

FAQ

Frequently Asked Questions Regarding ShakeCast

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Miscellaneous

1. Are there any licensing issues in using Google Maps API?
2. Is there a way for ShakeCast to effectively query the facility database and filter based on an attribute field?
3. I accidentally deleted the "scadmin" account. How do I fix this problem?
4. Is there a default username/password for the PHPmyadmin?
5. Are "HAZUS western US spectral shape factors", "mid-magnitude ranges", and "B-C soil amplification Factors" used in shaking and damage estimates for all regions or only those within the western US?
6. Is there a quick way to change the table header to read "Inspection Priority" instead of "Damage Level" in the upper right table?
7. How do I transfer all my data from a running ShakeCast server to another newly installed ShakeCast server?
8. Microsoft Forefront Endpoint Protection Client(FEP) / Microsoft Security Essentials(MSE) is installed and the "ShakeCast Notification Service" seems to randomly quit running.

Installation

1. Q. Why am I seeing a text file instead of the portal view after installing ShakeCast?

A. If you are seeing a plain text instead of rendered web page, this is a clear sign that the setup of PHP is likely at fault. It could be either that, during the installation, you did not select the Apache conf directory (default at "c:\program files\apache group\apache2\conf") or the required extensions correctly. To fix this problem, rerun the PHP installer (under "<shakecast>\Installer" directory), then reboot the computer to force reload of Apache with PHP.

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2. Q. Why do I need to install ShakeCast twice, using the REPAIR option the second time, to make the software functional?

A. I am aware that when the environment path (for Perl and other programs) is not refreshed during installation, the post-installation configuration scripts will fail and rerun of the installer is needed to finish the configuration. It seems that within your environment this is a norm and I do not know why.

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3. **Q.** Why am I receiving an error "HTTP 1.404 File Not Found" when installing MySQL 5.0 Server?

A. The main problem for installing ShakeCast is likely from a proxy server, or firewall which broke the automated installer. If this true, you will need to work out a process for manual installation.

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4. **Q.** Is there a way to install ShakeCast Version 2.0 without internet access?

A. Yes, it is possible to install the application without Internet connection. You have to follow the steps described inside the "windows_install.txt" file inside the shakecast home directory. It contains the manual processes of the installer. For you convenience, I saved a copy of all needed programs and modules at the url below,

<http://shakecast.awardspace.com/Installer/>

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Running ShakeCast

1. **Q.** What are the required specifications to run ShakeCast on a laptop?

A. ShakeCast should run fine on most modern hardware with P3 or above and Windows XP. We don't support Windows Vista officially and we have received user reports showing mixed results due to variations of the OS.

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2. **Q.** Why doesn't the system run on our intranet PCs?

A. In order for the Google Maps API within ShakeCast to work, it needs to authenticate with the Google servers via the standard http (port 80) request. This also applies to the core functions of the ShakeCast system. If there is no Internet access from within your intranet, there is little chance that the application would work.

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3. **Q.** Is there a way to keep the server in our intranet? Can we open some firewall ports?

A. There are in general two solutions to the users I had helped with on Internet connectivity issues with ShakeCast. One is to include proxy authentication information into the ShakeCast config file, another is to add a server exclusion policy to the ShakeCast server and allows it for outbound Internet connection. The system initiates all outgoing Internet connections and no incoming connections from the Internet. Again, to open a firewall port will be TCP/UDP 80.

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4. **Q.** Do the .csv files for facilities need to be in exact format shown in the tutorial or can I add fields to the files?

A. In the ShakeCast manual (available on the USGS web site), there is a list of acceptable keywords for facilities you can include in the csv file. The order/case of the fields does not matter but the keys must match. Extra definitions you want to associate with facility should be defined as attribute. The same rule applies to both profile and user.

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5. **Q.** Can ShakeCast be run on a UNIX machine?

A. Yes, I am running it with RedHat ES4 at NEIC and there are also a few UNIX ShakeCast users. Under the Caltrans project, we only produce and support the Windows version. However, source code for the UNIX version is available upon request.

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6. **Q.** How can I run the ShakeCast Web UI over SSL?

