

Integration

Blackboard/LAT Integration

Setup Guide

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Data Integration Solutions

Enterprise Data Hub Launches

The Enterprise Data Hub establishes a central portal through which institutions can manage data between Taskstream LAT by Watermark and other enterprise data resource systems within or outside of the campus infrastructure. The Enterprise Data Hub has been built to scale and utilizes non-relational database technology to process vast amounts of data.

Direct Access to Taskstream LAT by Watermark from within Blackboard

The Enterprise Data Hub creates a direct data link from Taskstream LAT to Blackboard data. Tasks which previously required students to log into both Blackboard and Taskstream LAT can now be completed from within Blackboard alone, greatly simplifying and streamlining the student workflow and user experience.

Students are able to navigate into a single course section in Blackboard and interact with their assessment requirements in the LMS assignment area.

This seamless integration establishes a critical connection between student work submitted at the course level in the LMS and the learning outcomes assessed at the course, program and institution levels in Taskstream LAT.

Grade Transfer from Taskstream LAT by Watermark to Blackboard Gradebook

Artifacts submitted to Taskstream LAT assessment requirement within the Blackboard assignment area are available in Taskstream LAT for scoring by the Evaluator. Once the Evaluator submits a final score for the artifact it automatically passes back to the LMS and populates the gradebook. This eliminates the need to score assignments in two systems, simplifying the Evaluator workflow.


This document explains step by step how you can set up your LMS to utilize the new Taskstream LAT by Watermark Integration Solutions.

Part 1: Step-by-step Setup Guide for the Blackboard Administrator/Taskstream Administrator

Configure Blackboard and LAT by Watermark admin area – Required for Student Experience and Grade Transfer

1. Logon to Taskstream LAT by Watermark
2. Click on **System Admin** from top navigation menu. Login with your credentials. If you do not have access, please contact your Watermark contact.
3. From the **System Administrator Home Page**, click **Enterprise Data Hub**.

taskstream System Administrator

 **Welcome to the System Administrator Home Page**
The System Administrator is able to configure preferences and access features that require a higher level of administrative access.

Tip: While an organization may have multiple System Administrators, one individual will be designated the primary System Administrator for the organization.
For help contact Mentoring Services at help@taskstream.com or 1-800-311-5656.

Administrative Options
for Z_Blackboard Demo OA

General Application Settings

- **Home Page Customizations**
Post a welcoming or other important message for everyone in the organization that will appear at the top of the home page.
- **Analytics and Dashboards**
Select which dashboards and widgets are appropriate for users at your institution.
- **Cybrary Publishing Options**
Select if and how items are published to the Cybrary. View current storage usage.

Registration and Subscribers

- **Subscribers' Information**
Update Usernames, Passwords and Email Addresses
- **Registration Preferences**
Limit subscribers to using specified email domains at registration.

Integration

- **Single Sign-On**
Manage connects for SAML, LTI and Shibboleth.
- **Enterprise Data Hub**
Manage data feeds from Learning Management Systems, Student Information Systems and other sources.
- **TS DataExchange**
Import data from CSV files to create accounts, manage program enrollment and add field placement records.
- **Turnitin Originality Checking**
Enable Turnitin Originality reporting for DRF programs.
- **TS Export**
Setup automatic transmissions of evaluation data via secure FTP.

- Click on the **Go** button associated with **Register Data Source Connectors**.

The screenshot shows the Taskstream Enterprise Data Hub interface. At the top left is the Taskstream logo, and at the top right is the user role 'System Administrator'. The main heading is 'Enterprise Data Hub'. Below this, there is a breadcrumb trail 'System Administrator Home > ENTERPRISE DATA HUB'. A section titled 'DIRECTIONS:' provides information about the Enterprise Data Hub. Below that, an 'Options' section is shown for 'Z_Blackboard Demo OA'. This section contains a list of four options, each with a 'GO' button to its right. The first option, 'Register Data Source Connectors', is highlighted with a red rectangular box, and a blue arrow points from this box to the 'GO' button. The other three options are 'Manage Data Source Feeds', 'Data Feed Summary', and 'Enable Data Integration', each with its own 'GO' button.

taskstream System Administrator

Enterprise Data Hub

[System Administrator Home](#) > ENTERPRISE DATA HUB

DIRECTIONS:
The Enterprise Data Hub is where you have the option to centralize, manage and distribute course and program information throughout the Taskstream toolset. It also provides a way of creating tighter integration with your institution's external data sources and also allows you to reference any existing TSDE resources which may have setup for flat file (CSV) import. Once this area is setup, additional functionality will become enabled (ie. grade transfer to LMS, and an integrated TS student experience within the LMS).

