

Tools:

A computer with windows system

Xvast browser

Moodle

DRM-X 4.0 account

Steps:

1. Install Moodle and configure your website.

Download the latest Moodle installation package from its official website, unzip it and upload it into your server. Follow the prompts to modify configuration and complete the installation including the establishment of Moodle database. So you must have your own server and database.

The demonstration below uses Apache and MySQL constructed in local PC. There are many tutorials about Moodle installation online, so we won't do more introduction here.

After installation, and registered the administrator account. Then login to create your course.

The screenshot displays the Moodle user interface. At the top, there is a navigation bar with a hamburger menu, the text 'test', the language 'English (en)', and user management icons. A left sidebar contains a list of navigation options: Dashboard, Site home (highlighted in blue), Calendar, Private files, My courses, music, code, Site administration, and Add a block. The main content area shows the 'test web' header with a settings gear icon. Below this is a '+ Add an activity or resource' button. The 'Available courses' section lists two courses: 'music' with a blue abstract image and 'code' with a grey background and the text '这是一个编程课程'. At the bottom of the page, a grey button labeled 'Add a new course' is visible, with a green arrow pointing to it from the left sidebar area.

- [Dashboard](#)
- [Site home](#)
- [Calendar](#)
- [Private files](#)
- [My courses](#)
- [music](#)
- [code](#)
- [Site administration](#)
- [Add a block](#)

test web

[Dashboard](#) / [Site administration](#) / [Courses](#)
[/ Manage courses and categories](#) / [Add a new course](#)

Add a new course ▶ Expand all

▼ **General**

Course full name

Course short name

Course category

Course visibility

After create a course example, add user account for your student.

- [Dashboard](#)
- [Site home](#)
- [Calendar](#)
- [Private files](#)
- [My courses](#)
- [music](#)
- [code](#)
- [Site administration](#)

[Search](#)

Site administration
Users
Courses
Grades
Plugins

Appearance
Server
Reports
Development

Users

Accounts

- [Browse list of users](#)
- [Bulk user actions](#)
- [Add a new user](#)
- [User default preferences](#)
- [User profile fields](#)
- [Cohorts](#)
- [Upload users](#)
- [Upload user pictures](#)

- Dashboard
- Site home
- Calendar
- Private files
- My courses
- music
- code

- Site administration

- Add a block

▶ [Expand all](#)

▼ General

Username ?

Choose an authentication method ?

Suspended account ?

Generate password and notify user

The password must have at least 8 characters, at least 1 digit(s), at least 1 lower case letter(s), at least 1 upper case letter(s), at least 1 non-alphanumeric character(s) such as *, -, or #

New password ? [Click to enter text](#) ✎ 👁

Force password change ?

First name !

Surname !

Email address !

▶

After add user account for your student, give your students the right to learn the 'course example'. In the 'Participants', click 'Enroll users' to allow your student learn the course.

- example
- Participants**
- Badges
- Competencies
- Grades
- General

course example

[Dashboard](#) / [Courses](#) / [example](#) / [Participants](#)

Participants

No filters applied ⚙ ▼

▼

▶

Enrol users ×

Enrolment options

Select users No selection

→

Assign role Student

[Show more...](#)

→

Here we completed a simple course creation and add a student user. Then we will add encrypted content to the blank course. We can encrypt some video, audio or pdf files by DRM-X 4.0 encryption platform, integrate DRM-X 4.0 with Moodle and embed the encrypted files into Moodle. It will make your students learn the course easily and securely.

2. Sign up for a DRM-X 4.0 account and encrypt your course.

Download the windows version of Xvast browser from Xvast official website: <https://www.xvast.com>. Open Xvast after installation.

To register a DRM-X 4.0 account through Xvast Browser, <https://4.drm-x.com/register.aspx>

Browser window: Haihaisoft DRM-X pro x

Address bar: 4.drm-x.com/Register.aspx

Phone: +86-512-50127486

Buttons: Customer Login, Free Trial, -- Language --

Navigation: Home, Products, Services, Solutions, Downloads, Customers, About Us, Support

“Your sophistication looks far more than your competitors at a lower price too! I wasted so much time with windows media drm, hexalock, multimedia protector and other methods. Your DRM is the answer I was looking for.”

—DRM-X Customer DUNCAN SCOTT

The easiest, most secure way to protect your digital content.

Register now and for 90 days you'll have full trial access to all the features and capabilities of the world's most powerful DRM platform.

DRM-X 90 Days Free Trial. Securely distribute your files to Windows, Mac, iOS and Android devices.

Current version 4.0

Promotions: Enterprise customers first month free, allow commercial use

Please fill in all fields.

Login E-mail:

Password:

Re-enter password:

Full Name:

Country:

Phone: -

Verification Code: Refresh the image

DRM-X Prohibited Content:

- Pornography or Sex related content.
- Content that infringes the intellectual property rights of a third party.

