NWSTC

CHPS Job Sheets

A Supplemental Resource for the CHPS System Manager Course

Table of Contents

Creating a CHPS Stand Alone Account

Objective: Set up a Stand Alone instance of CHPS.

STEP 1 Create the File System

Step	Action	Notes
1	As user "fews", open a terminal window on an AWIPS workstation.	The account will have "fews" permissions.
2	Navigate to the Stand Alone directory. **cd /awips/chps_share/sa**	
3	Create an application directory. **mkdir <name>**	Give the directory a unique name.
4	Navigate to the newly created directory. **cd <name>**	

STEP 2 Create the Contents of the CHPS Region Directory, xxrfc_sa

Step	Action	Notes
1	If there is an existing SA user account with the proper directory structure, navigate to the newly created user directory and enter the following command to copy the account. **cp –rf /awips/chps_share/sa/<existing_user>/* .**	If there is not an existing account, complete Steps 2 through 5.
2	Copy the files listed in "Notes" to the newly created user directory. **cp –rf <CHPS software location> /awips/chps_share/sa/<username>**	clientConfig.xml Log4jConfig.xml sa_global.properties log.txt
3	Copy the xxrfc_oc directory, ensuring the directory contains the subdirectories listed in "Notes". **cp -rf /awips/chps_share/sa/<file or directory> .**	/Config /Import /Export /localDataStore /DumpFiles /Models
4	Untar and unzip files as needed, then delete the zip or tar file. **tar -xvf <file.tar.gz>** **unzip <file.zip>** **rm *.gz** **rm *.zip**	
5	Create symbolic links to the /jre and /bin directories. **cd /awips/chps_share/sa/<username>** **ln –s /awips/chps_share/java jre** **ln -s /awips/chps_share/fews/bin bin**	

STEP 3 Start the New CHPS SA

Step	Action	Notes
1	Navigate to the main the application directory and initialize the CHPS SA. **cd /awips/chps_share/sa/<username>** **./bin/fews.sh xxrfc_sa &**	Where **xxrfc** is the ID for your RFC.
2	Make sure there are no errors in the log panel as the software loads and builds the local datastore.	If there are no errors, the SA is ready to use.
3	If the log panel contains errors, exit CHPS and open the **log.txt** file.	
4	Once the errors are addressed, delete the contents of the following directory, and reinitialize the CHPS SA. **/awips/chps_share/sa/<username>/xxrfc_sa/localDataStore**	Where **xxrfc** is the ID for your RFC.

If there are not copies of these files on the system, check the Deltares ftp server or contact another RFC to provide these files. For more information on these files, check the Deltares documentation website.

Using the Configuration Manager

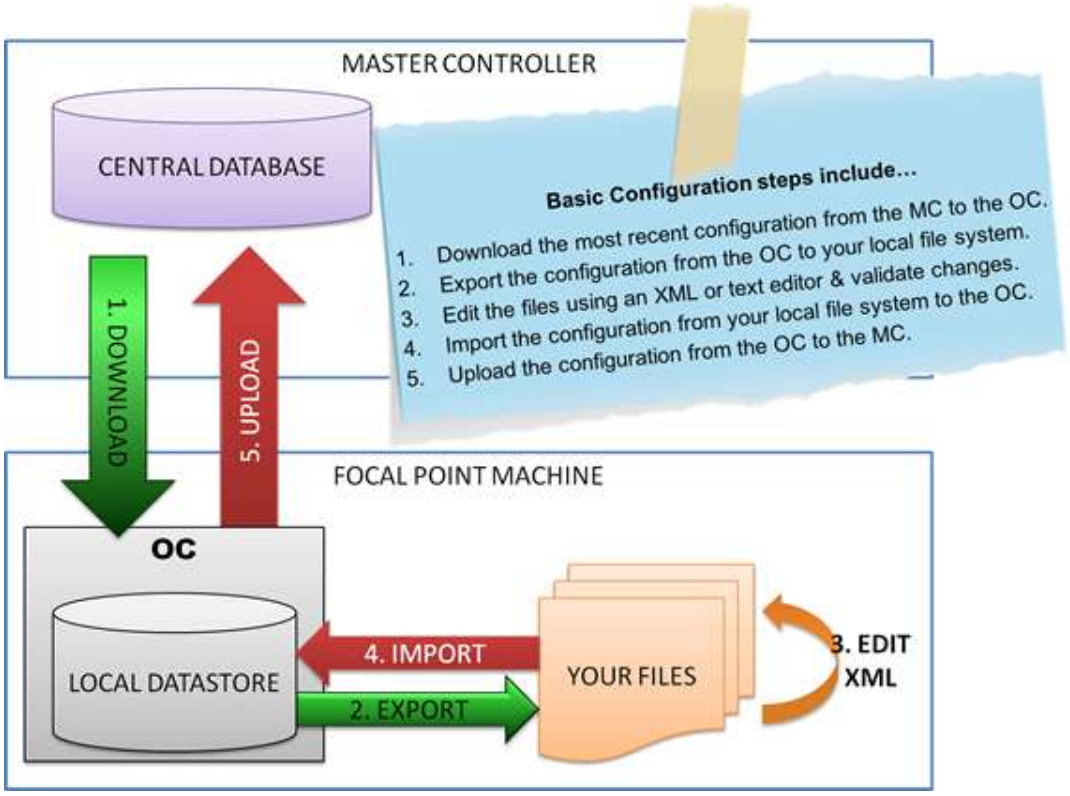
Objective: Acquire and upload configuration files using the Configuration Manager. **Reminder:** Test the configuration on a Stand Alone system before uploading to the live system.

STEP 1 Launch the Configuration Manager

Step	Action	Notes
1	Open a terminal window on an AWIPS workstation as user "fews".	
2	Navigate to the OC directory. **cd /awips/chps_share/oc/fews**	
3	Type the following command to launch the Configuration Manager. **./bin/fews.sh xxrfc_oc cm** &	Where **xxrfc** is the ID for your office.

STEP 2 Connect to the Configuration Manager and Acquire Files

Step	Action	Notes
1	Click "File" in the top navigation.	
2	Select "Login".	A dialog box appears.
3	Select a Master Controller.	
4	Click the "OK" button.	



STEP 3 Edit Files

Step	Action	Notes
1	After the file download completes, click one of the files from the "tree".	
2	Click the "Export" button.	This starts the "editor" configured for the selected file.
3	Make the required changes and save the file.	

STEP 4 Submit Files to the Configuration Manager

Step	Action	Notes
1	From the "Management" tab, select a configuration to import.	
2	Click the "Import" button.	This starts the "editor" configured for the selected file.
3	From the dialog box, select a file to import.	
4	Click the "Open" button.	
5	In the "Import Options" GUI, click in the "Select" column.	
6	Click "Use a single description for all imported files" and enter a description in the data entry field.	
7	Click the "OK" button.	
8	Select a file from the file tree on the center of the display.	
9	Click the "Set Active" button.	
10	Select the configuration(s) from the file tree on the Management tab.	
11	Click the "Upload" button.	Prompt to validate the file(s) appears.
12	Type a unique description for the upload.	Description appears as a comment in Version Management.

STEP 5 Verify the Upload

Step	Action	Notes
1	Click the file just uploaded on the "tree".	
2	Check to make sure the ID changed from a local ID to a Master Controller ID.	Ensure the name includes "CM".

Completing Configuration Rebuild

Objective: Recover from a corrupt configuration using the following procedure **only** if all other methods failed. **Note:** this is written for a two-MC system.

