# Documentation of the Moodle plugin "Advacheck"

The Moodle plugin "Advacheck" is designed to provide a seamless integration of <u>Advacheck</u> plagiarism detection system with Moodle Learning Management System.

The Moodle plugin "Advacheck" sends student answers from the Moodle to Advacheck.Edu system for similarity check, and then returns the results, along with links to both a brief and a full report, back to the Moodle. The plugin is capable of checking:

- student assignment submissions in both text and file formats;
- student forum posts and any files attached to these messages;
- student essay answers in quiz;
- student lesson essay answers and any files attached to them.

Checks can be either automatic or manual, and teachers can adjust the mode for the entire course or for each individual activity. The similarity check process uses all of the Advacheck.Edu search modules specified in the sales agreement.

The installation and setup process for the Moodle plugin "Advacheck" is described in the Moodle Administrator's Guide, whereas module's course setup and the methodology for checking student answers for text reuse can be found in the Teacher's Guide.

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# Administration's Guide

# Installing the Plugin in the Moodle

To integrate your Moodle-based Learning Management System (LMS) with the Advacheck.Edu system, your company needs to have a contract with Advacheck OÜ company for using the Advacheck software. In your Advacheck.Edu account, create a user with administrator rights and contact <u>Advacheck's support</u>, requesting access to the Advacheck.Edu system's program interface for this user and API access details for your company.

Make sure to also install the Moodle system. This open-source software is distributed free of charge under the GNU GPL v3 license and can be downloaded from the official Moodle website: <a href="https://download.moodle.org/">https://download.moodle.org/</a>.

Before installing this module, make sure that the moodle user has the right to create views in the moodle database. If this permission is not available, it must be added, otherwise errors will occur when installing the module and trying to work with it.

Download and install the plugin as normal, using the Administration/Plugins/Install Plugins menu. The plugin is designed for Moodle version 3.1 and up, and has not been tested on earlier versions of Moodle.

Install the plugin in the Moodle. Go to the Administration/Advanced Features page and activate the plagiarism plugins:



### Advacheck System Activation

Go to Administration/Plugins/Plagiarism Prevention/Advacheck Plugin. Enable the plugin and input the parameters for activating the Advacheck system's interface. Below is an example of activating the Advacheck system's test program interface:

Enable the Moodle-Advacheck Module						
Advacheck Sys	tem connection parameters					
Company website <b>()</b> in the Advacheck system	https://testapi.advacheck.com/					
	For a test connection https://testapi.advacheck.com/					
User email 🛛 🔒	testapi@advacheck.com					
	For a test connection testapi@advacheck.com					
User password 🌗	testapi					
	For a test connection testapi					
API access () address	https://api.advacheck.com:4959/apiCorp/testapi?wsdl					
	For a test connection https://api.advacheck.com:4959/apiCorp/testapi?wsdl					
	Check connection and payment plan					

Click on the "Check connection and payment plan" button. This should display information about your current rate plan:



If an error message appears, verify the accuracy of the activation parameters. If this doesn't resolve the issue, please reach out to the developer's support.

# Applying Check Parameters to the Entire Moodle

On the Plugin Settings page, input the check parameters that apply to the entire Moodle:



#### Supported file types

In this field, list the file types (separated by commas) that can be uploaded to the Advacheck system via API:

Supported file types for file checks	3	txt, docx , html, htm, pdf, rtf, odt , pptx
		Default value: txt, docx , html, htm, pdf, rtf, odt , pptx

If a student uploads a file type not listed in the Supported File Types For File Checks field, the file will not be uploaded to the Advacheck system and an error message will be displayed instead of the check results.

# Default Advacheck settings in the assignments

The following parameter values are recommended for setup at the system level:

Default Advach	eck lesson settings
Default student checks limit	0 🗢
Student report	Brief 🗢

These parameters are described in more detail in the Configuring Advacheck in a Moodle Course article.

#### Check event log settings

The event log is utilized by Moodle administrators and developers to oversee the checking process within the Advacheck system.

The check event log is stored in the following table: mdl\_plagiarism\_advacheck\_action\_log. The mdl\_ advacheck \_log\_view is added to the database upon plugin installation for easier viewing.

