

PROCTORING PRO PLUGIN USER MANUAL

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About Brain Station 23

Brain Station 23 is a team of talented developers. We pride on being one of the top IT giants in the industry. By implementing the latest and the most innovative technologies we work on challenging projects to offer comprehensive solution meeting every last need of our clients.

We combine the finest technical craftsmanship with elegant and functional design to ship innovative digital experiences. We have a track record of building successful web and mobile applications for our clients. From 2006 the company started providing services in the local market alongside the offshore clients.

Empowered with 700+ professionals, Brain Station 23 carries a strong pull of globally recognized professionals certified by Microsoft, Oracle, PMP and other (AWS, CCNA, ZEND, etc.) large tech giants and software platform embodies. The result is a hub of enthusiastic individuals who encourage each other with continued excellency. Our talents include certified personnel like Microsoft MVP, Code Project MVP, MCP, MCTS, CEH, CHFI and so on.

Industries we worked with

Our experienced team of skilled engineers & developers have served clients in different industries including -

Banking & Finance, Software Companies, Real Estate, Retail, Telecom, Pharma, Education, Healthcare, Furniture & Non-Profit

Awards & Recognitions

BASIS National ICT Award 2017, 2018, 2019,2020.	Industry Standards		
BASIS National ICT Award 2018 (Won in 3	ISO 9001:2015		
category- Fintech, Real-estate, Transportation)	ISO 27001:2013		
The Daily Star ICT Award, Winner of 2017 best ICT solution provider on International Market Focus			
Best Outsourcing Organization 2013, 2014 & 2015 by BASIS			
HSBC Exporter of the Year 2013			
Code Warrior Challenge 2014			

Technical Expertise

0	PHP	0	Adobe	0	Mean Stack	0	Database
	Moodle Laravel Symfony Drupal WordPress CakePHP		Adobe experience cloud Analytics Campaign		Node.js Angular Express.js Jade React		SQL Server PostgreSQL MongoDB MySQL PostgreSQL RavenDB Oracle
0	Server & Cloud	0	Microsoft	0	BI, ML, AI	0	Python
	Weblogic Nginx Sun One AWS Azure Google		Microsoft ASP.net Web Form ASP.net Web API/MVC 4 SharePoint 2013/2010 SignalR C#		Microsoft Power BI SSIS (Data Warehouse) Hadoop Oracle BI Azure ML Studio Python pandas & scikit		Django Flask Fast API Odoo
0	Mobile Platform	0	Java	0	JavaScript	0	AR/VR
	iOS – iPhone/iPad (Native) Android (Native) React Native Ionic Flutter Xamarin Unity 3D		Spring.io Spring Batch Hibernate Jasper Report Maven Axis 2 JSTL		MVC/MVVM Framework React Angular.js Node.js Express.js Jade Vue.js		Unity 3D Vuforia Unreal Engine AR core AR kit Open VR Maxst DeepAI
0	Testing Automation	0	Sales force	0	Sitecore	0	Moodle
	Selenium Cypress Appium Cucumber Katalon Studio Apache Jmeter Postman		Veeva CRM Veeva Vault IQVia Data Connector		Sitecore EXM Analytics Marketing Automation		Custom plugin development Theme customization Website optimization Cloud Consultation Mobile app website maintenance Training

Proctoring Pro Plugin

1.1 Introduction:

Moodle proctoring pro plugin is a quizaccess plugin to capture a user's picture via webcam to identify who is attempting the Moodle quiz. It will capture the picture of the user's webcam automatically every 30 seconds and store it as a PNG image. Admins can analyze the image of students after exams for verification using AWS Face Rekognition / BS Face Matching API.

1.2 Features

- Capture user/student images via web camera
- Prevent users from accessing the quiz without enabling the camera
- Store images in Moodle data as a small PNG image that can be deleted individually or in bulk
- Generate a proctoring log report with search facilities
- Configure image size and capture interval for your specific needs
- Compatible with Face Recognition services like AWS to validate user images with admin-uploaded images
- Detect if webcam was enabled for the entire time of attempt
- Detect if user has moved to any other application/tab
- Detect if screen was resized
- Detect if copy and paste occurred
- Detect if F12 button was pressed
- Detailed admin report of every event log and webcam images
- Admin summary report
- Email Support