I have read and agreed to the User Agreement.

Login to the newly registered DRM-X 4.0 account, In the DRM-X 4.0 Control Panel, first we click "Rights" to add a new rights. Set Rights Description, Rights Price, Open count, Expiration After First Use, Protect document, Not Allow Print, enable watermark. You can set the watermark content to prevent piracy. Dynamic watermarking supports two modes of display. The first way is to set the watermark's position and frequency of change. The second type of watermark display is a marquee effect with a higher level of security.

- Account Home
- User Group
- License Profile
- Rights**
- Users
- Reports
- Account Settings
- Protect File

Edit Rights

Edit Rights (*=Required Fields)

Rights ID: *	19529
Rights Description: *	<input type="text" value="resources"/>
Rights Price: *	<input type="text" value="1"/> RMB Set Currency
Open Count: *	<input type="text" value="10"/> For unlimited open count, please input -1
Begin Date: *	<input type="text" value="10"/> <input type="text" value="27"/> Year: <input type="text" value="2018"/>
Expiration Date: *	<input type="text" value="10"/> <input type="text" value="29"/> Year: <input type="text" value="2033"/>
Expiration After First Use: *	<input type="text" value="-1"/> <input type="text" value="Hour(s)"/> To disable this limitation, please input -1. If user is monthly or yearly payment, please set 1 month or 1 year here. Expiration Date in Valid Date Range, please set 10 years later. System will use the earlier expiration time.
Check Server Time	<input checked="" type="checkbox"/> Check expiration date by connecting to Standard Time of server, it may take 1-2 seconds
Disable Virtual Machine:	<input checked="" type="checkbox"/> Disable VMWare, Microsoft Virtual PC

Protect PDF and Web Page Settings

Protect Document:	<input checked="" type="checkbox"/> You need to enable Protect Document to set Allow Print & Allow ClipBoard
Allow Print:	<input type="checkbox"/> Allow Print. (You need to enable Allow Print to set Disable Virtual Printer & Print Count)
-Disable Virtual Printer	<input type="checkbox"/> After you disable virtual printer, only real (physical) printer can print document. This feature is only for Business Pro and Enterprise Account. Upgrade Account here
-Print Count:	<input type="text" value="-1"/> For unlimited print count, please input -1. This feature is only for Business Pro and Enterprise Account. Upgrade Account here
Allow ClipBoard:	<input type="checkbox"/> User can copy text and print screen


[Show Watermark Settings](#) (Only Applied to Business Account or Enterprise Account) [Select another package here](#)

Watermark Settings (Watermark applied to MP4, WebM, PDF, Web Pages and Images)

Enable Watermark: * Enable Watermark in protected files

Watermark Text:* + Username.

First Watermark Area * Please select where you would like to show watermark in your video.
Note: if you don't want display first watermark, please don't choose any Watermark Area.



Random Change First Watermark Area: Enable Random Change Watermark Area

Random Frequency: Seconds

Font Size: 10~30 Pixels

Watermark Alpha Please enter watermark alpha value from:0~255. 0 is transparent, 255 is opacity. Default is 127 half transparent.

Second Enhanced Security Watermark Default is Close. We recommend you open it, choose different color 1~4. It enhances watermark security. It supports Windows & MacOS, and requires Xvast version 1.0.0.8 or later.

Second Watermark Speed Please choose watermark speed for Second Watermark

DRM-X 4.0 inherits 3.0's blacklist prevent screen recording feature. By setting the blacklist program, it can effectively prevent the blacklist from recording or screenshots. When the user opens the protected file, if the Xvast detects that a blacklist program is running, the Xvast will immediately block the blacklist process. Currently, the blacklist program contains hundreds of screen recording and screenshot programs.

Please Select Software in Blacklist (Programs with screen capture function. Business Windows, Business Pro and Enterprise account Only) [Select another package here](#)

Select the software you want to block when you play the video

	Program Name	Exe Name
<input type="checkbox"/>	Windows Media Encoder	wmenc.exe
<input type="checkbox"/>	Cam Recorder	camrecorder.exe
<input type="checkbox"/>	Windows Media Encoder Chinese	WMEnc.exe
<input type="checkbox"/>	Esun Screen Capture	SC.exe
<input type="checkbox"/>	Hyperionics HyperCam	HyCam2.exe

Haihaisoft provides the unique Smart Prevent Screen Recording Technology. It can automatically and effectively detect Screen Recording software in the market, even future Recording Screen software. It helps content providers better control the Rights of their DRM-X 4.0 protected content.

Haihaisoft Smart Prevent Screen Recording Technology (Enterprise Account Only) [Select another package here](#)

Enable Smart Prevent Screen Recording: Currently in beta version. Few user may have problem in Windows if you turn it on. [Learn more...](#)

[OK](#)

With these steps, we have got a custom license right.