A. Prior to installing ShakeCast the following procedure would need to be used:

Prepare for running Apache with SSL enabled

- a. Download Apache with SSL
- b. Install Apache with SSL
- c. Create the following folders

i. C:\Program Files\Apache Group\Apache2\conf\ssl.key

- ii. C:\Program Files\Apache Group\Apache2\conf\ssl.crt
- d. Create a key and certificate signing request(CSR)
 - If necessary send the CSR to a Certificate Authority to digitally sign the certificate.
- e. Install the key by copying it to the ssl.key folder
- f. Install ShakeCast but leave the Apache checkbox unchecked
- g. Login to the ShakeCast Admin Web UI and enable "Cookie Secure" setting.
 - i. General Admin -> Configuration -> Cookie secure
 - ii. Set to enabled
 - iii. Save the changes.
- h. Log out of Web Admin UI.
- i. Install the certificate by copying it to the C:\Program Files\Apache Group\Apache2\conf\ssl.crt folder.
- j. Edit the Apache configuration, C:\Program Files\Apache Group\Apache2\conf\httpd.conf, and enable the SSL Module
 - i. Remove the comment character '#' from the following line:
LoadModule ssl_module modules/mod_ssl.so
 - ii. Such that it looks like the following:
LoadModule ssl_module modules/mod_ssl.so
 - iii. Save and close the file.
- k. Edit the Apache SSL configuration file, C:\Program Files\Apache Group\Apache2\conf\ssl.conf:
 - Remove or comment out "<IfDefineSSL>" directive and its closing tag "</IfDefineSSL>".
 - Before the closing Virtual Host tag, "</VirtualHost>", add the following line:
 - i. Include "C:/ShakeCast/sc/conf/httpd-sc.conf"
 - Save and close the file.
- l. Restart Apache.

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Scenarios

1. **Q.** How do I inject a ShakeMap scenario into Shakecast to run a scenario on it?

A. You place the product files of the ShakeMap into a directory with the same name as event id and place it under the "<shakecast>\sc\data" directory. From a DOS window, issue the following command:

```
<shakecast>\sc\bin\scfeed_local.pl \-event <evid>
```

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2. **Q.** Why are scenario results not showing up?

A. Scenarios are not actual earthquakes so they will not appear in the xml data feed. You need to use the admin interface (under USGS ShakeMap) to pick them up.

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3. **Q.** Why do some scenarios send email notifications while others do not?

A. Notifications are created based on four requests for four different event types, actual, test, scenario, and heartbeat. Unexpected results may happen when you mixed notifications of different event types. I will need more detailed description of this problem if you could share.

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4. **Q.** Is there a way to generate "What if" scenarios for ShakeCast? If not, how can we obtain a ShakeMap to use in these scenarios?

A. Producing ShakeMap requires significant resources and expertise in the fields of both seismology and information technology and is strongly discouraged for PDC. All scenario ShakeMaps on the USGS website have been reviewed before publishing. You will need to request one if there is no suitable ShakeMap in the scenario and the Atlas archives.

For a magnitude 8.0 event, you can not simply scale up the M6.7 quake. At this magnitude the dimensions of fault ruptures become critical and the tectonic settings in Hawaii may not be justified to an event of this scale at shallow depth. This means that you will need to be specific about the triggered fault zones in addition to the earthquake location. I will pass around your request to our in-house experts for their opinion and get back to you on our decision.

The Atlas contains ~5500 significant earthquakes worldwide for the past 35 years and there is a good chance that you will find a representative one in the region you are interested in.

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5. **Q.** How do I run a scenario of a recent earthquake and its impact on my facilities if it had occurred near me?

A. This can be accomplished by first loading your facilities into the system then creating a "Test Event" using the event of interest. Once the "Test Event" has been created you can trigger it by clicking "Version 1" from the "Action" column. If no previously processed event is available you can select one from the "USGS ShakeMap" catalog by clicking on "Scenario Inject" from the "Action" column. This will download and process the event as a "Scenario Event". Its important to note however to continue to use the event for future testing it will still need to be added as a "Test Event" from the list of processed events.

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Emails and Notifications

1. **Q.** Why do some scenarios send email notifications while others do not?

A. Notifications are created based on four requests for four different event types, actual, test, scenario, and heartbeat. Unexpected results may happen when you mixed notifications of different event types. I will need more detailed description of this problem if you could share.

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2. **Q.** Is there a way to assign more than one HTML email address for an individual user without creating a separate user profile?

A. You may edit the Text template to match the HTML version and assign it to delivery to users' second email address.

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3. **Q.** How can I add the actual ShakeMap JPEG to our ShakeCast notification template?

A. You customize ShakeCast notifications by editing the notification template. In the case of Caltrans notification, this is based on a damage template, located under the directory "C:\ShakeCast\sc\templates\damage\email_html." To add a ShakeMap link, you can simply edit the header segment, such as the following lines to before the table section

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Errors and Failure Messages

1. **Q.** I am not able to import facilities in the same manner that is demonstrated on the website, `Manage_facility.pl --insert (file).csv` produces line error 193. More specifically "can't call method prepare on an undefined value at c:\shakecast\sc\bin\manage_facility.pl line 193."

A. One likely possibility is that the header line includes fields not part of the table scheme.

Other common causes are incorrect data types and improper data length. I will be happy to take a look at your input file, just send me the first few lines of the file.

