

# Read Only Moodle

Frozen but available

Marcus Green

Senior Developer

Titus Learning



# End of year problem

- Require 'snapshot' of student work
- Easy access to old learning material
- Reduce backup requirement on live systems





# Potential solutions

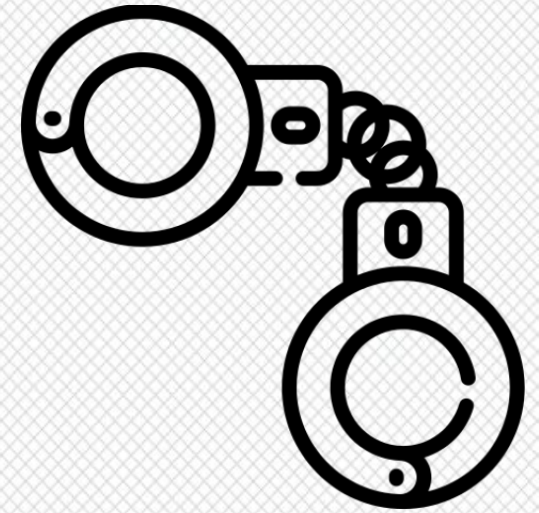
- Using permissions transforms how Moodle looks
- Create course backups (mbz file)
- Freezing introduced with Moodle 3.6





# Using Moodle permissions

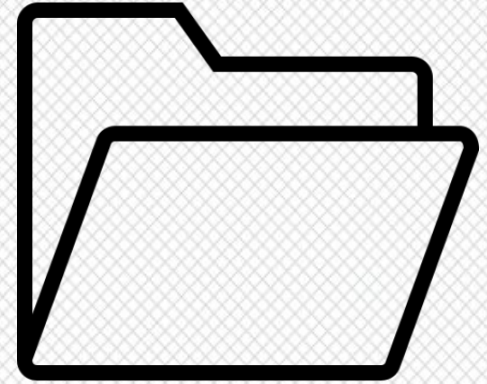
- Appears to be the 'right' way of doing things
- Complex and error prone
- Significantly changes appearance/access





# Moodle backups

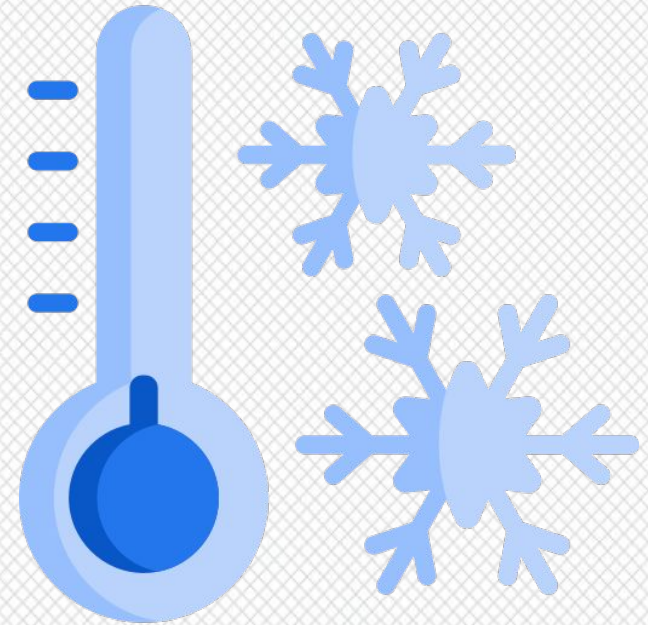
- Not for the technophobe
- Where do you keep them?
- Restoring can sometimes cause issues





