remove This Override, will be shown on this panel that will let you remove the routing. Selecting the remove option will delete the routing and bring you back to the Initial Display.

Mutex-Wait Watch - MX

This feature watches for Mutex Wait status (MTXW) to be reported for a specified job running for a specific user profile. Once the task has reported MTXW status for a full interval specified, then an alert will be issued.

When you select to add a Mutex-Wait Watch, or when you check how a current watch is configured, the following panel will be shown:



To start a Mutex-Wait Watch, fill in the settings on the initial display panel as follows:

Job Name To Watch	Enter the specific job name that you want to watch. If there are multiple jobs with the same name, all of them will be watched.
User Profile	Enter the specific user profile that started the job you want to watch. If you want to watch all instances of the requested job name, use the special value of ***ALL**.
Check Interval	Enter how frequently you want to check for the job showing the MTXW status, in seconds. The default value of 15 seconds is a good starting point.
Reminder Interval	Enter the number of minutes that you want to lapse before a reminder alert is sent after an initial alert has been issued. If you enter the value of zero, then no reminder alerts will be

	issued.
Notification address	See the Notification Address(s) section of this manual on page 5.
Alert Subject Text	iEventMonitor will issue an alert with the default subject text if you leave this set to *DFT. If you want a unique alert subject text used, enter that value here and it will be used if an alert is issued.

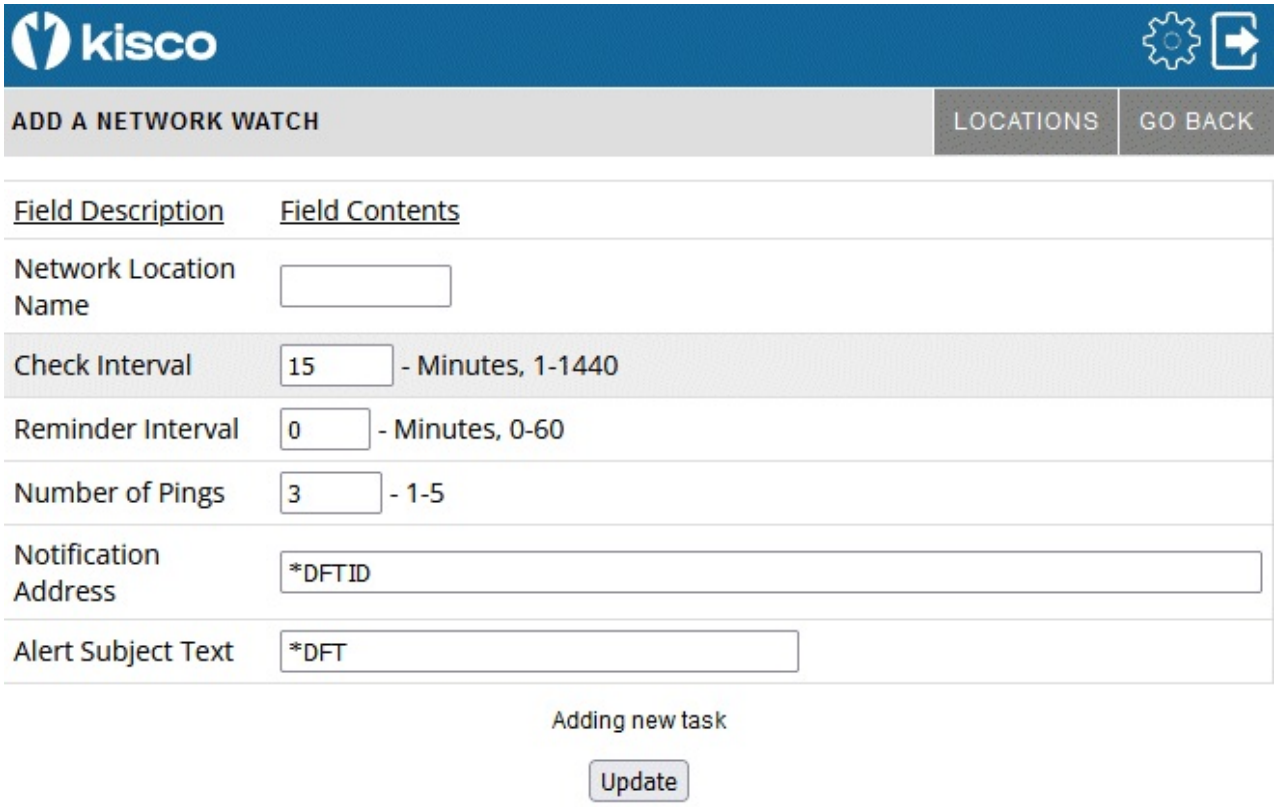
Press the Update button to add/update this watch when you are ready. The values entered will be edit checked. If any errors are found, this panel will be shown again with an appropriate error message. If all settings are acceptable, then the watch will be added and the initial display will be shown again. The new watch will appear as Inactive. It can then be started from the initial display.

If you select it from the initial display, it will be shown on this panel with all of the current values. If the task is shows as Inactive, then you can make changes to any settings and press the Update button to record the changes. Another option, Remove This Task, will be shown on this panel that will let you remove the watch from the list running on your system. Selecting the remove option will delete the watch and bring you back to the Initial Display.

Network Location Watch - NW

iEventMonitor's network location watch can issue an alert when a connection that you depend on is not working or is reporting lost packets or other interruptions.

When you select to add a Network Location Watch, or when you check how a current watch is configured, the following panel will be shown:



To start a Network Location Watch, fill in the settings on the initial display panel as follows:

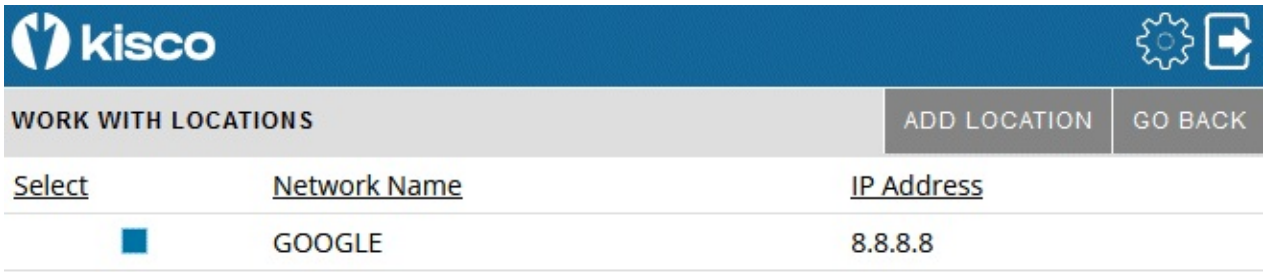
Network Location Name	Enter the 8 character network name that was created in the Network Locations list. A Network Watch can only be run for a location established on this list. See the following section of this manual for details on how to create a location.
Check Interval	Enter how frequently you want iEventMonitor to check the network connection in minutes.
Reminder Interval	If you want delayed reminders issued when a problem is found, enter that delay time here in minutes. An entry of zero will cause the alerts to be re-issued based on the Check Interval setting.
Number of Pings	Enter the number of remote pings that you want iEventMonitor to use when checking the network connection. We recommend

	a minimum setting of at least 2.
Notification address	See the Notification Address(s) section of this manual on page 5.
Alert Subject Text	iEventMonitor will issue an alert with the default subject text if you leave this set to *DFT. If you want a unique alert subject text used, enter that value here and it will be used if an alert is issued.

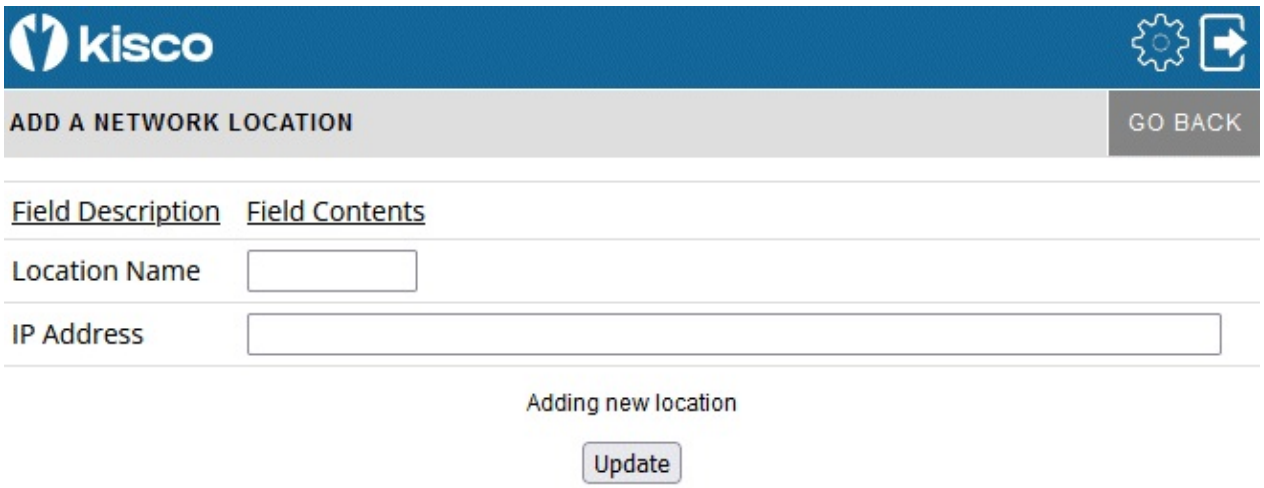
Press the Update button to add/update this watch when you are ready. The values entered will be edit checked. If any errors are found, this panel will be shown again with an appropriate error message. If all settings are acceptable, then the watch will be added and the initial display will be shown again. The new watch will appear as Inactive. It can then be started from the initial display.

If you select it from the initial display, it will be shown on this panel with all of the current values. If the task is shows as Inactive, then you can make changes to any settings and press the Update button to record the changes. Another option, Remove This Task, will be shown on this panel that will let you remove the watch from the list running on your system. Selecting the remove option will delete the watch and bring you back to the Initial Display.

Before a network location can be watched, it has to be defined to iEventMonitor. On the Network Watch panel, select the gray LOCATIONS button at the top of the panel. The following will be shown:



To review a current entry, select it using the blue box on the left side of the panel. To add a new location, select ADD LOCATION at the top of the panel. The following will then be shown:



When you add a record to the Network Location file, you assign a unique short, 8 character, name to the location and then associate that with a specific IP address. The IP address can be either a numeric address such as "10.1.2.3" or a named address such as companyname.com.

