



IMS Synapse Strong Ground Motion (SGM) Alarms

Ilana Loubser
Version 2014-05-30

Configuring SGM Alarm Levels

Step 1: Configuring SGM Alarm Levels

To edit the settings:

1. Activate *Advanced Configuration Editing* mode:
 1. Select **Tools** → **Options** from the menu bar
 2. Select the **Configs** → **Con Editor** tab
 3. Select the **Show advanced config editor options...** check box
2. In the tree, expand the Synapse server node → network node → **System Settings** node
3. Expand the **Sites** node
4. Select the appropriate site node
5. In the properties window, select the **Advanced** tab

Properties	Regional	Errors	Filtering	Log	Advanced
Post-trigger length			750		
STA/LTA Trigger Ratio			25		
STA/LTA Trigger Ratio			3.2		
STA/LTA Detrigger Ratio			19		
STA/LTA Detrigger Ratio			2.0		
STA Period			4		
STA Period [samples]			16		
LTA Period			9		
LTA Period [samples]			128000		
▼ Strong Ground Motion (SGM)					
SGM Alarm Number			4		
▼ X Component					
Enabled?			<input checked="" type="checkbox"/>		
Calibration Gain			1.0		
Calibration Offset			0.0		
SGM Enabled?			<input type="checkbox"/>		
SGM Level m/s			0.1		
▼ Y Component					
Enabled?			<input type="checkbox"/>		
Calibration Gain			1.0		
Calibration Offset			0.0		
SGM Enabled?			<input type="checkbox"/>		
SGM Level			0.1		
▼ Z Component					
Enabled?			<input checked="" type="checkbox"/>		
Calibration Gain			1.0		
Calibration Offset			0.0		
SGM Enabled?			<input checked="" type="checkbox"/>		
SGM Level			0.01		

6. Specify the following parameters:
 1. **SGM Alarm (Panel) Number**
 2. Enable the X, Y and/or Z-components and specify the SGM level. The default value for geophones is 0.1 m/s and for accelerometers 1.0 m/s²

Step 2: Configuring E-mail Notifications

Please refer to the **Issue Notifications** section in the Synapse Notifications document for more information on configuring SGM alarm notifications via e-mail.

http://software.imseismology.org/documents/SynapseNotifications_IMS-SYNAPSE-DOC-201307-ILv2.pdf

Testing SGM Alarm Popups and Sound

This function test the SGM Alarm popup and sound capabilities.

1. Select **Help** → **Test Synapse Alarm** from the menu bar
2. A warning will be displayed and an alarm sound will be activated
3. Select the **Confirm** button to acknowledge and close the alarm display window
4. Log in if prompted to do so

