NYSE GEMS

(Global Executions Management System)

Stepouts (SOS)

Debit List

Equity Comparison (OCS)

User Guide v4.0
GEMS Reference Guide

Overview
The Global Execution Management System’s (GEMS) Step-Out-Service (SOS) product is an online web tool that provides NYSE Clearing Firms with the ability to transfer all or part of a security position from one clearing member to another. The user may choose to add, change, delete, affirm, reject or view SOS transactions by status, date, and symbol or by selecting individual transactions that may be adjusted if necessary. The application also supports an MQM messaging interface from clearing firms and a History component.

Revision History

<table>
<thead>
<tr>
<th>Date</th>
<th>Changes</th>
<th>Pages Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/16/12</td>
<td>Initial Version</td>
<td>All</td>
</tr>
<tr>
<td>5/1/13</td>
<td>Added Instructions to change Password</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Added Multiple Add, Delete and Accept Functions</td>
<td>18-26</td>
</tr>
<tr>
<td>8/14/13</td>
<td>Added Debit List Functionality (updates were not made to the SOS Section to reflect the button on the screens)</td>
<td>30-33</td>
</tr>
<tr>
<td>10/21/13</td>
<td>Added OCS Functionality</td>
<td>34-47</td>
</tr>
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GEMS Desktop Requirements

GEMS is a Flash (Flex) based application that runs in a web browser via HTTPS. While it is not necessary to download/install any third party software on your local machine, the user will need to download the Adobe® Flash® Player plug-in; as well as a browser certificate verifying the email address used for all credentials. The latest Flash plug-in can be obtained at the Adobe Flash website http://get.adobe.com/flashplayer. For the security certificate, the Exchange uses Comodo Email Certificate Validation; the user will receive an email with a link to access this certificate.

The minimum hardware configurations are identified in the table below:

<table>
<thead>
<tr>
<th>Windows®</th>
<th>Mac OS</th>
<th>Linux®</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel® Pentium® II 450MHz, AMD Athlon® 600MHz or faster processor (or equivalent)</td>
<td>PowerPC® G3 500MHz or faster processor†</td>
<td>800MHz or faster processor</td>
</tr>
<tr>
<td>128MB of RAM</td>
<td>128MB of RAM</td>
<td>512MB of RAM, 128MB of graphics memory</td>
</tr>
</tbody>
</table>

The Exchange recommends a monitor with a screen display size of 17". To maximize the viewing experience a monitor with screen display size of 19"-22" may be used.

Required Operating Systems and Browsers

<table>
<thead>
<tr>
<th>Windows</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Platform</strong></td>
<td><strong>Browser</strong></td>
</tr>
<tr>
<td>Microsoft Windows 7</td>
<td>Microsoft Internet Explorer 8.0, Mozilla Firefox 3.0, Google Chrome 28.0.1500.95 or earlier†</td>
</tr>
<tr>
<td>Microsoft® Windows Vista®</td>
<td>Microsoft Internet Explorer 7.0, Mozilla Firefox 2.0, Google Chrome 28.0.1500.95 or earlier†, Safari 3.0, Opera 9.5, AOL 9</td>
</tr>
<tr>
<td>Microsoft Windows XP</td>
<td>Microsoft Internet Explorer 6.0, Mozilla Firefox 2.0, Google Chrome 28.0.1500.95 or earlier†, Safari 3.0, Opera 9.5, AOL 9</td>
</tr>
<tr>
<td>Microsoft Windows Server 2008</td>
<td>Microsoft Internet Explorer 7.0, Mozilla Firefox 3.0</td>
</tr>
<tr>
<td>Microsoft Windows Server® 2003</td>
<td>Microsoft Internet Explorer 6.0, Mozilla Firefox 2.0</td>
</tr>
<tr>
<td>Microsoft Windows 2000†</td>
<td>Microsoft Internet Explorer 6.0, Mozilla Firefox 2.0, Opera 9.5, AOL 9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mac OS†</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Platform</strong></td>
<td><strong>Browser</strong></td>
</tr>
<tr>
<td>Mac OS X v10.6</td>
<td>Safari 4.0, Mozilla Firefox 3.0</td>
</tr>
<tr>
<td>Mac OS X v10.4 (PowerPC)†</td>
<td>Safari 3.0, Mozilla Firefox 2.0, Opera 9.5, AOL for Mac OS X</td>
</tr>
<tr>
<td>Platform</td>
<td>Browser</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>Mac OS X v10.4 (Intel)</td>
<td>Safari 3.0, Mozilla Firefox 2.0, Opera 9.5</td>
</tr>
<tr>
<td><strong>Linux</strong></td>
<td></td>
</tr>
<tr>
<td>Red Hat® Enterprise Linux (RHEL) 5</td>
<td>Mozilla Firefox 2.0, SeaMonkey 1.11</td>
</tr>
<tr>
<td>openSUSE® 11</td>
<td>Mozilla Firefox 2.0, SeaMonkey 1.11</td>
</tr>
<tr>
<td>Ubuntu 7.10 or later or 8.04</td>
<td>Mozilla Firefox 2.0, SeaMonkey 1.11</td>
</tr>
<tr>
<td><strong>Solaris™</strong></td>
<td></td>
</tr>
<tr>
<td>Solaris 10™</td>
<td>Mozilla Firefox 2.0</td>
</tr>
</tbody>
</table>
Access

Complete and return the GEMS User Request and Comodo Certificate Authorization form for access to the Step-Out-Service and return to brokerservices@nyse.com. Once the GEMS User documentation is received and approved, the user will receive an email containing their GEMS username and password credentials as well as an email regarding the installation of the Comodo certificate. Current users of GEMS for NYSE AMEX and NYSE ARCA Options may already have access to GEMS. COMODO certificates do expire annually. The CRS group audits certificates monthly and contacts users about to expire to renew their certificates.