Enter the values as follows:

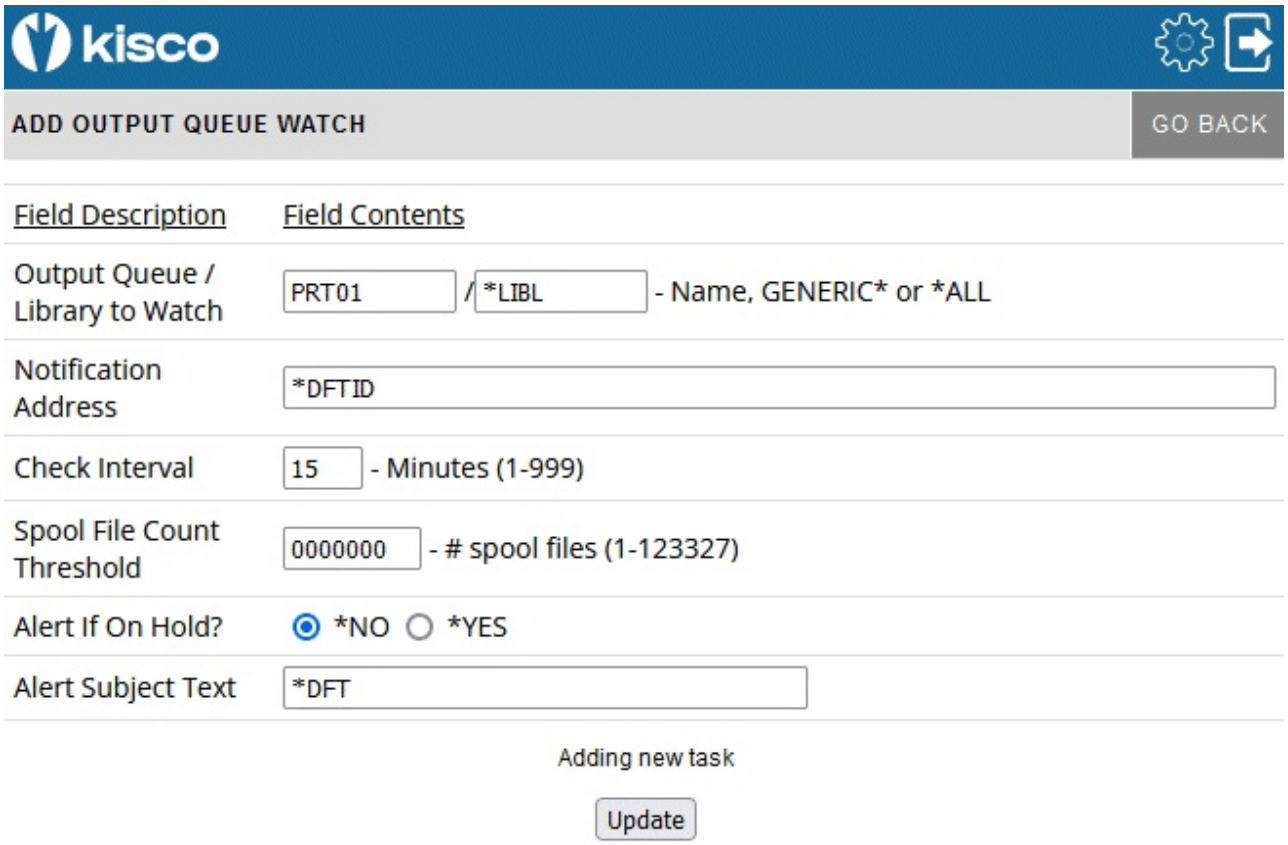
Network Name	Enter the unique 8 character name you have assigned to the network location to be monitored.
IP Address	Enter the IP address to be monitored.

When you create an entry, the IP address will be validated. If the address cannot be validated, the entry cannot be completed.

Output Queue Watch - OQ

iEventMonitor can watch an output queue for unprocessed spool files in ready status. When the number of spool files exceeds a threshold value that you set, an alert will be issued.

When you select to add an Output Queue Watch, or when you check how the current watch is configured, the following panel will be shown:



To start an Output Queue Watch, fill in the settings on the initial display panel as follows:

Output Queue / Library to Watch	Enter the name of the output queue that you want to watch.
Notification address	See the Notification Address(s) section of this manual on page 5.
Check interval	Enter a value, in minutes, that indicates how frequently you want to check the output queue. The default value is 15 minutes but you can specify as low as 1 and as high as 999, but 15 minutes is a good setting to start with.
Spool file count threshold	Enter the spool file threshold that you want checked. When the number of spool files in ready status waiting to be processed exceeds this value during a check cycle, then an alert will be issued. Any value up to 123,327 can be used.

Alert If On Hold	The default value of *NO will exclude reports that are on hold in the output queue from being counted. By selecting *YES, reports that are on hold will be included along with those that are ready to print.
Alert Subject Text	iEventMonitor will issue an alert with the default subject text if you leave this set to *DFT. If you want a unique alert subject text used, enter that value here and it will be used if an alert is issued.

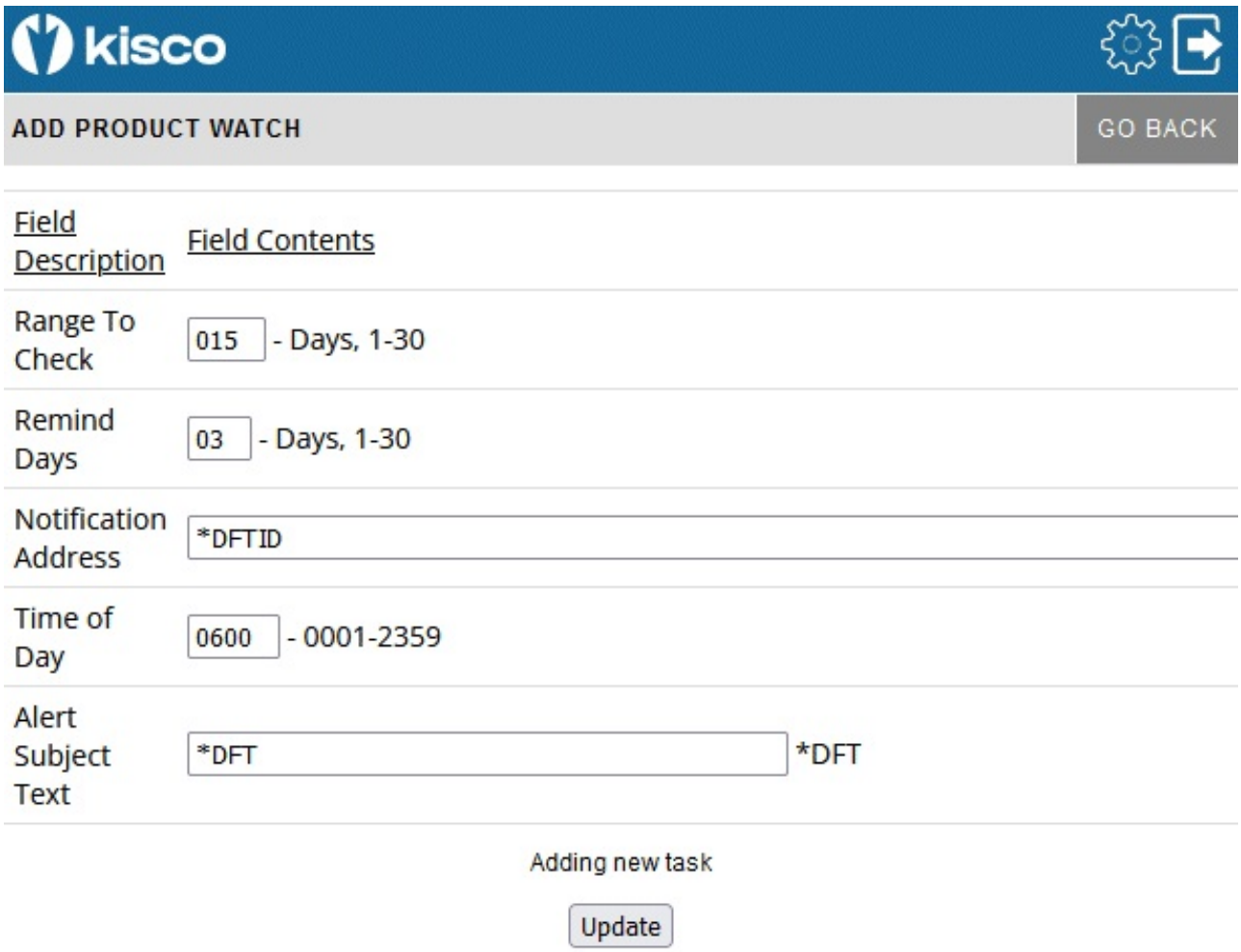
Press the Update button to add/update this watch when you are ready. The values entered will be edit checked. If any errors are found, this panel will be shown again with an appropriate error message. If all settings are acceptable, then the watch will be added and the initial display will be shown again. The new watch will appear as Inactive. It can then be started from the initial display.

If you select it from the initial display, it will be shown on this panel with all of the current values. If the task is shows as Inactive, then you can make changes to any settings and press the Update button to record the changes. Another option, Remove This Task, will be shown on this panel that will let you remove the watch from the list running on your system. Selecting the remove option will delete the watch and bring you back to the Initial Display.

Product Watch - PW

The Product Watch will perform a daily check on the IBM i OS component products to give you advance warning when any of them will be expiring. With the advent of subscription pricing from IBM, this will become important.

When you select to add a Product Watch, or when you check how the current watch is configured, the following panel will be shown:



To start a Product Watch, fill in the settings on the initial display panel as follows:

Range To Check	Enter a value that represents how many days until the expiration date that you want to receive an alert.
Reminder Days	Enter a value that represents if you want to be reminded of this when the expiration is not corrected. If you leave this set to zero, you will get daily alerts. Entering any value between 3 and 30 will suppress the alerts for that number of days. This value must be less than the RANGE setting.

Notification address	See the Notification Address(s) section of this manual on page 5.
Time of Day	Enter time of day when you want this watch to run. Whenyou start the watch, it will run immediately. Once it has been started, then it will run once per day at the time that you specify.
Alert Subject Text	iEventMonitor will issue an alert with the default subject text if you leave this set to *DFT. If you want a unique alert subject text used, enter that value here and it will be used if an alert is issued.

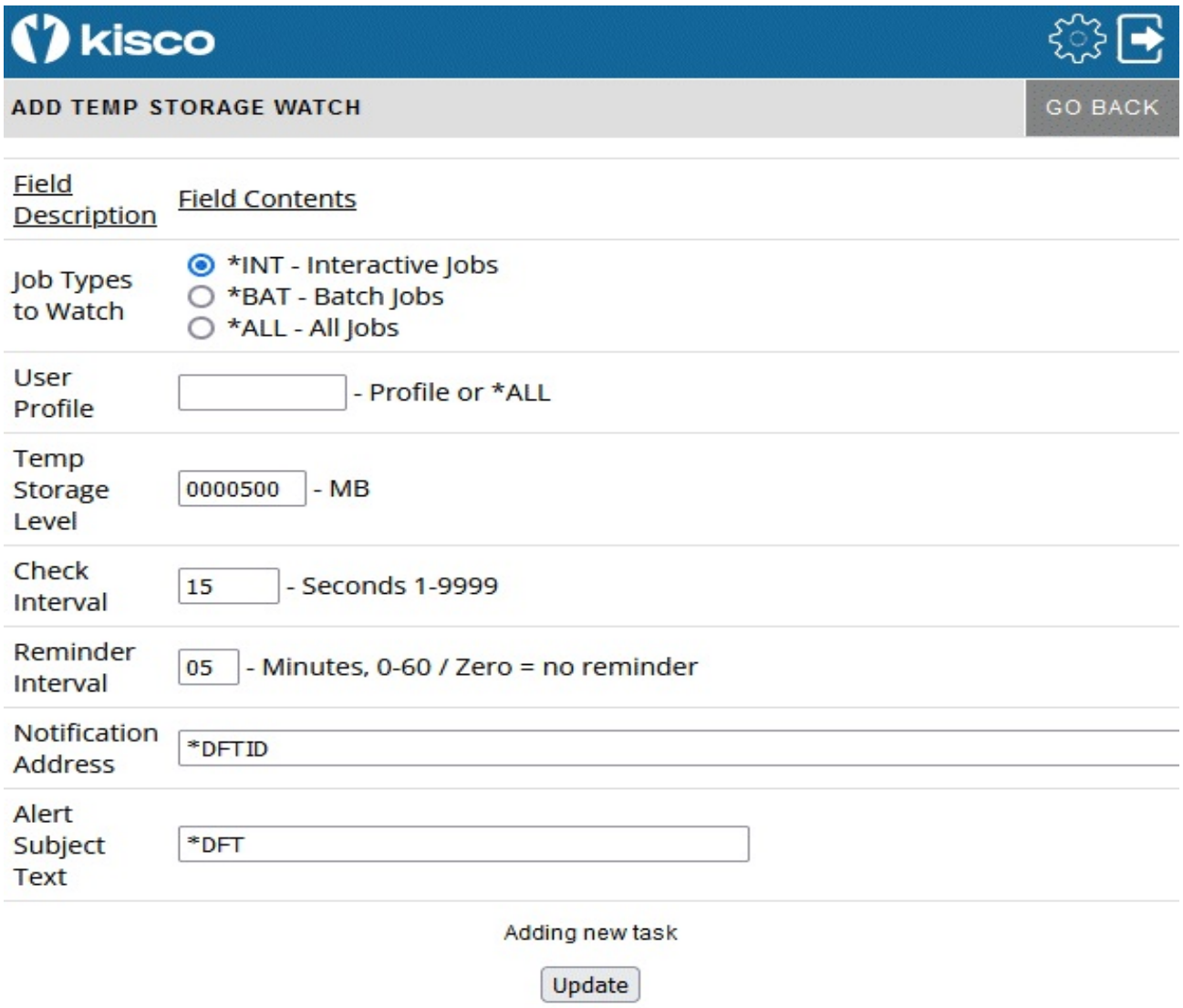
Press the Update button to add/update this watch when you are ready. The values entered will be edit checked. If any errors are found, this panel will be shown again with an appropriate error message. If all settings are acceptable, then the watch will be added and the initial display will be shown again. The new watch will appear as Inactive. It can then be started from the initial display.