STEP 1 Shut Down Systems and Processes

Step	Action	Notes
1	Open an Administration Interface (AI) to monitor the processes.	
2	Log out of all Operator Clients.	
3	From an AWIPS terminal window, stop Pi-Service. **ssh fews@chps3** **cd /awips/chps_local/fewspiservices** **./fews_piservice.sh xxrfc_pi stop**	
4	Stop processes on FSSs. **cd /awips/chps_local/fss/xxrfc/FSS00/mcproxy** **./mcproxy.sh stop**	Where **xxrfc** is the ID for your RFC. Repeat for each FSS.
5	See if any processes are still running. **ps -ef |grep java |grep mcproxy**	Note the process ID and kill any remaining processes.
6	Remove local datastores on all of the FSSs and workstations. **cd /awips/chps_local/xxrfc_oc/localDataStore0**	Remove everything except the ***.fdb** files.

STEP 2 Suspend Scheduled Tasks (Optional)

Step	Action	Notes
1	In the AI, click the “Forecast Tasks” link.	
2	Select “Scheduled Tasks”.	
3	Click the check boxes next to each task to suspend.	
4	Click the “Suspend” button.	

STEP 3 Prepare the MCRecovery Tool

Step	Action	Notes
1	Log on to CHPS 1 as user "fews".	
2	Navigate to the directory containing the MCRecovery Tool. **cd /awips/chps_local/mc/mcs/xxxmc00/build/mcrecoverytool**	Where **xxxmc00** is the ID for you RFC's MC.
3	Unzip the zip file if it has not already been done. **unzip mcrecoverytool.zip**	
4	Copy the fews.master.mc.conf from the master controller mcs/xxxmc00 directory to the current directory. **cp /awips/chps_local/mc/mcs/xxxmc00/fews.master.mc.conf .**	
5	Enter the following command to clear the old configuration. **/awips/chps_local/java/bin/java -jar mcrecoverytool.jar -clear_config_all**	Select **A** to answer "yes" to all of the prompts.
6	Repeat the above steps on CHPS 4 and 7.	

STEP 4 Import the New Configuration

Step	Action	Notes
1	Open a terminal window on an AWIPS workstation.	
2	Open the Configuration Manager. **./bin/fews.sh xxrfc_oc cm**	Where **xxrfc** is the ID for your office.
3	Verify the configuration is empty (the CM will not contain any files).	
4	Import the new configuration.	

STEP 5 Restart Systems and Processes

Step	Action	Notes
1	From a terminal window on an AWIPS workstation, enter: **ssh fews@chps3-ntcc** **cd /awips/chps_local/fss/xxrfc/FSS00/mcproxy/** **./mcproxy.sh start**	Where **xxrfc** is the ID for your RFC. Repeat for each FSS.
2	From the Admin Interface, restart the MC Sync tasks.	
3	Ensure the MC synch task is complete on MC01 before proceeding.	
4	Submit a Preprocessor task to run on each MC. The Workflow FSS Mapping on each system may need rebuilding.	Rebuilding the local datastores takes approximately an hour.
5	Restart any suspended processes.	
6	Repeat the above steps on CHPS 4 and 7.	

Rebuilding the FSS Local Datastore

Objective: Use the following procedure to remove the old local datastore and fix the workflow completion problems.

STEP 1 Remove the Old Local Datastore

Step	Action	Notes
1	From a terminal window on an AWIPS workstation, enter: **ssh fews@chps3** password: **<password>**	Repeat on CHPS 6/ 9.
2	Type the following command to stop the processes on the server. **cd /awips/chps_local/fss/xxrfc/FSS00/mcproxy/** **./mcproxy.sh stop**	Perform these steps on each FSS. Where **xxrfc** is the ID of your RFC.
3	Navigate to the directory containing the local datastore. **cd /awips/chps_local/fss/xxrfc/FSS00/FewsShell/xxrfc/localDataStore**	Perform these steps on the rest of the FSSs.
4	Delete the files in the **localDataStore** directory. **rm *.cbin**	DO NOT delete the **.fdb** file!
5	Type the following command to start the server. **cd /awips/chps_local/fss/xxrfc/FSS00/mcproxy/** **./mcproxy.sh start**	Repeat on the rest of the FSSs.

STEP 2 Repopulate the Local Datastore

Step	Action	Notes
1	Open the Administration Interface (AI).	
2	Click the “Workflows and FSSs” link in the left menu.	
3	Select “Workflow FSS Mappings” from the list.	
4	Click the “Create New Workflow FSS Mapping” link above the table.	
5	From the pull down menu, select a workflow ID.	
6	From the list, select a FSS ID (i.e. synchronisation, FSS00, etc.) for a small common job (i.e. Import Mods, ImportScalars).	Do NOT click “Map”, it will map all unmapped workflows to “all”.
7	Click the “Submit” button.	The local datastore will repopulate in approximately one hour.

Accessing the Administration Interface

Objective: Use the following procedure to open the Administration Interface (AI) to view a status "snapshot" of CHPS.

STEP 1 Open a Firefox Session

Step	Action	Notes
1	Log into AWIPS.	Log in as any user.
2	Left click in the background.	
3	Select "Firefox Web Browser" from the menu.	

STEP 2 Open the Tomcat Web Application Manager Interface

Step	Action	Notes
1	In the address bar, enter the URL for the Tomcat Manager for the MC. For example, **http://chps1:8080.**	Or enter in the IP address of the server.
2	Click the "Tomcat Manager" link in the left-hand menu.	
3	Enter the username and password in the dialog box.	Tomcat Web Application Manager opens.

STEP 3 Open the Administration Interface

Step	Action	Notes
1	From the column marked "Path", select the link to the M. For example, /fewsadmin_xxxrfcmc90.	
2	Type in the username and password.	The AI opens.

Managing User Accounts

Objective: Use the following procedures to create Administration Interface user accounts, edit existing ones, or delete accounts.

Create a User Account

Step	Action	Notes
1	Click “User Administration” link from the left menu.	
2	Click the “Add User” link.	
3	In the data entry fields, enter the following: • unique user ID • AWIPS user name • password (and confirm password)	
4	Click the “Submit” button.	

Modify an Existing Account

Step	Action	Notes
1	Click “User Administration” link from the left menu.	
2	Click the “Modify” link in the “Action” column of the “User” table.	
3	Make changes to the information in the data entry fields as needed.	
4	Click the “Submit” button.	

Delete an Account

Step	Action	Notes
1	Click “User Administration”.	
2	Click the “Delete” link in the “Action” column.	
3	Click the “Delete” button.	The user no longer appears in the table.

Viewing/Downloading/Managing/Saving Log Files

Objective: Use the following procedures to view of download log files. Remember, these logs are **only** for the MC into which you are logged. **Note:** the date format is DD/MM/YY.

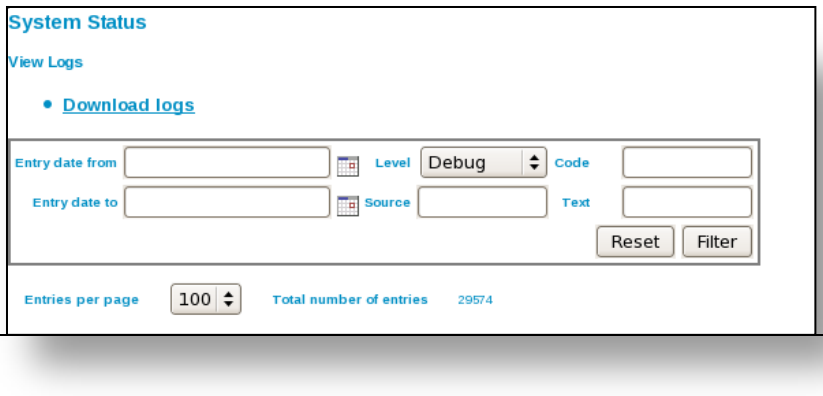
View Logfiles

Step	Action	Notes
1	Open the Administration Interface.	
2	From the left hand menu, select "System Status".	
3	From the sub menu, select "View Logs".	The default sort order is chronological.
4	Click the link from the "text" column for more information on the debug, warning, or error message.	