Manage Rights				
Rights ID	Rights Description	Rights Details	Edit Rights	Delete
19529	resource	Details	Edit Rights	✗
19475	example	Details	Edit Rights	✗
19071	Courses Rights (Please don't delete)	Details	Edit Rights	✗
19030	Rent: Open 10 times, 72hours, \$1	Details	Edit Rights	✗
19029	Rent: Open 3 times, 24hours, \$1	Details	Edit Rights	✗

And then let's add a new license profile which use the right we added above. We can encrypt files with this profile.

Profile ID	44779			
Profile Name*	<input type="text" value="profile example"/>			Thankyou!
Default Rights *	Select	Rights Name	Price	Rights Details
	<input checked="" type="checkbox"/>	resource	1	Details
	<input type="checkbox"/>	example	0	Details
	<input type="checkbox"/>	Courses Rights (Please don't delete)	0	Details
	<input type="checkbox"/>	Rent: Open 10 times, 72hours, \$1	1	Details
	<input type="checkbox"/>	Rent: Open 3 times, 24hours, \$1	1	Details
Add New Rights				
Security Version*	<input type="text" value="2"/>			
ProductID in your system(Optional):	<input type="text" value="60"/>			
Created Date	10/30/2018 10:56:18 AM			
Updated Date	10/30/2018 10:56:18 AM			
License Profile Settings				
License is Revocable	<input checked="" type="checkbox"/> If you check this option, Haihaisoft client software will check if you want to revoke license when user open protected file with internet connection.			
Revoke License	<input type="checkbox"/> Note: If you choose this option, Xvast browser will revoke the license when users open the protected content online. User can no longer open the protected file encrypted with this license profile.			
Force Internet	<input checked="" type="checkbox"/> If you choose this option, user must have internet connection to open the protected content. It ensures customers use latest Xvast browser. It also makes license invocation more convenient. But a few users may not be able to use when the network is bad.			

Which need to emphasize is that the value of 'ProductID in your system' must be same as your course ID in your own database. Generally students' course selection record is stored in the table "mdl_role_assignments". Here the course id of 'course example' is 56, so we must change the 'ProductID in your system' into 60. Furthermore, we can find that the user account whose UserID is 6 have the right to learn the course.

id	roleid	contextid	userid	timemodified	modifierid	component	itemid	sortorder
4	5	34	2	1539248586	2		0	0
8	5	34	3	1540267053	2		0	0
9	5	34	4	1540267199	2		0	0
10	5	21	3	1540267251	2		0	0
11	5	21	2	1540275505	2		0	0
15	5	60	6	1541055472	2		0	0

If you feel that looking for parameters in a lengthy database is too cumbersome, you can also find this parameter directly in the Moodle account. Click Settings in the 'Participants column of the course. Move your mouse over the permissions. You can find the URL in the lower left corner of the screen. The last number is the product ID of the course we are looking for.

The screenshot shows the Moodle 'Participants' page. On the left is a navigation sidebar with options like 'Competencies', 'Grades', 'General', and 'Topic 1-4'. The main content area is titled 'Participants' and shows 'No filters applied' and a search box. Below the search box, there are filters for 'First name' and 'Surname', each with an 'All' button and a row of letters (A-M, N-Z). A dropdown menu is open over the 'Permissions' link, listing options: 'Enrolled users', 'Enrolment methods', 'Manual enrolments', 'Groups', 'Permissions' (highlighted with a green arrow), 'Check permissions', and 'Other users'. At the bottom of the page, a table lists participants with columns for 'Select', 'Surname', 'Email address', 'Roles', 'Groups', 'Last access to course', and 'Status'. One participant is listed with the name '生学' and email 'studentemail@mail.com'. At the bottom left, the browser address bar shows the URL '192.168.0.103/moodle/admin/roles/permissions.php?contextid=60', with a green arrow pointing to the 'contextid=60' part.

Then we can encrypt files with the profile.

Click into the 'protect file', choose the right and license profile we added above.

Protect Files (mp4, mp3, webm, wav, pdf, html, htm, bmp, gif, png, jpg, jpeg, svg, webp, js, css)

Note: Please check the latest DRM-X 4.0 Security Settings. It will help you make your encryption safer.
For beginners, please learn: [DRM-X 4.0 Encryption Tutorial](#)

Step 1. Select A License Profile: [Edit this Profile](#) [New Profile](#)

profile example Delete Selected Profile: ✕

Step 2. Rights of the selected License Profile: [New Rights](#)

Rights Name	Price	Rights Details	Edit Rights	Delete
resource	1	Details	Edit Rights	✕

Step 3. Which User Group can access this License Profile [New User Group](#)