If you select it from the initial display, it will be shown on this panel with all of the current values. If the task is shows as Inactive, then you can make changes to any settings and press the Update button to record the changes. Another option, Remove This Task, will be shown on this panel that will let you remove the watch from the list running on your system. Selecting the remove option will delete the watch and bring you back to the Initial Display.

Temporary Storage Watch - TS

This feature watches for jobs that exceed their use of temporary storage based on a threshold limit that you set. Once the task has identified as a temporary storage exception for a full interval specified, then an alert will be issued.

When you select to add a Temporary Storage Watch, or when you check how the current watch is configured, the following panel will be shown:



To start a Temporary Storage Watch, fill in the settings on the initial display panel as follows:

Job Types To Watch Indicates the type of jobs to be watched on your system.

Select from the following values:

*INT Just check for lock waits on interactive jobs.

	*BAT Just check for lock waits on batch jobs. *ALL Check for lock waits on all jobs.
User Profile	You can check for excess temporary storage on jobs run by a specific user profile or *ALL user profile jobs.
Storage Level	Enter the temporary storage threshold limit that you want to use. Jobs using over this limit will result in an alert being issued.
Check Interval	Enter how frequently you want to check for jobs excessive temporary storage, expressed in seconds.
Reminder Interval	Enter the number of minutes that you want to lapse before a reminder alert is sent after an initial alert has been issued. If you enter the value of zero, then a reminder will be sent for each Check Interval value seconds that you have set in the previous parameter setting.
Notification address	See the Notification Address(s) section of this manual on page 5.
Alert Subject Text	iEventMonitor will issue an alert with the default subject text if you leave this set to *DFT. If you want a unique alert subject text used, enter that value here and it will be used if an alert is issued.

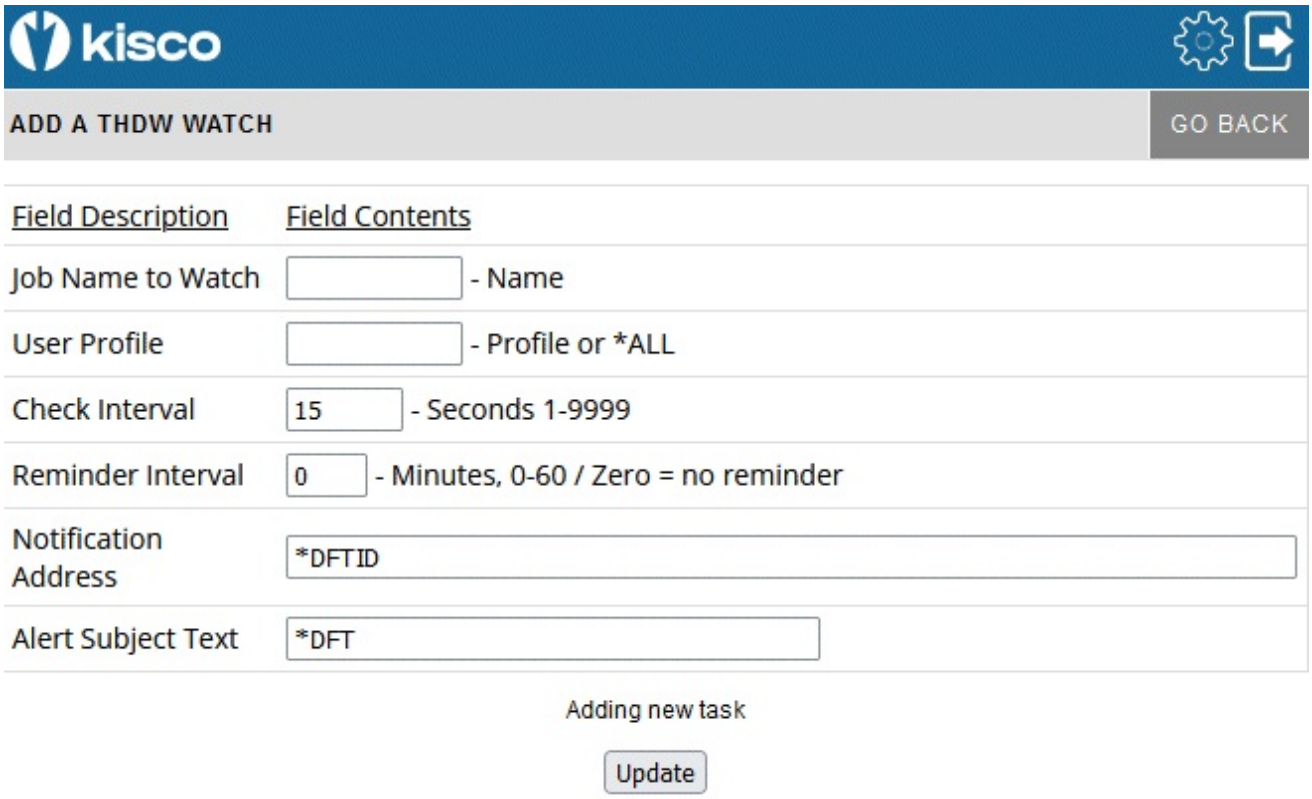
Press the Update button to add/update this watch when you are ready. The values entered will be edit checked. If any errors are found, this panel will be shown again with an appropriate error message. If all settings are acceptable, then the watch will be added and the initial display will be shown again. The new watch will appear as Inactive. It can then be started from the initial display.

If you select it from the initial display, it will be shown on this panel with all of the current values. If the task is shows as Inactive, then you can make changes to any settings and press the Update button to record the changes. Another option, Remove This Task, will be shown on this panel that will let you remove the watch from the list running on your system. Selecting the remove option will delete the watch and bring you back to the Initial Display.

Thread-Wait Watch - TW

This feature watches for Thread Wait status (THDW) to be reported for a job running for the indicated type and user profile. Once the task has reported THDW status for a full interval specified, then an alert will be issued.

When you select to add a Thread-Wait Watch, or when you check how the current watch is configured, the following panel will be shown:



To start a Thread-Wait Watch, fill in the settings on the initial display panel as follows:

Job Name Watch	Enter the specific job name that you want to watch. If there are multiple jobs with the same name, all of them will be watched.
User Profile	You can check for thread waits for a specific user profile or *ALL user profiles.
Check Interval	Enter how frequently you want to check for jobs in thread wait status, expressed in seconds.
Reminder Interval	Enter the number of minutes that you want to lapse before a reminder alert is sent after an initial alert has been issued. If you enter the value of zero, then a reminder will be sent for each Check Interval value seconds that you have set in the previous parameter setting.

Notification address	See the Notification Address(s) section of this manual on page 5.
Alert Subject Text	iEventMonitor will issue an alert with the default subject text if you leave this set to *DFT. If you want a unique alert subject text used, enter that value here and it will be used if an alert is issued.

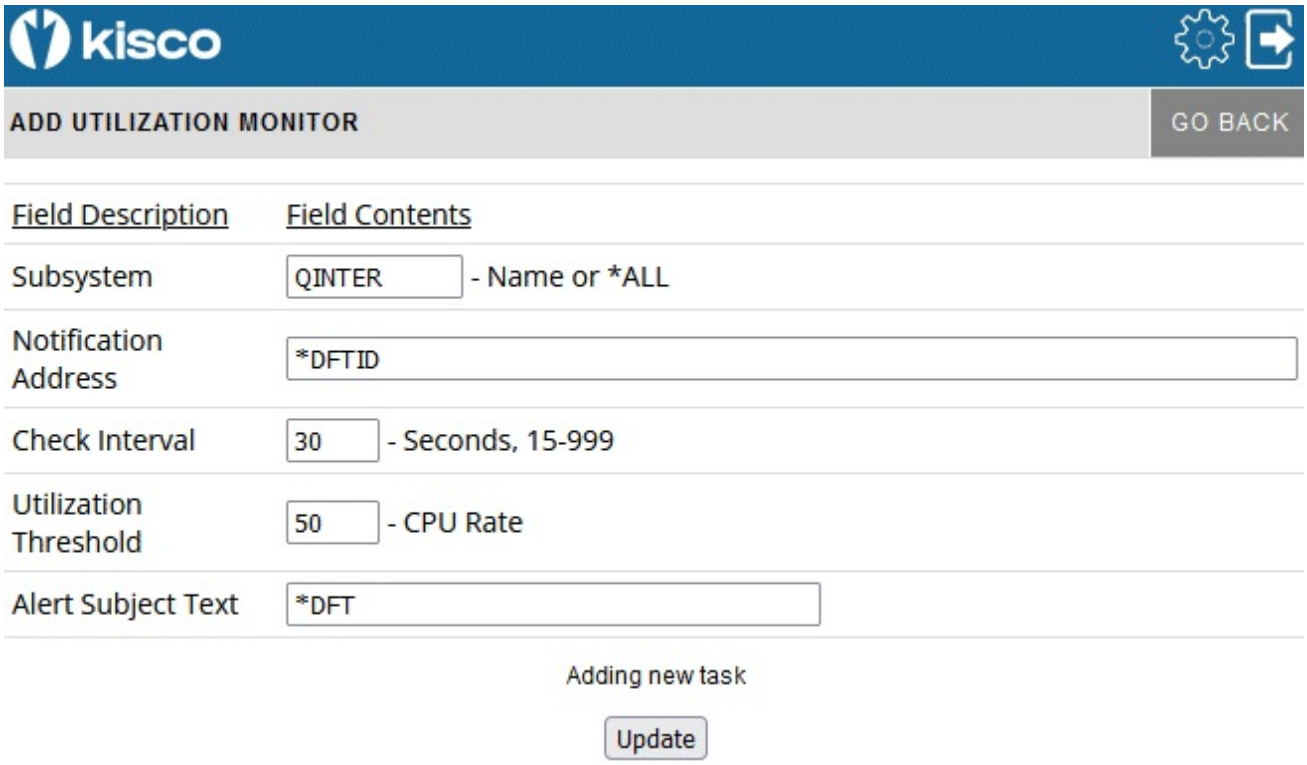
Press the Update button to add/update this watch when you are ready. The values entered will be edit checked. If any errors are found, this panel will be shown again with an appropriate error message. If all settings are acceptable, then the watch will be added and the initial display will be shown again. The new watch will appear as Inactive. It can then be started from the initial display.

If you select it from the initial display, it will be shown on this panel with all of the current values. If the task is shows as Inactive, then you can make changes to any settings and press the Update button to record the changes. Another option, Remove This Task, will be shown on this panel that will let you remove the watch from the list running on your system. Selecting the remove option will delete the watch and bring you back to the Initial Display.

System Utilization Monitor - UT

iEventMonitor includes a System Utilization Monitor feature. Using this feature, you can monitor interactive subsystems, such as QINTER, for jobs that are using too much CPU capacity. High use of CPU can be an indication of a runaway job or an application that is poorly designed.

When you select to add a System Utilization Monitor, or when you check how the current watch is configured, the following panel will be shown:



To start a System Utilization Monitor, fill in the settings on the initial display panel as follows:

Subsystem	Enter the sub-system name that you want to watch. The default value of QINTER will watch jobs running in the system default interactive subsystem. Kisco does not recommend using this feature to monitor jobs in a batch processing subsystem. To monitor total system utilization, use the special value of *ALL.
Notification address	See the Notification Address(s) section of this manual on page 5.
Check interval	Enter a value in seconds. The monitor will check for excess utilization every specified interval.
Utilization threshold	Enter the utilization threshold value that you want the monitor to check. This is expressed as a percentage of the CPU utilization for the job.
Alert Subject Text	iEventMonitor will issue an alert with the default subject text if you leave this set to *DFT. If you want a unique alert subject text used,

enter that value here and it will be used if an alert is issued.