Comodo Email Certificate Installation and Validation

The user will receive an email invitation which contains a link to download the browser certificate which validates their email address. Click on the link in the email which opens the default browser and will access the Certificate Manager on the Comodo website.

![Certificate Manager](image)

The user will be required to enter a PIN and Passphrase.
Enter PIN (7 character max) and re-enter to confirm. The PIN is a secure password that the user will employ to install the certificate to the browser. Enter passphrase and re-enter to confirm. The Passphrase is meant to be a hint to the user’s PIN and may be used to help remember a forgotten PIN.

Click “submit”

The “Digital Certificate download screen appears; click on “Download”.

![Digital Certificate download](image)

Save certificate to the default location specified by the user’s computer. Take note of the file location of the certificate.

Install certificate into Browser

The user will need to install this certificate in the browser located on the computer to be used to access GEMS. This will allow the user and only the user to access their firm’s execution data. The user will only need to install the certificate once; after that, the browser will be certified and the user may directly access the Global Executions Management System (GEMS).
Internet Explorer
Locate the Digital Certificate that was downloaded and double-click the filename. This will initiate the Certificate Import Wizard. Click “Next” to continue.
Pop up screen requesting the user to specify the file to import will appear and will already contain the name of the certificate. Click “Next” to continue.

The user will need to enter in the PIN number they setup earlier when downloading from the Comodo site. Also, check the box “Mark this key as exportable” – this will allow the user to back up the key as protection against a hard disk failure on your PC. Click “Next” to continue.

Allow the system to select where to store the certificate by choosing “Automatically select”, and click “Next” to continue.
The user will receive a pop-up that they have completed the import of the certificate. Click “Finish” to exit from the Import Wizard. If an additional pop-up confirmation appears, click “OK”.

**Mozilla Firefox**
Go to “Tools” ▸ Options ▸ Advanced. Select the “Encryption tab and click on “View Certificates”

Select the “Your Certificates” tab and click on the “Import” button”
The “File to Restore” pop up will appear – locate the Digital Certificate you downloaded, select the file and click “Open”

The user will need to enter in the PIN number they setup earlier when downloading from the Comodo site. Enter the PIN and click “OK”

The user will receive a pop-up that they have successfully restored their certificate. Click OK

The Certificate Manager will display the certificate in the pop up screen. Click OK to exit.

The user is now ready to access the Global Executions Management System!
Global Executions Management System (GEMS)

To login to GEMS, go to https://gems-sos.nyse.com/

The FIRST time the user logs in to the site, they may encounter messages affirming their security certificate; simply click “OK” to continue on to the GEMS login screen. Affirmation screens may look like the following:

Internet Explorer

OR

Firefox

If the user attempts to access GEMS without having downloaded or establishing their certificate, they will get an error message, either not acknowledging the website, or denying access:
If the certificate is installed properly, the user will receive the login screen. Please login using the GEMS Username and Password and select the SRO: SOS. Click Login

From the drop down, select the specific company profile for the trades you wish to access. Click Ok

Once the user is logged in, they will have the ability to view and update Step-Out-Service transactions.

The list of executions returned will only contain those that the user has been given access to, based on the companies they have permission to view from their system profile.
DASHBOARD

Once logging into GEMS the first page accessed is the Dashboard which provides general information. The Dashboard’s header page also displays the name of the user logged in as well as the name of the company profile accessed. From the Dashboard Tab, the user will be able to view system status, action requests for alerts and unaffirmed transactions that are rejected and an overview of affirmed, unaffirmed and alerted transactions with a total position chart.

DASHBOARD Illustration SAMPLE SCREEN.....
There are 7 functional items in the Dashboard

- **System Status**: The System Status section provides information about any condition that may be affecting the processing of transactions in GEMS. These alerts will pop up wherever the user is in GEMS. The notifications may range from critical, warning, and or information for the current day. If the user stays logged into a session, it’s suggested that they periodically “refresh” this page to display updates.

- **Action Required**: The Action Required section displays any Alerts entered against the Clearing Firm or any Unaffirmed items that were rejected that day.

- **Action Positions**: The Action Positions section displays statistics about the number and Status of transactions.
  - Unaffirmed/Alert: A count of all open Unaffirmed and Alert items.
  - Unaffirmed: A count of all open Unaffirmed items.
  - Alerts: A count of all open Alert items.
  - Affirmed: A count of items that were Affirmed on the current day
  - Total Position Chart: A pie chart of total open transactions in GEMS and any Affirmed transactions entered within the current day.

- The user can click on any of the Action Positions and will be brought to the search screen with those positions pre-filled as the search criteria. For Unaffirmed and Alert positions, all open positions in the system will appear, for Affirmed positions only items Affirmed on the current day will be populated

- In addition on the top of the Dashboard and all GEMS Screens is the option to change your password.