Options (for Z_Blackboard Demo OA)

◉ Register Data Source Connectors	GO
◉ Manage Data Source Feeds	GO
◉ Data Feed Summary	GO
◉ Enable Data Integration	GO

- Select the Blackboard **data source** from the dropdown and click **Add** button.

taskstream System Administrator

Manage Data Source Connectors

System Administrator Home » Enterprise Data Hub »
MANAGE DATA SOURCE CONNECTORS

DIRECTIONS:
This report shows a list of data source connectors your institution registered with taskstream. To register new data source connector, please select a data source from the dropdown and click "Add" button.

Add a new Data Provider: --Select Data Source Connector-- **ADD** Search:

PreviousNext Page 1 of 1 **GO**

Data Source Connector	URL	Registration Name	Confirmed	Status	Modified Date	Modified By	Created Date	Created By	Action
Blackboard Learn	https://bbdemo.taskstream.com:8445	bbdemo	Yes	Active	06/22/2016 12:24 PM	Michael Chan	12/04/2015 2:07 PM	Michael Chan	Edit Test Connection Disable
Blackboard Learn	https://bbdemo.taskstream.com:8445	Bbdemo2	Yes	Active			02/10/2016 6:02 PM	Michael Chan	Edit Test Connection Disable

PreviousNext Page 1 of 1 **GO**
Showing 1 to 2 of 2 Data Source Connectors

- Fill out all information on the screen as all fields are required.

taskstream System Administrator

Register Blackboard Learn Data Source Connector

[System Administrator Home](#) » [Enterprise Data Hub](#) » [Manage Data Source Connectors](#) »

REGISTER DATA SOURCE CONNECTOR

DIRECTIONS:
To register Blackboard Learn as a tool provider, please fill out the required fields on the registration form below.
Legend: ■ = Required Field

Vendor ID	TSVendor1546030917105517
Program ID	TSPProgram1546030917105517
■ Registration Name:	<input type="text"/>
■ Tech Email:	<input type="text"/>
■ URL:	<input type="text"/>
■ Tool Registration Password:	<input type="text"/>
■ Administrator Username: <small>This account name will be used to exchange data only. It is recommended you create a separate account for this.</small>	<input type="text"/>
<input type="checkbox"/> Request Permission in order to utilize the Taskstream integration solutions	

- **Vendor ID and Program ID** are LAT-system generated values. Note these values down as you'll need to reference them later in Blackboard.
- **Registration Name** – Give it a unique name (10-character limit).
- **Tech Email** – Add a technical contact in case registered data source runs into issues.
- **URL** – Your Blackboard URL. Ensure there is no backslash at the end of the URL.

- **Tool Registration Password** – Log into Blackboard as the administrator. Go to System Admin > Building Blocks> Proxy Tools > Manage Global Properties. Copy the Proxy Tool Registration Password value and paste into Taskstream LAT.

Building Blocks > Proxy Tools > Proxy Tools Global Properties

Proxy Tools Global Properties

Cancel Submit

PROXY TOOL REGISTRATION PASSWORD

Optional password to restrict access to the registerTool method. If specified then Proxy Tools that wish to register themselves must supply this password during the registration process. If left blank then any Proxy Tool may register itself. Note that the Proxy Tool will not be able to login as a tool until you give it a password on the Proxy Tool configuration page. A Proxy Tool will not be able to receive any entitlements until explicitly granted by giving the individual Proxy Tool its own password.

Proxy Tool Registration Password

ALLOW UNKNOWN PROXY TOOLS

If you allow unknown Proxy Tools, then Proxy Tools can connect and use user-based authentication to access Web Services. This still requires a password and restricts access based on the users entitlements within the system and is therefore secure, but can be done without explicitly granting them the right to use Web Services. If you do not allow this then only Proxy Tools that register themselves or that you manually add will be allowed.