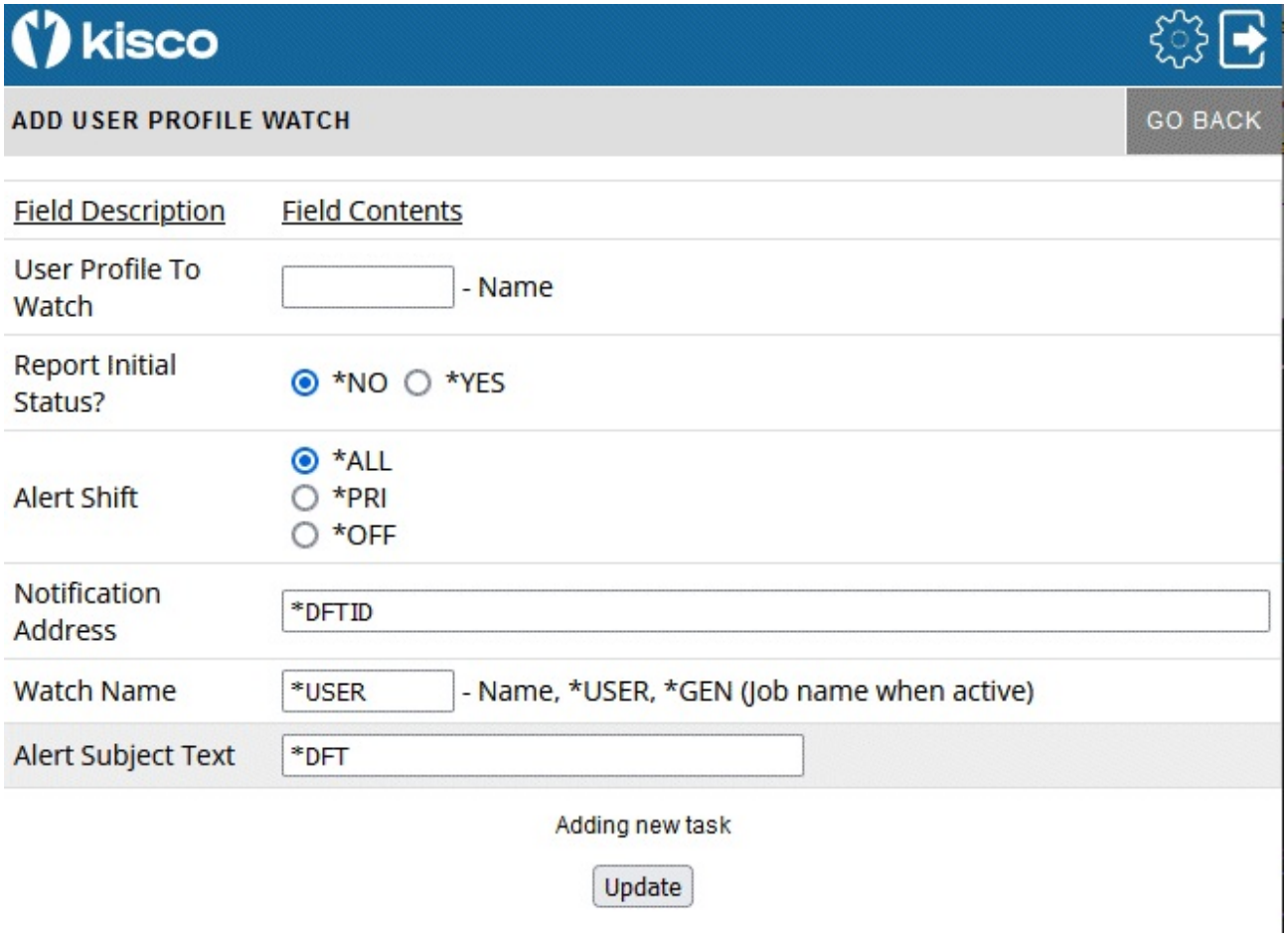
Press the Update button to add/update this monitor when you are ready. The values entered will be edit checked. If any errors are found, this panel will be shown again with an appropriate error message. If all settings are acceptable, then the monitor will be added and the initial display will be shown again. The new monitor will appear as Inactive. It can then be started from the initial display.

If you select it from the initial display, it will be shown on this panel with all of the current values. If the task is shows as Inactive, then you can make changes to any settings and press the Update button to record the changes. Another option, Remove This Task, will be shown on this panel that will let you remove the watch from the list running on your system. Selecting the remove option will delete the watch and bring you back to the Initial Display.

User Profile Activity Watch - UW

The User Profile Activity Watch feature will let you track user profile use for interactive sessions. When a user profile watch is started, it will issue an alert when a user profile is used for an interactive signon process or a sign off process. The watch will stay active and continue watching for signon and sign off activity.

When you select to add a User Profile Activity Watch, or when you check how the current watch is configured, the following panel will be shown:



To start a User Profile Activity Watch, fill in the settings on the initial display panel as follows:

User Profile To Watch — Enter the name of the user profile that you want to track.

Report Initial Status? — Controls the initial status reporting for the specified user profile.

Select one of the following values:

*NO The current status of the user profile sessions will not be alerted.

*YES At startup, the current status of the user profile sessions will be issued as an alert.

Alert Shift

Controls whether alerts are issued all the time or only during prime or off-prime shift times.

Select one of the following values:

*ALL Alerts will be issued regardless of the shift time.

*PRI Alerts will only be issued when the occur during the time period identified as prime shift.

*OFF Alerts will only be issued when the occur during the time period identified as off shift.

Note: Shift times and days of the week are set on the Global Settings.

Notification address

See the Notification Address(s) section of this manual on page 5.

Watch name

Early versions of iEventMonitor used a job name that included the user profile when they were active. This setting will let you optionally generate your own job name so that the actual user profile is hidden.

Enter one of the following options.

*USER The job that iEventMonitor uses for this user profile watch will run with a job name of the user profile being watched.

*GEN The job that iEventMonitor uses for this user profile watch will run with a generated job name in the form of UWnnnnnn where nnnnnn is a sequential number assigned by the software at each job start. Each time the watch is started, a different job name will be used.

Name The job that iEventMonitor uses for this user profile watch will run with a job name entered here.

Alert Subject Text

iEventMonitor will issue an alert with the default subject text if you leave this set to *DFT. If you want a unique alert subject text used, enter that value here and it will be used if an alert is issued.

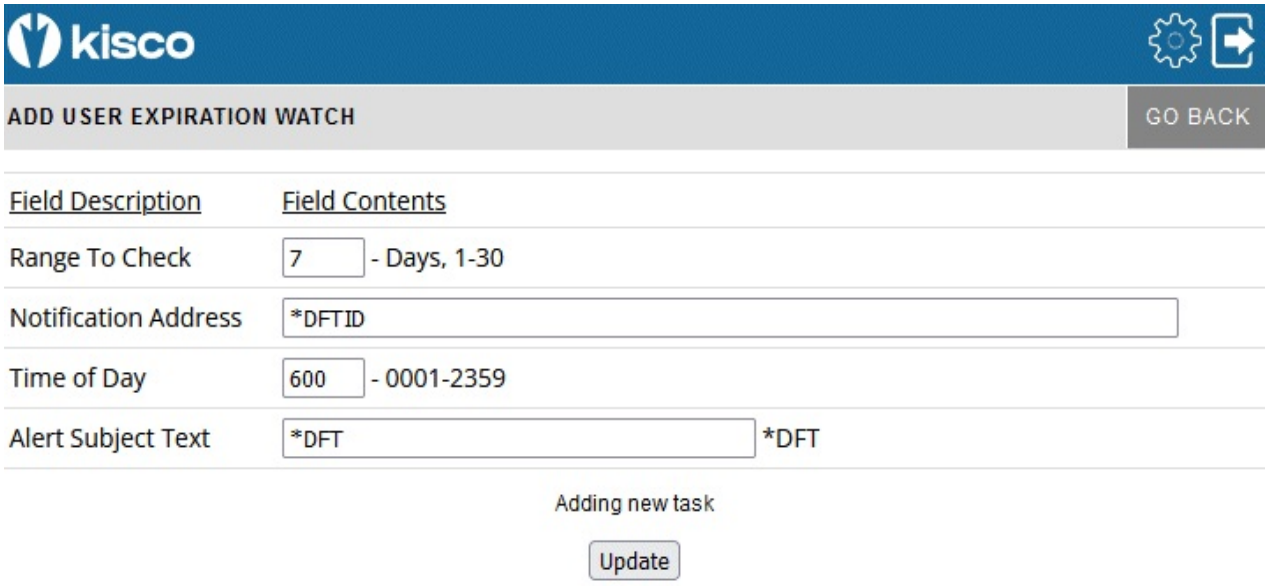
Press the Update button to add/update this watch when you are ready. The values entered will be edit checked. If any errors are found, this panel will be shown again with an appropriate error message. If all settings are acceptable, then the watch will be added and the initial display will be shown again. The new watch will appear as Inactive. It can then be started from the initial display.

If you select it from the initial display, it will be shown on this panel with all of the current values. If the task is shows as Inactive, then you can make changes to any settings and press the Update button to record the changes. Another option, Remove This Task, will be shown on this panel that will let you remove the watch from the list running on your system. Selecting the remove option will delete the watch and bring you back to the Initial Display.

User Profile Expiration Watch - UX

This feature scans the active user profiles on your system once per day and issues an alert when one or more will expire within a specified period of time from when the scan is run.

When you select to add a User Profile Expiration Watch, or when you check how the current watch is configured, the following panel will be shown:



Fill in the parameters as follows:

Range To Check	Enter a value that represents how many days until the expiration date that you want to receive an alert.
Notification address	See the Notification Address(s) section of this manual on page 5.
Time of Day	Enter time of day when you want this watch to run. When you start the watch, it will run immediately. Once it has been started, then it will run once per day at the time that you specify.
Alert Subject Text	iEventMonitor will issue an alert with the default subject text if you leave this set to *DFT. If you want a unique alert subject text used, enter that value here and it will be used if an alert is issued.

Press the Update button to add/update this watch when you are ready. The values entered will be edit checked. If any errors are found, this panel will be shown again with an appropriate error message. If all settings are acceptable, then the watch will be added and the initial display will be shown again. The new watch will appear as Inactive. It can then be started from the initial display.

If you select it from the initial display, it will be shown on this panel with all of the current values. If the task is shows as Inactive, then you can make changes to any settings and press the Update button to record the changes. Another option, Remove This Task, will be shown on this panel that will let you remove the watch from the list running on your system. Selecting the remove option will delete the watch and bring you back to the Initial Display.