# Moodle 3.6 context freezing

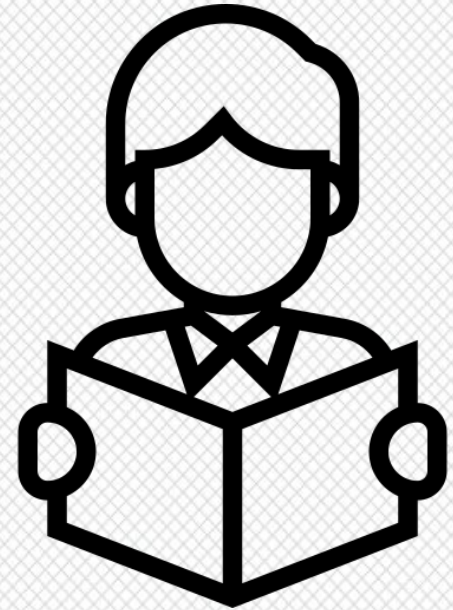
- An “experimental” feature
- Significantly changes appearance
- Only available in 3.6 Si





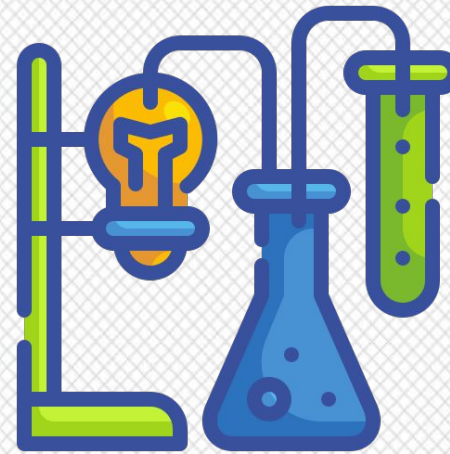
# The read\_only solution


- Replace mysql with mysqlro
- All database updates silently thrown away
- No change to appearance
  - (apart from warning on login)





# Freezing is experimental




 TS101 Admin User

## Test Site 101

[Dashboard](#) / [Site administration](#) / [Development](#) / [Experimental](#) / [Experimental settings](#)

Blocks editing on

### Experimental settings

Context freezing <small>contextlocking</small>	<input checked="" type="checkbox"/> Default: No 	This setting enables read-only access to be set for selected categories, courses, activities or blocks.
Context freezing applies to administrators <small>contextlockappliestoadmin</small>	<input checked="" type="checkbox"/> Default: Yes	If disabled, administrators remain with write access to any frozen contexts.



# Turning freezing on

Site administration

Users

Courses

Grades

Plugins

Appearance

Server

Reports

Development

## Development

Debugging

Web service test client

Purge caches

Third party libraries

Acceptance testing

Make test course

Make JMeter test plan

PHPUnit tests

Template library

XMLDB editor

Code checker

Moodle PHPdoc check

## Experimental

Experimental settings

Database migration





`admin/settings.php?section=experimentalsettings`

### Context freezing

`contextlocking`

☐ Default: No

This setting enables read-only access to be set for selected categories, courses, activities or blocks.

### Context freezing

applies to

administrators

`contextlockappliestoadmin`

☒ Default: Yes

If disabled, administrators remain with write access to any frozen contexts.



# Freezing a course

## Question Practice Course

[Dashboard](#) / [My courses](#) / [QPC](#)














 [Announcements](#)

### Topic 1

 [Quiz Test Of Frozen](#)

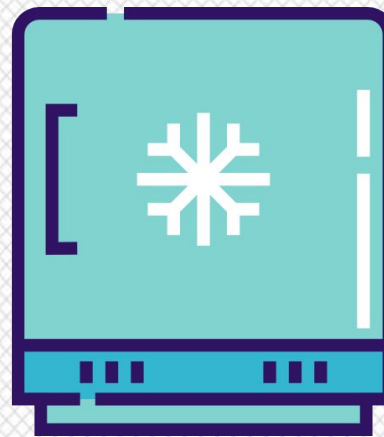
### Topic 2



-  [Edit settings](#)
-  [Turn editing on](#)
-  [Course completion](#)
-  [Unenrol me from QPC](#)
-  [Filters](#)
-  [Gradebook setup](#)
-  [Freeze this context](#)
-  [Backup](#)
-  [Restore](#)
-  [Import](#)
-  [Share](#)
-  [Reset](#)
-  [More...](#)



# Quiz on a frozen course





## Quiz Test Of Frozen

Grading method: Highest grade

[◀ Announcements](#)

Jump to...

