



Database Administrator – System Management

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System Management

- Database Administrators can customize and set system preferences throughout the system as well as review user statistics.

System Requirements

Self-Hosted Server Requirements

- Windows 7 or later / Linux
- Apache 2
- MySQL 5
- Perl 5
- SMTP service (IIS, sendmail, etc)
- Webalizer (Optional web site statistics package)

Hardware Requirements

UNHCEMS does not have an absolute set of hardware requirements. However, UNH hosts six CEMS sites on one server with the following specs:

- Intel 2GHz CPU
- 2 GB of system memory
- 20 GB hard drive space



System Management

How to Navigate to System Options

Step 1: Navigate to the Database Administrator dashboard on the home screen.

Step 2: Click on the *Manage data object* dropdown menu within the Database Administrator dashboard.

Step 3: Find the category called *System*.

The subcategories of *System* allow database administrator to customize and review important system information.

The screenshot shows the 'Database Administration' dashboard. At the top, there are links for 'download backup' and '(11) unapplied HandyCEMS Uploads'. Below these is a 'manage data object' dropdown menu. The dropdown is open, showing a list of categories: 'dashboard', 'storage locations', 'transfer types', 'usage log', 'user limits', 'waste', 'System', 'Training', 'completed requirements', 'compliance matrix', 'courses', 'enrollments', and 'requirements'. The 'System' category is highlighted in blue. A red box highlights the 'System' category and its subcategories: 'dashboard', 'global vars', 'logs', 'notices', 'registered devices', 'scheduled tasks', 'statistics', and 'sql'. A red arrow points from a text box to the 'System' category in the dropdown.

Database Administration

- download backup
- (11) unapplied HandyCEMS Uploads
- manage data object dropdown menu
 - dashboard
 - storage locations
 - transfer types
 - usage log
 - user limits
 - waste
 - System**
 - dashboard
 - global vars
 - logs
 - notices
 - registered devices
 - scheduled tasks
 - statistics
 - sql
 - Training**
 - completed requirements
 - compliance matrix
 - courses
 - enrollments
 - requirements

System subcategories used when editing system preferences



Dashboard Management

How to Customize User's Homepage Dashboard

- Administrators can customize user's dashboards by configuring which parts of the CEMS system are enabled using user assigned roles. Admins can also link external applications that are outside of UNHCEMS

Step 1: From the *manage data objects* dropdown menu -> System, and click on the *dashboard* subcategory.

Step 2: The Dashboard Items list will allow database administrators to add links to the different dashboard modules. Click on the  button to the left of the link you want to make accessible to a certain dashboard.

Dashboard Group	Unique Key	Content	Allow Guest	Required Privileges
cheminv	cheminmyinv	MyChemicalInvDashboard	0	Active Account
 cheminv	cheminvintransit		0	Update Inventory
 cheminv	cheminvmultiupdate	return "Update inventory" if userHasActiveChemicalInventory	0	Active Account
 cheminv	cheminvrecentlyadded		0	Update Inventory
 cheminv	cheminvrecentwaste	>recently disposed inventory	0	Update Inventory

The 'Search Inventory' link will show up in the Chemical inventory dashboard

Guests are not allow to view this link

Click to open the record to make changes

Users must have the 'update Inventory' privilege to use it



Dashboard Management

Step 3: Make appropriate changes to the dashboard record, an example is shown below.

Dashboard Record	
SYS ID	59
Unique System Key	<input type="text" value="cheminvintransit"/>
Type	html
Content	<pre>containers in transition</pre> <p>visual editor</p>
Dashboard Group	<input type="text" value="cheminv"/>
Alphasort	<input type="text" value="containers in transition"/>
Is Disabled	no
Allow Guest	no
Required Privileges	<ul style="list-style-type: none">Chemical Waste ManagerCompliance ManagerDatabase AdministrationEmergency Response UserEvents ManagerPending Task ManagerRadiation Safety OfficialSigns ManagerTraining InstructorTraining ManagerUpdate Inventory
<p>cancel delete save</p>	

To make available to all users, select required privilege to only 'Active Account'

The 'Search Inventory' link will display in the 'Chemical Inventory' dashboard, available to people with the 'Update Inventory' privilege. Hold CTRL to add more than one privilege.