Watch For Specific Messages - WT

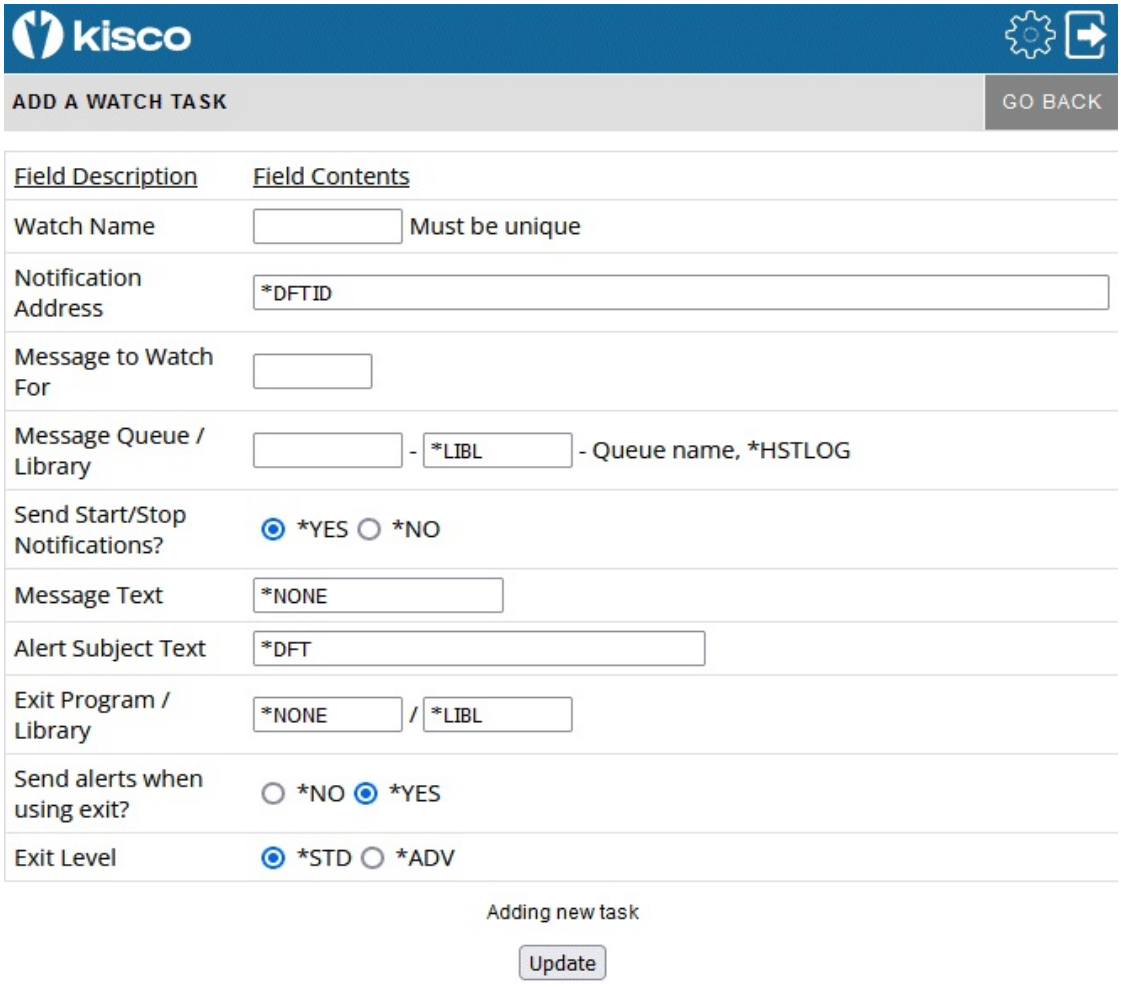
This watch feature that will allow you to set watches for specific message IDs arriving at any message queue you want to watch or in the System History Log. This watch function is different from the message queue monitor feature in that the watch will check for a specific message ID regardless of the message severity level whereas the monitor looks at all messages that have a severity code at a selected level or higher. This is also the only way to watch for a message on the System History Log. You can also set a watch to look for a specific text string appearing in a message posted to a message queue or in the history log.

You can set a single watch or multiple watches using this feature. It will let you monitor the system operator message queue at the same time that you have the iEventMonitor message queue monitor function active. You can also set watches for any other message queue in your system including user profile message queues.

Each watch that runs on your system must be assigned a unique 10 character name. At any time, you can view the names of the active watches from the Initial Display. They will appear with the task code WT.

See the next page for how to set up a Watch For Specific Messages task.

When you select to add a Watch For Specific Message, or when you check how the current watch is configured, the following panel will be shown:



To start a Watch for a specific message, fill in the settings on the initial display panel as follows:

Watch name	This must be a unique watch event name. You can set multiple watches, but each one must have a unique name. You will need to know this name when you want to end the watch event at a later time.	
Notification Address	See the Notification Address(s) section of this manual on page 5.	
Message to Watch For	Enter the message ID that you want to monitor for with this watch task.	
	*ALL	Search all messages posted to the message queue
	*IMMED	Search just the immediate messages that are posted to the message queue
Message Queue /	Enter the name of the message queue that you want to monitor.	

Library	You can watch for a specific message in the System History Log by using the special value *HSTLOG. When you use this option, you must be watching for a specific message ID and you cannot specify a Message Text selection.
Send Start/Stop Notifications?	Leave the default value *YES if you want iEventMonitor to issue an alert reporting that this watch task is being activated. Select *NO if you do not want the alert to be issued.
Message Text	If you are not searching for a specific text string, leave this set to *NONE. If you are searching for a text string, enter the string here. Keep in mind that the string is case sensitive and uses embedded blanks.
Alert Subject Text	iEventMonitor will issue an alert with the default subject text if you leave this set to *DFT. If you want a unique alert subject text used, enter that value here and it will be used if an alert is issued.

See below for the Exit Program options that are also shown.

Press the Update button to add/update this watch when you are ready. The values entered will be edit checked. If any errors are found, this panel will be shown again with an appropriate error message. If all settings are acceptable, then the watch will be added and the initial display will be shown again. The new watch will appear as Inactive. It can then be started from the initial display.

If you select it from the initial display, it will be shown on this panel with all of the current values. If the task is shows as Inactive, then you can make changes to any settings and press the Update button to record the changes. Another option, Remove This Task, will be shown on this panel that will let you remove the watch from the list running on your system. Selecting the remove option will delete the watch and bring you back to the Initial Display.

Watch Task Exit Program Option

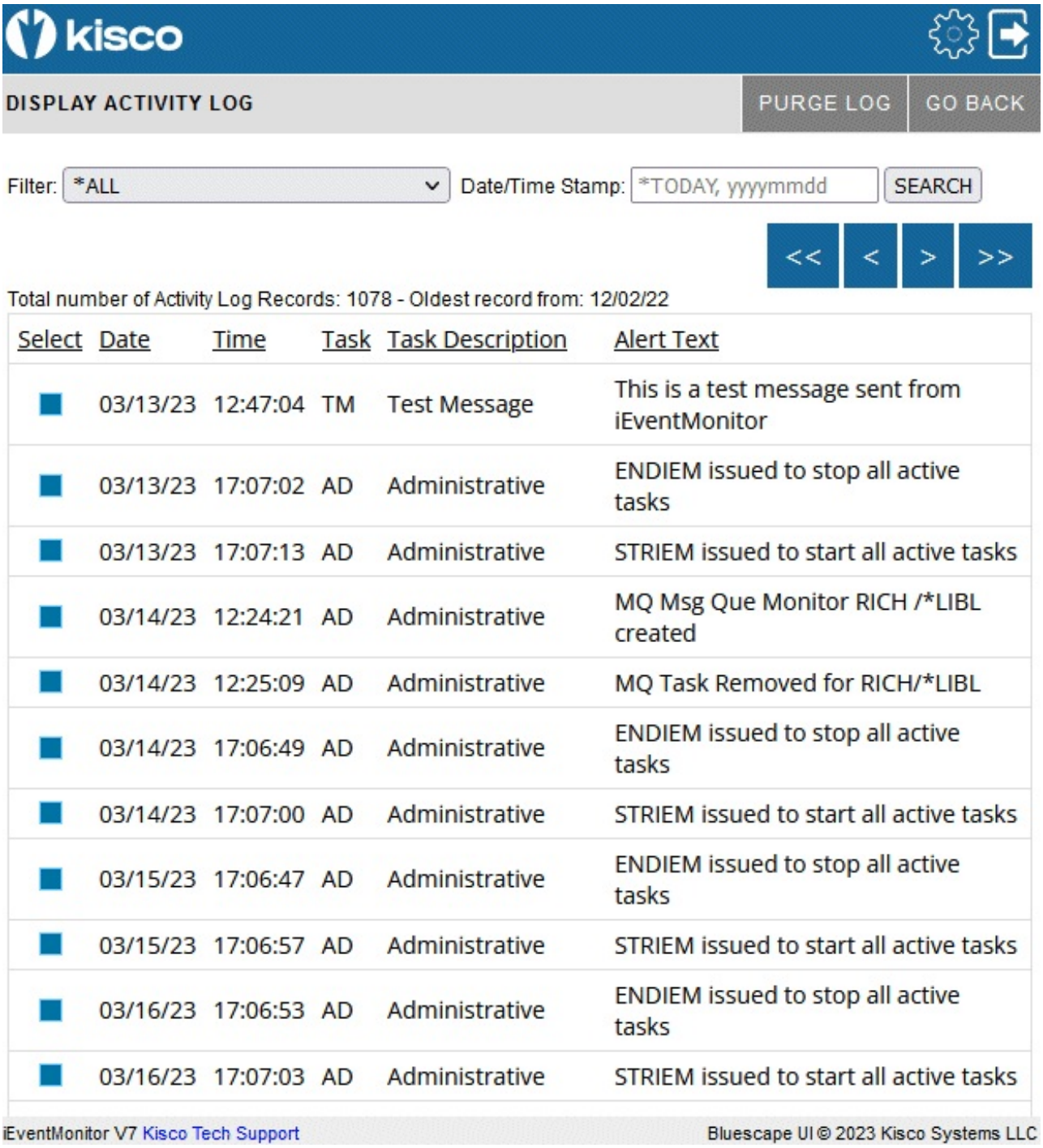
The Watch Task includes an optional exit program interface. Use these additional settings to implement your own exit program:

Exit program	If you want to call your own exit program during watch processing, enter the name of the program and library here. When the watch is satisfied, the program will be called passing a single parameter that contains information about the message issued. The amount of information is determined by the setting of the Exit Level parameter (see below). If you are not using an exit program, then the special value of *NONE should be used.
Send alerts when Using exit?	This value controls whether iEventMonitor will send out an alert when you have specified an exit program. Select one of the following values: *NO - No alerts will be issued. *YES - Alerts will be issued as normal.
Exit level	Select the level of exit data that you want passed to your exit program. Chose one of the following values: *STD The single parameter with a length value of 7 will be passed. It will contain the message ID value. *ADV A single parameter of 1024 characters will be passed which represents the full message detail available from the message ID being watched for. This can be used for a variety of user objectives. The full message data stream is included.

Activity Log

If you have iEventMonitor Enterprise version installed and you have the Central Activity Log feature configured, see the Central Activity Log section of this documentation.

From the Initial Display, you can view the iEventMonitor Activity Log by selecting the ACTIVITY LOG gray button at the top of the panel. The following display will appear:



You can navigate your way through the Activity Log using several methods. The four blue arrow buttons near the top of the panel will act as follows:

<<	Takes you to the oldest records on file
<	Scrolls backwards one panel
>	Scrolls forward one panel
>>	Takes you to the newest records on file

In addition, you can select the specific type of transaction that you want to see and a specific date where you want to start you review. Select the transaction filter, then enter the date you want to start with. Dates should be entered in yyyymmdd format. A special value of *TODAY will bring up the most recent activity records. Use the SEARCH button once these values have been set.