- 
-  Results
    - Grades
    - Responses
    - Statistics
  - Permissions
  - Logs
  - Question bank
    - Questions
    - Categories
    - Import
    - Export

 [Moodle Docs for this page](#)

You are logged in as [Admin User](#) ([Log out](#))

[QPC](#)

[Feedback](#)

# Quiz with read-only enabled



## Quiz Test Of Frozen



Grading method: Highest grade

Preview quiz now

Jump to...

◀ Announcements

MyCapQuiz ▶





## Results

- Grades
- Responses
- Statistics

Permissions

Logs

Question bank

Questions

Categories

Import

Export

Edit settings

Group overrides

User overrides

 Edit quiz

 Preview

 Results

● Grades

● Responses

● Statistics

● Manual grading

Locally assigned roles

Permissions

Check permissions

Filters

Logs

Backup

Restore

Question bank

Questions

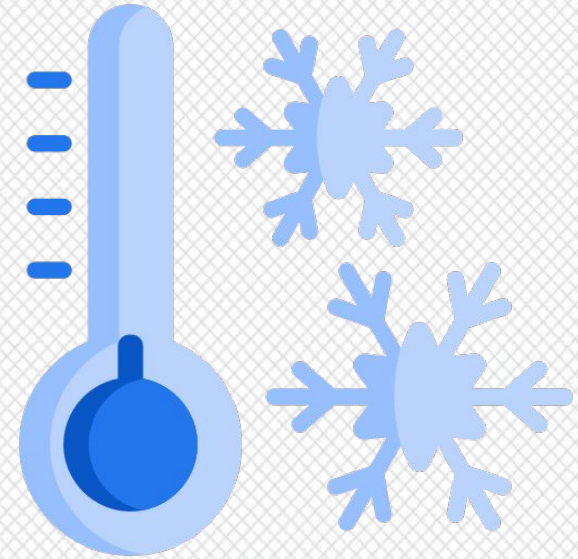
Categories

Import

Export

# Limitations of Moodle 3.6 freezing

- You need Moodle 3.6
- It changes the appearance of things
- Some things cannot be frozen





# Installing read-only

- git clone [https://github.com/marcusgreen/local\\_read\\_only](https://github.com/marcusgreen/local_read_only)
- Copy “mysqlor\_native\_moodle\_database.php to”
- moodle/lib/dml





# Change mysqli to mysqliro

```
1  <?php // Moodle configuration file
2
3  unset($CFG);
4  global $CFG;
5  $CFG = new stdClass();
6
7  $CFG->dbtype = 'mysqli';
8  $CFG->dblibrary = 'native';
9  $CFG->dbhost = 'localhost';
10 $CFG->dbname = 'scss';
11 $CFG->dbuser = 'root';
12 $CFG->dbpass = 'root';
13 $CFG->prefix = 'mdl_';
```





# Configure the plugin

## Read Only

Enable Read Only Mode

local\_read\_only | enable\_readonly

☐ Default: No

Enable Read Only Mode

alert\_message

local\_read\_only | alert\_message

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🖼️

Site is in read-only mode

Default:

Site is in read-only mode

## Test Site 101

admin



.....



☐ Remember username

Log in

[Forgotten your username  
or password?](#)

Cookies must be enabled  
in your browser [?](#)

Some courses may allow  
guest access

Log in as a guest



# How it works (simplified)

File mysqliro\_native\_moodle\_database.php

Same principle for update and delete

```
public function insert_record_raw($table, More Params XX)
{
    $writabletables=$this->get_writable_tables();
    if(!in_array($table,$writabletables)){
        return true; //lying to Moodle that a write happened
    }
    return parent::insert_record_raw($table, More Param
XX);
}
```



# Exampler of open source

- Original concept by Marcus Green
- Code passed on to Hittesh Ahuja at Bath University
- Updated and available under GPL





# Limitations

- Not a standard plugin
- The whole site or not at all
  - (but we could work on that)
- MySQL only
  - should be easy to modify for other db's



# Fin

marcus.green@tituslearning.com

<https://twitter.com/marcusavgreen>

<https://twitter.com/TitusLearning>

## Any Questions?

