HLoginMon

HLoginMon is a 32bit windows application that is designed to provide a real time display of Harvest clients logged into the Harvest broker. It also provides an interface to the Harvest hdbgctrl command line that can be used to invoke server side logging of a client's SCM transaction activity for debug purposes. This utility connects to the Harvest Broker service to gather the client information, therefore it also doubles as a Broker health monitor since it will display an error record during the scan interval if the Broker cannot be connected at any time. This application is considered as a value added utility to the Harvest product and *requires Harvest administrator credentials* to login and connect to the Broker.

Versions:

V2.00 - Original Release

V2.01 – Added enhancement to identify "stale" userId records, also added checkbox to filter out stale userIds (where date < current date). There has been a problem discovered where the user could somehow drop connectivity with the broker, however since Harvest is a three(3) tier application, sometimes the Broker does not register the client drop and therefore a stale userId record may remain. This stale record identification and filter process is to help Harvest Administrators to view only current logged in clients to the Broker in the matrix view.

V3.00 – Added new email alert feature that will send emails to recipients (even smartphones) when the utility fails to connect to the broker after a set number of contiguous failures is reached. This alert can be a first indication that the Harvest Broker connectivity needs to be looked at. See **Email Alerts** for setup details.

V4.00 – Added Broadcast Email Features.

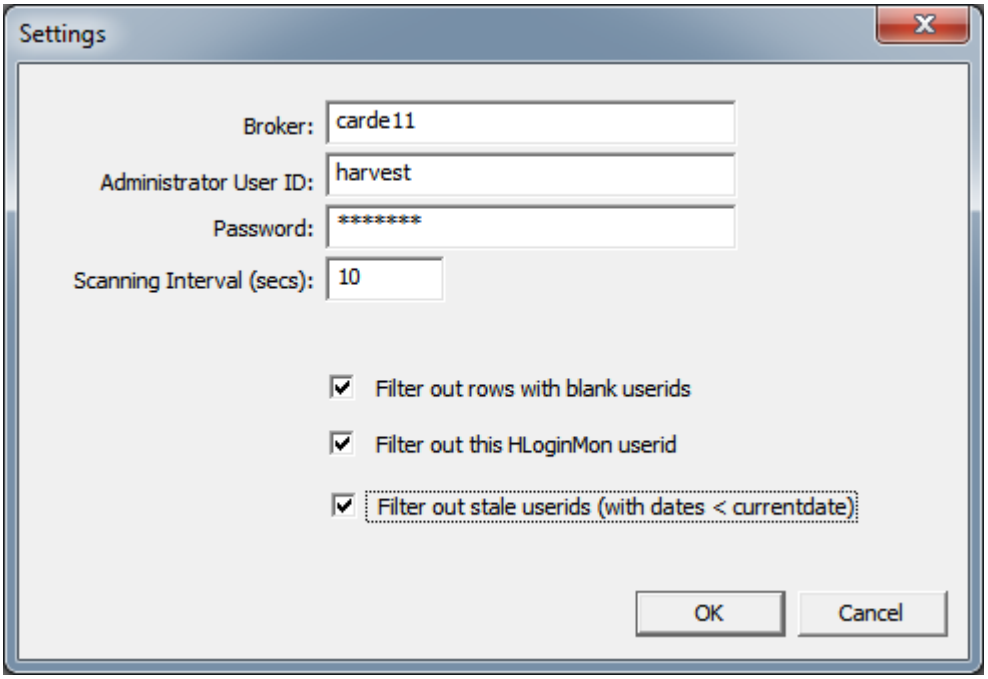
Installation:

This utility requires the full Harvest client (32bit or 64bit) to be installed on the machine.

Execute the self-extracting InstallShield executable (HLoginMonMatrixView_Install.exe) and execute the install with "Run as Administrator" privileges. This will install by default to "C:\HLoginMon" and place a single "HLoginMon" icon on the windows desktop. This utility can be installed on a windows PC that has network access to the Harvest broker. If the machine does not have Microsoft's VS2010 redistributals installed, this installer provides for that which is required for HLoginMon execution.

Execution:

When you start the application, you will be presented the login matrix display and it will pop up the Settings dialog to allow you to enter the Harvest **administrator** credentials and the interval in seconds to connect and sample the Broker for the list of current logged in clients. The interval should not be set to less than five(5) seconds to prevent over activity on the system network. Ten(10) to thirty(30) seconds is the recommended scanning interval:



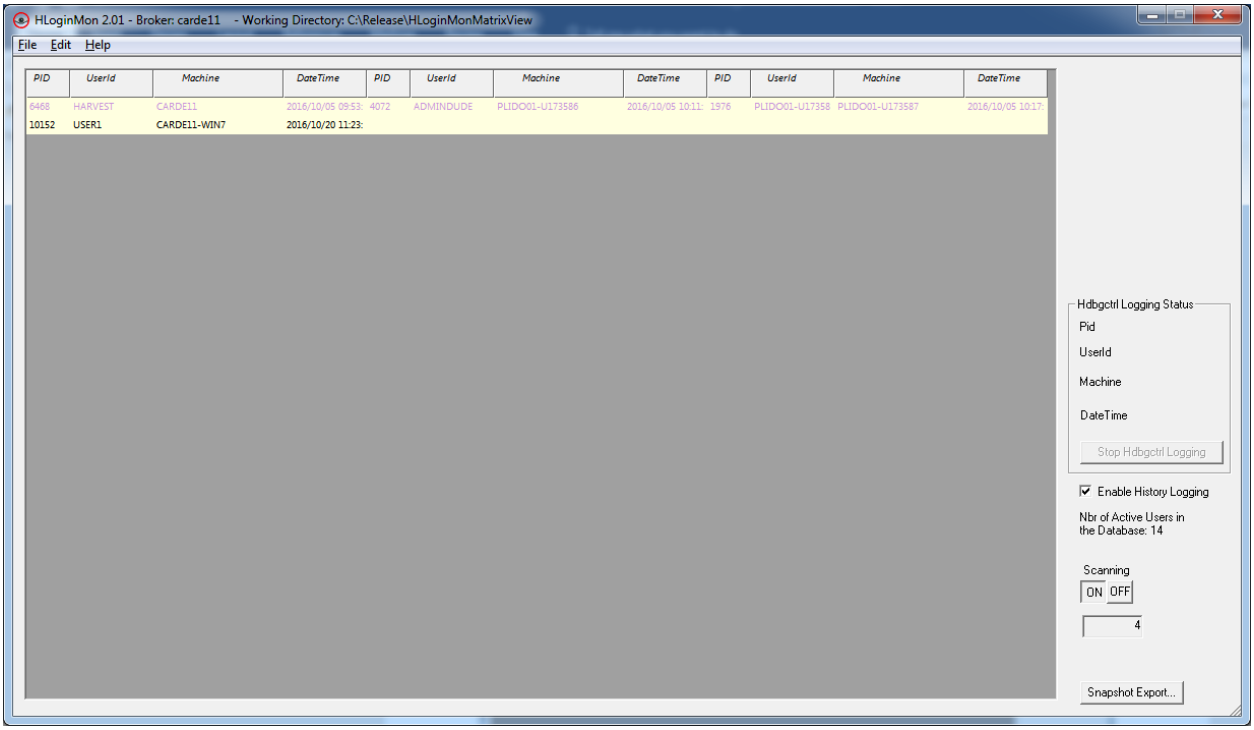
The check box for “Filter out rows with blank userids” will not display any ambigious logins where the userid shows blank (normally checked by default).