<input type="checkbox"/>	Group Name	Edit Group	View Users	Delete
<input checked="" type="checkbox"/>	test	Edit Group	Manage its Users	✕

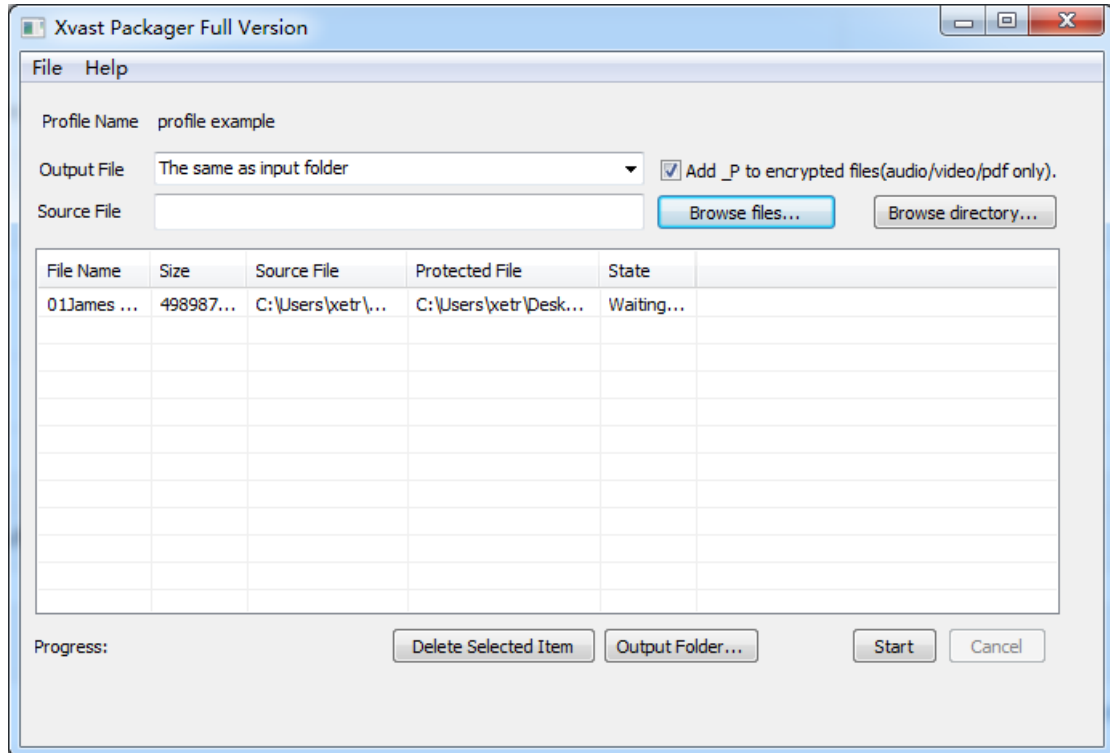
After you selected Groups, click here to [Apply](#)

Step 4. Protect Files Online

DRM-X Online Encrypt
How to:
First, [Download and install Xvast browser !](#)
Important: [Download and install Xvast Packager Full Version](#), You are already DRM-X 4.0 paid member, please install Xvast Packager Full Version. It enhances security level of protection. Please extract zip, then copy 2 files Packager.exe and psum.db to Xvast browser installed directory(Default installed in: C:\Program Files (x86)\Xvast\). Then please access this page in Xvast browser, click [Popup Encrypt Dialog](#) button. Then you can start encryption. Please check [Encryption Tutorial](#).

[Popup encrypt dialog](#) Please access this page in Xvast browser

Choose the file you want to encrypt and click 'Start'.



Ok, now we have encrypted a video file. Other audio or pdf files all can be encrypted like this. The detailed process of encryption can refer to the following tutorial
 Video encryption: https://www.drm-x.com/DRM-X4.0_encryption_tutorial.aspx
 Web page Encryption: https://www.drm-x.com/DRM_web_page_html_encryption_tutorial.aspx
 PDF encryption: https://www.drm-x.com/How_To_Encrypt_PDF.aspx

3. Integration between Moodle and DRM-X 4.0

Now we need to integrate DRM-X 4.0 with the Moodle website. After integration, students who have selected your course will be able to view the encrypted content in the course by simply logging into your Moodle website. Let's demonstrate the specific operation of the integration.

Sample code:

https://www.drm-x.com/download/DRM-X_4.0_Integration/DRM-X4.0_Integration_With_Moodle.zip

According to the sample code, you need to copy four pages named 'index.php', 'reindex.php', 'login.php' and 'licstore.php'. When the user opens the encrypted file, it will automatically jump to 'index.php' to check if he has logged into his Moodle account. If not, jump to 'reindex.php' to login account. Otherwise, jump directly to 'login.php' to verify that the user's password is correct or not, whether user have the right to learn the corresponding course, etc. You can freely add and modify your verification code on this page. After that, if the user passes the verification, it will jump to 'licstore.php' to obtain the license and open the encrypted file.

In 'index.php', get the corresponding information of the encrypted file including profileid, clientinfo, rightsid, yourproductid, platform, contenttype, version, return_url. Store these parameters in the global variable \$USER for later calls. Then determine if the user has logged into his Moodle account.

```

require_once("../config.php");
$USER->ProfileID = $_REQUEST["profileid"];
$USER->ClientInfo = $_REQUEST["clientinfo"];
$USER->Platform = $_REQUEST["platform"];
$USER->ContentType = $_REQUEST["contenttype"];
$USER->ProductID = $_REQUEST["yourproductid"];
$USER->RightsID = $_REQUEST["rightsid"];
$USER->Version = $_REQUEST["version"];
$USER->Return_URL = $_REQUEST["return_url"];
if (isloggedin() or isguestuser()){
    echo "<SCRIPT language=JavaScript>location='login.php!';</SCRIPT>";
}else{
    echo "<SCRIPT language=JavaScript>location='reindex.php!';</SCRIPT>";
}

```

If the student hasn't logged into Moodle, jump to 'reindex.php' (It is not the initial login page of Moodle, which allows users to obtain licenses to view encrypted files without logging into Moodle.). Otherwise jump to login.php for specific verification.

If the user hasn't logged into Moodle, you will need to verify the password. If the user has already logged into Moodle, there is no need to verify the password.

```

if($_GET['un'] == 'login'){
    $username = $_REQUEST["username"];
    $pwd = $_REQUEST["password"];

    /***** verify the password *****/
    $result = mysqli_query($dbcon,"SELECT ID,password,email FROM mdl_user WHERE username
    ='". $username. "'");
    $row = mysqli_fetch_array($result, MYSQLI_ASSOC);
    $email = $row['email'];
    $t_hasher = new \PasswordHash(8, FALSE);
    $newpwd= $t_hasher->CheckPassword($pwd, $row['password']);
    if ($newpwd != true ) {
        $info = "Your Account or Password is incorrect! <br><br>Please revisit the course!<br>";
    } else{
        $ username      = $username;
        $_SESSION['pwd'] = $pwd;
        $ userid        = $row['ID'];
        $ userEmail     = $email;
    }
}
/****/
// If the user has already logged into moodle, there is no need to verify the password.
}else{
    $username = $USER->username;
    $userEmail = $USER->email;

```

```

    $userid = $USER->id;

}

```

Then verify whether the user has permission to learn the course. If the verification is passed, save the user information to the DRM-X 4.0 account, then obtain the license and jump to next page to open the encrypted file. Note that the red code below needs to be changed to your DRM-X 4.0 account, the Web Service Authentication String you set (This will be demonstrated below) and the GroupID.

```

// Query the order based on the user ID
$id_query = mysqli_query($dbcon,"SELECT id FROM mdl_user WHERE username='".$username."'");
$id_row = mysqli_fetch_array($id_query, MYSQLI_ASSOC);
$id_result = $id_row['id'];

$courseid_query = mysqli_query($dbcon,"SELECT contextid FROM mdl_role_assignments WHERE
userid='".$id_result."'");
while($courseid_row = mysqli_fetch_array($courseid_query, MYSQLI_ASSOC)){
    $courseid_result = $courseid_row['contextid'];
    if ($courseid_result == $USER->ProductID){
        /****** Check whether the user exists on the DRM-X platform******/
        $wsdl="http://4.drm-x.cn/haihaisoftlicenseservice.asmx?wsdl";
        $CheckUser_param = array(
            'UserName'          => $username,
            'AdminEmail'       => 'yourEmail@163.com', //your DRM-X4.0 account
            'WebServiceAuthStr' => 'aaaaaa', // the Web Service Authentication String you set in DRM-X4.0
background
        );

        $client = new nusoap_client($wsdl, 'wsdl');
        $client->soap_defencoding = 'UTF-8';
        $client->decode_utf8 = false;
        $CheckUser = $client->call('CheckUserExists', array('parameters' => $CheckUser_param), "", "", true,
true);

        $CheckUser_result = $CheckUser['CheckUserExistsResult'];
        /*** End detecting whether the user exists ***/

        // If the username is not exists, call 'AddNewUser' to add user.
        if($CheckUser_result == "False"){
            $add_user_param = array(
                'AdminEmail'          => 'yourEmail@163.com', // your DRM-X4.0 account
                'WebServiceAuthStr' => 'aaaaaa', // the Web Service Authentication String you set in
DRM-X4.0 background
                'GroupID'            => '11726', //GroupID

```

```

        'UserLoginName'    => $username, // Username or ID
        'UserPassword'    => 'N/A',
        'UserEmail'       => $userEmail,
        'UserFullName'    => 'N/A',
        'Title'           => 'N/A',
        'Company'         => 'N/A',
        'Address'         => 'N/A',
        'City'            => 'N/A',
        'Province'        => 'N/A',
        'ZipCode'         => 'N/A',
        'Phone'           => 'N/A',
        'CompanyURL'      => 'N/A',
        'SecurityQuestion' => 'N/A',
        'SecurityAnswer'  => 'N/A',
        'IP'              => getIP(),
        'Money'           => '0',
        'BindNumber'      => '2',
        'IsApproved'      => 'yes',
        'IsLockedOut'     => 'no',
    );

    $add_user = $client->call('AddNewUser', array('parameters' => $add_user_param), "", true,
true);

    $result = $add_user['AddNewUserResult'];
}
/**/ Successfully added new users ***/
/****** obtain a license after the license authority is updated *****/
$param = array(
    'AdminEmail'        => 'yourEmail@163.com', // your DRM-X4.0 account
    'WebServiceAuthStr'=> 'aaaaaa', // the Web Service Authentication String you set in DRM-X4.0
background
    'ProfileID'         => $USER->ProfileID,
    'ClientInfo'        => $USER->ClientInfo,
    'RightsID'          => $USER->RightsID,
    'UserLoginName'     => $username,
    'UserFullName'      => 'N/A',
    'GroupID'           => 11726, //GroupID
    'Message'           => 'N/A',
    'IP'                => getIP(),
    'Platform'          => $USER->Platform,
    'ContentType'       => $USER->ContentType,
    'Version'           => $USER->Version,
);

```

```

$client = new nusoap_client($wsdl, 'wsdl');
$client->soap_defencoding = 'UTF-8';
$client->decode_utf8 = false;
/***** Obtain a license by calling the getLicenseRemoteToTableWithVersion method *****/
$result = $client->call('getLicenseRemoteToTableWithVersion', array('parameters' => $param), "", true,
true);

$license = $result['getLicenseRemoteToTableWithVersionResult'];
$message = $result['Message'];

if(strpos($license, '<div id="License_table_DRM-x4" style="display:none;">') === false )
    echo "<SCRIPT language=JavaScript>location='LicError.php?error=".$license."&message=".$
$message."';</SCRIPT>";
/***** After obtaining the license, store the license and message into $USER, then jump to the licstore
page. *****/
$USER->license = $license;
$USER->message = $message;
echo "<SCRIPT language=JavaScript>location='licstore.php';</SCRIPT>";
$flag = 1;
$info = "Getting license...";
exit;
}
}

```

Here is just the simplest example verification. If you have more feature plugins installed in Moodle, such as courses purchasing, fees paying, etc., you also need to include the verification about whether student has submitted orders, whether the payment is completed or not in the code. Enter the account setting options of the DRM-X platform again, and click in 'Website Integration Preferences' then 'Custom login page integration'. Fill in the 'Web Service Authentication String' and 'License URL'. After the user opens the encrypted file, it will jump to your Moodle integration page for verification.

Account Settings		
Account Information	Preferences	Tools
Contact Information	Payment Preferences	Batch Create Users
Change Password	Currency Preferences	Batch Create License Profiles
Notification	Website Integration Preferences	Export Users CSV File
Renew Service	End User Settings	Import Users CSV File
Select another package here	Manage Blacklist	Xvast Inspect Settings
	Force Use Latest Xvast Browser	

Account Settings

Profile - Website Integration Preferences

Integration Method: [Integration Help](#)

Synchronize user integration
 →
 Custom login page integration

Note: Synchronize user integration is synchronize your website users to DRM-X.com your user. We protect the password with strong encryption. It's secure and easy. (Recommend for most users)
 Custom login page integration is when user acquiring license, it will pop up your website DRM login window to acquire license. It requires you create a new DRM login page. It requires more code work. (Not Recommend, only for advanced users)

Please set a Web Service Authentication String for DRM-X web service (DRM-X need you provide this string to access DRM-X web service.)

aaaaaa →

Please enter License URL(Must begin with http:// or https://) (License URL is the url used by pop window when acquiring license)

http://192.168.0.103/moodle/mdl_integration/index.php →

Submit Cancel

Now we basically completes the integration of DRM-X with our Moodle website. Then you can simply send the encrypted file to your students and they should open it in the Xvast browser. But those who do not have access to your course will not be able to view the encrypted file even though they get the file.

Also you can embed encrypted files directly into your Moodle page so that your students can browse and learn your course directly on your website.

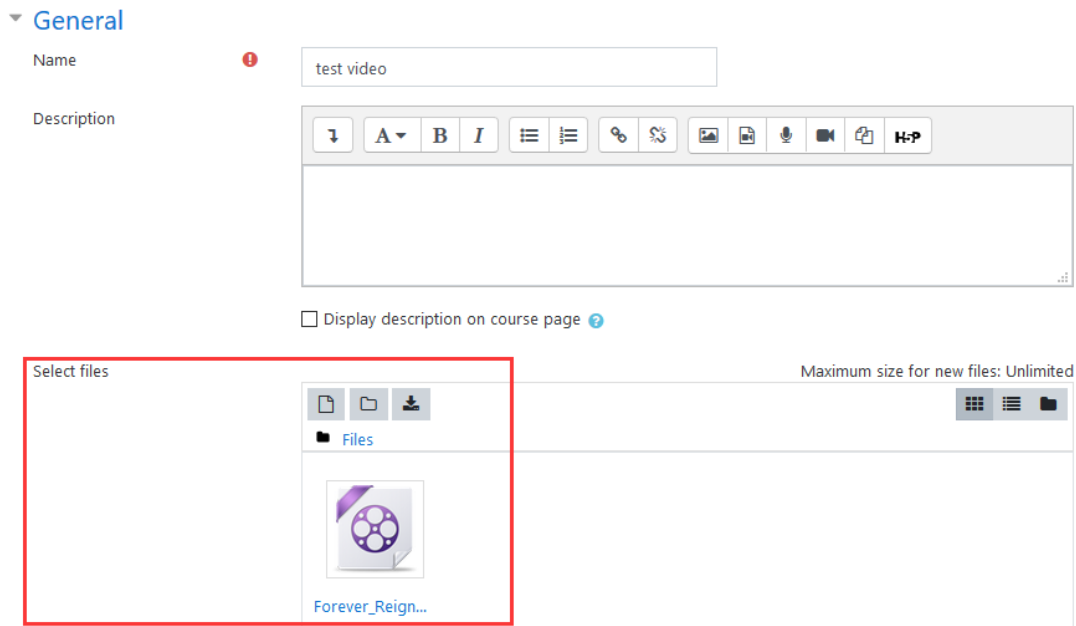
Add an activity or resource to topic 1 of 'course example' you just created and select the page.

The screenshot shows the Moodle course page for 'course example'. On the left is a sidebar with navigation options: Participants, Badges, Competencies, Grades, General, Topic 1, Topic 2, and Topic 3. The main content area shows the course title 'course example' with a settings gear icon. Below the title is a breadcrumb trail: Dashboard / Courses / example. The main content area contains an 'Announcements' section with an 'Add an activity or resource' button. Below that is a 'Topic 1' section, also with an 'Add an activity or resource' button. A green arrow points to this button.

We use the first method to embed the encrypted video through the file mode. **(Recommended)**

The screenshot shows the 'RESOURCES' selection menu in Moodle. It has three options: 'Book', 'File', and 'Folder'. The 'File' option is selected, indicated by a blue dot and a red box around it.

- To share presentations given in class
- To include a mini website as a course resource
- To provide draft files of software programs so students can edit and submit them for assessment



Then you need to modify the videojs plugin code of Moodle, please find the file to be modified through the following path.

Moodle\media\player\videojs\classes\plugin.php

Add the following code on line 203:

```
$text = $text.'<script>document.onreadystatechange = function
() {if (document.readyState == "complete") {let xvastPlayer =
document.getElementById("'.$attributes['id'].'");let isSupp =
xvastPlayer.canPlayType("xvast");if(isSupp.indexOf("http")>0){
let licURL = isSupp.substring(isSupp.indexOf("http"));window.l
ocation.href = licURL;}}}</script>';
```

As shown below:

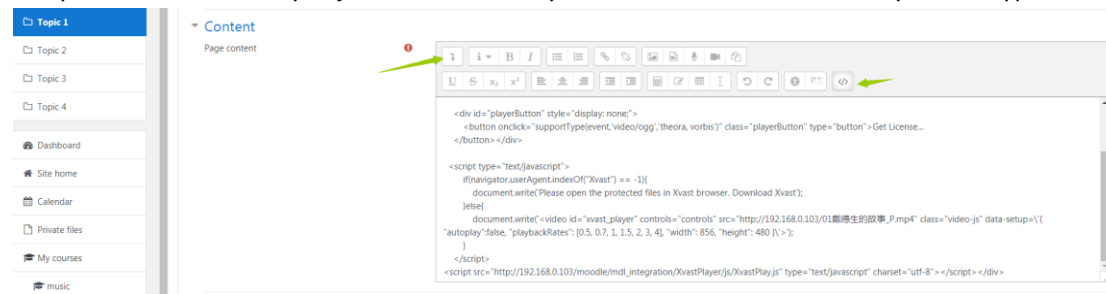
```
194 // Limit the width of the video if width is specified.
195 // We do not do it in the width attributes of the video because it does not work well
196 // together with responsive behavior.
197 if ($responsive) {
198     self::pick_video_size($width, $height);
199     if ($width) {
200         $text = html_writer::div($text, null, ['style' => 'max-width:' . $width . 'px;']);
201     }
202 }
203 $text = $text.'<script>document.onreadystatechange = function () {if (document.readyState ==
204     return html_writer::div($text, 'mediaplugin mediaplugin_videojs');
205 }
206
```

Once completed, you can access the course files through Xvast and Xvast will automatically be directed to the Get License page.

Next, we look at the second mode. Select Page.



As shown below, add the embed code in the html column. The embed code has been saved in the sample code folder, and you just need to modify red URL below to the URL of your encrypted file.



```
<div id="LoadingText" style="display: none;" align="center">
```

```
    Please wait, connecting to obtain license page...
```

```
</div>
```

```
<div align="center" style="margin-top: 10px">
```

```
    <div id="playerButton" style="display: none;">
```

```
        <button onclick="supportType (event,'video/ogg','theora, vorbis')" class="playerButton" type="button"
">Get License...
```

```
    </button></div>
```

```
<script type="text/javascript">
```

```
    if(navigator.userAgent.indexOf("Xvast") == -1){
```

```
        document.write('Please open the protected files in Xvast browser. Download Xvast');
```

```
    }else{
```

```
        document.write('<video id="xvast_player" controls="controls"
```

```
src="http://192.168.0.103/01James Hudson Taylor_P.mp4" class="video-js"
```

```
data-setup=\'{"autoplay":false, "playbackRates": [0.5, 0.7, 1, 1.5, 2, 3, 4], "width": 856, "height":
480 }\>');
```

```
    }
```

```
</script>
```

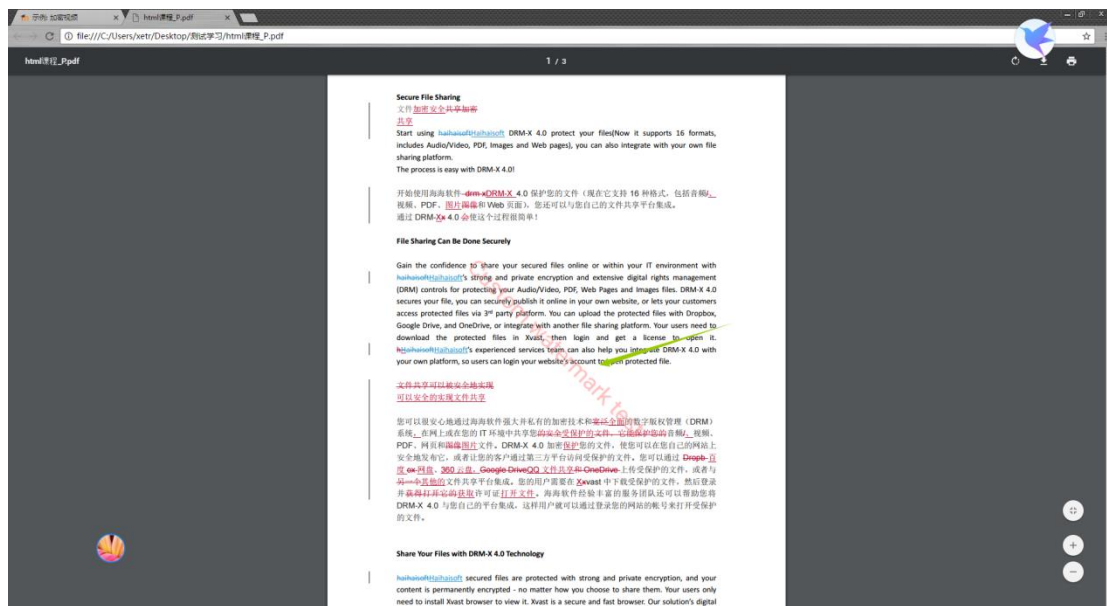
4. Play your course

You can play your course after the integration is completed. Open your website in Xvast browser and login with student account. Then open the "Course example" and Xvast will automatically get the license and play the encrypted content.



After embedding the code, it will show the video like this. There will be two watermarks moving when the video is playing. You can customize the content of the watermark to prevent from being recorded. In addition, DRM-X 4.0 also has blacklist and smart prevent screen recording technology to prevent malicious recording or screen captures. Students who participate in the course can play its encrypted video directly.

Similarly, you can add your encrypted pdf file link directly to your course page. Your students can get license to read the content. The watermark can prevent your encrypted PDF from malicious screen capture, because the content in the watermark will reveal the personal information of the user who transmitted the source.



So far, we have introduced how to build a teaching website based on Moodle, how to encrypt files with DRM-X 4.0 and how to integrate DRM-X 4.0 with Moodle. With this features, your students can easily view your encrypted files while you can also get rid of the piracy problems about transferring or selling your course.