- GEMS Passwords will expire every 90 Days
- You will receive warning messages 10 days prior to your password expiration
- In order to change your Password, click the Change Password button and following pop-up will appear

```
Change Password

Old Password *
New Password *
Confirm New Password *

Yes No
```

- Input your old Password, new Password and confirm the New Password
- The YES button will highlight when you entered all 3, click on that and the system will give you a message that your Password was changed and bring you back to the screen you were on
From the Trade Search Tab, the user may filter the transactions that they wish to view based on the parameters for which they have chosen. The Search parameters are listed below:

<table>
<thead>
<tr>
<th>Search Field</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unaffirmed/Alert</td>
<td>Displays all the unaffirmed and alert records that contain your firm’s clearing number as a Major or Contra firm. Unaffirmed data can be changed or deleted and Alert data can be accepted or rejected.</td>
</tr>
<tr>
<td>Unaffirmed</td>
<td>Displays all the unaffirmed records that contain your firm’s clearing number as a Major or Contra firm. Unaffirmed data can be changed or deleted. Status equals UNF.</td>
</tr>
<tr>
<td>Alert</td>
<td>Displays all the alert records that contain your firm’s clearing number as a Major or Contra firm. Alert data can be accepted or rejected. Status = ALT.</td>
</tr>
<tr>
<td>Affirmed</td>
<td>Displays all affirmed SOS transactions resolved on the current business day (unless otherwise specified) that contain your clearing number as a Major or Contra Firm. No actions can be taken on these records. Status = AFF.</td>
</tr>
<tr>
<td>Delete</td>
<td>Displays all SOS transactions deleted on the current business day (unless otherwise specified) that contain your clearing number as a Major or Submitting Firm. No actions can be taken on these records. Status = DEL.</td>
</tr>
</tbody>
</table>

Fill in the desired fields from below:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>Displays all SOS transactions that meet the search criteria for the specified date</td>
</tr>
<tr>
<td>Symbol</td>
<td>Displays all SOS transactions that meet the search criteria for the specified symbol</td>
</tr>
<tr>
<td>MPID</td>
<td>Displays all SOS transactions that meet the search criteria for the specified MPID</td>
</tr>
<tr>
<td>Buy/Sell</td>
<td>Displays all SOS transactions that meet the search criteria and your firm is on the specified Side.</td>
</tr>
</tbody>
</table>

- Any basic search must consist of at least one of the show only buttons being selected; Unaffirmed/Alert, Unaffirmed, Alert, Affirmed, Deleted.
- The Trade Search parameters the user may set to retrieve the trade information include: Date; Symbol; Buy/Sell; Clearing Firm; MPID
- The Clearing Firm will default to the Firm the user logged in as and cannot be changed. If the user has access to another firms’ data, they will need to log out and log back in to see the other firm data.
- All Search results, can be exported to Excel
- Once the Trade Search results are present, the user can select a single item and additional action buttons become available to Adjust, Delete, Accept or Reject the item.
- There is always an option at the bottom of the screen to click the “ADD” button and be brought to the add screen.
- There is a refresh key at the bottom of the screen that will refresh the search and bring in any new items added.
All searches display the following criteria:

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>Displays the Trade Date of the SOS record</td>
</tr>
<tr>
<td>Line #</td>
<td>Displays a Sequential Line Number for results on the page</td>
</tr>
<tr>
<td>Status</td>
<td>Displays the status of the record is Unaffirmed (UNF), Alert (ALT), Affirmed (AFF) or Deleted (DEL)</td>
</tr>
<tr>
<td>Reject</td>
<td>Displays if an item has been Rejected (REJ), is a correction (COR) or a reversal (REV)</td>
</tr>
<tr>
<td>B/S</td>
<td>Displays the Side for your Firm; Buy or Sell</td>
</tr>
<tr>
<td>In/Out</td>
<td>Displays if your Firm is Stepping In or Out</td>
</tr>
<tr>
<td>Qty</td>
<td>Displays the share quantity of the record</td>
</tr>
<tr>
<td>Symbol</td>
<td>Displays the Symbol for the record</td>
</tr>
<tr>
<td>Net Money</td>
<td>Displays the Net Money for the record</td>
</tr>
<tr>
<td>Price</td>
<td>Displays the Price for the record</td>
</tr>
<tr>
<td>Firm</td>
<td>Displays your firm</td>
</tr>
<tr>
<td>Contra Firm</td>
<td>Displays the firm who is counter-party</td>
</tr>
<tr>
<td>Major MPID</td>
<td>Displays your MPID</td>
</tr>
<tr>
<td>Contra MPID</td>
<td>Displays the MPID for the counter-party</td>
</tr>
<tr>
<td>Control Number</td>
<td>System assigned number</td>
</tr>
<tr>
<td>Account ID</td>
<td>Account ID or other information entered by your firm</td>
</tr>
<tr>
<td>Time</td>
<td>Time Record was added</td>
</tr>
</tbody>
</table>
When a user wants to add a transaction, they click on the Add button and are brought to a pop-up screen where they will add the details of the transaction. Available fields for an add transaction are as follows:

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clearing Firm</td>
<td>Defaulted based on login</td>
</tr>
<tr>
<td>Trade Date</td>
<td>Defaulted to current date, can be backdated, and cannot be dated in future. Required Field.</td>
</tr>
<tr>
<td>Symbol</td>
<td>Security Symbol. Must be valid symbol. Required Field.</td>
</tr>
<tr>
<td>Buy/Sell</td>
<td>User chooses from a drop-down whether they are buying or selling. Required Field</td>
</tr>
<tr>
<td>StepIn/Out</td>
<td>User chooses from a drop-down whether they are stepping in or stepping out. Required Field</td>
</tr>
<tr>
<td>Cor/Rev</td>
<td>User chooses from a drop-down if the transaction is a reversal or a correction. Left blank if it is neither.</td>
</tr>
<tr>
<td>Quantity*</td>
<td>Shares. Required field.</td>
</tr>
<tr>
<td>Net Money*</td>
<td>Optional field required if price is not entered.</td>
</tr>
<tr>
<td>Price*</td>
<td>Optional field required if Net Money is not entered. Numeric 11 characters (includes decimal point)</td>
</tr>
<tr>
<td>Contra Firm</td>
<td>Clearing Firm on other side of the transaction. 4-characters alpha. Required Field.</td>
</tr>
<tr>
<td>Major MPID</td>
<td>User can enter their MPID or other identifier. 4-characters alpha/numeric. Optional Field.</td>
</tr>
<tr>
<td>Contra MPID</td>
<td>User can enter the MPID of their counter-party. 4-characters alpha/numeric. Optional Field.</td>
</tr>
<tr>
<td>Account ID (old comments)</td>
<td>User can enter the Account ID (Tag 1) of the original order or other identifying information/ Free Form, optional field. Character 32 bytes.</td>
</tr>
<tr>
<td>Reversal/Correction</td>
<td>User chooses reversal or correction from a drop-down. Defaults to blank for regular transaction.</td>
</tr>
</tbody>
</table>

*NOTE*: On the SOS Add Screen, Quantity is required along with Net Money, or Price. If all three are entered, they are kept as entered. If only Quantity and Net money are entered, the Price is calculated; if only Quantity and Price are entered Net Money is calculated.
• Once all the required information is entered the user hits the Submit button and is prompted with an “Are you sure you want to add this transaction” box that they must confirm before the transaction is submitted.
Users can elect to perform multiple “adds” by using the GEMS SOS Add Excel Spreadsheet and the Import Tab available from any GEMS Screen. First the user fills out the spreadsheet below (the actual spreadsheet will be sent to all firms under a separate cover).

<table>
<thead>
<tr>
<th>Date</th>
<th>Symbol</th>
<th>B/S</th>
<th>I/O</th>
<th>Clear Firm</th>
<th>Contra Firm</th>
<th>Qty</th>
<th>Net Money</th>
<th>Price</th>
<th>Major MPID</th>
<th>Account ID</th>
<th>C/R</th>
<th>Contra MPID</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>M</td>
<td>M</td>
<td>M</td>
<td>M</td>
<td>M</td>
<td>M</td>
<td>C</td>
<td>C</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

M = Mandatory
C = Conditional
O = Optional

- Date = MM/DD/YYYY
- Symbol is compressed, no spaces or special characters
- B/S is filled in with “buy” or “sell”
- I/O is filled in with “in” or “out”
- Clear Firm is your own Clearing Firm Alpha or 4-digit number (does not require leading zeroes)
- Contra Firm is Alpha or 4-digit number (does not require leading zeroes)
- C/R is filled in with “rev” or “cor”
- The fields in red and underlined are mandatory
- Either Price or Net Money is mandatory
  - Quantity, Price and Net money need to be added as straight numbers, no dollar signs or commas.
- After entering all the items to add (up to 500 rows), the user saves the Spreadsheet as Tab Delimited
- The user then clicks on the “Import” button at the top of the screen
- A new screen is displayed with an Option to Load File.
  - The system prompts the user to select a file from their computer
  - The user selects the Excel file they saved
  - The rows will appear in a grid in GEMS

If there were any syntax errors (missing a mandatory field, having a letter in the price etc.) the system will highlight the row and provide an error message

  - If the user receives an error, they will need to redo the spreadsheet and import again
- Once imported, the user clicks on the “Save to Database” button and the rows are added to the system
- If there are any errors, the user will be brought back to the grid with an error message stating what the issue is.

NOTE: During the “Load File” or “Save to Database” steps, none of the Adds will be processed if an error is detected.
Grid where entries appear after Importing Spreadsheet