Sort Logfiles

Step	Action	Notes
1	Open the Administration Interface.	
2	From the left hand menu, select "System Status".	
3	From the sub menu, select "View Logs".	The default sort order is chronological.
4	Left click a table heading to sort the log entries.	

Filter Logfiles

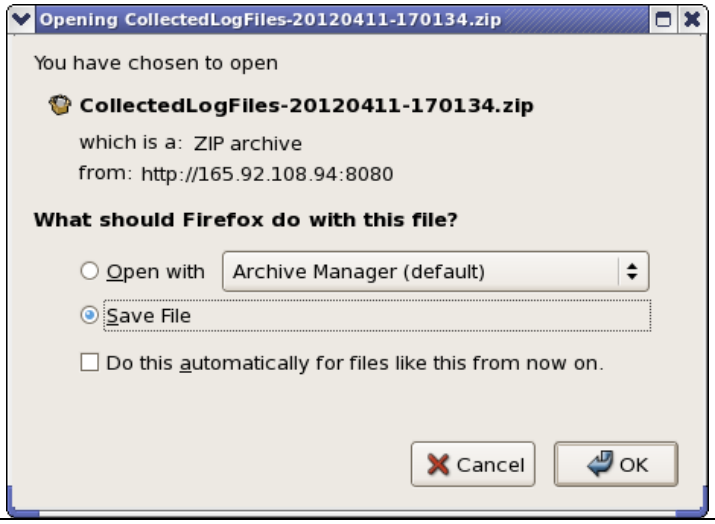
Step	Action	Notes
1	Open the Administration Interface.	
2	From the left hand menu, select "System Status".	
3	From the sub menu, select "View Logs".	The default sort order is chronological.
4	Fill in the data entry fields and/or select items from the pull down menus to filter the data. 	

Download Log.txt

Step	Action	Notes
1	From the left hand menu, select “System Status”.	You cannot save a filtered list.
2	From the sub menu, select “View Logs”.	
3	Click “Download logs”.	“Opening log.txt” dialog opens.
4	Select the “Open with” radio button and choose how to open the file (as a text file is the default).	
5	To save the file: 1. Click the “Save File” radio button. 2. Click the “OK” button. 3. Enter a file name in the dialog box. 4. Save in the directories listed in the pull down menu or click “Browse for Other Folders”. 5. Click the “Save” button.	

Use the LogCollector

The LogCollector gathers logs from all of the FSSs and MCs and stores them in a zip directory.

Step	Action	Notes
1	From the left hand menu, select “System Status”.	
2	From the sub menu, select “Collect System LogFiles”.	
3	Click the “Download” button.	The “Opening Collected LogFiles” dialog opens.
4	To view the files: Select the “Open With” radio button and use the Archive Manager to view the files.	
5	To save the files: 1. Click the “Save File” radio button. 2. Click the “OK” button. 3. Enter a file name in the dialog box. 4. Save in the directories listed in the pull down menu or click “Browse for Other Folders”. 5. Click the “Save” button. 	

Manage Logfiles

AI users can manually purge files based on log attributes.

Step	Action	Notes
1	From the left hand menu, select “System Status”.	
2	From the sub menu, select “Log Manager”.	
3a	To purge files based on severity level: 1. Choose “Level” from the “Purge entries based on” pull down menu. 2. Click the “Confirm” button to confirm the deletion of log entries.	
3b	To purge files based on date: 1. Choose “Date” from the “Purge entries based on” pull down menu. 2. In the data entry field, input the date in DD/MM/YYYY format. 3. Click the “Confirm” button to confirm the deletion of log entries. 	

Scheduling Forecast Tasks

Objective: Use the following procedures for scheduling forecast tasks. For one or two tasks, or for initial task setup, use the "Schedule Through GUI" option. Use the "Upload Schedule from File" to load a file of previously saved tasks.

Schedule Tasks

Step	Action	Notes
1	From the Administration Interface, click "Forecast Tasks" in the left hand menu.	
2	Click "Scheduled Tasks".	A table of tasks opens.
3	Use one of the following methods for scheduling tasks.	

Schedule Through GUI		Upload Schedule from File	
1	Click "Schedule New Task".	1	Click "Upload Task(s) from File".
2	In the data entry fields, enter a description of the task and an optional tag.	2	Click in the data entry field OR click "Browse" to open a "File Upload" GUI.
3	Choose a Workflow ID from the drop down menu.	3	Select a file from the list.
4	Select a "What-if-Scenario" if applicable.	4	Click the "Submit" button.
5	Click the calendar icon to select a date or enter a date in the data entry field in dd/mm/yyyy format.		
6	Click the clock icon to select a UTC time or enter a time in the data entry field in hh:mm format.		
7	Select an interval (seconds through weeks) from the drop down menu and enter a value for the interval in the data entry field. Leave blank to run the task only once!		
8	Apply a time shift (optional) using the same method as the time entry.		
9	Enter an expiry time using the same method as the time entry.		
10	Use the radio button to set a task priority.		
11	Check the box for the task to run on failover.		
12	Check the box to approve the task.		
13	Click the "Submit" button.		

Download Scheduled Tasks

Note: The procedure to upload tasks from a file is shorter, so after scheduling tasks through the GUI, use the following procedure to save a file with the tasks. This makes reschedule tasks easier, since all of the definitions are in the file.

Step	Action	Notes
1	From the Administration Interface, click “Forecast Tasks” in the left hand menu.	
2	Click “Scheduled Tasks”.	
3	Click “Download All Scheduled Tasks”.	
4	Click the “OK” button.	
5	In the dialog box, select the “Save” radio button.	
6	In the data entry field, change the default file name (optional).	
7	Navigate to the directory where the file will be saved.	
8	Click the “Save” button.	

Suspend Tasks

Step	Action	Notes
1	From the Administration Interface, click “Forecast Tasks” in the left hand menu.	
2	Click “Scheduled Tasks”.	
3	Click the “Suspend” link corresponding to the task to suspend (one task at time) OR Click the checkbox(es) in the “Actions” column and click the “Suspend” button at the bottom of the page.	

Resume Tasks

Step	Action	Notes
1	From the Administration Interface, click “Forecast Tasks” in the left hand menu.	
2	Click “Scheduled Tasks”.	
3	Click the “Resume” link corresponding to the task to resume (one task at time) OR Click the checkbox(es) in the “Actions” column and click the “Resume” button.	

Editing and Mapping Workflows

Objective: Map workflows (tasks used in CHPS to import and export data, run forecasts, and synchronize the databases) using the following instructions.

Map a Workflow

Reminder: An unmapped workflow will not complete.

Step	Action	Notes
1	Open the Administration Interface.	
2	Click the "Workflows and FSSs" link in the left menu.	
3	Select "Workflow FSS Mappings" from the list.	
4	Click the "Create New Workflow FSS Mapping" link above the table.	
5	From the pull down menu, select a workflow ID.	
6	From the list, select a FSS ID (i.e. synchronisation, FSS00, etc.).	Do NOT click "Map", it will map all unmapped workflows to "all".
7	Click the "Submit" button.	

Edit a Workflow

Use this procedure to change attributes of the workflow mapping, but do not need to remove the mapping.