The checkbox for “Filter out this HLoginMon userid” will not display this userid in the matrix every time the interval scan event occurs (normally checked by default).

The checkbox “Filter out stale userIds (with dates < currentdate) “ (V2.01) will remove all records that have login dates older than current date from the matrix display.

Clicking on OK will save the settings persistence into the registry. Opening the settings dialog will pause the scanner.

Following is an example of the application during normal run with four detected clients logged into the Broker:



Note: In the above example, three of the clients are identified as “stale” records since they have login dates less than current date (shown in a pale color), therefore one client is showing as an active current record in black color.

You can manually pause the login scanner by clicking the [OFF] button, clicking the [ON] button will resume the scanner.

Enable History Logging:

If you wish to maintain a history log of the application, then check the “Enable History Logging” check box. Checking this box turns the history logging on immediately, unchecking the box turns it off.

This will produce a log in the application’s current directory with the following format:

ADD : 13624	HARVEST	CARDE11-WIN7	2016/03/30 14:04:14
ADD : 2096	USERA	CARDE11-WIN7	2016/03/30 14:04:55
ADD : 1920	VSUSER1	CARDE11-WIN7	2016/03/30 14:07:07
ADD : 3880	USERB	CARDE11-F169281	2016/03/30 14:07:42
ADD : 3452	HARVEST	CARDE11-F169281	2016/03/30 14:08:48

ADD - Indicates when the userid logged into the Broker.

DEL - Indicates when the userid logged off the Broker.

REC - Indicates an Error occurred or a special event such as hdbgctrl logging turned on/off.

Note: At midnight, the HLoginMonHistory.log will be saved as the previous day as HLoginMonHistoryYYYYMMDD.log. So for example on April 05 2016 at midnight, if the application is performing history logging, then the previous log will be saved as HLoginMonHistory20160405.log and a new HLoginMonHistory.log will commence.

Use of Hdbgctrl:

This feature supports three(3) basic logging scenarios:

1. You wish to perform hdbgctrl logging on ALL clients.
2. You wish to perform hdbgctrl logging on a specific client that is currently shown in the matrix.
3. You wish to perform hdbgctrl logging on a specifc client userid and machine name that has not yet logged into the Broker and is not displayed in the matrix view.

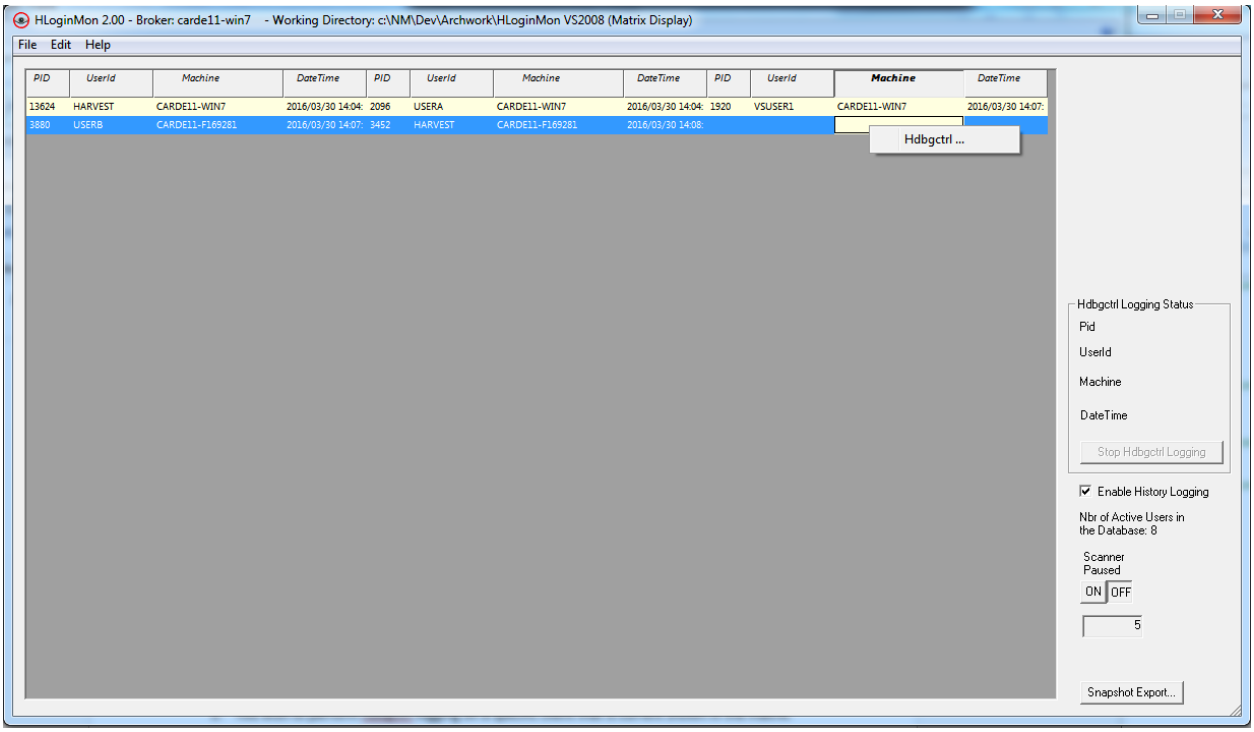
Notes:

When hdbgctrl logging has been started on one or all clients then the appropriate matrix record will commence flashing orange to provide a visual queue that the record's transaction activity is being logged on the server.