- **Administrator Username** – The Blackboard admin account username. This is needed to pull data from Blackboard.
 - Registration cannot proceed without checking the checkbox, **Request Permission in order to utilize Taskstream LAT integration solutions.**
 - Upon clicking on the **Register** button with all validations passed, a registration request is sent to the Blackboard Administrator. Approval is needed from the Blackboard Administrator in order to establish successful connection.
- Back in Blackboard, go to System Admin > Building Blocks > Proxy Tools. Based on the Taskstream Vendor ID and Program ID from above, search for a Blackboard Proxy Tool containing the same values. Check the Data Source Connector Request sent from Taskstream listed.

- Open the contextual menu associated with the registration request and select **Edit**.

The screenshot shows the 'Proxy Tools' management page. At the top, there are navigation links: 'Manage Global Properties', 'Register Proxy Tool', and 'Download Sample Tools'. Below this is a table with columns: 'Vendor', 'Program', 'Availability', 'Tool Authentication Configured', 'Tool Entitlements Requested', and 'Proxy Placements Requested'. A 'Delete' button is visible in the top left, and a 'Refresh' button is in the top right. A contextual menu is open over the first row, showing 'Edit' and 'Delete' options. The first row is highlighted in yellow.

Vendor	Program	Availability	Tool Authentication Configured	Tool Entitlements Requested	Proxy Placements Requested
<input checked="" type="checkbox"/> TSVendor1129030716101409	TSPProgram1129030716101409	Yes	Yes	Yes	No
<input type="checkbox"/> TSVendor1153072114111414	TSPProgram1153072114111414			No	No
<input type="checkbox"/> TSVendor1153101416151420	TSPProgram1153101416151420			Yes	No

- Select **Yes** for Availability to approve the registration.

The screenshot shows the 'AVAILABILITY' configuration section. It contains a descriptive paragraph: 'Configure the availability and security for this Proxy Tool. If the Proxy Tool's Availability is not "Available" then it will not be able to login to any Web Services using any authentication methods (In addition to having any requested placements disabled). The password is only required for tool-authenticated Web Service sessions.' Below this, there are two radio button options: 'No' (Restrict use of this Proxy Tool) and 'Yes' (Permit use of this Proxy Tool). The 'Yes' option is selected and highlighted with a red box.

AVAILABILITY

Configure the availability and security for this Proxy Tool. If the Proxy Tool's Availability is not "Available" then it will not be able to login to any Web Services using any authentication methods (In addition to having any requested placements disabled). The password is only required for tool-authenticated Web Service sessions.

* Availability

No
Restrict use of this Proxy Tool

Yes
Permit use of this Proxy Tool

- Click **Submit** to save the changes.

Manage Data Source Connectors

[System Administrator Home](#) > [Enterprise Data Hub](#) >

MANAGE DATA SOURCE CONNECTORS

DIRECTIONS:

This report shows a list of data source connectors your institution registered with taskstream. To register new data source connector, please select a data source from the dropdown and click "Add" button.

Add a new Data Provider:

Search:

Previous1Next		Page 1 of 1		GO					
Blackboard Learn	https://bbdev2012.murgler.org:8445	TestBBDev	No	Inactive		07/28/2017 10:48 AM	Blackboard Admin	<input type="button" value="Edit"/>	<input type="button" value="Confirm Connection"/>
Previous1Next		Page 1 of 1		GO					

Showing 1 to 3 of 3 Data Source Connectors

- Back in Taskstream LAT System Admin > Enterprise Data Hub > Register Data Source Connectors, locate the Blackboard data source entry and click the **Confirm Connection** button.
- If everything was setup correctly, a **Connection Succeeded** alert shall appear. Click **Ok**.
- Once successful connection is established, the status of the data source connector registration will change to **Active**.

- Click on the **Go** button associated with **Manage Data Source Feeds**.

taskstream System Administrator

Enterprise Data Hub

[System Administrator Home](#) »

ENTERPRISE DATA HUB

DIRECTIONS:
The Enterprise Data Hub is where you have the option to centralize, manage and distribute course and program information throughout the Taskstream toolset. It also provides a way of creating tighter integration with your institution's external data sources and also allows you to reference any existing TSDE resources which may have setup for flat file (CSV) import. Once this area is setup, additional functionality will become enabled (ie. grade transfer to LMS, and an integrated TS student experience within the LMS).