To maintain the log, you must first activate it in Plugin Settings and set the duration of check event storage:

Check event log settings							
Enable the check event log?	Yes 🗢						
Store check events	1 + month(s)						

You must go to the Scheduler, activate the Clearing the Check Event Log task, and schedule it to run weekly:

Clearing the check event log \plagiarism_advacheck\task\clear_action_log	Moodle-Advacheck Module plagiarism_advacheck	۵		Friday, 22 March 2024, 4:00 AM	Friday, 29 March 2024, 4:00 AM	0	4	*/7	*	*	0
---	--	---	--	---	--	---	---	-----	---	---	---

# Additional Reused Text Source Fields

On the Plugin Settings page, tick the additional fields that will be sourced from the Moodle and automatically added to each document indexed/added to collection, and displayed among the information on reused text sources.



If a document uploaded from the Moodle to the Advacheck system is identified as a reused text source, the verifier will be able to see information about this source: where this Moodle document comes from, its course and activity of origin, and its author.

The System Name and System Description are entered by the Moodle administrator on the Administration/Registration page.

# Configuring the Task Scheduler in Moodle

In the Moodle, open the Administration/Server/Task Scheduler page, locate and set up two tasks for the Moodle plugin "Advacheck":

Controlling document check completion \plaglarism_advacheck \task\control_check_status_advacheck	Moodle-Advacheck Module plagiarism_advacheck	٥	Friday, 22 March 2024, 10:57 AM	Friday, 22 March 2024, 10:58 AM	*	*	*	*	*	0
Uploading and sending documents for checking \plagiarism_advacheck \task\upload_and_check_advacheck	Moodle-Advacheck Module plagiarism_advacheck	٥	Friday, 22 March 2024, 10:45 AM	Friday, 22 March 2024, 11:00 AM	*/15	*	*	*	*	0

The task of uploading and sending documents to the Advacheck system should not run more than once an hour, while the task of check completion control should not run more than once every 15 minutes.

# Settling Role Permissions in Moodle

The following permissions are recommended for the Teacher role:

Moodle-Advacheck Module				
Send it to the Advacheck system for checking	O	Allow	O	O
plagiarism/advacheck:checkadvacheck	Not set		Prevent	Prohibit
Get checked in the Advacheck system	O	O	Prevent	O
plagiarism/advacheck:checkedby	Not set	Allow		Prohibit
Set up a check in the Advacheck system for the course plagiarism/advacheck:manage	O Not set	Oliveral Allow	O Prevent	O Prohibit
Update check results in the Advacheck system plagiarism/advacheck:updatereport	O Not set	Oliveral Allow	O Prevent	O Prohibit
See the full report in the Advacheck system plagiarism/advacheck:viewfullreadreport	O Not set	Oliveral Allow	O Prevent	O Prohibit
See and edit the full report in the Advacheck system	O	Oliveral Allow	O	O
plagiarism/advacheck:viewfullreport	Not set		Prevent	Prohibit
See the brief report in the Advacheck system	O	Allow	O	O
plagiarism/advacheck:viewshortreport	Not set		Prevent	Prohibit

The following permissions are recommended for the Student role:

Moodle-Advacheck Module				
Send it to the Advacheck system for checking	<ul> <li>Not set</li> </ul>	O	O	O
plagiarism/advacheck:checkadvacheck		Allow	Prevent	Prohibit
Get checked in the Advacheck system	O	Output State Allow	O	O
plagiarism/advacheck:checkedby	Not set		Prevent	Prohibit
Set up a check in the Advacheck system for the course plagiarism/advacheck:manage	<ul> <li>Not set</li> </ul>	O Allow	O Prevent	O Prohibit
Update check results in the Advacheck system	O	O	O	<b>⊙</b>
plagiarism/advacheck:updatereport	Not set	Allow	Prevent	Prohibit
See the full report in the Advacheck system	<ul> <li>Not set</li> </ul>	O	O	O
plagiarism/advacheck:viewfullreadreport		Allow	Prevent	Prohibit
See and edit the full report in the Advacheck system	Not set	O	O	O
plagiarism/advacheck:viewfullreport		Allow	Prevent	Prohibit
See the brief report in the Advacheck system	O	Olympic Allow	O	O
plagiarism/advacheck:viewshortreport	Not set		Prevent	Prohibit

#### ExternalUserID Field

ExternalUserID field under the DocData parameter is a mandatory part of the Advacheck system's software interface. This field must contain a unique identifier for the end user of the information system (IS) integrated with the Advacheck system via API. This field aims to enhance the efficiency of automatic user blocking upon detecting suspicious activity.