1.3 Installation

1.3.1 Install by downloading the ZIP file

- Download zip file.
- Unzip the zip file in /path/to/moodle/mod/quiz/accessrule/proctoring folder or upload the zip file in the install plugins options from site administration : *Site Administration -> Plugins -> Install Plugins -> Upload zip file*

1.4 Configuration

After installing the plugin, you can enable the plugin by configuring the quiz settings:

- Go to your quiz setting (Edit Quiz):
- Change the 'Extra restrictions on attempts' to 'must be acknowledged before starting an attempt'

> Appearanc	e			
> Safe Exam Browser				
✓ Extra restri	ctions on attempts			
Require password 🛛 🤅	Click to enter text 🖋 👁			
Show more Webcam identity validation	must be acknowledged before starting an attempt 🗢			
> Overall fee	dback 🛛			
> Common n	nodule settings			
> Restrict acc	ess			

1.5 Settings Configuration

To update the plugin settings, navigate to plugin settings:

Site Administration->Plugins->Proctoring

- Go to Site Administrations plugins section.
- Select Proctoring from the activity module section to configure your plugin settings

1.5.1 Upload User Images

Use the 'Upload User Images' option to add images of users for verification by matching the face.

Proctoring	
Users List for Uploading User Image	Upload User Images
The delay between camshots in seconds.	30 Default: 30
quizaccess_proctoring autoreconfigurecamshotdelay	Given value will be the delay in seconds between each camshot
The width of the camshot image in pixel.	230 Default: 230
quizaccess_proctoring autoreconfigureimagewidth	Given value will be the width of the camshot. The image height will be scaled to that
Facematch Method(BS/AWS) quizaccess_proctoring fcmethod	BS ✦ Default: BS
	Service to match faces.(Values: AWS/BS).

Admins can upload all the users images from the following table:

Users List			
		Proctoring Settings	
User name	Preview	Action upload image	
test_15	Please upload user image.	2	
test_16	Please upload user image.	2	
test_17	Please upload user image.	2	
test_18	Please upload user image.	a	
test_19	Please upload user image.		
« 1 2 3 4 5 6 7 8 9 10 13 »			

** There must be a face in the uploaded image by the admin.

1.5.2 Select Face Match Method

E.

Select one of the face match method (BS/AWS) from the following settings:

Facematch Method(BS/AWS) quizaccess_proctoring fcmethod	BS 🗢 Default: BS
	Service to match faces.(Values: AWS/BS).

1.5.3 BS Service API Settings

When using the BS face match method, the BS service API, BS API key has to be entered.

Facematch Method(BS/AWS) quizaccess_proctoring fcmethod	BS Cefault: BS
	Service to match faces.(Values: AWS/BS).
BS Service API quizaccess_proctoring bsapi	Default: Empty
	BS service api endpoint.
BS API Key	······ 🖋 🐵
	BS API Key
Threshold quizaccess_proctoring threshold	68 Default: 68
	Percentage for The face verification

If you need the BS service API, BS API key, please contact here: <u>elearning@brainstation-</u> 23.com.

1.5.4 AWS Rekognition Settings

For AWS facematch, only the AWS key and secret are needed.

Γ	AWS key quizaccess_proctoring awskey	Here French rep	Default: Empty
	AWS secret	AWS Key for face recognition service.	Default: Empty
		AWS secret for face recognition service.	

If you need the AWS key and secret, you can refer to this official documentation here.

1.6 Additional Settings

1.6.1 Validate Face on Quiz Start

You can enable face validation before attempting the quiz. Users will not be able to attempt the quiz if the face doesn't match with the image uploaded by admin.

Face ID validate on quiz start quizaccess_proctoring fcheckstartchk	✓ Default: No
	Face ID validate on quiz start[If "yes" user has to validate face id to start quiz].

Face validation modal will pop up before attempting the quiz

Start attempt	×
Allow your webcam to continue	
This exam requires webcam access.	
(Please allow webcam access).	
Face Validated: Pending	
Validate Face Recognition	
Start attempt Cancel	

1.6.2 Face match Scheduler Task

Images of attempted quizzes can be analyzed by an automatic scheduled task. This can be enabled from the following settings.