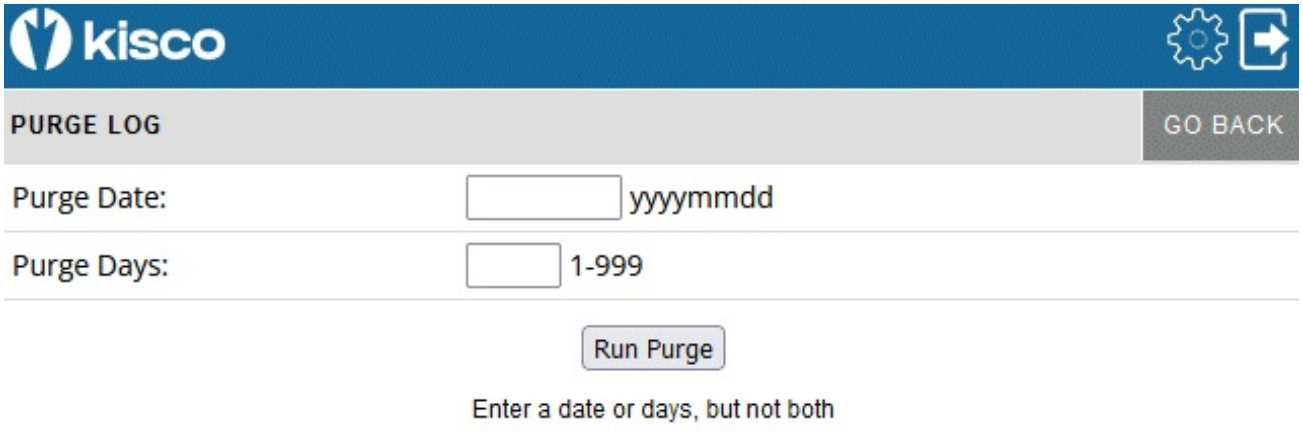
To review the details for any log entry shown, select the blue box to the left of the line and the details will be shown:

Description	Log Contents
Date/Time Stamp	03/17/23 12:00:30 036225
Notification Address	rich@kisco.com
Task Code	MQ- Message Queue Monitor
Message Detail	Msg ID: CPF1189 Subsystem QINTER varied off work station KISCO1. Alert for que QSYSOPR in library *LIBL Job:242449/QSYS/QINTER Date: 03/17/23 Time: 120029 Level 2 Text: Cause . . . . . : Subsystem QINTER received CPF5083 while using file QDSIGNON in library QSYS record format SIGNON. As a result of this error, work station KISCO1 was varied off by the subsystem. Recovery . . . : Correct the problem that is causing the CPF5083 error. Display the job log of the subsystem for more information. After the problem has been corrected, vary the device on (VRYCFG command). The subsystem will then allocate the work station when it becomes available.

If the entry is for an Audit Monitor, the details of the report that was issued will be shown as well.

Activity Log Purge

When you no longer want older records from the Activity Log, you can remove them from the log by selecting the PURGE LOG gray button at the top of the panel. The following selection panel will be shown:



To run the purge, enter one of the two values shown. Do not enter both.

Purge Date: Enter the oldest date that you want to keep on file in format yyyymmdd

Purge Days: Enter the number of days that you want to keep on file. Older records will be purged.

When you select the Run Purge button, a confirmation panel will be shown before the purge is actually run. The purge may take a while to complete before the next panel is then shown.

Central Activity Log Feature

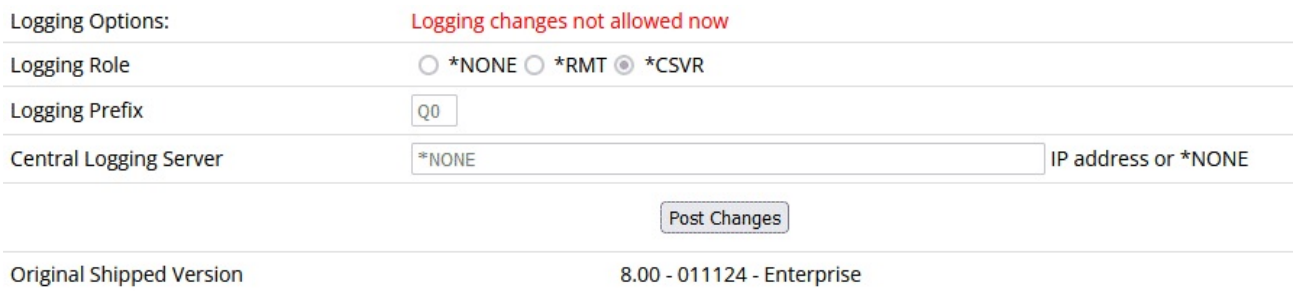
If you have the Enterprise version of iEventMonitor installed, the Central Activity Log feature is available for you to use.

Central Logging lets you configure systems in your network. One system must be chosen as the central server. This is where all of the activity log information from the other systems will be collected. There can be only one central logging server in your configuration. Before you start, decide what the role of each system will be. There will be a single central server, one or more remote servers and you can choose to have any system running iEventMonitor that does not send activity log information to the central server.

The Central Log feature works using IBM's Distributed Data Management (DDM) feature. Before you start configuring central logging, we recommend that each of your systems be enrolled by system name in the IBM i OS Host Name Table. This is done using option 10 on the IBM menu named CFGTCP. On each remote server, the system name of the central server must be enrolled with the associated IP address of the central server. There is no special configuration work needed on the central server or on any servers where this feature will not be used.

The Central Log feature also depends on customers having the same release level of iEventMonitor installed at each participating system. This will be checked each time the logging function runs. You can check this by using option 5 on the INSTALL menu on each system.

To define the roll of a server for the Central Logging feature, log in to iEventMonitor Bluescape and select the Global Setting Gear icon at the top of the page. Scroll down until you see the following section near the bottom of the page:



Note that logging changes can only be made when iEventMonitor is inactive on the server. In the above example, it is active and the warning message indicates that changes cannot be made. Note also that the bottom line showing Original Shipped Version will also indicate whether or not you have the Enterprise version activated.

To set you central logging options, complete these three fields as follows:

Logging Role Choose one of the following values:

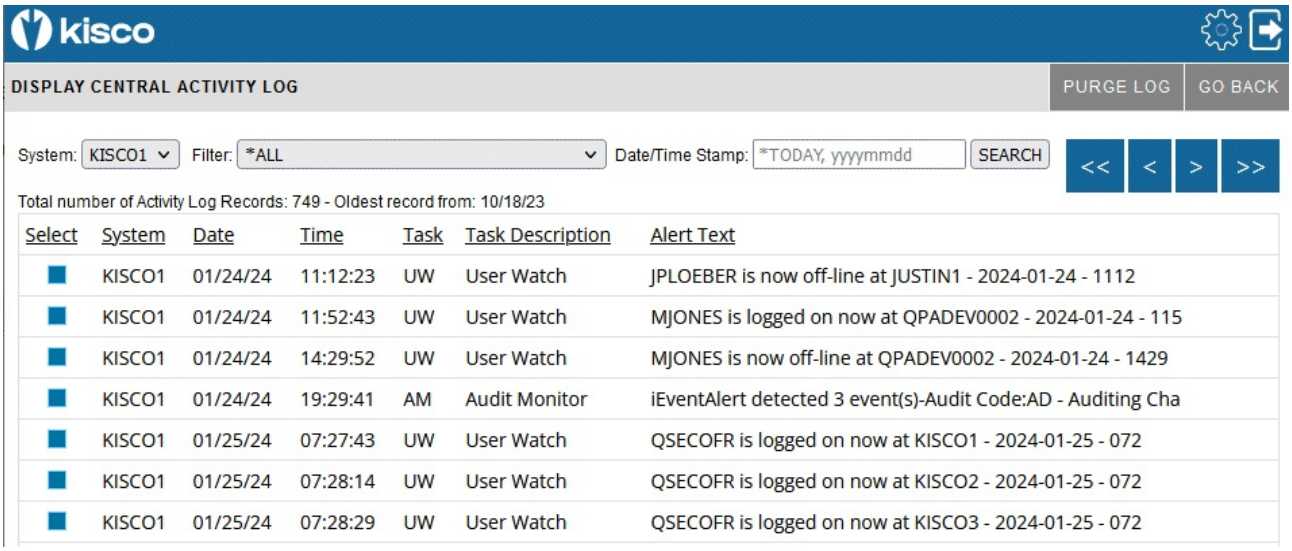
*NONE	No central logging will be done from this system
*RMT	This will be a remote logging server and activity log information will be sent to the central logging server
*CSVR	This system will be the central logging server

Logging Prefix	For systems defined as *CSVR or *NONE, this value must be set to the fixed value ‘Q0'. For systems defined as *RMT, this must be a unique two character value that must start with an alphabetic character. Each *RMT system in your network must have its own prefix value set.
Central server location	For systems defined as *CSVR or *NONE, this value must be set to the fixed value of *NONE. For system defined as *RMT, this must be the system name of the central logging server that has already been configured in the IBM i OS Host Name Table.

To store the changes, use the Post Changes button. The values will be checked to make sure that they are correct. Once set, you can resume normal use of iEventMonitor and restart all tasks defined on your system.

Display Central Activity Log

If your system is defined with a logging role of *NONE or *RMT, then the previously documented method for accessing the Activity Log applies. If, however, your server is defined as the Central Logging Server in your network, then when you select the ACTIVITY LOG button, the Central Log will be shown as follows:



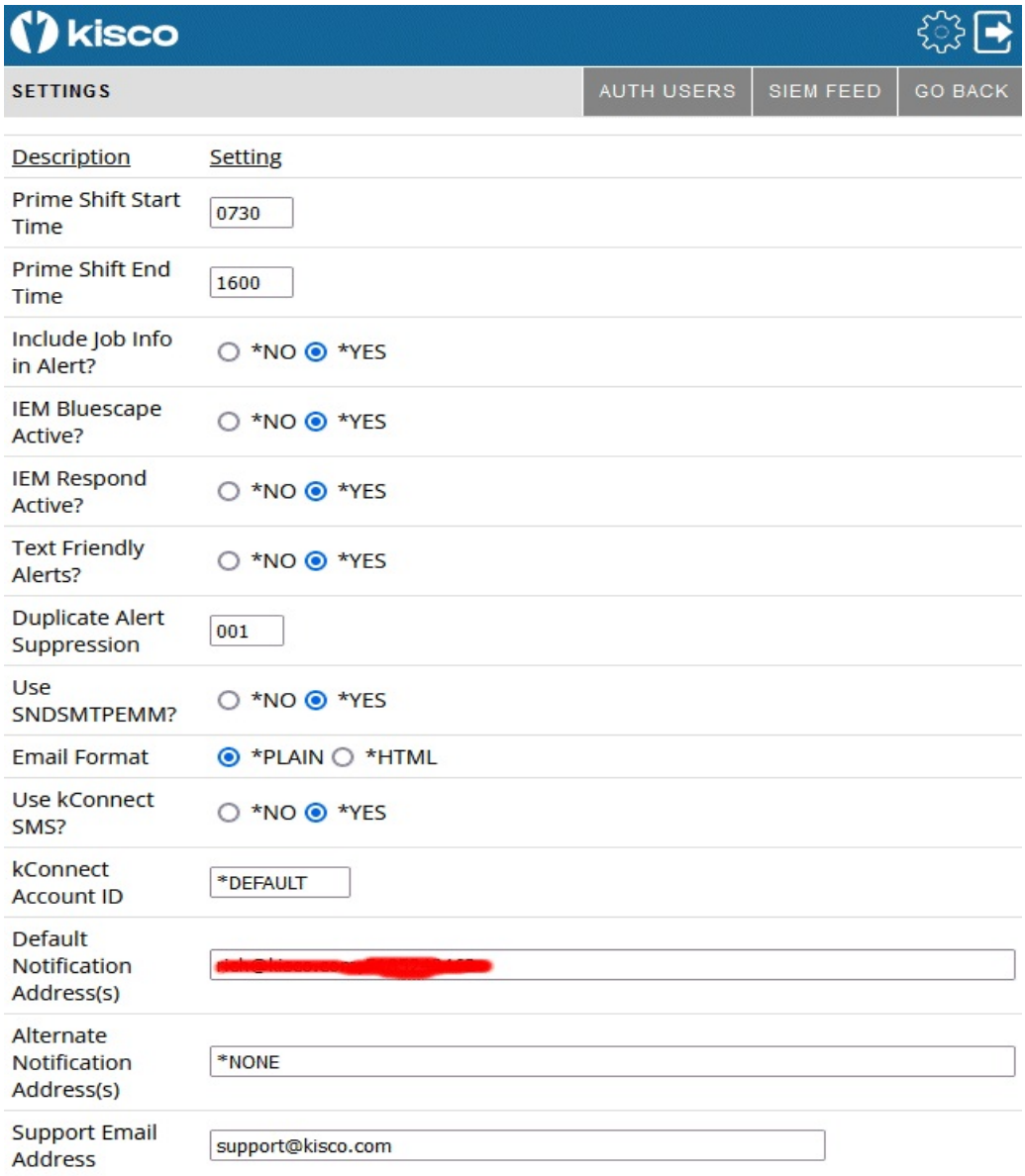
The initial display will default to the local system’s Activity Log records. To change to a different system, use the System: selection box. The other filters on the SEARCH line all work the same as already documented for the Activity Log.