The algorithm for filling in this field is as follows:

In case of manual check, the ExternalUserID field is filled with the Moodle ID of the user (either teacher or student) that initiated the check.

In case of automatic check, the ExternalUserID field is filled with the name of the Moodle scheduler task, "task\upload\_and\_check\_advacheck", which is responsible for uploading documents to Advacheck and initiating the check.

# Troubleshooting

Below is a list of the most common errors that occur during plugin setup, accomponied by solutions for resolving them.

Error Description	Causes and Solutions
When clicking the "Check connection and payment plan" button on the Settings page, the following message appears:	1) The Advacheck server address was entered incorrectly in the API Access Address field (for example, with http: instead of https:)
Failed to check: SOAP-ERROR: Parsing WSDL:	2) The port specified in the API Access Address field is blocked in the organization's local network.
	1) The "Enable plagiarism plugins" box under the Advanced Features section in the Moodle website settings was not ticked.
There is no special icon for the submission in the student's assignment so it can't be sent for a plagiarism	2) The plugin use permissions for the Student and Teacher roles were configured incorrectly, see the <i>Settling Role Permissions in Moodle</i> section
cneck.	3) The assignment submission that needs to be checked in Advacheck is submitted by a user without a Student role, or an attempt to run an Advacheck check is being made by a user without a Teacher role.
The check runs normally in the manual mode and fails in the automatic mode.	<ol> <li>The Moodle website's cron is not running.</li> <li>The plugin tasks are either disabled or misconfigured, see the <i>Configuring the Task Scheduler</i> section.</li> </ol>

#### Updating the Plugin

The latest version of the plugin can be downloaded from the <u>Advacheck website</u>. To update the plugin, you need to first install its distribution through the Moodle menu: Administration/Plugins/Install Plugins. The settings page displays the plugin's current version number.

#### Personnel Requirements

Installation and configuration of the plugin should be handled by a professional with Moodle website administrator rights and experience in Moodle customization.

Moodle installation and Cron configuration should be handled by a professional with administrator access to the server where Moodle is installed, as well as with experience in system administration.

#### Technical Support from the Developer

The documentation for the Moodle plugin "Advacheck" includes comprehensive guides for administrators and teachers, sufficient for the plugin's independent configuration and use.

If required, however, the organization can enter into a paid technical support contract with the developers for a period ranging from 2 to 12 months.

Should you encounter any program errors with the plugin, please contact Customer Support Service for help <a href="support@advacheck.com">support@advacheck.com</a>.

# Teacher's Guide

In order to learn how to check student papers for text reuse, Moodle Learning Management System (LMS) teachers should familiarize themselves with the following sections of the official Advacheck system developer's guide:

- <u>1.1 Terms and Definitions</u>
- <u>1.2 Purpose and Use Conditions</u>
- <u>8 The report on the text reuse check result</u>

Next, it is essential to understand the specifics of configuring and checking student answer in the Moodle:

# Configuring Advacheck in Moodle Course

Advacheck Settings Course Page

Selecting Advacheck Settings in the Course Administration menu will open a page for customizing the Advacheck check parameters for all course assignments, forums, quizzes and lessons:



**Note:** all check parameters can also be set individually for each activity under the Advacheck Settings section

#### Auto check

During automatic checks, all student answers sent for review are automatically sent to the Advacheck system as per the schedule set by the Moodle administrator. Typically, submissions are sent to be checked every 1-2 hours, and every 15 minutes the check completion is verified and the results are recorded in the Moodle.

If a teacher opens an activity page while the automatic check is still ongoing, the "Submit for Advacheck

Check" buttons *will appear next to the student answer that have not been checked yet. The teacher can either revisit the activity later or press these buttons to manually initiate the check process.* 

#### Manual check

During manual checks, the teacher only submits those student answers that they have selected. This can be

done by pressing the button located next to the uploaded activity and waiting for the check process to finish. The manual check process is described in more detail in the following articles:

- Checking Student Assignments
- Checking Student Forum Posts

#### Checking Texts and Files

In the settings for assignments and forums, under Submission Types, the teacher needs to select which types of student submissions are permissible in the assignment:

➤ Submission types	
Submission types	🗹 Online text 😢 🗆 File submissions 😮

In the Advacheck settings, the teacher needs to indicate which types of student submissions should undergo Advacheck checks (texts, files, or both).