Number of facematch per quiz quizaccess_proctoring awschecknumber	0 Default: Empty
	Number of facematch per quiz. (-1 for check all)

1.7 Allowing webcam access before attempting the quiz

Student will be asked to allow access to their webcam for the exam before attempting the quiz:



1.8 Attempting the quiz

During attempting the quiz, the quiz page will look like this:

moodle_3	311 Home Da	ashboard My courses	Δ Ω tu ·
	Back		Close block drawer
	Question 1 Not yet answered Marked out of 1.00 P Flag question	The scientific method cannot be identified with any particular set of experimental or observational a. Parameters b. Procedures c. Formulas d. Goals	Quiz navigation 1 2 Finish attempt Webcam
		Next page	

1.9 Proctoring Report

Admins can view the proctoring report:

	Test Course 2 / Qu	uiz with proctoring / Quizaccess Proctoring			
	🕑 Quiz	with proctoring			
	Quiz Settings	Questions Results Question bank	More -		
Proctoring re	port for: Quiz with pro	octoring			
Search by email	Search			Proctoring Summa	ry Report Proctoring Logs
In this report you will find a	all the images of the students which are taken	n during the exam. Now you can validate their	identity, like their profile pic	ture and webcam photos.	
		Dete and time	Warnings	Suspicious Activity Detected	Actions
User	Email address	Date and time			710110110

Admins can view individual proctoring reports and analyze the images using AWS face rekognition service/ BS Face Matching API

	Quiz Quiz Settings	With proctoring	a More →							
roctoring report for: Quiz with proctoring arch by email Search Proctoring Summary Report Proctoring Logs In this report, you will find all the images of the students which are taken during the exam. Now you can validate their identity, like their profile picture and webcam photos.										
User	Email address	Date and time	Warnings	Suspicious Activity Detected	Actions					
Shadman Ahmed	shadman@yopmail.com	2023/Apr/20 10:04:52	1	E.	C 💼					
Overview		Status	These	are the pictures captured during the qu	uiz.					
Was the webcam enabled?		Yes		20-04-2023 10:29:40	-					
Was the webcam enable	ost?	Yes								
Was the webcam enable Was the screen focus le					10 M 10 M					
Was the webcam enable Was the screen focus le Was the screen resized	1?	Yes			and the second					
Was the webcam enable Was the screen focus le Was the screen resized Did copy and paste occ	I? urred?	Yes		A	-					

1.10 Browser compatibility of proctoring pro plugin

Proctoring plugin uses the getUserMedia() API. So, the browser compatibility will be similar to the browser compatibility of getUserMedia() API.

		Ţ										
	 Chrome 	Edge	Firefox	🕼 Internet Explorer	O Opera	Safari	Chrome Android	Firefox for Android	O Opera Android	Safari on iOS	Samsung Internet	WebView Android
getUserMedia	✓ 53 ★	✓ 12	✓ 36 ★	× No	✓ 40 ★	× 11	✓ 53 ★	✓ 36 ★	✓ 41 ★	~ 11	✓ 6.0	✓ 53
Secure context required	∽ 53	✓ 79	✓ 68	× No	✓ 40	× 11	✓ 53	~ 68	✓ 41	× 11	6.0	✓ 53

FAQ

- How can I upload a user image?
 => From the settings of the proctoring pro plugin, there is an option for uploading user images.
- 2. Why does the analyze image button give a red mark for all the images?
 => Check whether the credentials for the face match methods are correct and the user's image is uploaded by the admin.
- 3. Can the students upload their own images?=> No, only admins can access.
- 4. Where can I get the BS Service API credentials?
 => Please contact here: elearning@brainstation-23.com
- 5. Where can I get the AWS Secret and Key?
 => Please contact here: elearning@brainstation-23.com
- 6. Is the screenshot feature available?=> No, it is removed because of browser limitation
- 7. Is there any documentation for AWS Face Rekongnition Service?
 => AWS Documentation link
- 8. How can I report an issue regarding this plugin?
 => Contact us at <u>elearning23@brainstation-23.com</u>.
- 9. Why is my moodle stuck while validating the face?
 => Please check whether the credentials for the face match methods are correct
- 10. Why can't I upload some of the user images?
 => Every user image needs to have a face. Otherwise, it can't be uploaded.
- 11. As a student, why can't I validate my face before starting a quiz? =>
 - 1. Student's image must be uploaded by an admin in the moodle to validate their face before an attempt.
 - 2. Please make sure there is proper lighting while validating the face