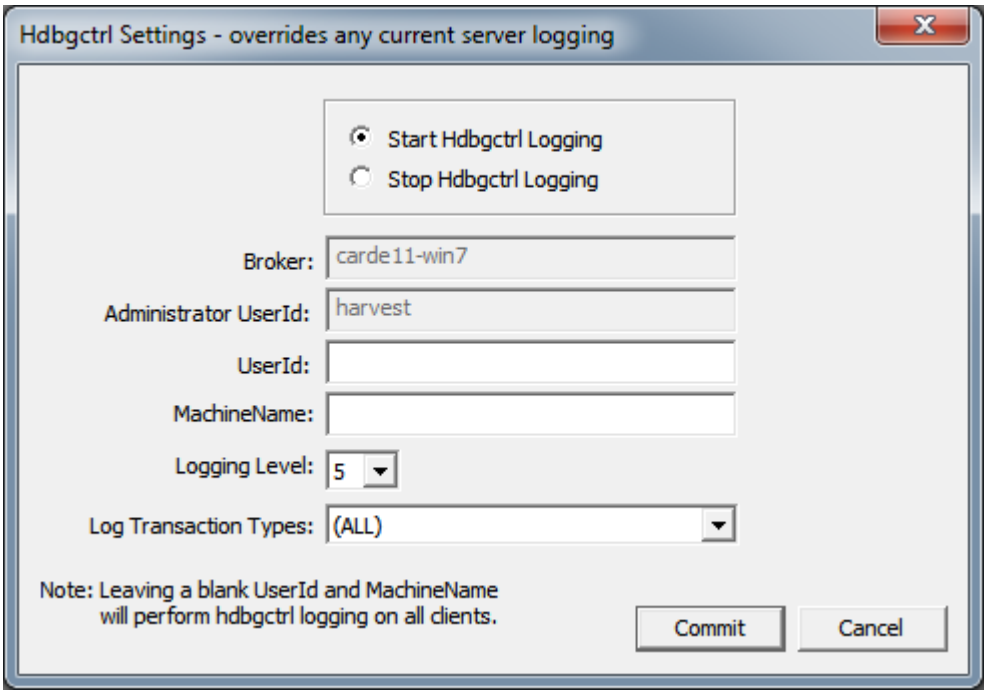
If hdbgctrl logging is set for a specific client, as in scenarios 2 and 3 and the client either logs off the Broker or kills his/her Harvest client process, then the logging process will pause and wait until the client has re-logged into the Broker at which time it will recommence server side logging for the client and the Hdbgctrl Logging status pane will change from PAUSED to ON. The client's record will begin orange flashing once again to indicate this client's transaction activity is being logged on the server.

To perform hdbgctrl for scenario 1 – where you wish to do logging for all clients.

Click on any blank 'Machine' name column, this will pop up the menu for the Hdbgctrl settings dialog:

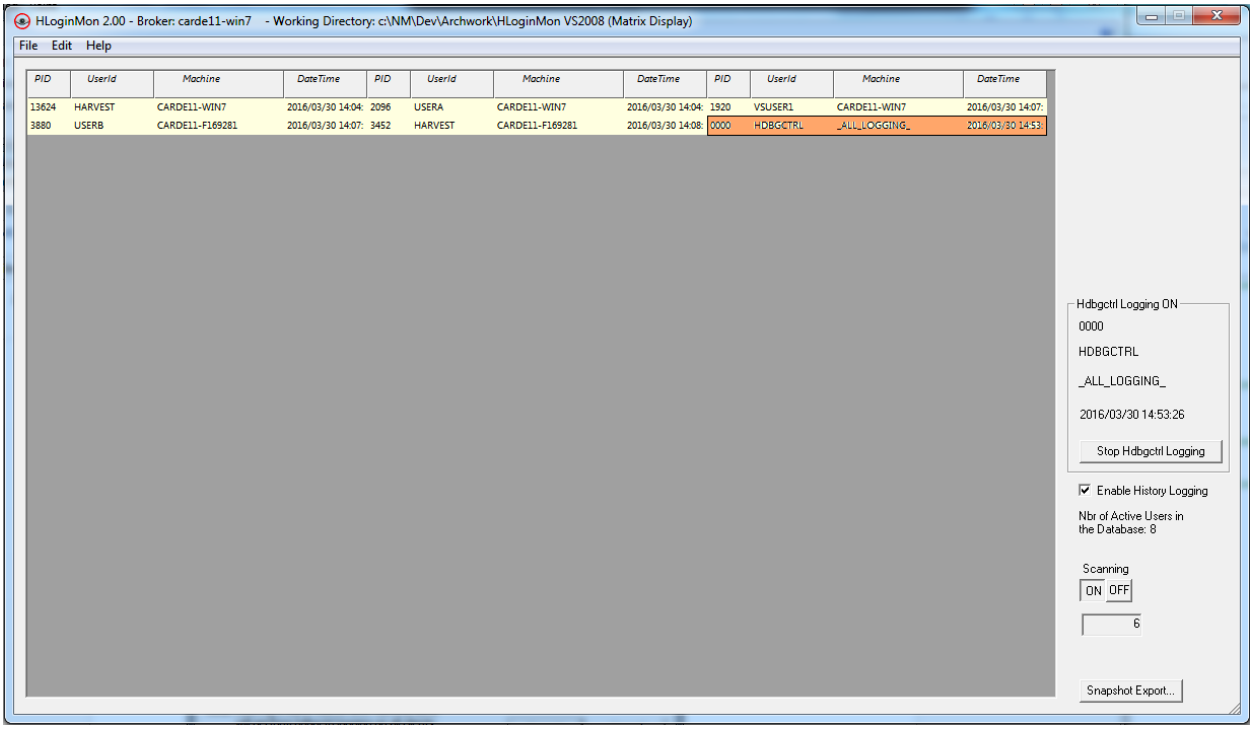


Click on “Hdbgctrl…” in the pop up menu and this will display the HDbgctrl Settings dialog, leave the UserId and MachineName blank, set logging level 4 or 5 (5 is the recommended setting in order to log all event details), set the Transaction type (normally ALL is the recommended setting which will record all transaction types that the client or clients will perform), then click the [COMMIT] button to start the logging process:



UserId and MachineName must be left blank to commit hdbgctrl logging for all clients.

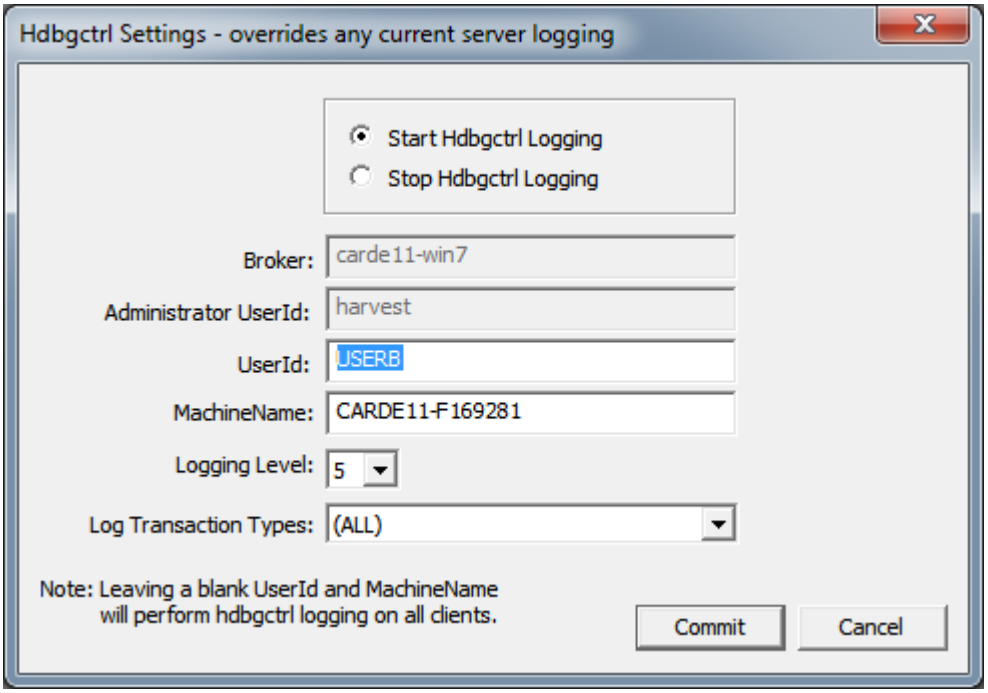
After you click the [COMMIT] button, a matrix record will be added to the display with a PID of 0000, userId of HDBGCTRL, and the Machine Name as _ALL_LOGGING_. This record will begin flashing orange to provide a visual queue at a glance that all the clients Harvest transactions are being logged:



Note: The right Hdbgctrl status pane will be set to the PID, UserID, and Machine Name from the flashing orange record and the [Stop Hdbgctrl Logging] button will be enabled. You may click on this button to stop the logging process alternatively you can right click on the machine name column of the flashing orange record and stop the logging process from the Hdbgctrl dialog settings when you check “Stop hdbgctrl logging” check box and the click the [COMMIT] button.

To perform logging for scenario 2 - where you wish to perform logging on a specific client in the matrix display:

Right click on the Machine name column of your record of interest to pop up the menu for Hdbgctrl and open the Hdbgctrl setting dialog. The UserId and MachineName will be populated from the matrix record, enter any specific logging settings then click the [COMMIT] button to start the logging process only on that client's userId.



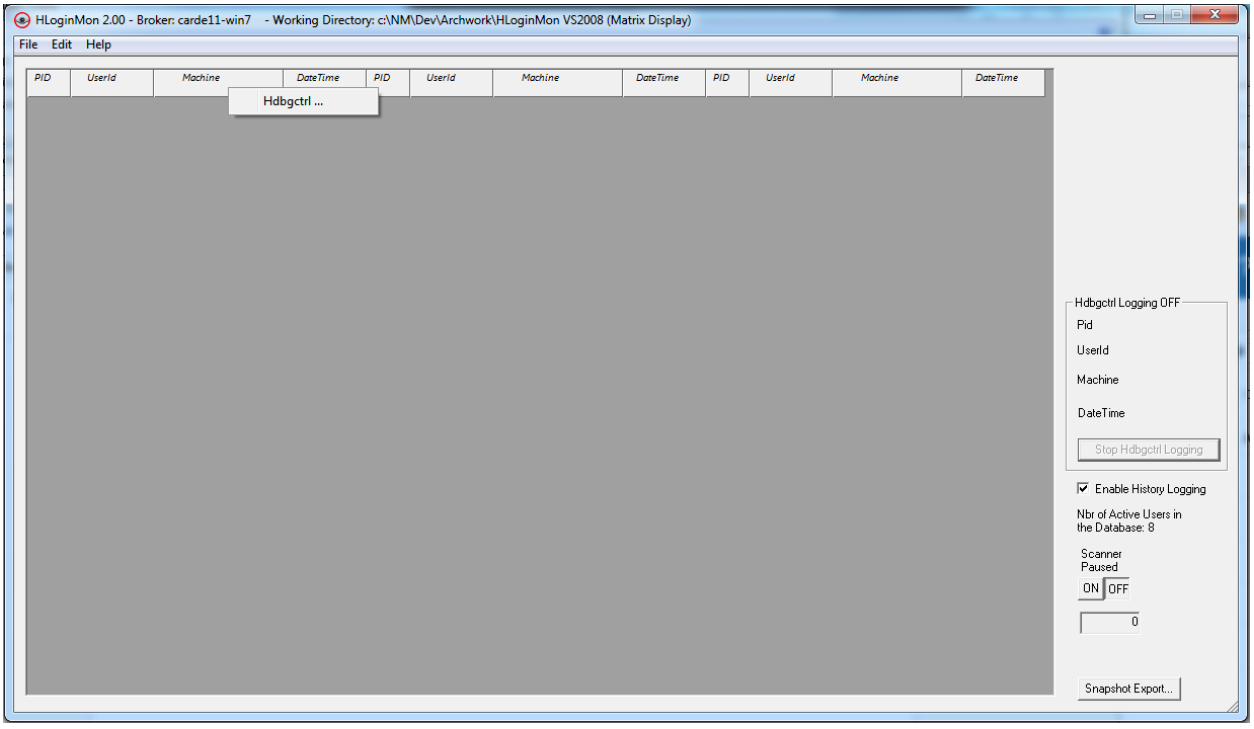
The client's matrix record will immediately start flashing orange to indicate this client's Harvest transactions are being logged. This setup focuses the logging only to this client.

To perform logging for scenario 3 - where you wish to perform logging on a specific client but the client has not logged into Harvest yet and is not displayed in the matrix. This scenario works for client login problems with Harvest.

Right click on the Machine name column of any blank record or if there are no current logins and the matrix is empty then click on the Machine column in the header display. This will pop up the hdbgctrl menu item, open the Hdbgctrl settings dialog and manually enter the userid and machine name (this is non-case sensitive), and any other appropriate settings for the log level and Transaction types, then click the [COMMIT] button. A record with PID of 0000 will display for this userId and Machine name and the right hdbgctrl status pane will show that hdbgctrl is in a WAIT status waiting for the client to log into the Broker. The record will flash orange to indicate that hdbgctrl has been set for this client.

As soon as HLoginMon detects the user has logged into the Broker then the PID will change from 0000 to the current process id of the client, and the PID in the hdbgctrl status pane will also change to the current process id of the client. Server side logging will commence for this client only.