Options (for Z_Blackboard Demo OA)

◉ Register Data Source Connectors	GO
◉ Manage Data Source Feeds	GO
◉ Data Feed Summary	GO
◉ Enable Data Integration	GO

- The **Manage Data Source** feature allows you to specify the course for your incoming data (and ultimately outgoing data) by data type
 - For the **Course Section, Enrollment, User and Grade** data type, select your registered data source under the **Source In** column, and then check **Enable grade transfer** under the **Source Out** column if you would like ability for Taskstream LAT evaluators to send the scores back to Blackboard.
- Click **Apply Changes** and it will take you to the previous page where you will need to go to **Enable Data Integration** section.

Manage Data Source Feeds

[System Administrator Home](#) > [Enterprise Data Hub](#) >
MANAGE DATA SOURCE FEEDS

DIRECTIONS:
This screen allows you to specify the source for your incoming and outgoing data, by data type. It also allows you to specify the synchronization frequency, if you want to update the data automatically or manually, which notifications you would like to receive, and where you would like them sent to.

Data Type Configuration

Data Type	Source In	Source Out
Course Section, Enrollment, User, Grade	LMS/CMS: Blackboard REST (ulearnPRO) <input type="button" value="Edit"/>	<input checked="" type="checkbox"/> Enable grade transfer <input type="checkbox"/> (use LTI)

- Click on the **GO** button associated with **Enable Data Integration**

taskstream System Administrator

Enterprise Data Hub

[System Administrator Home >](#)
ENTERPRISE DATA HUB

DIRECTIONS:
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Options (for Z_Blackboard Demo OA)

<input type="radio"/> Register Data Source Connectors	GO
<input type="radio"/> Manage Data Source Feeds	GO
<input type="radio"/> Data Feed Summary	GO
<input type="radio"/> Enable Data Integration	GO

Enable Data Integration


- You must either enable the integration for all the DRF Programs or enable it for select DRF program(s)
- Once you have enable integration on this page, it will enable the LMS Mapping button to appear on the DRF Template tab under DRF Program Management. That will eventually allow your assessment coordinator to map your Blackboard data against the Taskstream LAT Data template structure

The screenshot shows the 'taskstream' interface for a System Administrator. The page title is 'Enable Data Integration'. Below the title, there are navigation links: 'System Administrator Home > Enterprise Data Hub > ENABLE DATA INTEGRATION'. A section titled 'DIRECTIONS:' states: 'This screen allows you to disable the data integration for all programs, enable it for all programs, or enable it for a single program.' Under the 'Options' section, there are three radio buttons: 'Disable for all programs', 'Enable for all programs' (which is selected), and 'Enable for program(s)'. Below the 'Enable for program(s)' option is a dropdown menu with the following items: 'EX ED 111', 'EX ED 111 Demo', 'Ex Ed Sample CRN', and 'General Education'. At the bottom of the form, there are two buttons: 'Cancel' on the left and 'APPLY CHANGES' on the right.

- Once you click "**Apply Changes**" here, please send an email to integration@taskstream.com so that we may review everything and ensure that the data pull process is working seamlessly.

- Go back to the **System Administration Home Page**. Click **Single Sign-On**.

taskstream System Administrator



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Manage data feeds from Learning Management Systems, Student Information Systems and other sources.
- **TS DataExchange**
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- **Turnitin Originality Checking**
Enable Turnitin Originality reporting for DRF programs.
- **TS Export**
Setup automatic transmissions of evaluation data via secure FTP.

- Click on **LTI Connection** button to create a new LTI connection by providing the Blackboard URL that will be used, then click **Continue**.