Step	Action	Notes
1	Open the Administration Interface.	
2	Click the "Workflows and FSSs" link from the left menu.	
3	Select "Workflow FSS Mappings" from the list.	
4	From the table, click the "Edit" link to edit any attribute of the workflow mapping.	

Delete a Workflow

Use this procedure to remove unused workflows.

Step	Action	Notes
1	Open the Administration Interface.	
2	Click the "Workflows and FSSs" link in the left menu.	
3	Select "Workflow FSS Mappings" from the list.	
4	From the table, click the "Delete" link to remove the workflow mapping.	

Event Mapping

Objective: Use the following steps to map event actions (workflows triggered when a threshold is crossed).
Note: Keep in mind configuration changes are needed – this procedure only outlines the steps to **map** the Event-Action.

STEP 1 Open Administration Interface

Step	Action	Notes
1	Log into the Administration Interface.	
2	Click the "Workflows and FSSs" link.	
3	Select "Event and Action Configuration".	
4	From the "Upload New Action Configuration", choose a file containing Event Actions.	

STEP 2 Create Event Action Mapping

Step	Single Event	Step	Multiple Events
1	From "Workflows and FSSs", click "Event Action Mappings".	1	From "Workflows and FSSs", click "Event Action Mappings".
2	Select "Create New Event Action Mapping".	2	Select "Upload Multiple Event Action Mappings from File".
3	Enter an Event Code in the data entry field.	3	Enter a path and file name in the data entry field, OR click "Browse" to navigate to a file.
4	Select an Action Configuration ID from the drop down menu.	4	Click the "Submit" button.
5	Click the "Submit" button.		

Shutting Down and Starting UP CHPS Hardware and Processes

Objective: Shut down the CHPS hardware and processes.

Shut Down CHPS Processes

Step	Action	Notes
1	Open an AWIPS terminal window.	
2	**ssh fews@chps3** password: **<fews password>** **cd /awips/chps_local/fss/xxrfc/FSS00/mcproxy/** **./mcproxy.sh stop**	Where **xxrfc** is the ID for your RFC. Repeat for each FSS and on CHPS 6/9.
3	**ssh chps1** **cd /awips/chps_local/mc/mcs/xxrfcmc90** **mcstop**	Where **xxrfc** is the ID for your RFC. Repeat on CHPS 4/7.
4	**ssh root@chps1** password: **<root password>** **service jboss stop** **service tomcat stop**	Repeat on CHPS 4/7.
5	**ssh root@chps2** password: **<root password>** **service postgresql stop**	Repeat on CHPS 5/8.

Shut Down CHPS Hardware

Step	Action	Notes
1	Push the power button on the front of each server.	Power off the servers in the following order: 1, 3, 2, 4, 6, 5, 7, 9, 8.

Startup of Hardware and Processes

Objective: Start the CHPS hardware and processes.

Restart CHPS Hardware

Step	Action	Notes
1	Push the power button on the front of each server.	Power up the servers in the following order: 2, 1, 3, 5, 4, 6, 8, 7, 9.

Restart CHPS Processes

Step	Action	Notes
1	Open an AWIPS terminal window.	
2	**ssh root@chps1** password: **<root password>** **service jboss stop** **service tomcat stop**	Repeat on CHPS 4/7.
3	**ssh root@chps2** password: **<root password>** **service postgresql restart**	Repeat on CHPS 5/8.
4	**ssh root@chps1** password: **<root password>** **service jboss start** **service tomcat start**	Repeat on CHPS 4/7.
5	**ssh fews@chps1** password: **<fews password>** **cd /awips/chps_local/mc/mcs/xxrfcmc90** **mcstart**	Where **xxrfc** is the ID for your RFC. Repeat for each FSS and on CHPS 4/6.
6	**ssh fews@chps3** password: **<fews password>** **cd /awips/chps_local/fss/xxrfc/FSS00/mcproxy/** **./mcproxy.sh start**	Where **xxrfc** is the ID for your RFC. Repeat for each FSS and on CHPS 6/9.

Starting and Stopping Pi-Service on FSS

Objective: Stop and start Pi-Service.

Stop Pi-Service on FSS

Step	Action	Notes
1	Log on to CHPS 3 as user "fews". **ssh fews@chps3** password: **<fews password>**	Substitute CHPS 6/9 where applicable.
2	Navigate to the Pi-Service directory. **cd /awips/chps_local/fewspiservices**	
3	Type the following command to stop the Pi-Service. **./fews_piservice.sh xxrfc_pi stop**	

Start Pi-Service on FSS

Step	Action	Notes
1	Log on to CHPS 3 as user "fews". **ssh fews@chps3** password: **<fews password>**	Substitute CHPS 6/9 where applicable.
2	Navigate to the Pi-Service directory. **cd /awips/chps_local/fewspiservices**	
3	Type the following command to start the Pi-Service. **./fews_piservice.sh xxrfc_pi start**	

Troubleshooting Pi-Service

Objective: Use the following steps to troubleshoot in the event Pi-Service stops performing correctly.

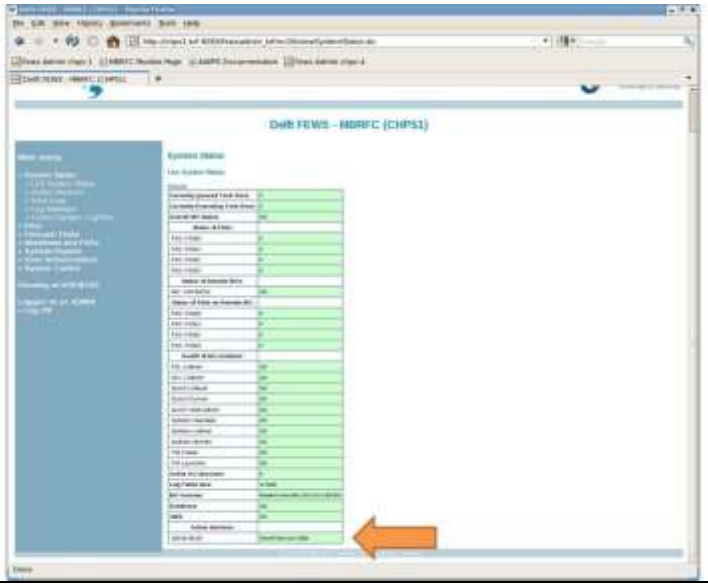
STEP 1 Open a Firefox Session

Step	Action	Notes
1	Log into AWIPS.	Log in as any user.
2	Left click in the background.	
3	Select “Firefox Web Browser” from the menu.	The Tomcat Manager page opens.

STEP 2 Open the Tomcat Web Application Manager Interface

Step	Action	Notes
1	In the address bar, enter the URL for the MC.	Or enter in the IP address of the MC.
2	Click the “Tomcat Manager” link in the left-hand menu.	
3	Enter the username and password in the dialog box.	Tomcat Web Application Manager opens.

STEP 3 Open the Administration Interface

Step	Action	Notes
1	From the column marked “Path”, select the link to the MC.	For example, /fewsadmin_xxxrfcmc90
2	Type in the username and password.	The Administration Interface opens.
3	Check Pi-Service status. 	

STEP 4 Check Running Processes

Step	Action	Notes
1	Log on to CHPS data server. **ssh fews@chps3** **enter password**	
2	Search running processes. **ps -ef |grep java |grep fews_piservice**	If it is not running, try to start the process.
3	Go to the Pi-Service directory and start process. **cd /awips/chps_local/fewspiservices** **./fews_piservice.sh xxrfc_pi start**	If process is running, but still not working, check configuration files for errors.