Load File Button
Example of an error message when Importing spreadsheet

```
Error message displays which row had an issue and what the issue was.

SOS ADJUST/DELETE

<table>
<thead>
<tr>
<th>Date</th>
<th>Symbol</th>
<th>Buy/Sell</th>
<th>Step In/Out</th>
<th>Quantity</th>
<th>Net Money</th>
<th>Cor/Rev</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>07/20/2012</td>
<td>CHL</td>
<td>Sell</td>
<td>Step In</td>
<td>20</td>
<td>112500.00</td>
<td></td>
<td>56.2500</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This screen is used so the user can Adjust or Delete any Unaffirmed items previously entered for their Firm.
• From the Search Results screen, select a single row of an Unaffirmed record.
• The Adjust/Delete button on the bottom of the screen becomes visible.
• Click on that button and a box appears with the details of the record chosen.
• The user can update any of the fields on the record except their own Clearing Firm.
• Once all the data is updated, the user hits the submit button and they are prompted with an “Are you sure” box which must be confirmed to make the change.
• If the user decides not to put through the change as entered, they will click the Cancel button and return to the Adjust/Delete screen after confirming that they want to cancel their changes.
• If the user wants to Delete the Unaffirmed item, they will select the “Delete” button from the Adjust/Delete Box.
• The user will be prompted with an “Are you sure you want to delete this transaction” box which must be confirmed to complete the deletion.

Multiple Deletes

Users can select multiple Unaffirmed items to Delete in one action.

• From the search screen, the user clicks the boxes next to any Unaffirmed row they wish to delete and the Multi Delete button at the bottom of the screen becomes available.
• User clicks Multi Delete and a Pop-up Window appears.
The user should review the rows to ensure these are the items they want to delete and hit the Submit button.

The user will be prompted with a pop-up asking them to confirm their Deletions.

If for any reason the user decides not to delete all the rows, they can hit the Cancel button and return to the search screen.

If the user selects an Alert and hits the Multi Delete button, they will get an error message alerting them they have chosen an invalid record for Deletes (see Screen below).

During the Multiple Delete process, if a selected item is changed between when it was selected and when it is acted upon the transaction will fail and the user will receive a message. For instance, if the user is deleting an unaffirmed item that gets Affirmed before they perform the transaction, the item is no longer on the database as Unaffirmed to be deleted.

**SOS ACCEPT/REJECT**

The user can Accept or Reject any items that were entered against their Firm.

- From the Search Results screen, select a single row of an Alert record.
- The Accept/Reject button on the bottom of the screen becomes visible.
- Click on that button and a box appears with the details of the record chosen.
- The user can update his own MPID or Account ID, but cannot alter any of the other fields on the record.
- Once all the data is updated, the user hits the submit button and they are prompted with an “Are you sure” box which must be confirmed to make the change.
- If the user decides not to put through the change as entered, they will click the Cancel button and return to the Accept/Reject once they confirm they want to cancel the change.
- If the user performs an Accept, once the Action is confirmed the record will become Affirmed and both parties will see it on their Affirmed Screens.
- If the user performs a Reject they will still see the Alert and the counterparty will still see their Unaffirmed record with a Status of “REJ”.

**Multiple Accepts**
Users can select multiple Alert items to Accept in one action.

- From the search screen, the user clicks the boxes next to any Alert row they wish to delete and the Multi Accept button at the bottom of the screen becomes available.
- User selects Multi Accept and a Pop-up Window appears.

- When the user hits the Multi Accept Button, a Pop Up window appears with all the selected rows.
- Before the user accepts the transactions they are given the opportunity to add their MPID and/or Account ID and append to the selected records.
- The screen defaults to “No Change” and the user can Accept without appending any information by hitting the Apply Button (which applies no change) and then the Submit Button (to accept the transactions).
- The user can unselect the No Change button and add an MPID for their side and/or an Account ID for their side that will be applied to all the rows.
- After entering their value, the user hits “Apply” to append the information and then hits submit to Accept the rows.
- The user will be prompted with a pop-up asking them to confirm their Accepts.

- If the user selects an Unaffirmed item and the Multi Accept Button they will receive an error message that a row is invalid for the transaction.
- During the Multiple Accepts process, if a selected item is changed between when it was selected and when it is acted upon the transaction will fail and the user will receive a message. For instance, if they are trying to Accept an item and before they perform the transaction the other side deletes it, the item is no longer on the database to be accepted.
Online Reports

History

- When looking at the Search results, the user can select a single record and click on the History button to see the history of the item.
- The History screen will show a chronological view of when the record was added and any changes made to the record.

<table>
<thead>
<tr>
<th>Date</th>
<th>Act Date</th>
<th>Type</th>
<th>Status</th>
<th>Symbol</th>
<th>CM No</th>
<th>B/S</th>
<th>L/D</th>
<th>Qty</th>
<th>Net Money</th>
<th>Price</th>
<th>Firms</th>
<th>Contra Firm</th>
<th>Major HFT</th>
<th>Contra HFT</th>
<th>Account ID</th>
<th>Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/01/2012</td>
<td>11/30/2012</td>
<td>Add</td>
<td>UNF</td>
<td>DAR</td>
<td>00405130</td>
<td>Buy</td>
<td>In</td>
<td>1900</td>
<td>29789.86</td>
<td>10.5602</td>
<td>BWF</td>
<td>UBS</td>
<td>UBS</td>
<td>UBS</td>
<td>001634821</td>
<td>Lx</td>
</tr>
<tr>
<td>10/01/2012</td>
<td>11/30/2012</td>
<td>Change</td>
<td>UNF</td>
<td>DAR</td>
<td>00405130</td>
<td>Buy</td>
<td>In</td>
<td>1900</td>
<td>302000</td>
<td>2836421</td>
<td>BWF</td>
<td>9</td>
<td>UBS</td>
<td>LP</td>
<td>001634821</td>
<td>Lx</td>
</tr>
<tr>
<td>10/01/2012</td>
<td>11/30/2012</td>
<td>Approve</td>
<td>UNF</td>
<td>DAR</td>
<td>00405130</td>
<td>Buy</td>
<td>In</td>