The screenshot shows the 'Manage Single Sign-On' page in the Taskstream System Administrator interface. The page title is 'taskstream' and the user is logged in as 'System Administrator'. The main heading is 'Manage Single Sign-On'. Below this, there are navigation links for 'System Administrator Home' and 'MANAGE SINGLE SIGN-ON'. A 'DIRECTIONS' section provides information about downloading certificates and contacting integration services. The 'CREATE A NEW:' section has two buttons: 'LTI CONNECTION' (highlighted with a red box) and 'SAML CONNECTION'. Below this is a table of existing LTI connections with columns for 'SSO Type', 'Referrer or IDP URL', 'Last Modified', and 'Status'. A modal dialog box titled 'Create New LTI Connection' is open, prompting the user to 'Please provide the URL for the LMS that will be used.' with a text input field and 'CANCEL' and 'CONTINUE' buttons. At the bottom of the page, there are radio buttons for 'Allow Self-Registration' (set to 'No (Default)') and a 'SUBMIT CHANGES' button.

- The system will produce an **Assignment Direct Access URL**, **Shared key** and **Shared Secret** which will be needed later to configure on the Blackboard side.

taskstream System Administrator

Manage Single Sign-On

System Administrator Home > **MANAGE SINGLE SIGN-ON**

DIRECTIONS:
 For SAML connections, please [download the Taskstream Certificate](#). You can also download SAML metadata template file [here](#).
 If you have any questions regarding Single Sign-On please email [Integration Services](#).

CREATE A NEW: LTI CONNECTION - OR - SAML CONNECTION

SSO Type	Referrer or IDP URL	Last Modified	Status		
LTI	https://canvasdemo.taskstream.com:3001	12/15/16	Inactive	Enable	View Exceptions
LTI	http://tiapps.net/test/tc.php	02/26/15	Active	Disable	View Exceptions
LTI	https://canvasdemo.taskstream.com	03/09/17	Active	Disable	View Exceptions
LTI	https://mjohnson.instructure.com	01/10/17	Active	Disable	View Exceptions

LTI Connection Details:

Launch URL	https://w.taskstream.com/SingleSignOn2/Login/u1hyhnhmhu
Assignment Direct Access	https://w.taskstream.com/SingleSignOn2/ContentEntryPoint/u1hyhnhmhu
Shared Key	u1hyhnhmhu
Shared Secret	fee87e939e1c4deb8846300e63093552
Error Notification Email	<input type="text" value="ema@taskstream.com"/>
Allow Self-Registration	<input checked="" type="radio"/> No (Default) - Un-matched users redirected to Taskstream Generic Page directing them to contact their institution administrator <input type="radio"/> Yes - Un-matched users redirected to Taskstream Registration / Activate Subscription page (allows users to either link to existing Taskstream account or self-register using key code or credit card)

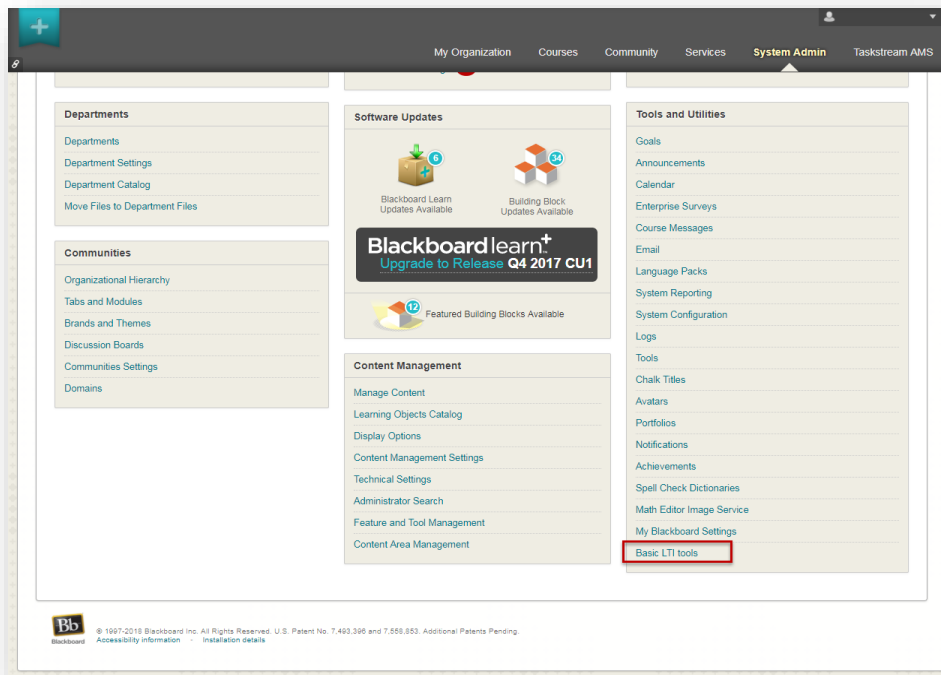
Provides streamlined view, deep linking capability for students, while faculty goes to Taskstream homepage with full set of menu options.