Dashboard Management

How to Add New Dashboard Links

Step 1: Navigate to the Dashboard Items Recordset.

Step 2: Click on the  button to pull up a new record form.

Step 3: Fill in the preferences for the link you want to add then click the  button to update the dashboard.



Global Variables

- Global variables allow Data Administrators to manage layout colors, IP Filtering, logos, etc.

How to Customize CEMS global Variables

Step 1: From the *Manage Data Objects* dropdown menu->*System*, and click on the *Global Vars* subcategory.

Global Variables		Result(s) (1 - 43) of 43
Sort:	Key	Value
	ALLOWED_IPS	****
	ALLOWED_TEST_IPS	
	AUTO_ACTIVATE_ACCOUNT	
	BYPASS_IP_RESTRICTION	
	CEMS_LOGO	
	CEMS_SOFTWARE_MESSAGES	
	CHEMICAL_INVENTORY_BARCODE_SIZE	
	COLOR_BG	#ffffff
	COLOR_FG	#006699
	COMPLIANCE_ALERT_NOTIFICATION	
	COMPLIANCE_OVERDUE_EMAIL_GRACE_DAYS	
	DEFAULT_CEMS_EMAIL_BCC	
	DEFAULT_CEMS_EMAIL_FROM	
	DENIED_MSG	
	DOCUMENTATION_PAGE_CONTENTS	
	DOC_HEADER_HTML	 CEMS Chemical Environmental Management System

Examples of global variables

Allows any IP Address to access your CEMS site

Click to open the record for editing

Represents the header on the home page of your CEMS site



Global Variables

Functions of Global Variables

Allowed IP	list of allowable ip addresses that can access CEMS.
Allowed test IPS	list of allowable ip addresses that can access CEMS while server it is in TEST_MODE.
ER reminder	Allows the administrator to enter an email address that will be sent a monthly reminder to download the emergency response data. The data can then be put on a CD or kept in a zip file and sent to emergency responders.
Pending Admin Tasks	An email address is entered in order to get daily reminders of pending administrative tasks. The database administrator's email is preferred.
Pending Sign Request	If there is one person responsible for approving and updating sign requests, their email address should be entered here.
Default CEMS Email BCC	If a user clicks on another users' email address, he can send the email directly through CEMS. A blind copy of that email can be sent to an administrator through this feature.
Default CEMS Email From	All notifications and reminders that are generated by CEMS sends an email to a user. This option allows the administrator to enter an email "from" someone in order for the user to reply. An alias email can be used that does not reveal the actual administrator's address.
Pending Waste Notification	If users have submitted waste pick-up requests, these appear under the Hazardous Waste section of the main page. This notification will send a reminder to the hazardous waste manager that waste requests have been submitted without having to sign into CEMS.
Compliance Alert Notification	If an email address is entered, it will send daily emails that a compliance report is overdue, or that a compliance report shows problems. This is a separate feature than the area of the compliance report where an email address is used to send a reminder to the person responsible for filling out the report.
Email Password Body	This is the message that is sent to a user who has forgotten his password. This value should not be changed.
Color BG	This is the background color for all of the pages. It should only be changed by someone with extensive html knowledge.

For support contact UNHCEMS at email cems-info@sr.unh.edu. For more information about UNHCEMS please visit <http://www.cems-info.sr.unh.edu/>.