<td>1900</td>
<td>302000</td>
<td>2836421</td>
<td>BWF</td>
<td>9</td>
<td>UBS</td>
<td>LP</td>
<td>001634821</td>
<td>Lx</td>
</tr>
</tbody>
</table>

Contra Firm Approved
Marks as Change
Price and Net Money Changed
Contra Changed
Log Off and End Session
To end the GEMS session, simply click on the “Log Off” button on the upper right corner of the screen. This button is available on all screens. It is advised that the user also close the browser used for accessing GEMS.

If the user forgets to log out and leaves GEMS up on their browser, the screen will time out after 60 minutes. Although the contents of the browser screen may display the last report accessed through GEMS, as soon as the user attempts to interact with GEMS, the screen will revert back to the login screen.
Debit List Functionality

The Debit List or Commission Billing processing is being migrated to GEMS from the OCS system. The Debit List screens allow users to make payments of commissions daily that will be sent to DTCC. DTCC runs a billing cycle monthly for all payments entered up to the 10th of the current month and pays them on the 15th through an electronic funds transfer. The 11th of the current month starts the new cycle for payments the next month.

The Debit List Option will appear as a Tab on each screen in GEMS SOS

- Once the button is selected the user is bought to the Debit List Screen. If logged on as a firm, the Firm Field defaults to the Clearing Firm you are logged in as.
Debit List Screen

- From the Debit List Screen, users have the ability to Add items or search for items they have entered
Debit List Add Screen

- From the Debit List Screen, the user selects the Add Button from the bottom of the screen and is presented with a pop-up window to add their payments.

- For a Firm Logon the Firm field will be defaulted with the Clearing Firm you logged on as.

- Fields with an asterisk are required:
  - The user will minimally enter their Payer Number, the Payee Number and amount of the payment.
  - Optionally the user can enter a behalf of firm value, a prior date and select an Exchange from the Drop Down “N” for NYSE “A” for NYSE MKT (Amex).

- Once all fields are entered the user clicks the Add Button.

- The transaction is added to the grid below and the item count is incremented by 1, the Firm Total sums up the Payer Number once and all Payee Numbers, the Payment Total sums up all amount fields.

- If the user needs to delete a row that was entered, they can highlight the row and hit the Delete button.

- When finished with all entries for this Payer, the user hits the “Submit” button to record the transactions.
  - The Payer cannot be changed while adding transactions on a single screen.

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![Debit List Add Screen Image](image-url)
Debit List Search Screen

- Debit List users will be able to search all entries that they have made by Payer number
  - If a Query Date is not entered (default setting), the user will see all entries for the current month and 2 prior months (most recent entries first)
  - If a Query Date is entered, the user will see all items added or updated on that date
- If an entry is added and later deleted on the same day, the item will appear on the search screen with a Status of DEL
  - The DEL status lets the user know that the item was never sent to DTCC as it was deleted on the same day it was added
- If an entry is added on one day and deleted on a subsequent day, the item will appear on the Search screen with a Status of CXL
  - The CXL Status lets the user know an entry was sent to DTCC on the date in the Entry Date field and a cancel was sent on the Updated Date field
- Debit List users will continue to receive Daily and Monthly Reports from DTCC, there are no changes to the DTCC process
OCS Logon

- Users follow the same link for SOS to logon to OCS *(https://gems-sos.nyx.com/)*
- On the menu with the username and password is a dropdown where OCS can be chosen
- Once the user enters their password and chooses their company (if applicable), they will be brought to the Dashboard for GEMS OCS, similar to the Dashboard for GEMS SOS
There are 7 functional items in the Dashboard

- **System Status**: The System Status section provides information about any condition that may be affecting the processing of transactions in GEMS OCS. These alerts will pop up wherever the user is in GEMS. The notifications may range from critical, warning, and or information for the current day. If the user stays logged into a session, it’s suggested that they periodically “refresh” this page to display updates.

- **Action Required**: The Action Required section displays any Advisories entered against the Clearing Firm or any Uncompared items that were rejected that day.

- **Action Positions**: The Action Positions section displays statistics about the number and Status of transactions.
  - Uncompared/Advisory: A count of all open Uncompared and Advisory items.
  - Uncompared: A count of all open Uncompared items.
  - Advisory: A count of all open Advisory items.
  - Compared: A count of items that were Compared on the current day
  - Total Position Chart: A pie chart of total open transactions in GEMS OCS and any Compared transactions entered within the current day.

- The user can click on any of the Action Positions and will be brought to the search screen with those positions pre-filled as the search criteria. For Uncompared and Advisory positions, all open positions in the system will appear, for Compared positions only items Compared on the current day will be populated

- In addition on the top of the Dashboard and all GEMS Screens is the option to change your password.
- GEMS Passwords will expire every 90 Days
- You will receive warning messages 10 days prior to your password expiration
- In order to change your Password, click the Change Password button and follow the instructions in the SOS portion of this User Guide

### OCS Search

![OCS Search](image)

- From the Trade Search Tab, the user may filter the transactions that they wish to view based on the parameters for which they have chosen. The Search parameters are listed below:

<table>
<thead>
<tr>
<th>Search Field</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncompared/Advisory</td>
<td>Displays all the uncompared and Advisory records that contain your firm’s clearing number as a Major or Contra firm. Uncompared data can be changed or deleted and Advisory data can be stamped or DK’d.</td>
</tr>
<tr>
<td>Uncompared</td>
<td>Displays all the Uncompared records that contain your firm’s clearing number as the Major firm. Uncompared data can be changed or deleted. Status equal UNC.</td>