Purge Central Activity Log

When you select the PURGE LOG box at the top of the panel, the same purge options will be shown. When the purge runs, both the local Activity Log and the Central Activity Log will be purged as specified.

Global Settings

Every display panel will give you access to the Settings controls by using the gear icon at the top of the panel. Settings are global settings and controls for iEventMonitor and help control how it is implemented on your system. The Settings panel appears as follows:



There are more fields on the panel that are not shown here.

Set these parameters as follows:

Prime Shift Start Time	Defines your primary shift starting time expressed in 24 hour clock format (hhmm).

Prime Shift End Time — Defines your primary shift ending time expressed in 24 hour clock format (hhmm).

Include Job Info in Alert? — This option can add more information to each message queue monitor alert notification. With this option activated, the job name, job number and user profile for the job issuing the message to the message queue will be included in the notification.

Select one of the following values:

***NO** No additional logging will be done.

***YES** The additional logging information will be posted to the joblog and to the system history log.

IEM Bluescape Active? — Tells iEventMonitor whether or not the Bluescape web browser interface is installed and configured. This is initially set to *NO. If you are using the Bluescape interface, this MUST be left set to *YES.

IEM Respond Active? — Tells iEventMonitor whether or not the IEM Respond feature has been activated on your system. When initially installed, this defaults to *NO. Once you have completed the additional configuration steps as outlined in this user's guide, you can set this to *YES to enable the feature. **DO NOT set this to *YES until you are sure that you are ready.**

Text Friendly Alerts? — Select one of the following values:

***NO** If you are not using the IEM Respond feature, leave this set to *NO.

***YES** If you are using the IEM Respond feature and you are issuing alerts to text destination addresses, this option will cause the alerts that require a response to be formatted better for those receiving the alert by text.

Duplicate Alert Suppression — This option controls suppression of duplicate message queue monitor alerts issued within a short period of time. It can be used to make sure that your email stream issued from your IBM i systems does not get clogged if an application error gets into a looping condition.

This setting is in minutes and the default value is set to 5. If an identical message is issued by the same user profile within the given period of time, only the first instance will result in an alert being issued.

Changing this value to zero will turn this feature off for your system.

Use SNDSMTPEMM? — Controls which email transport mechanism is used by iEventMonitor to send email from your system. If you make a change to this setting, it will not take effect until the next time you end and restart iEventMonitor.

Select one of the following values:

*YES When an alert is sent, the IBM i SNDSMTPEMM protocol will be used. Note: This is only valid on system running IBM i OS 7.3 or later.

*NO The legacy protocol will be used to send email. This is required on systems running IBM i OS 7.2 or earlier.

If you make a change to the SNDSMTPEMM setting while iEventMonitor is active, you must then stop and restart your monitors using the END ALL and START ALL options on the Initial Display.

Email Format — Controls how your alert notification emails are formatted when you are using the SNDSMTPEMM protocol.

Select one of the following values:

*PLAIN The email body will be encoded using plain text formatting.

*HTML The email body will be encoded using HTML formatting. This option is not available when the previous option is set to *NO.

If you make a change to the format setting while iEventMonitor is active, you must then stop and restart your monitors using the END ALL and START ALL options on the Initial Display.

Use kConnect SMS? — If you have Kisco Connect installed on your system, then changing this value to *YES will integrate iEventMonitor with Kisco Connect for text notifications.

kConnect ACCT ID — If Kisco Connect is activated, a valid Account ID must be specified here.

Default Notification Address — This is the email address field that will be used by iEventMonitor whenever the special value *DFTID is used for an alert.

See the Notification Address(s) section of this manual on page 5.

Alternate Notification Address — Enter the email address information that you want to use for off-shift notifications locations.

See the Notification Address(s) section of this manual on page 5.

If you do not want to use the off-shift notification process, enter the special value *NONE here.

Support Email Address — Enter a single email address. This address will be used with all alert emails as the "from" email and the "reply-to" address. This must be a valid email address and it should be monitored periodically for failed email delivery messages.

Support Description — Enter a name description that you want to show up on the email as the sender of your alert notices.

Default Alert Subject — Enter the standard email Subject text that you want used for all alert notices. If you are using iEventMonitor on multiple systems or partitions, you might want to have each install use a Subject that identifies the system that it is coming from.

Note: If you use either the header or trailer option, additional text will be included in all alerts. If you are routing alert messages by text, this could result in incomplete alert information when text size is limited by a cell carrier.

Optional Alert Header Text — Enter up to 80 characters that you want added as the first line header of every alert message that is issued. If you use the special value of *NONE, no first line header will be included in the alert.

Optional Alert Trailer Text — Enter up to 80 characters that you want added as the last line trailer of every alert message that is issued. If you use the special value of *NONE, no last line trailer will be included in the alert.

IEM Respond Page Heading — This is used as a web page heading when the IEM Respond feature is active for your installation.

IEM Browser Respond IP — This is your system web address to be used for the IEM Respond feature.

An example might look like this:

http://*yoursystemi.com*:8077

Note that the port reference of 8077 must be included. You can also specify a numeric IP address like the following example:

http://*10.1.2.3*:8077

Escalation Notification Address(s)s — Some features in iEventMonitor provide for reminder alerts to be sent when a situation has not been resolved yet. If you want to send an alert to any additional addresses, you can enter

	those here. Do not repeat any addresses that are already included in the primary notification. See the Notification Address(s) section of this manual on page 5.
Off-Shift Days	If you are using the off-shift alternate notification feature and you want to define certain days of the week as off shift all day (such as Saturday and Sunday), select those days here. You can select up to 5 values. Use the standard system values for the days of the week (*MON *TUE *WEB *THU *FRI *SAT *SUN). If you do not want any days to be considered as off-shift all day, leave them all unselected.
Purge Days Range	Enter the number of days to be used when an automatic purge is run. The automatic purge runs whenever the STRIEM command is issued. If this is set to 000, then the purge will be bypassed during startup processing. To use the automatic purge, a number of days within the range of 007-365 must be specified. All activity log entries older than the number of days specified will be purged.
List Purged Records?	If you are using the automatic purge feature, this setting will control whether a listing of the purged activity log entries will be created during the purge. Changing this setting to *YES, will cause the listing to be created.
Browser Roll Factor	Enter the maximum number of lines that you want to be shown on a multi-line browser panel. Kisco recommends starting this set to 15 but any value from 2 to 50 will be accepted.
Browser Timeout Limit	When you start a Bluescape session, the current time is noted. If no activity happens in the session for the number of minutes entered here, then a new logon will be needed. As shipped from Kisco, this is set to 60 minutes. You can change it to another value up to 999.

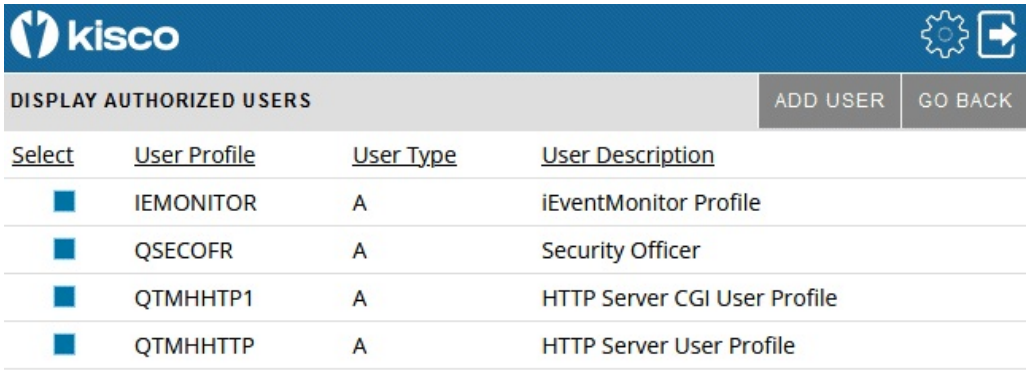
If you have the iEventMonitor Enterprise version installed, you will see several additional fields following the Browser Timeout Limit. Check the Central Activity Log section of this documentation for those details.

At the base of the Global Settings panel you will see information about the level of the installed iEventMonitor software, the latest PTF updates, the current IBM i OS level and the serial number and partition number where the software is installed. This information may be useful to Kisco Systems technical support team.

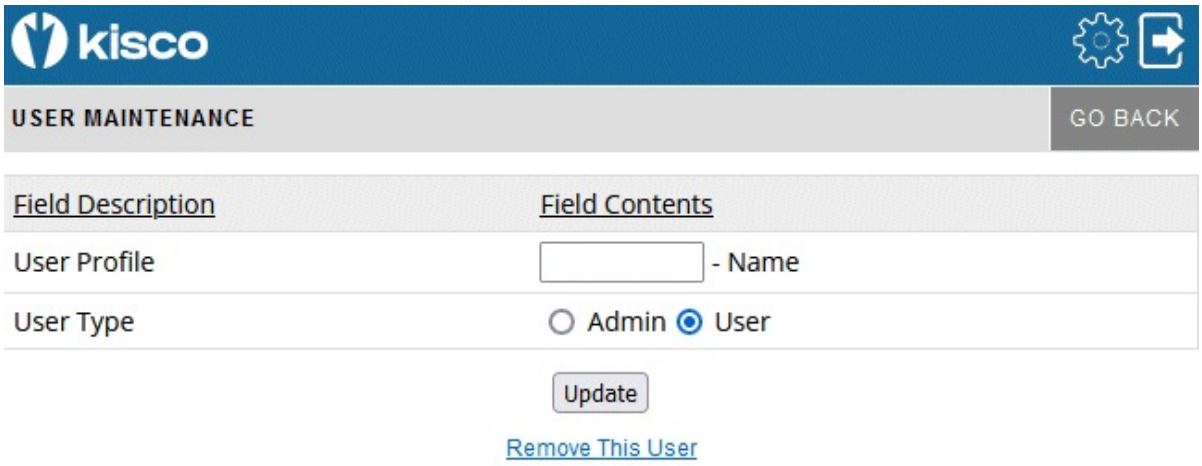
Authorized iEventMonitor Users

At the top of the General Settings panel there is a gray button labeled AUTH USERS. This lets you control who can administer iEventMonitor. You must be an authorized administrator for iEventMonitor before you can access this function. As shipped from Kisco Systems, the QSECOFR user profile is already authorized.

When you select this button, the following will be shown:



This is a list of the currently authorized user profiles. You can maintain an existing user by selecting the blue button on the left side of the panel or you can add a new user by selecting the ADD USER gray box at the top. When you do, the following will be shown:



Complete the entry as follows:

User Profile Enter a valid user profile.

User Type Select the type of user that you are registering.

Admin An admin user can use all functions and features of the iEventMonitor software product.

User For the Bluescape web browser interface for iEventMonitor

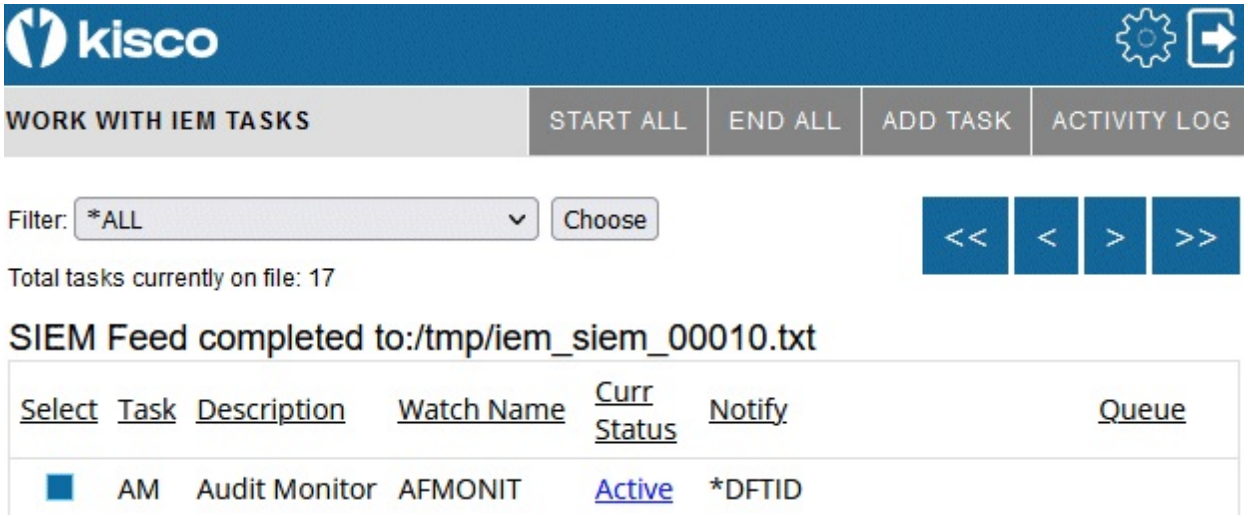
administration, a User type can only look at settings and active tasks, they cannot change them, set up new monitors or start and stop monitors.