Global Variables

Color FG	Allows the administrator to customize the foreground color of pages.
CEMS Logo	This is the link to where the CEMS logo resides. It should only be changed to a new logo by someone with extensive html knowledge.
CEMS Logo Text	This is the link to where the CEMS text (University of New Hampshire Chemical Environmental Management System) resides. It should only be changed by someone with extensive html knowledge.
Default URL	Allows the administrator to specify the default URL users are directed if they do not specify a URL.
Logout Redirect	Allows the administrator to specify the URL users are directed to after they log out
Login Redirect	Allows the administrator to specify the URL users are directed to when they sign in. It should go to the main page.
Policy Transfer	Allows the administrator to specify whether all users are permitted to transfer any chemical container. "0" means no and "1" means yes.
Policy View Owner	Allows the administrator to specify if all users can view the entire chemical inventory of any other user. "0" means no, "1" means yes.
Policy View Location	Allows the administrator to specify if all users can view the chemicals at every location. "0" means no, "1" means yes.
Policy Search All	Allows the administrator to specify if all users can search the entire chemical inventory. "0" means no, "1" means yes.
Verify Sign Interval	Allows the administrator to specify the number of months between prompts to update the information on door signs.
Session Expire Min	Allows the administrator to specify the number of minutes before a user's session expires and he needs to log in again
Rad Act Round	Allows the administrator to specify the number of digits for rounding off the activity of radioisotopes.
Rad drum Act Round	Allows the administrator to specify the number of digits for rounding off the activity of radioactive waste in drums.
Documentation Page Contents	Allows the administrator to customize the html on the documentation page.
Related Links Page Contents	Allows the administrator to customize the html of the Related Links page.
Info Page Contents	Allows the administrator to customize the html of the guest page.

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Global Variables

Email Password Subject Line	Allows the administrator to customize the subject line of the email sent when someone has forgotten their password.
Fire Emergency Message	Allows the administrator to customize the line on emergency door signs below the pictograms and above the contact information. The current default message says "For Fire or First Aid Dial 911"



Usage Data

Reading User Logs

Step 1: Logs can be accessed through the *Manage Data Objects* dropdown menu -> *System*, and click on the *Logs* subcategory

Application Log Viewer

Sort: [Date] (reverse)

Date	User	Description
2015-06-02 13:30:58	Smith, John	admin_task record saved (UID=2)
2015-06-02 13:30:34	Smith, John	profile updated
2015-06-02 13:30:04	Smith, John	Waste Record saved.
2015-06-02 13:29:25	Smith, John	admin_task record saved (UID=1)
2015-06-02 13:28:59	Smith, John	container record saved (UID=818) barcode: 23398 updated: empty date changed to
2015-06-02 13:28:46	Smith, John	container record saved (UID=107748) barcode: updated: owner from Indira Perrotta to Jerrell Acree, location from Martin 181 to 34 shelf
2015-06-02 13:28:30	Smith, John	container record saved (UID=97988) barcode: updated: owner from Valrie Hott to Jerrell Acree, location from Thomas 171 to 34 shelf
2015-06-02 13:27:16	GUEST	John Smith (14666) signed in

Click on a column title to add more columns

Click to export data as Excel, HTML, or XML format

Step 2: Every action by CEMS users will be kept track of in the usage log with a timestamp, users name and description of the action.

- Additional Information can be found such as looking at the IP address of the accessed point by adding more columns to the Recordset.
- A log report can be exported by clicking on the  button on the tool bar in the upper right corner of the screen.



Usage Data

- The statistics page will give you an idea of the number of chemicals and users that are in the system

How to View Current and Past Yearly CEMS Statistics

Step 1: To view the CEMS statistics, go to the *Manage Data Objects* dropdown menu -> *System*, and click on the *Statistics* subcategory.

CEMS Stats for 2015-06-08

Current Stats

stat	count
active chemical inventory	13999
count of surplus containers	2
unique chemicals in active inventory	6049
count of MSDS	31925
count of users with active chemical inventory	219
count of active signs	319
active biological agents	142
BSL-2 Rooms (from signs)	0
BSL-3 Rooms (from signs)	0
count of radioactive sealed sources	0

Step 2: Browse through the statistics page and view the tables.