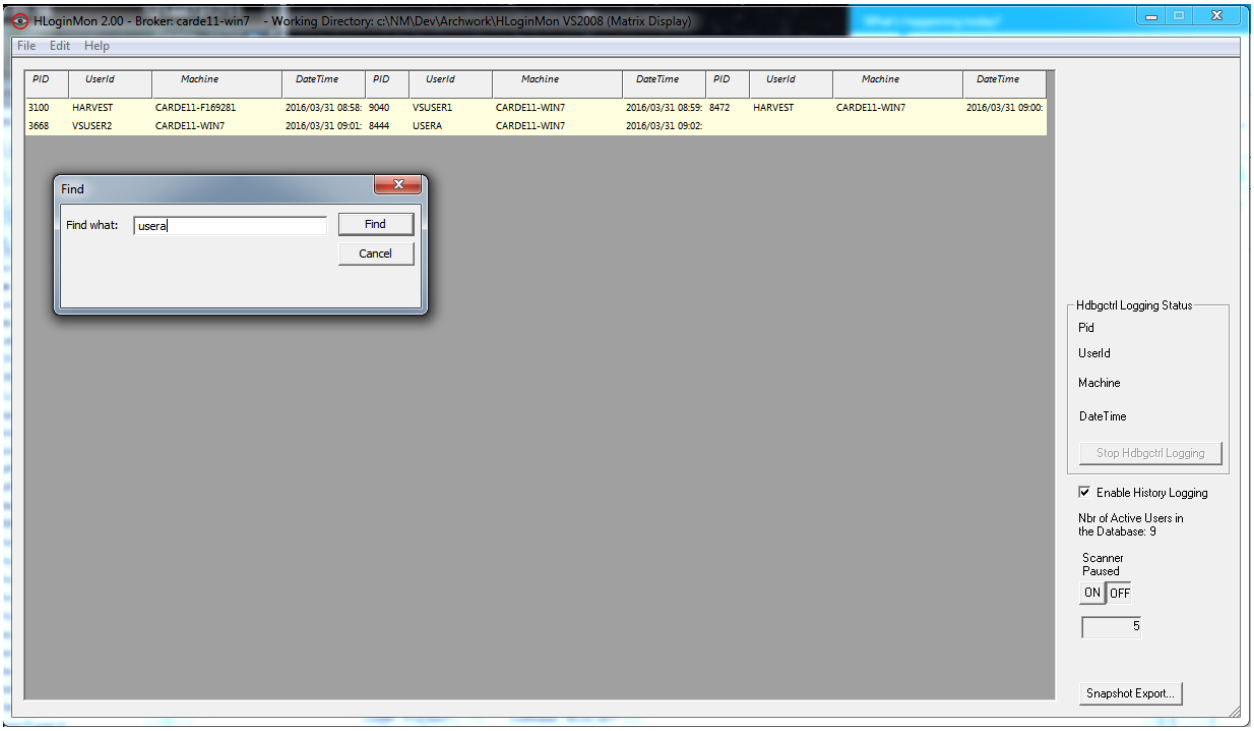
Example:



Find Feature:

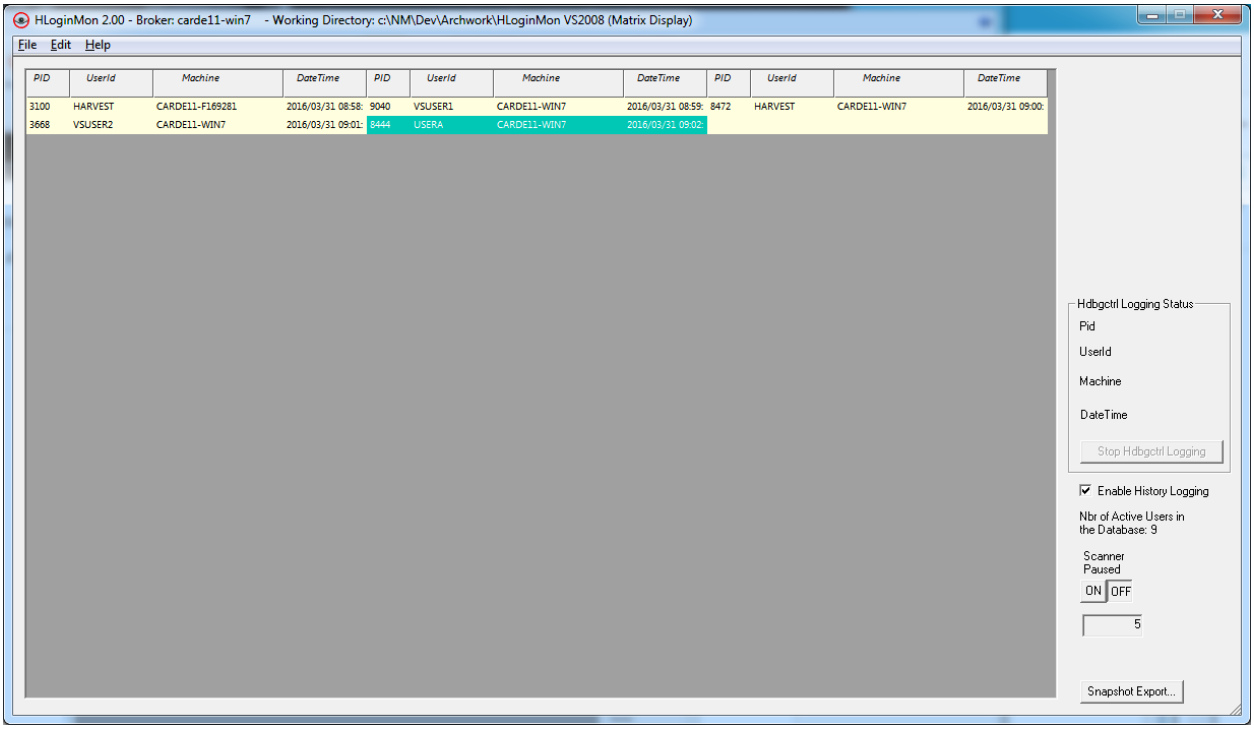
The Find feature is useful if you have many matrix view records and you wish to find a specific userid that is currently logged in.

This feature allows you to search the matrix and identify all records that match the userId in the find dialog. To use this feature, select Edit->Find or Ctrl-F, this will pop up the Find dialog, enter the userId (non-case sensitive search):



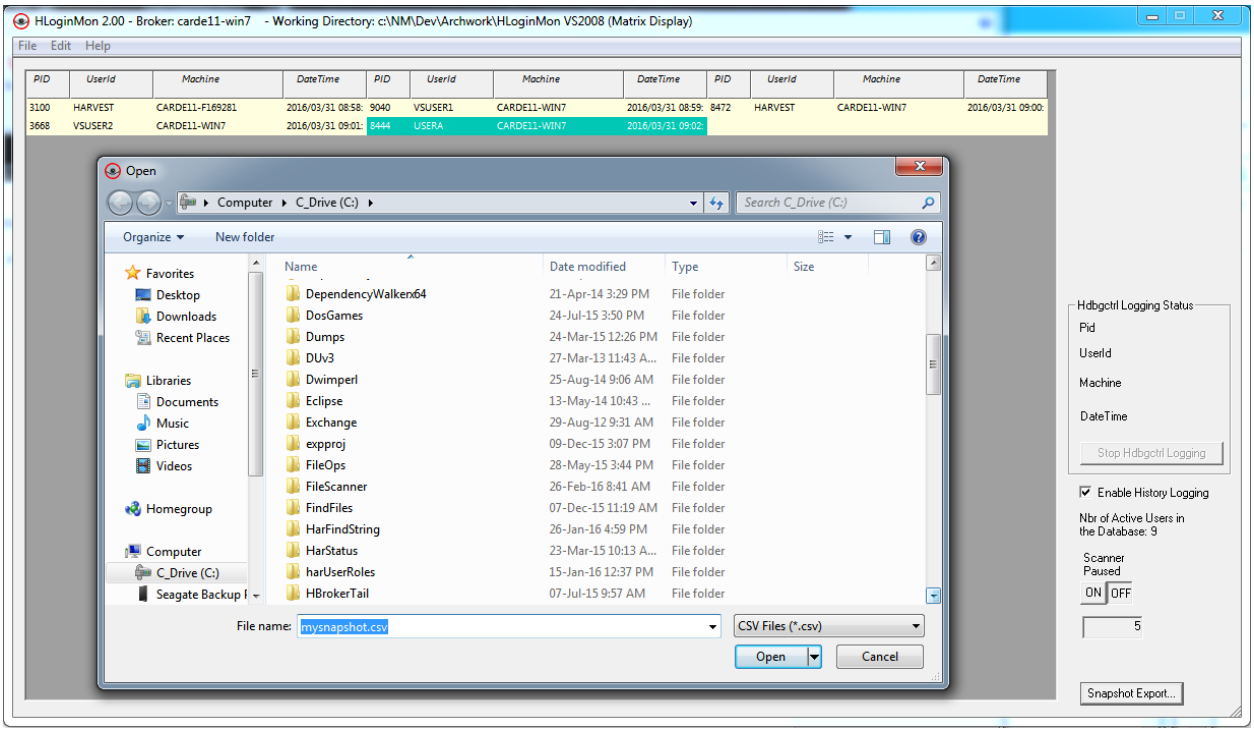
Note: (V2.01) User can click on any field in the record, then click Edit->Find or Ctrl-F and the pop up Find dialog will populate with the contents of the clicked on field to help searching.