STEP 5 Check Configuration Files

Step	Action	Notes
1	Check main Configuration files. **cd /awips/chps_share/Config/PiServiceConfigFiles**	Ensure the ports and path are correct.
2	Check files in the OC configuration directory. **cd /awips/chps_share/oc/fews/xxrfc_oc/Config/PiServiceConfigFiles**	There will be several configuration XML files. Validate changes if modifications were made. There are also files in the Config directories of each FSS.

Checking/Changing Memory Settings

Objective: Increase system performance by changing memory allocation.

STEP 1 Check/Change OC Memory Settings

Step	Action	Notes
1	Log into an AWIPS workstation as user "fews".	
2	Navigate to: **/awips/chps_share/oc/<user>/bin**	
3	Open the **fews.sh** file using a preferred editor (Vi, gedit, etc.) and note the memory settings.	
4	Navigate to: **/awips/chps_share/oc/<user>/xxrfc**	Where **xxrfc** is the ID for your office.
5	Open the **oc_global.properties** file and edit the timeSeriesDefaultCacheSize as needed.	

STEP 2 Check/Change FSS Memory Settings

Step	Action	Notes
1	Log into CHPS3. **ssh user@chps3** Password: **<Password>**	Check settings on CHPS 6/9.
2	Navigate to: **/awips/chps_local/fss/<xxrfc>/FSS##/mcproxy**	
3	Open the **fews.master.mcproxy.conf** file and edit the memory settings as needed.	Recommended settings: 512 MB – 1024 MB
4	Navigate to: **/awips/chps_local/fss/xxrfc/FSS##/FewsShell/xxrfc**	
5	Open the **fss_global.properties** file and edit the timeSeriesDefaultCacheSize as needed.	

STEP 3 Check/Change MCProxy Memory Settings

Step	Action	Notes
1	Log into CHPS 3. **ssh user@chps3** Password: **<Password>**	Check settings on CHPS 6/9.
2	Navigate to: **/awips/chps_local/fss/<xxrfc>/FSS##/mcproxy**	
3	Open the **mcproxy.sh** file and edit the memory settings as needed.	Recommended settings: 512 MB

STEP 4 Check/Change MC Memory Settings

Step	Action	Notes
1	Log onto CHPS 1. **ssh user@chps1** **Enter Password**	Check settings on CHPS 4/7.
2	Navigate to: **/awips/chps_local/mc/mcs/<rfc>**	
3	Open the **fews.master.mc.conf** file and edit memory settings as needed.	Recommended settings: OCListener:512-1024 MB FSListener:512-1024 MB Synchronization:512-1024 MB Task Manager:64-128 MB RemoteProxy:64-128 MB

STEP 5 Check/Change System Monitor Memory Settings

Step	Action	Notes
1	Log onto CHPS 1.	Check settings on CHPS 4/7.
2	Navigate to: **/awips/chps_local/mc/mcs/<rfc>**	
3	Open the **setenv.sh** file and edit as needed.	Recommended setting: 64-128 MB

MC-MC Synchronization

Successful failover depends on correct set up of the MCs. Follow the instructions below to synch MCs. **Note:** To re-install one of the systems, see the installation instructions on the RFC Support Page.

STEP 1 Set Up MCs

Step	Action	Notes
1	Set up the Primary Client server.	
2	Set up the Secondary Client server.	

STEP 2 Edit Config File

Step	Action	Notes
1	Navigate to the following directory: **/awips/chps_local/mc/mcs/<xxrfc>**	
	Open the **fews.master.mc.conf** for editing using a preferred editor (Vi, gedit, etc.).	
2	Confirm or add the following: In the "monitor" section: <component cptid="RemoteProxy.@@REMOTE_MCID@@" maxsilencetime="60" process="RemoteProxy_@@REMOTE_MCID@@"/> <process name="RemoteProxy_@@REMOTE_MCID@@" classname="nl.wldelft.fews.master.mc.systemmonitor.main.RemoteQueueProxy" jvmargs="-Xmx64M" appargs="@@REMOTE_MCID@@" canstop="true"/> Below the "rollingbarrel" section: <remotemc mcid="@@REMOTE_MCID@@"> <jndicontext factory="org.jnp.interfaces.NamingContextFactory" provider="jnp://@@REMOTE_APP_SERVER@@:1099" prefixes="org.jboss.naming:org.jboss.interfaces"/> <queueconnection> <factory jndi="ConnectionFactory"/> </queueconnection> <queue> <root jndi="@@REMOTE_ROOT_JNDI@@"/> <sysmonrequest jndi="External/JMSQueue/SysMonIncoming" timeout="10"/> <synchrequest jndi="External/JMSQueue/SynchIncoming" timeout="240"/> </queue> </remotemc>	Replace "@@REMOTE_MCID@@" with the name of the backup MC. Replace "@@REMOTE_APP_SERVER@"@ with the name of the server which runs JBoss (e.g. chps4-tar) Replace "@@REMOTE_ROOT_JNDI@@" with the content of the <queue><root jndi="…"> section. (e.g. NERFC would be "/nws/NERFC/MC01/")
3	Repeat these additions for each remote MC.	

STEP 3 Schedule MC-MC Tasks on Each MC

Step	Action	Notes
1	Open Admin Interface.	MC Synch workflows should be automatically mapped.
2	Click the “Forecast Tasks” link.	
3	Select “Scheduled Tasks”.	
4	Click “Schedule New Task”.	Keep the default value.
5	Select appropriate MCID from drop down box.	
6	Give appropriate synch level.	Avoid duplicate data!
7	Schedule MC-MC tasks on each MC for each remote MC.	

STEP 4 Configure MC Failover Priorities

Step	Action	Notes
1	Open the Admin Interface.	
2	Select “System Control”.	
3	Click “Master Controller Failover Priorities”.	
4	Select “Add a Master Controller to Failover Priorities”.	
5	Assign priority to the Master Controllers.	The lower the integer, the higher the priority.

STEP 5 Reschedule Forecast Tasks to Run on Failover

Step	Action	Notes
1	Check the scheduled tasks on MC00.	
2	Ensure “run on failover” is checked for all tasks scheduled to run on failover.	Confirm by selecting “edit task”.
3	Check all workflow-FSS mappings are correctly configured for each MC.	

MC Failover Instructions for MC00

Objective: Failover to the secondary Master Controller during software installations or if there are problems with the primary Master Controller.

STEP 1 Open a Firefox Session

Step	Action	Notes
1	Log into AWIPS.	Log in as any user.
2	Left click in the background.	
3	Select “Firefox Web Browser” from the menu.	Tomcat Manager opens.

STEP 2 Open the Tomcat Web Application Manager Interface

Step	Action	Notes
1	In the address bar, enter the URL for the MC.	Or enter in the IP address of the MC.
2	Click the “Tomcat Manager” link in the left-hand menu.	
3	Enter the username and password in the dialog box.	The Tomcat Web Application Manager page opens.

STEP 3 Open the Administration Interface

Step	Action	Notes
1	From the column marked “Path”, select the link to the MC.	For example, /fewsadmin_xxxrfcmc90
2	Type in the username and password.	The Administration Interface opens.

STEP 4 Navigate to MC Fail Section

Step	Action	Notes
1	Under “Main Menu” select “System Control”.	
2	The “System Control/MC Failed Status” page will open.	
3	Find the “Set MC status to failed” section.	
4	Click the “Fail” link.	

STEP 5 Confirm Failover

Step	Action	Notes
1	Select “Fail”.	Dialog opens “Please confirm failover of the MC”.
2	Choose the “Confirm” option.	
3	The system fails over to MC01.	