</tr>
<tr>
<td>Advisory</td>
<td>Displays all the Advisory records that contain your firm’s clearing number as a Contra firm. Advisory data can be stamped or DK’d. Status equal ADV.</td>
</tr>
<tr>
<td>Compared</td>
<td>Displays all Compared records resolved on the current business day (unless otherwise specified) that contain your clearing number as a Major or Contra Firm. No actions can be taken on these records. Status = COM.</td>
</tr>
<tr>
<td>Delete</td>
<td>Displays all records that were deleted on the current business day (unless otherwise specified) that contain your clearing number as Major Firm. No actions can be taken on these records. Status = DEL.</td>
</tr>
<tr>
<td>----------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Fill in the desired fields from below</td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>Displays all OCS transactions that meet the search criteria for the specified date</td>
</tr>
<tr>
<td>Symbol</td>
<td>Displays all OCS transactions that meet the search criteria for the specified symbol</td>
</tr>
<tr>
<td>Buy/Sell</td>
<td>Displays all OCS transactions that meet the search criteria and your firm is on the specified Side.</td>
</tr>
<tr>
<td>Clearing Firm</td>
<td>Defaults to your firm and cannot be changed. Returns all results where your Firm is the Major Firm</td>
</tr>
<tr>
<td>Contra Firm</td>
<td>Displays all OCS transactions that meet the search criteria for the specified Contra Firm.</td>
</tr>
<tr>
<td>Price</td>
<td>Displays all OCS transactions that meet the search criteria for the specified Price.</td>
</tr>
</tbody>
</table>

- Any basic search must consist of at least one of the show only buttons being selected: Uncompared/Advisory, Uncompared, Advisory, Compared, Deleted.
- The Trade Search parameters the user may set to retrieve the trade information include: Date; Symbol; Buy/Sell; Clearing Firm; Contra Firm; Price.
- The Clearing Firm will default to the Firm the user logged in as and cannot be changed. If the user has access to another firms’ data, they will need to log out and log back in as the other firm in order to see that firm’s data.
- All Search results, can be exported to Excel.
- Once the Trade Search results are present, the user can select a single item and additional action buttons become available to Adjust, Delete, Stamp or DK the item.
- There is always an option at the bottom of the screen to click the “ADD” button and be brought to the add screen.
- There is a refresh key at the bottom of the screen that will refresh the search and bring in any new items added.
When a user wants to add a transaction, they click on the Add button and are brought to a pop-up screen where they will add the details of the transaction. Available fields for an add transaction are as follows:

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>Defaulted to current date, can be backdated, and cannot be dated in future. Must be a valid business day. Required Field.</td>
</tr>
<tr>
<td>Clearing Firm</td>
<td>Defaulted based on login</td>
</tr>
<tr>
<td>Entering Firm</td>
<td>Entering Firm Mnemonic. Required Field. 4 positions alpha. Must be valid entering firm.</td>
</tr>
<tr>
<td>Buy/Sell</td>
<td>User chooses from a drop-down whether they are buying or selling. Required Field</td>
</tr>
<tr>
<td>Quantity</td>
<td>Shares. Required field.</td>
</tr>
<tr>
<td>Symbol</td>
<td>Security Symbol. Must be valid symbol. Required Field.</td>
</tr>
<tr>
<td>Price</td>
<td>Required field. Numeric 13 characters (includes decimal point)</td>
</tr>
<tr>
<td>Major Badge</td>
<td>Broker Badge for firm entering the trade. Required field. Must be a valid badge. Numeric 4 characters</td>
</tr>
<tr>
<td>Contra Firm</td>
<td>Clearing Firm on other side of the transaction. 4-characters alpha or numeric. Required Field.</td>
</tr>
<tr>
<td>Contra Badge</td>
<td>Badge for the opposite side of the transaction. Required field. Must be a valid badge. Numeric 4 characters</td>
</tr>
<tr>
<td>Exec Time</td>
<td>Execution Time of the transaction. User can enter 4 or 6 numeric. Required Field</td>
</tr>
<tr>
<td>Account Type</td>
<td>One position alpha. Required Field.</td>
</tr>
<tr>
<td>Cor/Rev</td>
<td>User chooses from a drop-down if the transaction is a reversal or a correction. If left blank if it is neither.</td>
</tr>
<tr>
<td>Branch/Sequence</td>
<td>Branch and Sequence Number of Order associated with this execution. Up to 9 characters alpha-numeric. Required Field.</td>
</tr>
<tr>
<td>TA#</td>
<td>Turnaround Number of Order associated with this execution. 6 character alpha-numeric. Optional Field.</td>
</tr>
<tr>
<td>Link ID</td>
<td>System Assigned Link ID. Optional Field. 6 position numeric.</td>
</tr>
<tr>
<td>Settlement Type</td>
<td>Settlement Terms of the execution from a drop-down. Defaults to Regular Way (RW). Other choices are Cash (CA), Next Day (ND), Seller’s Option (number of days entered between 2 and 60 excluding 3). Required Field.</td>
</tr>
<tr>
<td>Booth ID</td>
<td>Agency ID where Order was sent. 2 character Alpha-numeric. Optional Field.</td>
</tr>
<tr>
<td>Account ID</td>
<td>User can enter the Account ID (Tag 1) of the original order or other identifying information. Free Form, optional field. Character 32 bytes.</td>
</tr>
</tbody>
</table>
Once all the required information is entered the user hits the Submit button and is prompted with an “Are you sure you want to add this transaction” box that they must confirm before the transaction is submitted.
Users can elect to perform multiple “adds” by using the GEMS OCS Add Excel Spreadsheet and the Import Tab available from any GEMS Screen. First the user fills out the spreadsheet below (the actual spreadsheet will be sent to all firms under a separate cover).

<table>
<thead>
<tr>
<th>Date</th>
<th>Sym</th>
<th>B/S</th>
<th>Clr Firm</th>
<th>Ent Firm</th>
<th>Cntr Firm</th>
<th>Qty</th>
<th>Pric</th>
<th>Maj Badge</th>
<th>Cntr Badge</th>
<th>Exec Time</th>
<th>Acct Type</th>
<th>Branc h Seq</th>
<th>Sett Type</th>
<th>Acct ID</th>
<th>Corr Rev</th>
<th>T A</th>
<th>Link ID</th>
<th>Booth ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>M</td>
<td>M</td>
<td>M</td>
<td>M</td>
<td>M</td>
<td>M</td>
<td>M</td>
<td>M</td>
<td>M</td>
<td>M</td>
<td>M</td>
<td>M</td>
<td>M</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

M = Mandatory
O = Optional

**Special Entry Rules**

- Date = MM/DD/YYYY
- Symbol is compressed, no spaces or special characters
- B/S is filled in with “buy” or “sell”
- Clear Firm and Contra Firm Alpha or 4-digit number (does not require leading zeroes)
- Ent Firm – Your Entering Firm Mnemonic. 4 character Alpha
- C/R is filled in with “cor” or “rev” if applicable
- After entering all the items to add (up to 500 rows), the user saves the Spreadsheet as Tab Delimited
• The user then clicks on the “Import” button at the top of the screen

• A new screen is displayed with an Option to Load File.
  - The system prompts the user to select a file from their computer
  - The user selects the Excel file they saved
  - The rows will appear in a grid in GEMS OCS

If there were any syntax errors (missing a mandatory field, having a letter in the price etc.) the system will highlight the row and provide an error message
  - If the user receives an error, they will need to redo the spreadsheet and import again

• Once imported, the user clicks on the “Save to Database” button and the rows are added to the system

• If there are any errors, the user will be brought back to the grid with an error message stating what the issue is.

NOTE: During the “Load File” or “Save to Database” steps, none of the Adds will be processed if an error is detected.
Grid where entries appear after Importing Spreadsheet

<table>
<thead>
<tr>
<th>Load File Button</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Date</th>
<th>Symbol</th>
<th>Opt.</th>
<th>Ord.</th>
<th>Vol</th>
<th>Rate</th>
<th>Strike</th>
<th>Time</th>
<th>Data Type</th>
<th>Expiry</th>
<th>Put/Call</th>
<th>Base</th>
<th>Exch</th>
<th>Amt.</th>
<th>Corr</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2/2013</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>2/2/2013</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>200</td>
</tr>
</tbody>
</table>
Example of an error message when Importing spreadsheet

Error message displays which row had an issue and what the issue was.

**OCS ADJUST/DELETE**

This screen is used so the user can Adjust or Delete any Uncompared items previously entered for their Firm.

- From the Search Results screen, select a single row of an Unaffirmed record.
- The Adjust/Delete button on the bottom of the screen becomes visible.
- Click on that button and a box appears with the details of the record chosen.
- The user can update any of the fields on the record except their own Clearing Firm and the Date.
- Once all the data is updated, the user hits the submit button and they are prompted with an “Are you sure” box which must be confirmed to make the change.
- If the user decides not to put through the change as entered, they will click the Cancel button and return to the Adjust/Delete screen after confirming that they want to cancel their changes.
- If the user wants to Delete the Unaffirmed item, they will select the “Delete” button from the Adjust/Delete Box.
The user will be prompted with an “Are you sure you want to delete this transaction” box which must be confirmed to complete the deletion.

### OCS Multiple Deletes

Users can select multiple Uncompared items to Delete in one action.

- From the search screen, the user clicks the boxes next to any Uncompared row they wish to delete and the Multi Delete button at the bottom of the screen becomes available.
- User clicks Multi Delete and a Pop-up Window appears.
- The user should review the rows to ensure these are the items they want to delete and hit the Submit button.

User has choice to delete rows or cancel.
• Once the Submit button is hit, the corresponding entries will be deleted
• If for any reason the user decides not to delete all the rows, they can hit the Cancel button and return to the search screen
• If the user selects an Alert and hits the Multi Delete button, they will get an error message alerting them they have chosen an invalid record for Deletes (see Screen below)
• During the Multiple Delete process, if a selected item is changed between when it was selected and when it is acted upon the transaction will fail and the user will receive a message. For instance, if the user is deleting an Uncompared item that gets Compared before they perform the transaction, the item is no longer on the database as Uncompared to be deleted

**OCS STAMP/DK**
The user can Stamp or DK any items that were entered against their Firm.

- From the Search Results screen, select a single row of an Advisory record.
- The Stamp/DK button on the bottom of the screen becomes visible.
- Click on that button and a box appears with the details of the record chosen
- To Stamp a transaction, the user must enter their Branch/Sequence, Entering Firm and Account Type
- The user can optionally enter their own TA# or Account ID or change their Badge which was provided by the other side
- Once all the data is updated, the user hits the Stamp button and they are prompted with an “Are you sure” box which must be confirmed to make the change.
- Once the Action is confirmed the record will become Compared and both parties will see it on their Compared Screens.
- If the user decides not to put through the change as entered, they will click the Cancel.
- If the wants to DK the transaction, they just click on the DK transaction and the item will be DK’s.
- The original sender of the transaction will see his Uncompared record with DK in the DK field.
- The party who performed the DK will see the DK on their Advisory.

![OCS Stamp/DK](image)

**OCS Multiple Stamp/DK**
Users can select multiple Advisory items to Stamp or DK in one action.
• From the search screen, the user clicks the boxes next to any Advisory rows they wish to Stamp or DK and the Multi Stamp/DK button at the bottom of the screen becomes available.
• When the user hits the Multi Stamp/DK Button, a Pop Up window appears with all the selected rows
• Before the user stamps the transactions they must enter their entering firm, branch sequence and account type.
• Optionally the user can also enter their Badge, Turnaround Number and Account ID (Tag1). In order to change any of this optional information, the user needs to unselect the “No Change” box and enter data in the appropriate field.
• The user selects the boxes on the grid and hits the apply button to make the changes to those rows
• The user can then add different information and select different rows if they want to apply different values on the items
• Once all data is applied, the user hits the Stamp button and will be asked to confirm they want to stamp these items.
• If the user chooses to DK multiple transactions, they simply check the items again on the popup and click on the DK button.

Online Reports
OCS History

- When looking at the Search results, the user can select a single record and click on the History button to see the history of the item.
- The History screen will show a chronological view of when the record was added and any changes made to the record.