#### Add to index?

If "Add to index" is selected, then after the student answer has been checked by Advacheck, it will be automatically added to the index (university collection) and will be referenced as a potential text reuse source when checking other student answers.

If the option is not selected, the student answer will still be checked but it won't be added to the index.

#### Student report

The teacher can decide whether to show students the results of the check and if so, what kind of report to display:

Student report					
Brief ¢					
No.					
Brief					
Full	]				

#### Student checks limit

The Student Checks Limit feature is only used in assignments. It allows students to submit drafts of their submissions for Advacheck checks. More detailed customization and recommendations for using this parameter are described on the *Student Checks Limit* page.

The Advacheck Settings in the Assignment

All of the aforementioned check parameters can also be adjusted in the settings for each assignments, forums, quizzes and lessons, under the Advacheck Settings section:

✓ Advacheck settings	
Check mode	Manual check 🗢
Text check	Enable
File check	🗹 Enable
Add response to 👔 the index?	No 🗢
Student report	Brief ¢
Student checks limit	2 🗢

# Checking Student Forum Posts

Beneath the students' posts and attached files on forum pages where text and file checks are enabled, the

teacher will see a button () for initiating a post check in the Advacheck system:



In forums, the Advacheck check buttons only appear on students' posts, not on teachers' posts. These buttons are not visible to students.

Upon pressing the button, the post is sent to be checked. While the check is ongoing, a spinning circle is displayed. Once the check is complete, the results are displayed as follows:

Re: Test forum topic by Dorofeev Tester - Wednesday, 20 September 2023, 9:53 PM
In order to successfully participate in the educational process, students and faculty need to possess certain computer hardware and software. In particular, a computer with a minimum connection speed of 1.5 Mbps, as well as a webcam, headset or microphone and headphones are required to connect to the Internet. In addition, the Checking result uired: Checking result heet pr have a PDF viewer, a ZIP archiver, a EG, PNG, GIF, BMP image viewer, an audio-video player, and a DJVU viewer. sim.51.42% text rec. 0% qu.0% orig.48.58% CA Implement the educational process 2.txt Advacheck check in progress
Checkng in progress Permalink Mark read Show parent Edit Split Delete Reply Export to portfolio

If originality of the student post exceeds the threshold set by the Moodle administrator, the check result has a green background, otherwise it has a pink background.

To the right of the check results, there is an icon with a link that opens the Advacheck webpage with the check report. The teacher sees the full report, while students see its brief version. The "Update check result" button is only visible to the teacher and allows them to update the check result in the Moodle after editing the report in the Advacheck system.

If a student post contains fewer words than specified in the plugin settings, it does not get submitted to be checked, with the "No check" status being displayed instead:



Forums have a certain time limit during which the poster can edit their post. This time limit is set by the Moodle administrator and is displayed at the top of the forum page after each new post is posted:



If the forum has Advacheck system checks enabled and the editing time limit for a student's post has not

ended yet, a warning is displayed instead of the check submission button  $\checkmark$ , indicating when the time limit will end:

Re: Test forum topic by Dorofeev Tester - Wednesday, 20 September 24	023, 9:53 PM				
In order to successfully partic Time when message computer hardware and softv	was created	, sti th a			
as a webcam, headset or microphone and headphones are requir					
following software is required: a Google Chrome of Microsoft Excel spreadsheet programs, and Micro	r Mozilla Fir	efo			
have a PDF viewer, a ZIP archiver, a JPEG_D	Warning	1			
The student can make edits until 21:55 (0 min 17 sec left)	that student can				
Implement the educational process 2.txt	edit his answer				
The student can make edits until 21:55 (0 min 17 sec left)					
	Permalini	k Ma			

Once the time specified in the warning has passed, the user will need to refresh the page. The warning will

then be replaced by the check submission button

## Checking Student Assignments

The process of checking student assignments is the same as checking forums. On the assignment page, next

to the student submissions that haven't been checked yet, there will be a button for sending student submissions to Advacheck, and next to the checked student submissions, there will be the results of the check:



It is possible to customize the assignment settings in the Submission setting section so that the student will not need to press "Submit":



Unless the teacher has already prohibited changing the uploaded submission, a warning will be displayed next to the uploaded submission: "To carry out a check in Advacheck, you need to make the submission

uneditable". After changes are prohibited, a button <sup>20</sup> will appear for sending the submission to be checked:

Select	User picture —	Last name / First name — +	Status Gi	rade Edit - —	+	File submissions	Submission comments —	Last modified (grade) —
	TD	Dorofeev Tester	Submitted Uptrate grade Prevent submission	Grade Edit	Š	Implement the reducational process docx To carry out a check in Advacheck, you need to make the response uneditable 14 September 2023, 9:23 PM	Comments (0)	-
Select	User picture —	Last name / First name — +	Status —	Grade —	Edit —	File submissions	Submission comments —	Last modified (grade) —

# Checking Multiple Assignment Attempts

Once new students' submissions and forum messages checked in the Advacheck.Edu system, they are immediately indexed (added to the university's collection) and used for checking other answers.

When a student submits an updated answer to be checked in an assignment or forum thread, their previous answer or draft will be removed from the index and the new one will be indexed instead. This measure is in place so that new answer isn't compared to the previous one. Consequently, the index will only contain the most recent answer submitted by the student for a check in the Advacheck.Edu system.

In assignment, the teacher has the ability to manually allow students to make a new attempt and submit a revised submission. However, in forums, the teacher has no such option, and the student has to post a new message instead. To prevent the new post from displacing the student's initial post from the index, manual forum checks are recommended.

# Updating Check Results

While viewing the full report in the Advacheck system, the user can disable or enable text reuse sources, modify their type, and recalculate the check results. If the teacher recalculates the check results for the student answer on the Advacheck website, they must press the Refresh button in the Moodle to save the new result within the system:



## Working with the Advacheck Report

It is up to the teacher which version of the report to make visible to students, by selecting the respective option in the activity settings under the Advacheck section. If "Full Report" is selected, students will be able to see all sources for text reuse fragments, but won't be able to edit them.

Please refer to the Report section of the User Guide at <u>manual.advacheck.com</u> for the detailed information on viewing/editing reports.

#### Student checks limit

#### Student Checks Limit Parameter

A teacher can allow their students to check their own submissions within the Advacheck system. To do this, the teacher needs to set the number of checks a student can perform in the Student Checks Limit parameter under the plugin settings:

Student checks limit	2 🕈
	0
	1
	2
	3
	5
	7
	10

If a student is permitted by their teacher to check their own submissions in the Advacheck system, it would be beneficial to also allow this student to view the full check report. This way, the student can analyze the text reuse sources and revise their submitted answer as necessary. However, the student will not be able to edit the full report as their link will not provide them with an editing access.

The checks limit will be applied individually to each type of response within a submission. For instance, if the Student Checks Limit is set to 2 and the student submits their submissions in text format with two files attached, they will be able to check their text twice and each file twice.

If the teacher allows the student to make a new attempt, the checks limit for that attempt is reset.

#### Students can only check the drafts of their own submission

The student will be able to check their submission in Advacheck as long as the submission status remains as "Draft" (not submitted). This is determined by the "Require students to click the submit button" parameter in the assignment settings:

$\checkmark$ Submission settings		
Require students to click the submit button	3	Yes 🕈

- If the value of the "Require students to click the submit button" parameter = "Yes", the student' submission will remain a draft until the "Submit for Advacheck Check" button is pressed.
- If the value of the "Require students to click the submit button" parameter = "No", the student submission will remain a draft until the teacher restricts any further changes.

#### Assignment Configuration Guidelines

To prevent system from finding similarities in the student's own previous submissions within an assignment, the integration plugin will automatically delete all of the student's previous submissions from the index (university collection), as well as erase all drafts for the current assignment attempts, before forwarding the submission to Advacheck. Consequently, only the student's latest submission will be indexed.

When Advacheck is used for checking graduation theses, term answers, and other similar tasks, the following assignment setting customization is recommended:

- 1. Under the "Submission types" section, select "File" as the only permissible answer type.
- 2. Under the "Maximum Number of Uploaded Files" parameter, select 1 file. Otherwise, if, for instance, two files are permitted for upload, a student could submit their answer in the first file and use the second file for the appendix, which would then "displace" the submission from the index.

#### Student Assignment Self-Check

After saving their submission, the student will see a notification showing the checks limit and the "Submit for Advacheck Check" button:



The check usually takes 1 to 20 minutes. A spinning circle is displayed during this time:



Once the student has completed the check, they will see the result and the remaining number of checks:



Once the checks limit is reached, only the check result will be displayed:

