

Worth

Moodle LMS Review

18 May 2024

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Plugin Analysis

Plugin Name	Plugin Type	Plugin Version	Plugin Function	Notes	Required
Custom Certificate	mod	3.11.2 2021051703	Allows for custom certificates to be created and awarded based on meeting certain course-based criteria.	Supports Moodle 4.2, 4.3, 4.4	Yes
Questionnaire	mod	3.11.1 (Build - 2022062300) 2021062301	Custom Survey Creation.	Supports Moodle 4.1, 4.2. Used in Worth Wealthy Couples (id=2), Worth Wealthy Couples (id=26). I am sure the content provider can advise on replacing this with normal quizzes.	Yes
Reengagement	mod	3.6.5 2021080102	Used to send emails to users based on certain criteria, e.g. if a user hasn't logged in for X amount of days.	Supports Moodle 4.1, 4.2, 4.3	Yes
Subcourse	mod	0.1.0 2021021401	Allows for a course to be set up as an activity inside of another course. This plugin is used in particular to allow users to be enrolled into a single course where the user can select between X number of courses that they want to self-enrol into.	Supports Moodle 4.2, 4.3. Used in Course Selection Course (id=7) and Healthy Company Course Selection (id=28)	Yes
Configurable Reports	block	3.9.0 2020110300	This block is a Moodle custom reports builder. You	Supports Moodle 4.1, 4.2	Yes

			can create custom reports without SQL knowledge.		
Discovery	block	2022031003	This plugin checks if the current user is a Discovery student based on their user role. If they are a Discovery student, it displays a list of courses with images from a certain course category.	Custom. Needs to be tested/upgraded.	Yes
Hubble Studios Certificate	block	2017012405	Allows for setting up custom certificate templates which get emailed to a user.	Custom. Only set up for Worth Wealthy Me (id=5), Worth Wealthy Couples (id=2), Worth Wealthy Couples (Backup) (id=4). Doesn't seem to be used.	No
Login Custom	block	2020110900	A separate login block to the standard login block to allow more code customisations.	Custom. Used but might not be necessary depending on the chosen theme.	No
My Overview Custom	block	2017111300	A separate My Overview block to the standard My Overview block to allow more code customisations.	Custom. No longer supported.	No
Sharing Cart	block	4.0, release 2 2022101400	Allows for sharing of Moodle content such as resources and activities across different courses.	Supports Moodle 4.2, 4.3.	No
Auto Enrol	enrol	2.4.0 2024021900	Adds functionality to automatically enrol users onto a course, either as they log in to your Moodle site	Supports Moodle 4.1, 4.2, 4.3. Used in Healthy Company Course Selection (id=28)	Yes

			or as they access a course.		
Discovery	auth	2022205123	Simple authentication using JWT. Discovery constructs the JWT, sends it to this authentication and then proceed with the user enrolment.	Custom. Needs to be tested/upgraded.	Yes
OAuth 2 - Discovery SSO	auth	2021051700	OAuth 2 Discovery SSO configuration	Custom. Needs to be tested/upgraded.	Yes
Outage Manager	auth	2022042800 2022042800	A plugin to manage outage periods, such as scheduled maintenance, including CLI tools to embed in your scripting.	Supports Moodle 4.1, 4.2+ not officially supported.	No
Oauth 2 Services - Discovery	tool	2021051700	OAuth 2 plugin created specifically for Discovery SSO.	Custom. Needs to be tested/upgraded.	Yes
User Suspension	tool	3.5.9 (build 2022041301)	Allows for suspending users based on various criteria. In this case, it is set up to run every 12 hours and find users which haven't logged in for 90 days, if they haven't logged in for 90 days, their account will be suspended. It will also send an email to let them know before it actually suspends them.	Supports Moodle 4.1, 4.2.	
Collapsible Sections Format	course_format	3.6 2018120201	A course format which allows for sections to be	Custom, however, the main functionality	No

			collapsible.	is now in Moodle 4.x. Used in Testing Upgrade Worth 3.11 Site (id=40), Other Resources (id=41). Should be replaceable.	
Cumulate Report	report	0.1.0 2023112501	Unknown	Custom. Cannot find an instance of this being used.	No
Apollo	theme	v3.7.0.0 2019052600	Custom theme to change the interface of the LMS.	Custom. No longer supported. A new theme is needed.	No
Auto Unenrol - self	local	1 2018022400	Allows the user to unenrol themselves from a course. This works with the Course Selection Course (id=7) where once a user selects the course, they will be automatically unenrolled from the Course Selection Course (id=7).	Custom. Needs to be tested/upgraded.	Yes
Auto Group	local	2.7 2022062500	Automatically assigns enrolled users on a course into groups dependent upon information within their user profile, e.g. custom profile fields.	Supports Moodle 4.1. Used in Worth Wealthy Couples (id=2), Worth Wealthy Me (id=5), Worth Wealthy Me (id=24), Worth Wealthy Couples (id=26), Wealthy Workforce How To: First Job to Financial Freedom (id=33). Needs to be tested/upgraded.	Yes
Discovery	local	1.0 (Build:	Handles the	Custom. Needs	Yes

Integration		2021031702) 2021031721	integration process between Discovery and the LMS. It allows for an enrol request to be made to enrol a user into a course which is recorded via an event observer. If the user doesn't already exist, it will automatically create that user as well using the Entity Number provided by Discovery which is stored in the core ID Number field. It can also send an email on course_completion using a scheduled task.	to be tested/upgraded.	
Manual Email	local	1 2018022400	This plugin will listen for when a user is enrolled manually. If they are, this plugin will send them an email upon this enrolment. The email content can be configured and the functionality can be toggled per course.	Custom. Needs to be tested/upgraded.	Yes
Static Pages	local	v3.11-r3 2021120802	Allows for static web pages to be uploaded and displayed across the Moodle site. An example here is some Discovery HTML files which can be seen in the Static Pages config .	Supports Moodle 4.2, 4.3+ (source control).	No

Total Additional Plugins: 24

Total Custom Plugins: 13

Web Services (Integrations)

The following [Web Services](#) are configured on the LMS:

Service Name	Service Type	Plugin	Functions	User Access	In Use
discovery_ webservice	Built-in services	local_disc overy	enrol - This is used by Discovery to enrol a user.	All	No
mod_questi onnaire_ws	Built-in services	mod_que stionnaire	mod_questionnaire_submit_q uestionnaire_response - Questionnaire submit	All	No
Moodle mobile web service	Built-in services	moodle	All Moodle Mobile functions. Please view Moodle mobile web service .	All	No
Discovery	Custom services	N/A	core_user_create_users - Create users. core_user_get_users - search for users matching the parameters enrol_manual_enrol_users - Manual enrol users	Discovery Integration - integration@discovery.bank Web Services - ezjkpsraaqha yaxys@pp7rvv.com	Yes
Discovery HC	Custom services	N/A	enrol - This is used by Discovery to enrol a user.	Discoveryenrol Api - discoapi@hub blestudios.com	Yes
Flowgear	Custom services	N/A	core_course_get_courses - Return course details core_enrol_get_enrolled_users - Get enrolled users by course id. core_group_get_course_groups - Returns all groups in specified course. core_group_get_group_members - Returns group members.	All	No

			<p>core_group_get_groups - Returns group details.</p> <p>core_user_get_users - Search for users matching the parameters</p> <p>mod_choice_get_choice_results - Retrieve users results for a given choice.</p> <p>mod_choice_get_choices_by_courses - Returns a list of choice instances in a provided set of courses, if no courses are provided then all the choice instances the user has access to will be returned.</p> <p>mod_feedback_get_feedbacks_by_courses - Returns a list of feedbacks in a provided list of courses, if no list is provided all feedbacks that the user can view will be returned.</p> <p>mod_feedback_get_responses_analysis - Return the feedback user responses analysis.</p> <p>mod_quiz_get_quizzes_by_courses - Returns a list of quizzes in a provided list of courses, if no list is provided all quizzes that the user can view will be returned.</p> <p>mod_quiz_get_user_attempts - Return a list of attempts for the given quiz and user.</p> <p>mod_quiz_get_user_best_grade - Get the best current grade for the given user on a quiz.</p>		
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Worth Web Services Explained

This section provides some context as well as how the Web Services and plugins fit in to assist with the integration process.