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2. **Q.** I am getting about 8-10 a day of system error message, 106 1302 2009-09-04 10:03:57 did not find ShakeMap RSS feed element at C:\ShakeCast\sc\bin\lib\SC\Server.pm line 688, line 5129.

A. This error message shows a connection problem between your server with the upstream USGS web server at the given time. This can happens since the hostname 'earthquake.usgs.gov' is a virtual server and you are receiving data from one of the four servers at random. The server which responded might have been updating its feed content, every two minutes. It is fine as long as the error does not persist over a period of time.

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3. **Q.** I encountered the following error when I try to load the facilities to the Shakecast server using the Perl script:

```
C:\ShakeCast\sc\bin>manage_facility.pl -verbose facilities.csv DBD::mysql::st execute failed: Data too long for column 'attribute_value' at row 1 at C:\ShakeCast\sc\bin\manage_facility.pl line 443, <GEN2> line 1233.
```

A. The error message shows that some attribute value fields are too long. This field holds up to 30 characters. I suggest concatenating supplemental facility attributes into the description field, which holds up to 255 characters. This way you also save the step of defining facility type

specific attributes.

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4. **Q.** Why do we receive "http failure 400: authorization" when ShakeCast is run in a virtual environment?

A. As for the RSS feed errors related to http failure 400: authorization, it might be solved by increasing memory allocation to the virtual server. From a user report, David (IT analyst) changed the memory configuration of server with /PAE /3GB option. Now, we have not had the same error for a while. You could use our case to troubleshoot other people using windows server (especially with virtual server). We will keep eyes on it for more days to assure this.

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5. **Q.** How about http failure 500?

A. According to the official W3 documentation, response code 500 refers to "Internal Error 500"
The server encountered an unexpected condition which prevented it from fulfilling the request.

There should be no database involved in receiving RSS data feed via http request from the upstream USGS servers. The data feed xml is a plain file sitting on the web server and is refreshed frequently. I think this is a common error that even high availability web sites (yahoo, amazon alike) are not immune to it, as long as it does not happen too often. Keep in mind that you are actually receiving the data feed via L3, which makes it unlikely a frequent occurrence. I will pass on this information to our web group and will let you know if I receive any update on this issue.

The ShakeCast user report on 500 error I have received was fairly early in ShakeCast development and was regarding the dispatcher service. The error looks like the following,

```
2007-06-07 10:15:33 dispw[2660]: http failure: 500 Internal Server Error
2007-06-07 10:15:33 dispw[2660]: get file: HTTP_FAIL, 500 Internal Server Error
```

This error turned out to be associated with the Apache and local gateway server.

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6. **Q.** Why am I getting a "404 resource not found" error when opening <http://localhost/index.php> using Listen:8080 instead of 80?

A. There is a ShakeCast configurable field inside the MySQL database for specifying the server port. This can usually be done via the administrative web interface. To change the field (default 80) from the command line (since you don't have web access), you will need to issue commands like the following,

```
klin@gldcast $ mysql -u sc -p
Enter password:

Welcome to the MySQL monitor. Commands end with ; or \g.

Your MySQL connection id is 1494 to server version: 5.0.27-log
Type 'help;' or '\h' for help. Type '\c' to clear the buffer.

mysql> use sc;
Database changed

mysql> select * from phpbb_config where config_name='server_port';
+-----+-----+
| config_name | config_value |
+-----+-----+
| server_port | 80           |
+-----+-----+
1 row in set (0.00 sec)

mysql> update phpbb_config set config_value='8080' where config_name='server_port';
```

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7. **Q.** Why does my coworker see a "cannot display" webpage after I used my computer name and /index.php and they entered their username /password?

A. Your system is still tied with the default 'localhost' domain name. For the ShakeCast installation to be used in a shared environment, you will need to log into the system as administrator and enter the hostname information using the administrative interface. This means changes of two

fields, the hostname field and the Google Maps API key for the hostname. Google requires each hostname to use an unique API key and you will need to visit their web site (a direct link from within the Admin interface) to request it.

After updating these two fields, you will switch the ShakeCast system from the default 'localhost' to your unique hostname.

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8. **Q.** When I inject a ShakeMap and try to send it to several users, why do I get an error "line(s) were cut by GROUP_CONCAT()?"

```
2009-05-28 08:55:33 notifyqueue [2884]: QUIT: DBD::mysql::st execute failed: %d line(s) were cut by GROUP_CONCAT()
at C:\ShakeCast\sc\bin\notifyqueue.pl line 119
```

A. This is a MySQL issue related to long text string. Add an undocumented config option to the end of the MySQL config file "C:\Program Files\MySQL\MySQL Server 5.0\my.ini"

```
group_concat_max_len=4096
```

Save the file then restart the MySQL service.