MC Restore Instructions for MC00

Objective: Restore the primary Master Controller after a failover.

STEP 1 Open a Firefox Session

Step	Action	Notes
1	Log into AWIPS.	Log in as any user.
2	Left click in the background.	
3	Select “Firefox Web Browser” from the menu.	Tomcat Manager opens.

STEP 2 Open the Tomcat Web Application Manager Interface

Step	Action	Notes
1	In the address bar, enter the URL for the MC.	Or enter in the IP address of the MC.
2	Click the “Tomcat Manager” link in the left-hand menu.	
3	Enter the username and password in the dialog box.	The Tomcat Web Application Manager page opens.

STEP 3 Open the Administration Interface

Step	Action	Notes
1	From the column marked “Path”, select the link to the MC.	For example, /fewsadmin_xxxrfcmc90
2	Type in the username and password.	The Administration Interface opens.

STEP 4 Navigate to MC Fail Section

Step	Action	Notes
1	Under “Main Menu” select “System Control”.	
2	The “System Control/MC Failed Status” page will open.	
3	Find the “Restore MC status from failed” section.	
4	Click the “Restore” link.	

STEP 5 Confirm Restore

Step	Action	Notes
1	Select “Restore”.	Dialog opens “Please confirm restore of the MC”.
2	Choose the “Confirm” option.	
3	The system restores to MC00.	

Connecting DbVis to Central Database

Objective: Set up a PostgreSQL database connection to the Central Database. **Note**: DbVis is pre-loaded with drivers to connect to PostgreSQL databases.

Connect Using Connection Wizard

Step	Action	Notes
1	As user "fews," launch DbVis from an AWIPS workstation. **cd /awips/chps_share/DbVisualizer-6.5.1** **./dbvis**	
2	Click the "Create New Database Connection" icon located in the button bar. It is a stack of disks with a green plus sign: 	A wizard (or prompt for one) opens automatically if no databases are connected.
3	Type a descriptive name for the database in the first wizard window. Suggested names: CentralDatabaseMC00 or abrfcdb90, etc.	
4	Select "PostgreSQL".	If there is not a green check mark, a driver is missing.
5	Enter the connection details. **Server:chps2** **Port: 5432** **Database: Database name** **UserID: Account used to log into Central Database** **Password: Central database password**	Do NOT include a slash (/) in front of the database URL because one is entered automatically.
6	Click "Test Connection".	
7	If the prompt does not indicate a successful connection, go back and try again, or click "Finish" and evaluate the connection in the Connection Window (Figure 1).	

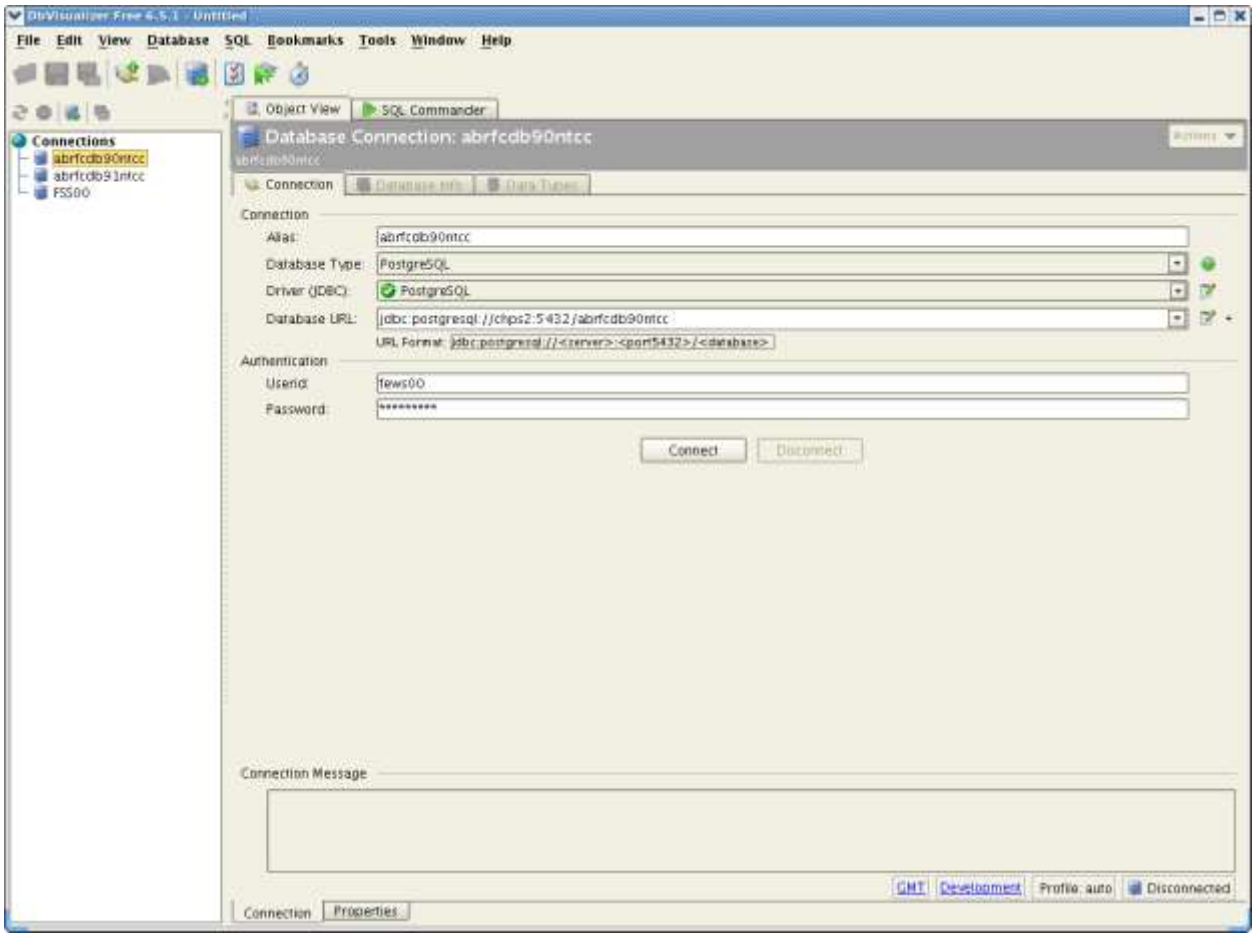

File Edit View Database SQL Bookmarks Tools Window Help
Object View
SQL Commander
Connections
abrfcdb90ntcc
abrfcdb91ntcc
FSS00
Database Connection: abrfcdb90ntcc
Connection
Alias:
abrfcdb90ntcc
Database Type:
PostgreSQL
Driver (JDBC):
PostgreSQL
Database URL:
jdbc:postgresql://chps2:5432/abrfcdb90ntcc
Authentication
Userid:
fews00
Password:
Connect
Disconnect
Connection Message
GMT
Development
Profile: auto
Disconnected
Connection
Properties

Figure 1.

Connecting DbVis to an FSS Firebird Database

Objective: Monitor the data in the FSS local datastores by connecting to the databases using DbVis. FSS local datastores are FirebirdSQL databases, and connecting requires a few extra steps.