1. The LMS contains a variety of courses
2. These courses are grouped into 3 categories:
 - a. Discovery Bank courses
 - b. Discovery Healthy Company courses
 - c. Worth Corporate courses
3. These courses vary in duration from ± 6 weeks to 20 minutes, but all take approximately the same form - namely a pre course survey, the course itself, and a post course survey. These pre and post course surveys are used to demonstrate a change in behaviour in learners who complete the course in question.
4. There are a variety of custom reports associated with courses in each of these categories, which we use to show our business partners and customers these changes in metrics
5. All courses send out a variety of email-based communications to learners, either based on being enrolled/completing a particular learning unit, or after a given period of time with no activity to nudge them to resume learning and finish the course

Enrolments:

The three categories of courses mentioned in (2) above differ in terms of the way that learners are enrolled into them. For all three categories, we have and require the ability to manual enrol learners/adjust enrolments for our learner support activities

1. Discovery Bank courses: These make use of the Core Moodle APIs to enrol learners via an exposed web service (the Discovery Web Service). Learners are enrolled into a single Course ID (the Course Selection Course), which is a Moodle course that contains a single activity - asking learners to pick which actual course within the DBank offering they'd like to do. This single course uses the Subcourse plugin to allow the selection between the other courses. When the user clicks the appropriate option they're then enrolled into one of two different courses on the LMS and then unenrolled from the Course Selection Course using the Auto unenrol-self plugin.
2. Discovery HC courses: these make use of an enrolment endpoint built on the LMS to accomplish much the same as in (1) above (the Discovery HC Web Service), however given the complexity of the offering from Discovery HC, a custom enrolment endpoint needed to be built (inside of the local_discovery plugin). There are a variety of possible course combinations and offerings, the logic of which are handled by Discovery, and then passed to the LMS for enrolment. Learners are also enrolled into a Course Selection course, similar to (1), to allow them to self-enroll into other courses should they wish to
3. Corporate Courses: These courses only currently involve manual enrolments processed via bulk upload by our learner success team

Custom attributes on the LMS:

There are a variety of custom attributes on the user object that have been created in our LMS. Primarily, these revolve around ID Numbers (used for all streams), Entity Numbers (used by HC) and BP Numbers (used by DBank). As there is the potential for a learner to gain access to different courses via all three streams, the decision was made to store these respective values in different user attributes for each learner so that there would be no conflicts if a learner was enrolled into both HC courses and DBank courses.

Production Information

Moodle Statistics as of 18 May 2024

- Moodle release (3.11)
- Number of courses (64)
- Number of users (37100)
- Number of recently active users (251)
- Number of role assignments (54883)
- Number of posts (1)
- Number of questions (745)
- Number of resources (6)
- Number of badges (0)
- Number of issued badges (0)
- Average number of participants (1001.70)
- Average number of recently active participants (9.42)
- Average number of course modules (22.51)
- Mobile services enabled (No)
- Mobile notifications enabled (No)
- Number of users with registered mobile devices (0)
- Number of active users with registered mobile devices which are receiving notifications (0)

Server Setup

Software Versions

Moodle version: 3.11.14 (Build: 20230424)

Database: Mariadb (5.5.5-10.6.16-MariaDB-0ubuntu0.22.04.1)

PHP: 7.4.33

Web Server: Apache 2.0

Server Configuration

No data provided by the current provider.

Security Checks

[Security Checks](#) provide insight on whether the site has been configured securely. These are the security checks which are currently not passing (i.e. could be in Warning, Info, Error or Critical state) and should be addressed:

1. **Check all public / private paths (Error)** - these are folders or files within the LMS code that is publicly accessible that shouldn't be

2. **Writable config.php (Warning)** - it's a recommendation to prevent the web server from being able to make changes to this file. It's not an outright security measure but it helps reduce the attack surface.
3. **Executable paths (Warning)** - Allowing executable paths to be set via the Admin GUI is a vector for privilege escalation.
4. **Web cron (Warning)** - Running the cron from a web browser can expose privileged information to anonymous users. It is recommended to only run the cron from the command line or set a cron password for remote access.
5. **Administrators (Info)** - this is just to ensure that the Site Administrator list is checked regularly to make sure the right users have the right access.
6. **XSS trusted users (Warning)** - a list of users that have elevated privileges that should be checked. Note: there are a number of "@hubblestudios.com" users within this list as well, and those accounts have **not** been disabled.
7. **Backup of user data (Warning)** - a list of users and roles that have permissions to backup user data. A list that should also be checked.
8. **Default role for all users (Critical)** - All logged in users are given capabilities of the default user role. Please make sure no risky capabilities are allowed in this role. Note: this check has a bug that has been fixed in later versions of Moodle, so, this is not AS critical as it is saying.