Here is an example of search results for ‘usera’ which is highlighted in green (if the user was logged in to the Broker with more than one client application then all of his/her records would be highlighted in green):



Note: Performing a search will automatically pause the scanner, to resume scanning you must click the [ON] button on the right side of the application. When the scanner refreshes the matrix then all green highlighted records will return to normal color display.

The [Snapshot Export] button will take a snapshot of the current matrix display and allow you to save the contents of this display to an Excel compatible .csv comma delimited file:

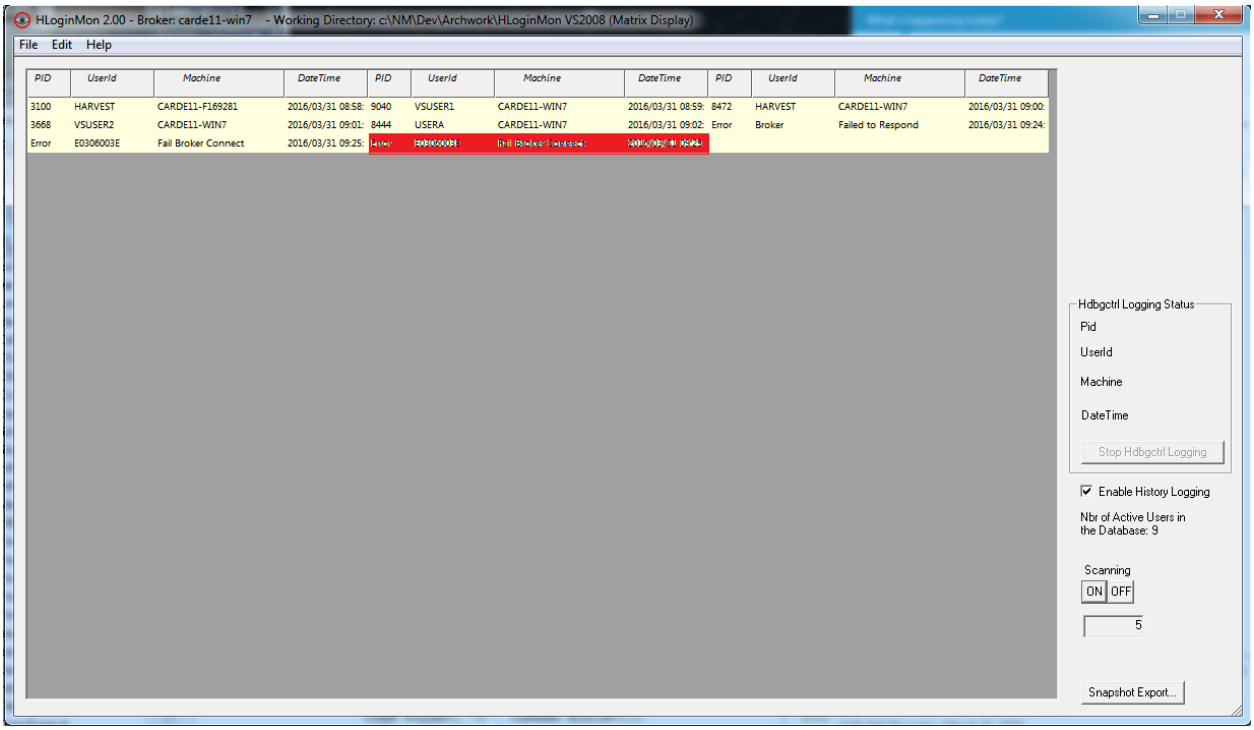


Note: Clicking the [Snapshot Export] button will pause the scanner, saving the .csv file will resume the scanner automatically.

Broker Connectivity Error Handling:

The application can also be used to monitor the availability of the Broker on the network.

During scanner intervals, the application will display a flashing red matrix record when the attempt to connect to the Broker fails. These error records will display as flashing red and will continue until the application successfully connects with the Broker. (V3.00) Email Alerts can be setup to send alerts to recipients if a set number of contiguous failures are encountered. Following is an example of Broker connection failure display:

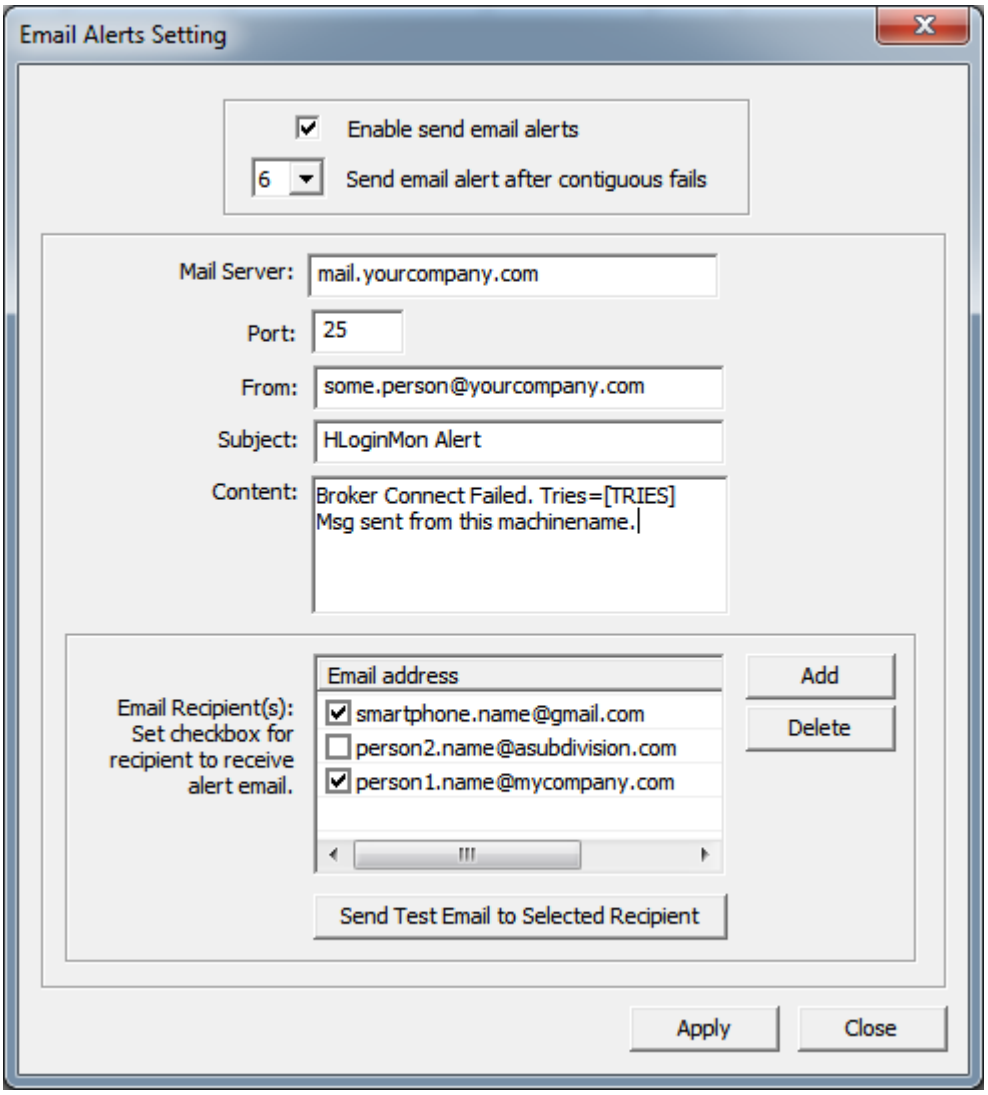


Note: If the Broker had to be restarted, you should notify all current userIds in the matrix that they will have to reconnect their client applications to the Broker.

Email Alerts: (V3.00)

This feature allows the Harvest administrator to setup email requirements and recipients for when the utility detects a set number of contiguous broker connection failures. This may indicate that the broker may be down or refuses connections (hung state) and that it should be investigated or perhaps restarted.

To setup these requirements, click on Edit->Email, this will bring up the following setup dialog (Example):



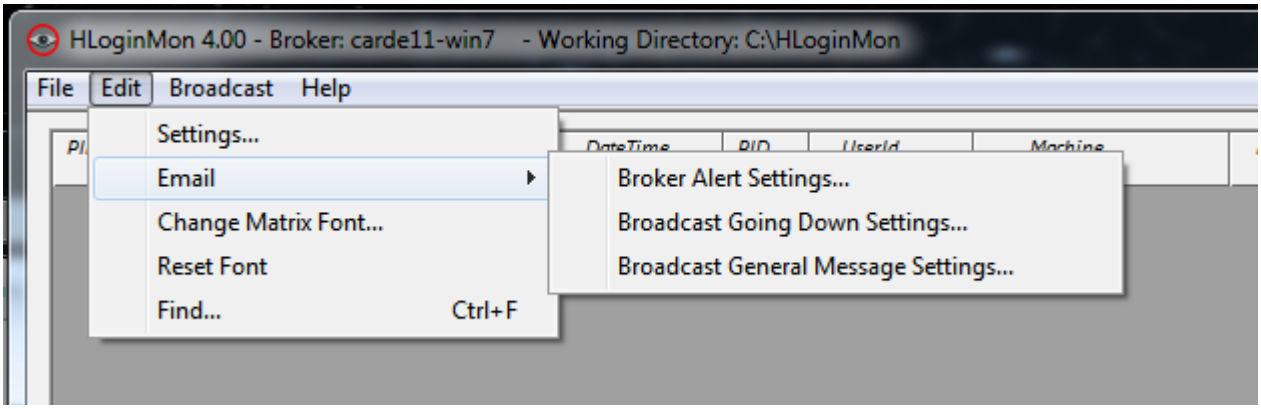
Fill in the data in this dialog and check the appropriate check boxes in order for email recipients to receive email alerts. You must tune the contiguous fail count to a set limit so that you do not receive bogus email alerts due to network volume causing many retry attempts to connect to the broker. Click the “Apply” button to save changes. Click the “Close” button to close the dialog.

Note: When using the “Send Test Email to Selected recipient” button is used, you must first highlight a user in the Email address list and check the recipient’s checkbox, then a test email will be sent to the recipient’s email address. This test ignores the status of the “Enable send email alerts” checkbox.

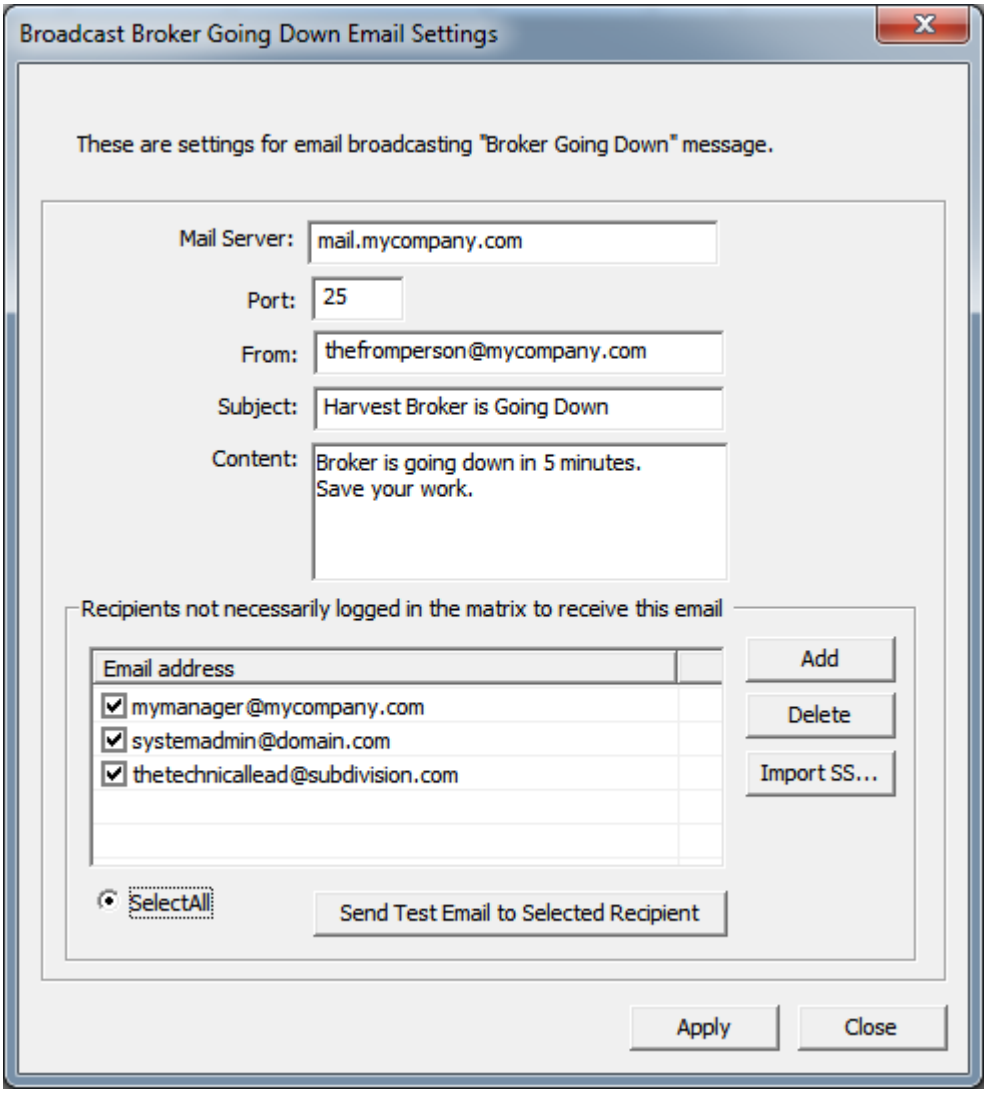
Broadcast Email Feature: (V4.00)