STEP 1 Create Firebird Directory

Step	Action	Notes
1	From a terminal window on an AWIPS workstation, enter **ssh fews@chps3** Password: **<password>**	CHPS 3 is an example. Perform these steps on CHPS 6/9.
2	Type the following command to change to the DbVis directory. **cd /awips/chps_share/DbVisualizer-6.5.1/jdbc**	The DbVis directory may not have the version number in the name.
3	Create a Firebird directory. **mkdir firebird**	
4	Change to the new Firebird directory. **cd firebird**	

STEP 2 Copy Binary Files

Step	Action	Notes
1	Copy the driver .jar file with the following command. **cp /awips/chps_share/install/<install_date>/delft_fews_binaries/bin/jaybird-2.1.6p.jar .**	Use the binaries from the latest build.
2	Copy the Firebird files. **cp /awips/chps_share/install/<install_date>/delft_fews_binaries/firebird/* .**	This should yield two files.
3	Copy and unzip the security file. **cp /awips/chps_share/install/<install_date>/delft_fews_binaries/security/* .** **gunzip security2.fdb.gz**	
4	Copy the library files. **cp /awips/chps_share/install/<install_date>/delft_fews_binaries/bin/libf* .** **cp /awips/chps_share/install/<install_date>/delft_fews_binaries/bin/libib* .** **cp /awips/chps_share/install/<install_date>/delft_fews_binaries/bin/libicu* .** **cp /awips/chps_share/install/<install_date>/delft_fews_binaries/bin/libjay* .**	

STEP 3 Make Symbolic Links

Step	Action	Notes
1	Make symbolic links. **ln –s libfbembed.so.2.1 libfbembed.so** **ln –s libicudata.so.30 libicudata.so** **ln –s libicui18n.so.30 libicui18n.so** **ln –s libicuuc.so.30 libicuuc.so**	

STEP 4 Copy Connector File

Step	Action	Notes
1	Change to the lib directory. **cd ../../lib**	
2	Copy the **Connector.jar** file. **cp /awips/chps_share/install/connector.jar .**	

STEP 5 Update Java

Step	Action	Notes
1	Find out where Java link points to with this command. **which java**	This should return: **/usr/local/java /bin/java**
2	Find out what version is linked. **ls -al /usr/local/java**	If it is jre-1.5.0_04, proceed to next steps. If not, go to STEP 6.
3	Switch to user "root". **su –** password: **<root password>**	
4	Change to the Java directory. **cd /usr/local**	
5	Remove Java. **rm java**	
6	Create new Java symbolic link. **ln -s jre-1.6.0_13 java**	
7	Exit as root. **exit**	

STEP 6 Write Firebird Script

Step	Action	Notes
1	Change to the DbVis directory. **cd /awips/chps_share/DbVisualizer-6.5.1**	
2	Edit the script in vi. **vi edit_firebird.sh**	

3	Type the following 11 lines exactly as shown:
	
	`#!/bin/bash`
	
	`# Point $DBVIS_DIR to the directory where DbVisualizer is installed`
	`DBVIS_DIR=/awips/chps_share/DbVisualizer`
	
	`# Set the two environmental variables`
	`export LD_LIBRARY_PATH=$LD_LIBRARY_PATH:$DBVIS_DIR/jdbc/firebird`
	`export FIREBIRD=$DBVIS_DIR/jdbc/firebird`
	
	`echo $LD_LIBRARY_PATH`
	`echo $FIREBIRD`
	`echo $DBVIS_DIR`
	
	`# Start DbVisualizer`
	`$DBVIS_DIR/dbvis $*`	

4	Change permissions. **chmod +x edit_firebird.sh**	This allows any execution of the script, which launches DbVis.

STEP 7 Set Up Connection in DbVis

Step	Action	Notes
1	Type the following command to launch DbVis. **./edit_firebird.sh**	
2	Click the "Create New Database Connection" icon located in the button bar. 	
3	In the Database Connection window, fill out the boxes as follows: Alias: **<Name the connection - include the local datastore number>** Database Type: **Generic** Driver (JDBC): **Firebird** Database URL: **jdbc:firebirdsql:embedded:/awips/chps_local/<all the way down to local.fdb>**	Click the "No wizard" option to open the database connection.
4	Enter database password in the "Authentication" box: Userid: **sysdba** Password: **masterkey**	This is the default userid and password.
5	Click the "Test Connection" button below.	Returns no errors if successful.

STEP 8 Save Settings (optional)

Step	Action	Notes
1	Click the "File" menu and select "Export Settings".	Saves as a .jar file.
2	Select the location to save the file. Next time DbVis is launched, select "Import" from the "File" menu.	Most save it in the DbVis directory.

Connecting DbVis to an OC Firebird Database

Objective: Set up a connection in DbVis to monitor data coming into the OC from the local datastore.

Note: The procedure below assumes the Firebird files were copied and a script was written. If not, please complete the "Connecting DbVis to FSS Firebird Database" job sheet before continuing.

STEP 1 Confirm Local Datastore Population

Step	Action	Notes
1	As user "fews" on AWIPS, navigate to the following directory: **cd /awips/chps_share/oc/<user>/xxrfc/localDataStore**	Where **xxrfc** is the ID for your RFC.
2	Check for database: **identify local.fdb**	If **local.fdb** does not exist, go to Step 2. If it does, go to Step 3.

STEP 2 Repopulate the Local Datastore (optional)

Step	Action	Notes
1	If there is not a **local.fdb** file in the datastore, open CHPS. **./bin/fews.sh xxrfc_oc &**	Where **xxrfc** is the ID for your RFC.
2	Click through the workflows to repopulate local datastore.	
3	Repeat Step 1 to confirm local.fdb exists in local datastore.	

STEP 3 Connect DbVis to the OC Local Datastore

Step	Action	Notes
1	From a terminal window on AWIPS, enter the following to launch DbVis. **cd /awips/chps_share/DbVisualizer-6.5.1** **./edit_firebird.sh**	
2	Click the "Create New Database Connection" icon located in the button bar. It looks like a stack of disks with a green plus sign: 	The database connection wizard launches automatically if no database connections exist.
3	Choose the option "no wizard" in the dialog box.	
4	Enter the following information in the connection window: (Figure 2) **Alias: Name of the OC Datastore (e.g. OC local datastore)** **Database Type: Generic** **Database URL:** **jdbc:firebirdsql:embedded:/awips/chps_share/oc/<user>/<xxrfc_oc>/localDataStore/local.fdb**	The directory structure may be different. Make sure the path ends at the local.fdb file for the OC user application directory.
5	Enter the UserID and Password in the Authentication Section: UserID: **sysdba** Password: **password**	Default UserID used in the command.
6	Click the "Connect" button. If there are no errors, the database connection is ready to use.	

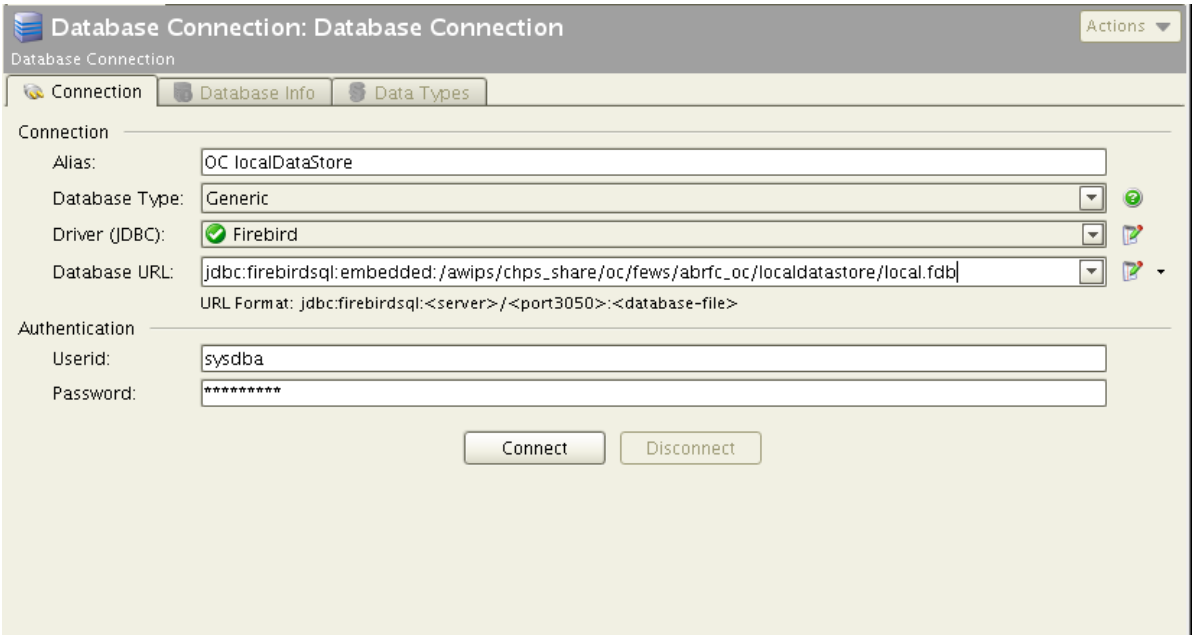


Figure 2.