From the command line, net stop mysqlnet start mysql

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Miscellaneous

1. **Q.** Are there any licensing issues in using Google Maps API?

A. According to EULA on the Google Maps API page, it is free to use for non-commercial purposes.

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2. **Q.** Is there a way for ShakeCast to effectively query the facility database and filter based on an attribute field?

A. Currently in Version 2, we are discouraging extensive use of attribute since it could slow the performance of the system. An alternative is to create a polygon to enclose the response region and to use the facility type filter (you can define both in profile definition) to separate multiple facilities.

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3. **Q.** I accidentally deleted the "scadmin" account. How do I fix this problem?

A. This is a very good reason to leave the "scadmin" account untouched.

Anyway, the equivalent command for loading user csv file is the "c:\shakecast\sc\bin\manage_user.pl." You open a DOS window and issue a command like this,

```
c:\shakecast\sc\bin\manage_user.pl <path_to_csv_file>
```

Just remember to give the administrative user the user type "ADMIN" instead of "USER." Only ADMIN user will be able to access the administrative interface.

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4. **Q.** Is there a default username/password for the PHPmyadmin?

A. There could be two pairs of username/password for accessing the phpMyAdmin interface. If you have enable Apache authentication (a popup dialog), then the default pair is "sc/sc" for web page access. If you were asked for username/password in the phpMyAdmin web page, it is the same as you configured inside the "sc.conf" file for database connection. The default is also "sc/sc" or whatever you entered during initial ShakeCast installation.

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5. **Q.** Are "HAZUS western US spectral shape factors", "mid-magnitude ranges", and "B-C soil amplification Factors" used in shaking and damage estimates for all regions or only those within the western US?

A. It correct that the current HAZUS fragility settings in ShakeCast is for western US only. At this time, regional implementation needs to adjust the default HAZUS values for the area.* We haven't had a chance to implement these regional HAZUS fragilities and are hoping to incorporate

them along the FEMA ROVER project.

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6. **Q.** Is there a quick way to change the table header to read "Inspection Priority" instead of "Damage Level" in the upper right table?

A. This is because the table actually matches the database definition. To alter the name, you can edit the file "c:\shakecast\sc\docs\language\lang_english\lang_main.php" and replace the definition for "Damage_level" to matching "Damage_estimate."

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7. **Q.** How do I transfer all my data from a running ShakeCast server to another newly installed ShakeCast server?

A. This procedure is for intermediate users and is the recommended way to migrate a system from an old installation to a new installation.

- a. In the Web UI go to Admin Page -> General Admin -> Backup Database, Select Full backup (You can Gzip it if you have a lot of data in your application.) Once the backup is done shutdown Apache, and the ShakeCast Services.
- b. In the file system on the old installation copy the folder "sc" from C:/Shakecast/ to a network folder, or the remote machine you are installing to, or a removable device. Include the backup database file.
- c. Install ShakeCast on the new machine.
- d. Replace the sc folder on the new machine in C:/Shakecast/ with the one from the old system/installation (If any services are running for ShakeCast you will need to shut them down. Go to Start -> All programs -> Administrative Tools -> Services to stop the ShakeCast services.)
- e. In the Admin Web UI on the new installation restore the backup. Go to Admin Page -> General Admin -> Restore Database. Find the backup database file from the old system/installation and Start Restore. (Note: after the restore you may need to set the hostname correctly)
- f. Restart the ShakeCast Services on the new system.

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8. **Q. Microsoft Forefront Endpoint Protection Client(FEP) / Microsoft Security Essentials(MSE) is installed and the "ShakeCast Notification Service" seems to randomly quit running.**

A. Several users have installed FEP/MSE and noticed the "ShakeCast Notification Service" spontaneously quits. If this is occurring its due to a race condition where two or more processes are simultaneously accessing a MySQL data file. To remedy the issue exclude the MySQL data files from FEP/MSE as outlined below:

In the settings for FEP/MSE set a global exclude on the MySQL database file types for the entire machine:

*.MYI
*.MYD
*.frm

If a global exclude isn't possible then at the very least exclude them in the following locations:

C:\Windows\TEMP*.MYI
C:\Windows\TEMP*.MYD
C:\Windows\TEMP*.frm

C:\Program Files (x86)\MySQL\MySQL Server 5.0\data\sc*.MYI
C:\Program Files (x86)\MySQL\MySQL Server 5.0\data\sc*.MYD
C:\Program Files (x86)\MySQL\MySQL Server 5.0\data\sc*.frm

Stop then start ShakeCast Services and monitor the service. If the issue occurs again further troubleshooting will be needed to determine the cause and solution.

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