This feature allows the Harvest administrator to send email messages to the logged in clients and also to a static list of addresses for persons not logged into Harvest but need to receive the notices anyways.

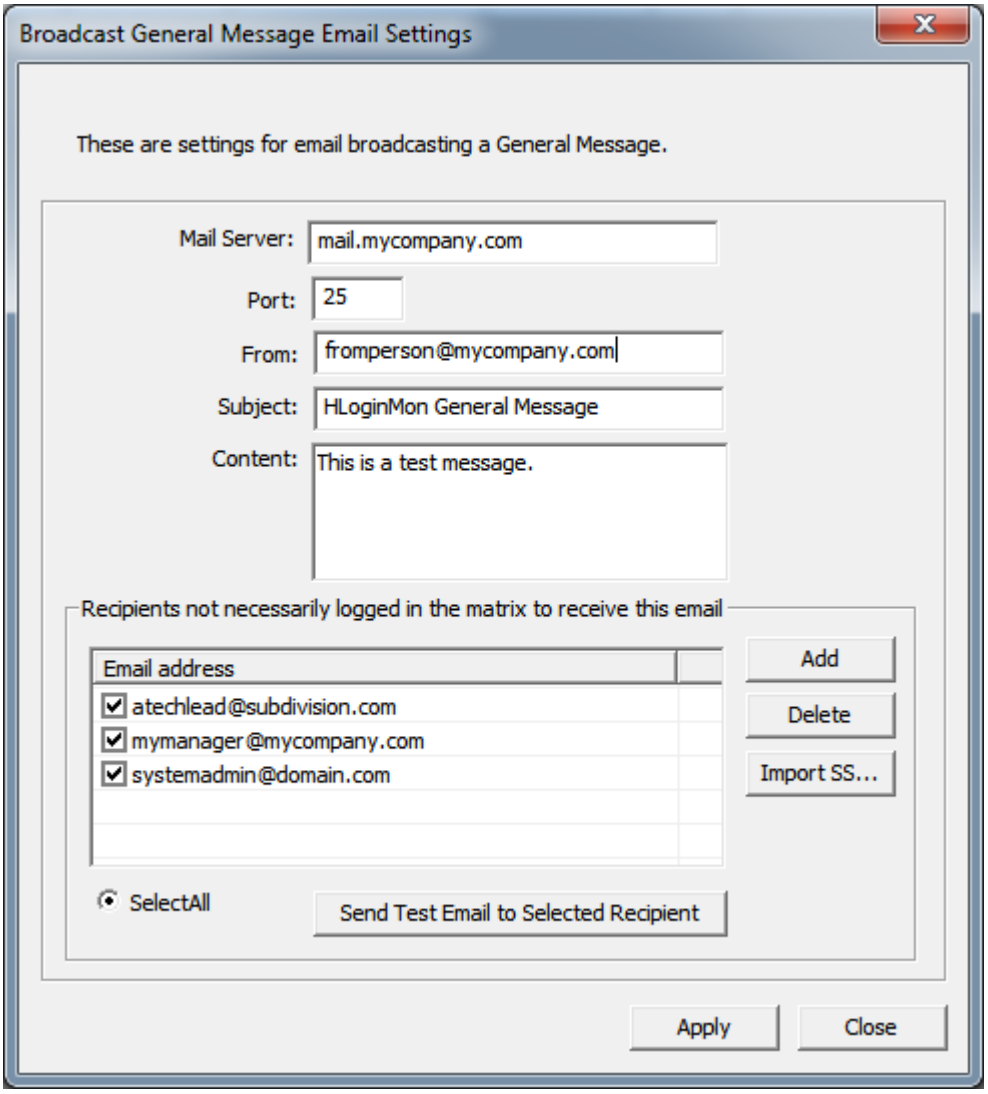
This is the new menu structure for settings up your broadcast requirements:



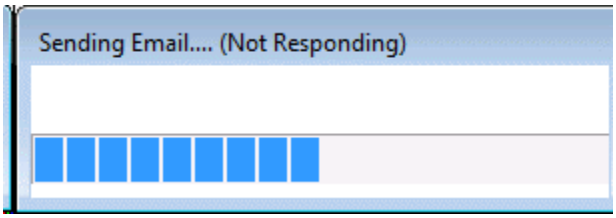
The Broadcast Broker Going Down settings dialog and the Broadcast General Message settings dialog is very similar. The Broker going down is provided to setup a canned message that you would use anytime that you wish to send the message that the Broker is going down. The Broadcast General Message dialog is designed for sending out any general public message that you wish to send to the Harvest population that is not intended for Broker going down situation. This is an example of the Broker going down setup dialog:



The following is the Broadcast General Message setup dialog:



It is a good idea to test sending email to all selected recipients especially to external smartphone accounts to insure that your email exchange server does not block anonymous out going emails. If the email is being blocked by the exchange server, this error can be first seen by the following popup that shows “Not Responding”:



If you observe this popup message of “Not Responding” then review the hsmtp.log in the HLoginMon install directory, if the log shows the following error then you must contact the mail exchange server administrator to correct for this failure:

Error sending mail: RCPT TO: error (550 5.7.1 Unable to relay)

This error is not the fault of the utility, rather it is a setup problem within your email exchange server that is blocking emails to an external domain with anonymous credentials. Modern email exchange servers are designed to block sending emails from devices as a spam precaution, therefore your exchange server must be set to allow sending emails from this utility that is installed on your devices.

You can search this problem on the internet, following is one internet publication that explains the blocking problem and provides steps for correcting it:

http://recover-email.blogspot.com/2013/12/how-to-solve-exchange-smtp-server-error.html

Caveats:

- Use of hdbgctrl controls in HLoginMon will override any current logging settings you have defined in the HServer.arg file.

- Logging of the Broker server will always start when the Broker is started as default logging level 1 (or at the logging level as set in your HServer.arg file with the "-logging=*n*" line). The *n* may be 1 thru 5. If no line is found in the HServer.arg file, then logging level 1 is run.

- Closing HLoginMon will automatically send an hdbgctrl OFF command to the broker.