Current Active Users By Status

user status	count
(undefined)	3967
Affiliate Professor	1
Assistant Director	1
Assistant Professor	29
Associate Professor	6
Chairperson	2
Compliance Officer	1
Contractor	7
Director	8
Extension Educator	3



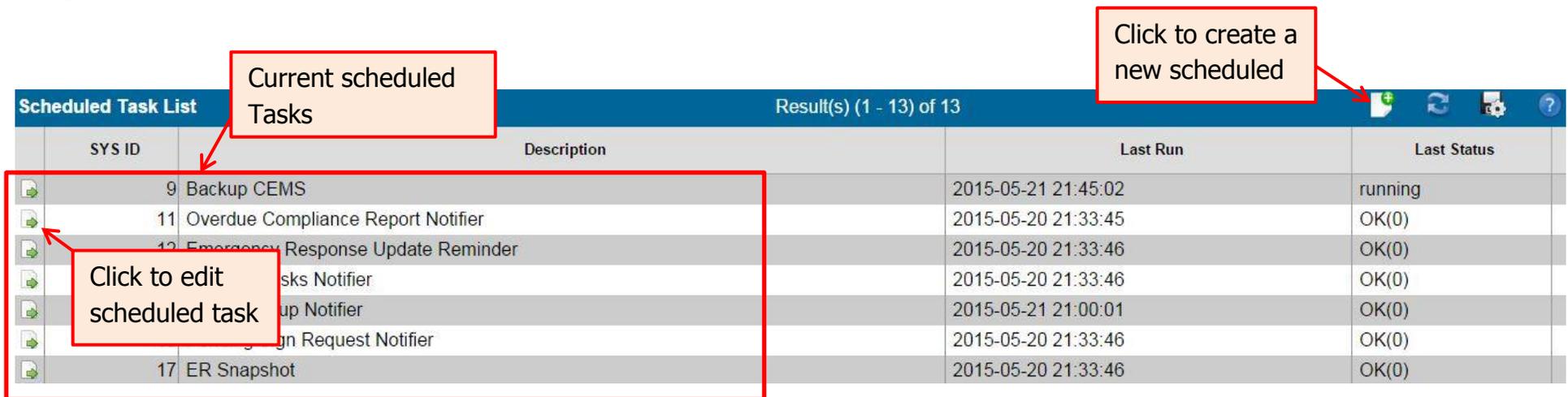
Tasks and Notifications

- System Tasks are processes that run in the background on a scheduled time. Scheduled tasks complete system maintenance, backups, send automated email, and more

How to edit/Schedule a System Task

Step 1: To set a scheduled task, go to the *Manage Data Objects* dropdown menu -> *System*, and click on the *Scheduled Task* subcategory.

Step 2: Here you can view/edit all current tasks.



The screenshot shows a table titled "Scheduled Task List" with columns for "SYS ID", "Description", "Last Run", and "Last Status". The table contains 13 rows of tasks. Annotations include a box around the table header labeled "Current scheduled Tasks", a box around the "+" button in the top right corner labeled "Click to create a new scheduled", and a box around the first few rows of the table labeled "Click to edit scheduled task".

SYS ID	Description	Last Run	Last Status
9	Backup CEMS	2015-05-21 21:45:02	running
11	Overdue Compliance Report Notifier	2015-05-20 21:33:45	OK(0)
12	Emergency Response Update Reminder	2015-05-20 21:33:46	OK(0)
	Tasks Notifier	2015-05-20 21:33:46	OK(0)
	up Notifier	2015-05-21 21:00:01	OK(0)
	gn Request Notifier	2015-05-20 21:33:46	OK(0)
17	ER Snapshot	2015-05-20 21:33:46	OK(0)

Step 3: Create a new task by clicking on the  button. This will bring up a blank scheduled task record. Fill in the appropriate fields and click save to add the record.



Tasks and Notifications

- Active CEMS Notices will appear above the first dashboard of the home screen.
- If Show Public is active, notices will be seen by all users upon login.

How to Create Notices

Step 1: To create a notice, go to the *Manage Data Objects* dropdown menu -> *System*, and click on the *Notices* subcategory.

Step 2: select the  button to create a new notice and fill out the blank notice record. Click save to post the notice to the dashboard

If 'Yes' the message will be seen by all guest users. 'No' will be hidden to guest users

Notice Record	
Start Date	YYYY-MM-DD 
End Date	YYYY-MM-DD 
Show Public	Yes ▾
Message	<input type="text"/>
<input type="button" value="cancel"/> <input type="button" value="save"/>	

The time period the record will be active