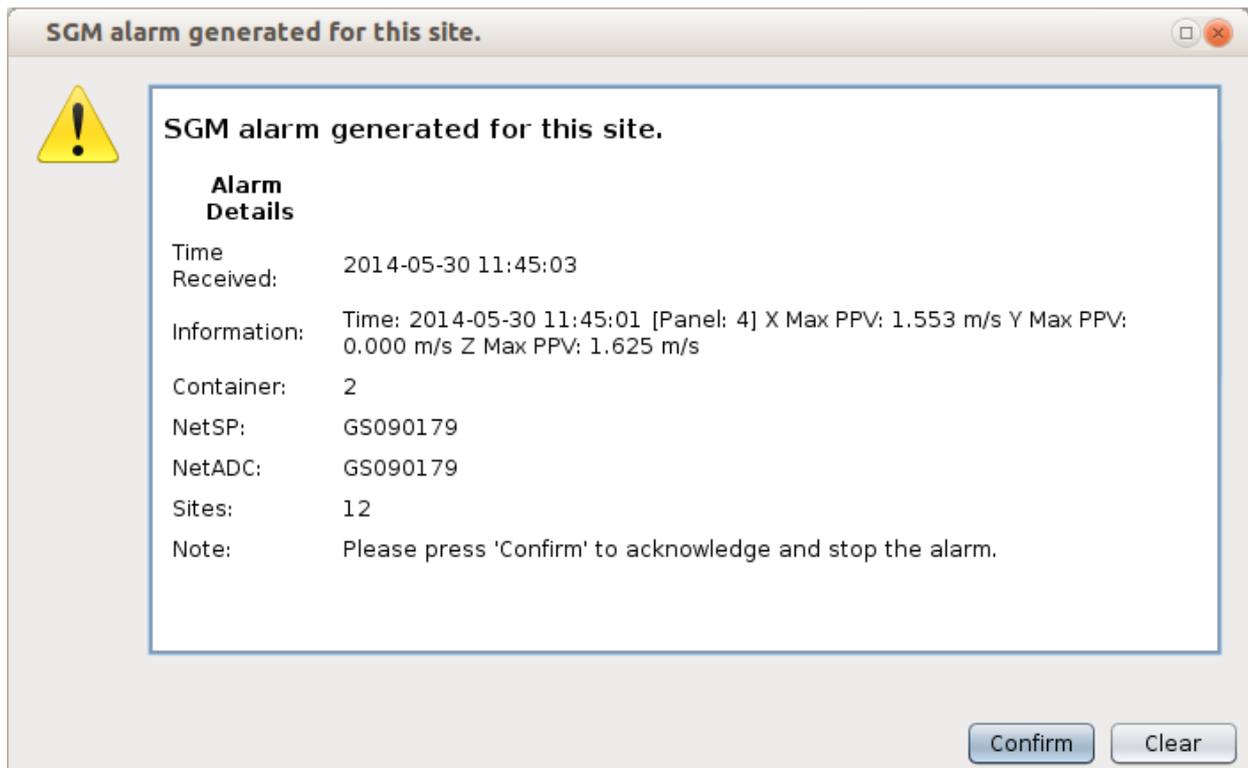
Testing SGM Alarm Panel

This function tests the SGM Alarm Panel by lighting up all the LED's.

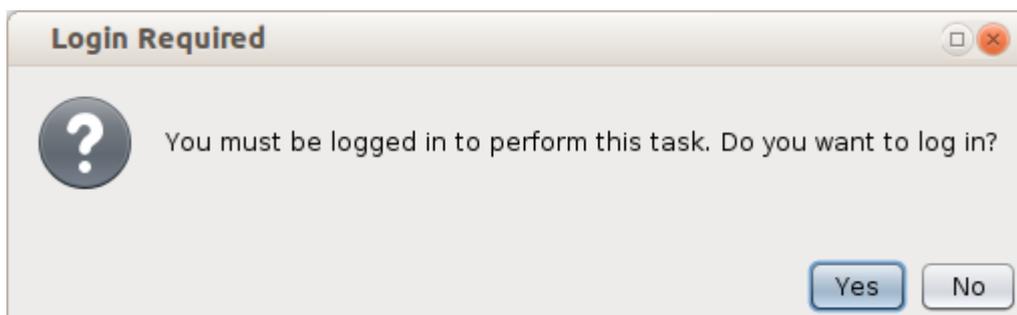
1. Select **Help** → **Test Synapse Alarm** from the menu bar
A warning will be displayed and an alarm sound will be activated

SGM Alarm Display

1. **Important Note:** To receive *live* SGM alarms, the Issue Monitor has to be open.
2. To open the monitor:
 1. In the tree, expand the Synapse server node → network node
 2. Double click on the **Issue Monitor** node to open the Issue Monitor
 3. If the Synapse Viewer was not running, or the Issue Monitor was not opened, all SGM alarms that occurred within the last hour will pop up and sound the alarm when the Issue Monitor is opened.
3. During a SGM alarm activation, a notification message will be displayed on the screen and an alarm will sound.



4. Once the alarm has been acknowledged, press the **Confirm** button to close the dialog and stop the alarm from sounding. If the user has not logged in, they will be prompted to do so.





5. SGM alarm details are listed in the Issue Monitor:
 1. Time the alarm was generated
 2. SGM alarm panel number that was activated
 3. Max PPV per component
 4. netSP, netADC and sensor triggered
 5. Site id
 6. Container

2014-05-29 18:44:55	SGM alarm generated for this site. (Time: 2014-05-29 18:44:53 [Panel: 4] X Max PPV: 0.152 m/s Y Max PPV: 0.000 m/s Z Max PPV: 0.173 m/s)	12
2014-05-29 18:44:41	SGM alarm generated for this site. (Time: 2014-05-29 18:44:24 [Panel: 4] X Max PPV: 1.540 m/s Y Max PPV: 0.000 m/s Z Max PPV: 1.187 m/s)	12
2014-05-29 18:42:09	SGM alarm generated for this site. (Time: 2014-05-29 18:42:11 [Panel: 4] X Max PPV: 1.246 m/s Y Max PPV: 0.000 m/s Z Max PPV: 0.728 m/s)	12

6. SGM alarms can be cleared (deleted) from the server by right-clicking on the issue and selecting the **Resolve Issue** option. This option is only available for Controllers and Administrative users.
7. The Synapse Server keeps a log of all SGM alarms that have been generated, confirmed or cleared/resolved within the past month.