The Update button will add or update the entry being processed. If you want to remove a currently registered user, use the Remove This User link.

SIEM Feed

Also at the top of the General Settings panel there is a gray button labeled SIEM FEED. This lets you generate a SIEM feed file to the IFS on your system. When you select the SIEM FEED button, you will get a confirmation panel to make sure that this is what you wanted to do. Confirm the selection and the SIEM feed file will be generated. This process may take a few moments depending on the amount of history in iEventMonitor that has not been processed in earlier SIEM FEED processes.

When the SIEM FEED is complete, the Initial Display will be shown with a confirmation that the SIEM FEED file was generated and a reference to where you will find it on your system:



Note: If you run the SIEM Feed on a system that is defined as the Central Activity Logging server, then the Central Log will be fed in its entirety with entries for all systems.

Apache HTTP Server Configuration

For the Bluescape interface for iEventMonitor to work, you will have to configure and activate a server instance for the Apache HTTP server on your IBM i.

The following checklist will have to be done to complete the configuration. The details will follow for each step.

Step 1: Start the Apache Administrative server tool on your IBM i.
Step 2: Create a new HTTP server instance named IEVENTMON
Step 3: Install the HTTP Server objects for iEventMonitor
Step 4: Start the new IEventMonitor server instance
Step 5: Update End User Table

Step 1: Start the Apache Administrative server tool on your IBM i.

To configure an Apache server instance, you must first start the Administration server instance for Apache. You can do this from a command line on your IBM i with the following command:

STRTCPSVR SERVER(*HTTP) HTTPSVR(*ADMIN)

The server may take a while to initialize, so wait a few minutes before starting up the configuration wizard in your browser. When you are ready, point your browser to the following web address:

http://yoursystemi.com:2001/HTTPadmin

The system will prompt you for a user profile and password. Once that has been supplied, a page of IBM i Tasks will be displayed. Select the "IBM Web Administration for IBM i" option. This will take you to the Web Administration wizard that comes with your OS.

Step 2: Create a new HTTP server instance named IEVENTMON

After you sign on and get to the Web Administration page, navigate to the "Manage" tab and then the "HTTP Servers" tab below that. Under the "Common Tasks and Wizards", select "Create HTTP Server". For server name, you MUST specify the value "IEVENTMON". The server description of "Kisco iEventMonitor Server" can also be used. Click on Next for all of the following displays taking all of the default options presented until you reach the "Create HTTP Server" panel with a "Finish" button at the bottom. Press the Finish button to complete creating the new server instance.

Step 3: Install the HTTP Server objects for iEventMonitor

On a terminal session where you are signed on as a security officer, go to the INSTALL menu in library IEMLIB by entering the following command:

GO IEMLIB/INSTALL

Run option #11 (Install HTTP Server Instance Objects) from this menu. This will install the HTTP server objects needed by iEventMonitor.

Step 4: Start the new IEVENTMON server instance

On a terminal session where you are signed on as a security officer, go to the IEMSVR menu in library IEMLIB by entering the following command:

GO IEMLIB/IEMSVR

To start the newly created server instance, run option #1. After the server has been started and running for about 30 seconds, run option #3 on this same menu. You should see at least 4 jobs running with the job name IEVENTMON. This will indicate that the server is running correctly.

Go to your browser and enter the following URL:

http://*yoursystemi.com*:8077

A test page should now be shown. This will indicate that the server is active.

Step 5: Update End User Table

For the Bluescape interface to work correctly, the special IBM user profilesQTMHHTP1 and QTMHHTTP must be present in the End User Table in iEventMonitor. Run option #8 on the INSTALL menu and add verify that both profiles are present.

At this point, the Bluescape interface for iEventMonitor is available for use on your system.

If you want to configure your own server instance or use a different instance that is already active on your system, you can do so provided that the following are taken into account:

- Add IEMLIB as a directory entry
- ADD a URL mapping entry to map "/cgibin/" to IEMLIB
- Authorize user access to IEMLIB
- Permit CGI programs to be run from IEMLIB

If you have other HTTP server instances already running, you may want to configure the iEventMonitor instance so that it works from a different port number. If that is the case, then the access URL that you use to start the browser interface for iEventMonitor will appear as follows:

http://*yoursystemi.com*:8081/iemlogon.htm

In this example, the HTTP server instance is running on port number 8081. Only the starting URL needs to be changed, the other URLs within the product will pick up the correct port number from this initial use.

Security Considerations

For instructions on how to configure the Apache server for a secure HTTPS connection, please review the following section of this documentation.

If you decide to implement the Apache server without HTTPS security, then user is cautioned that the logon process used will pass a valid user profile and password through your network in open clear text. As a result, Kisco specifically recommends that you only use this feature in a secure network environment where all activity takes place behind a firewall or a strong network router using internal IP addresses only (using a VPN).

As a second level of security, we also recommend that you set up a special user profile for use with the Bluescape interface for iEventMonitor access. You should use this profile only for the purpose of logging in to iEventMonitor through your browser. When you set the profile up, it must be a security officer class, but to limit its function in the event that the profile and password are compromised, we recommend that you include the following additional specification when the profile is created:

INLMNU(*SIGNOFF)	This will force a logoff if someone tries to log on through a normal terminal session using this profile.

Also, if you have exit point control software in place, you should set this profile up to deny all network access to your system. This will prevent the profile from being used by FTP, ODBC, IBM i Access, etc. If you do not have exit point control software in place, we suggest you take a look at our SafeNet/i software for your system to guard against this threat.

Configuring Apache for HTTPS Secure Use

iEventMonitor supports use of the Bluescape interface over a secure HTTPS browser connection. We recommend that when you first set up and configure the browser interface on your system, that you use the previous non-secure configuration to get started. This will simplify the setup routine. The following documentation assumes that you already have a working configuration using plain HTTP browser connections to your IBM i server.

HTTPS Configuration Overview

The following sequence of events must be completed to convert your working HTTP server instance (named IEVENTMON) from a plain HTTP server configuration to a secure HTTPS server configuration.

1. Start the *ADMIN server instance on your IBM i and log in.
2. Update your current HTTP server instance configuration to support HTTPS.
3. Connect to the Digital Certificate Manager application on your browser.
4. Create a new digital certificate in the *SYSTEM certificate store.
5. Validate the newly created certificate.
6. Assign the new certificate to the IEventMonitor application.
7. Start the updated IEVENTMON server instance.
8. Verify that the configuration is working correctly.

Step 1 - Start the *ADMIN server instance on your IBM i and log in.

From the command line on your system, enter the following command:

STRTCPSVR SERVER(*HTTP) HTTPSVR(*ADMIN)

This will start the IBM Web Administration for i tool on your system. This startup process can take a minute or two to complete. After waiting, go to your web browser and enter the following address in the address box of your browser:

http://*yoursystemi.com*:2001/HTTPadmin

You will be prompted for a logon process. **You must sign on as a security officer** with full authority to your system, such as QSECOFR.

Step 2 - Update your current HTTP server instance configuration to support HTTPS.

1. Select the "HTTP Servers" tab.
2. Use the Servers window and select the IEVENTMON server.
3. Make sure that the server instance is showing with the status of "Stopped". If not you MUST stop it before you continue with this procedure.
4. In the left hand panel, select the "Security" option.
5. When the security display shows, enable SSL and on the following line, enter "IEventMonitor" in the Server Application ID.
6. Press the "Apply" button at the bottom of the display.
7. In the left hand panel, select the "General Server Configuration" option.
8. On the next display, locate the "Server IP addresses and ports to listen on" section.
9. Add port number 443 for this server instance.
10. If port number 80 is shown, it must be removed.
11. Press the "Apply" button at the bottom of the display.

At this point, the HTTP server instance has been updated. Do not try to start it again until the following additional steps have been completed.

Step 3 - Connect to the Digital Certificate Manager application on your browser.

In your browser, re-enter the base address for the i5/OS Tasks:

http://*yoursystemi*:2001/QIBM/ICSS/Cert/Admin/qycucm1.ndm/main0

This will bring you back to the main menu. Select the link for the "Digital Certificate Manager".

Note: The following process will self-issue a digital certificate for use with your HTTPS server instance. When used from your browser, this will give you a warning because your server is not a registered certificate issuer, but the process will work correctly as long as you bypass the warning. On some browsers, such as Firefox, you will be allowed to accept the certificate the first time you use it and it will not be questioned again. Other browsers, like some versions of Internet Explorer, will question your use every time. Regardless, you will know where the certificate came from and you will be able to trust it by virtue of that knowledge.

Step 4 - Create a new digital certificate in the *SYSTEM certificate store.

Select the button in the top left corner of your browser that reads “Select a Certificate Store”. On the next panel, select the *SYSTEM store and press the “Continue” button. (If the *SYSTEM store does not exist, you will need to first create it using the “Create New Certificate Store” link.) Your system will prompt you for the password for the *SYSTEM certificate store. If you don’t know the password, you can use the reset function to assign a new password. When you are finished, the *SYSTEM certificate store will be open and available.

Now, select the “Create Certificate” link from the left-hand panel. On the next panel, select the option for “Server or client certificate” and press the “Continue” button. Next, select the option for “Local Certificate Authority” and press “Continue” again. Now the certificate form is displayed. Fill out the required fields as follows:

Certificate label	Enter the value “IEVENT”.
Common name	Enter a unique name. Kisco recommends that you use the system name for your system (or partition) as shown from the DSPNETA command display.
Organization name	Enter the name of your company or organization.
State or province	Enter the name of the state or province where you are located.
Country or region	Enter an abbreviation for your country.

Select the “Continue” button at the bottom of the page and your certificate will be created.

Step 5 - Validate the newly created certificate.

In the left hand panel, select the “Manage certificates” link. Next, select the “Validate certificate” link. Choose the “Server or client” option and press the “Continue” button. Select the IEVENT that you just created, then press the “Validate” button at the bottom of the page. If everything with the certificate is OK, a message will be displayed confirming that the certificate is valid.

Step 6 - Assign the new certificate to the IEventMonitor application.

In the left hand panel, select the “Assign certificate” link. Select the IEVENT certificate, then press the “Assign to Applications” button. Locate the IEventMonitor application in the list displayed and place a check mark next to it. Press the “Continue” button. A message will be displayed confirming that the certificate is now assigned to the application.

Step 7 - Start the updated IEVENTMON server instance.

On the IEMSVR menu in library IEMLIB, start the HTTP server instance using option #1. Or, you can issue this command from the command line:

```
STRTCPSVR SERVER(*HTTP) HTTPSVR(IEVENTMON)
```

This will start the server instance that has been converted for use with HTTPS security. Use option

3 on the IEMSVR menu to check if the server starts correctly. When active, it will have at least 4 jobs active. If the server instance fails to start, make sure there is not another server instance active using the secure port number 443. Only one application at a time can be active using this port. If you need more than one active, you will have to change the server instance to use a different port number.

Step 8 - Verify that the configuration is working correctly.

Once the server instance has been started, enter the following web address into your browser's address box:

https://*yoursystemi.com*

A test page from the IEVENTMON server instance should be displayed. As stated earlier, a warning message about the certificate in use may be issued by your browser. Please note the comments associated with Step 3 above about this issue.

Note: Switching to https will change the port number use for access. The default port number for https access will now be active so there is no need to specify port number 8077 as you did with plain http access.