Reporting Problems on FogBugz

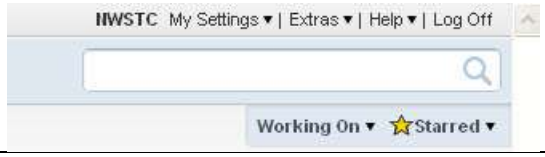
Objective: Report issues on the FogBugz web site, providing as much pertinent information as possible.

STEP 1 Log On to the FogBugz Website

Step	Action	Notes
1	From an internet browser, go to **Schuylkill.nws.noaa.gov:7069**	If the page does not load, send it again.
2	Log in using the RFC username and password. 	Box is in the upper right corner.

STEP 2 Search for Relevant Cases

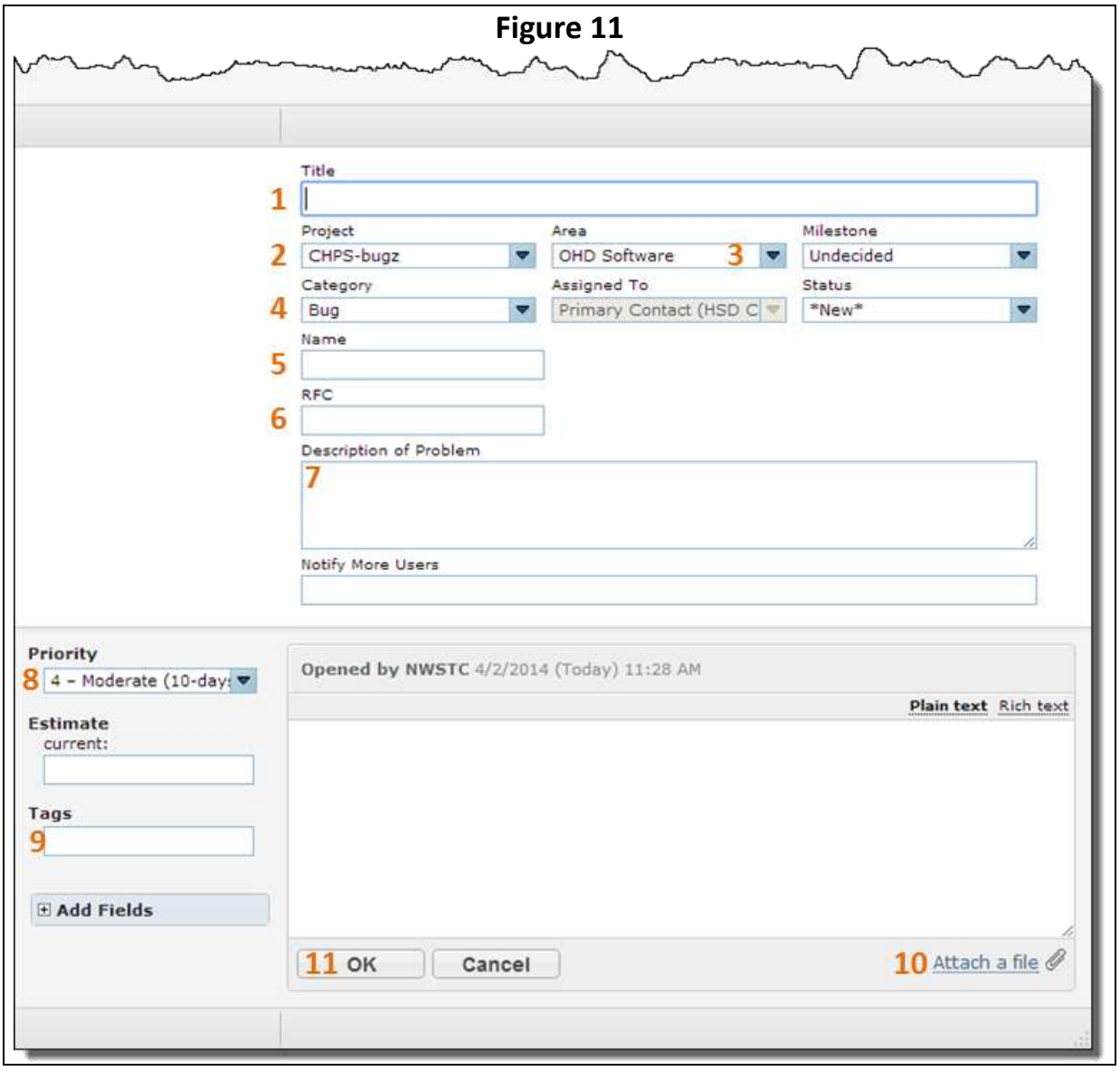
Note: In Internet Explorer, the search function only works in Compatibility mode.

Step	Action	Notes
1	Type a keyword associated with the topic/problem in the upper right search box. 	Documents will be listed first, then cases.
2	If a case is located, look through the status to see if it is still in progress or has been solved. Also, check the notes in the case.	
3	Track the progress of cases similar to the problems at your RFC by clicking the **Subscribe** button on the left side. 	
4	If the search yields no similar cases, add a case.	

STEP 3 Submit a New Case

Step	Action	Notes
1	Click **New Case** on the top navigation bar.	
2	Name the case the main topic of the problem.	Labeled **1** on Figure 11.
3	Select **CHPS-bugz** in the **Project** drop down menu.	Labeled **2** on Figure 11.
4	Select the area relating to the issue.	Labeled **3** on Figure 11.
5	Choose a category.	Labeled **4** on Figure 11.
6	Enter your name.	Labeled **5** on Figure 11.
7	Enter your RFC ID.	Labeled **6** on Figure 11.
8	Describe the issue, in depth. Make sure to note where, when, how, what directories or files are involved, and its impact.	Labeled **7** on Figure 11.
9	Set a priority.	Labeled **8** on Figure 11.
10	Make sure to include tags for easier searching.	Labeled **9** on Figure 11.
11	Change the priority, add more users, and attach a file.	Labeled **10** on Figure 11.
12	Click **OK**.	Labeled **11** on Figure 11.

Figure 11


Title
1
Project
2
CHPS-bugz
Area
OHD Software
3
Milestone
Undecided
Category
4
Bug
Assigned To
Primary Contact (HSD C
Status
New
Name
5
RFC
6
Description of Problem
7
Notify More Users
Priority
8
4 – Moderate (10-day
Estimate
current:
Tags
9
Add Fields
Opened by NWSTC 4/2/2014 (Today) 11:28 AM
Plain text
Rich text
11 OK
Cancel
10 Attach a file