No deep linking for students or grade pass-back. Show full set of Taskstream menu options.

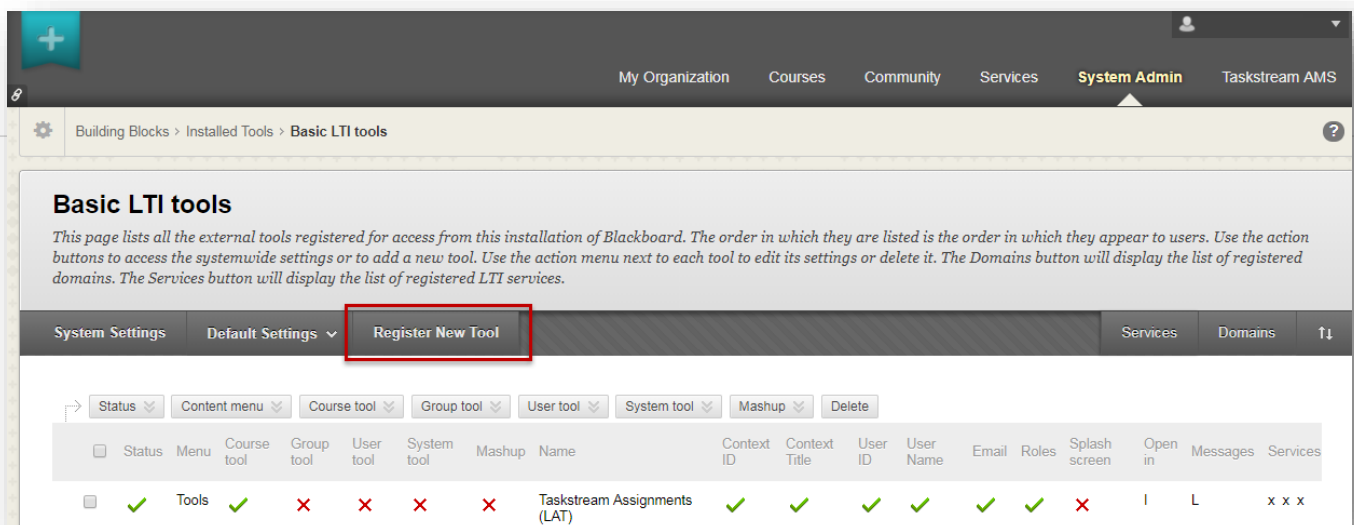
[SUBMIT CHANGES](#)

- Enter an **Error Notification Email** if you wish to receive an email notification if there are SSO issues.
- **Allow Self-Registration** – If your institution has new students self-register/pay for a Taskstream account, then select **Yes**. Else, select **No**.
- **Keep this page open and open a separate browser session to go to Blackboard.**

- Go back into Blackboard as the System Administrator, select **System Admin > Basic LTI tools**.
- If you do not see **Basic LTI tools link**, then please install the following building block from OSCELOT. There are usually 2 zip files listed, so download the larger file (not the bb-basictli-#.##-src.zip). Their building block can be downloaded from here: <http://projects-archive.oscelot.org/gf/project/bb-basictli/frs/>
- Extract the .war file from the downloaded zip and use that to install the building block.



- Click on the **Register New Tool** button to add new registration settings.



- Fill out the following information on the Registration Settings screen:
 - **Name** – Add a meaningful name (e.g. Taskstream-LAT Assignments) because the Blackboard faculty will need to recognize the name when they add the tool to their course.
 - **Launch URL** – Copy and paste the **Assignment Direct Access** URL from the **Taskstream System Admin/Manage Single Sign-on** page.
 - **Consumer key** - Copy and Paste the **Shared Key**.
 - **Shared Secret** - Copy and Paste the **Shared Secret**.
 - All other setting can be ignored and left as is.
 - Click on **Submit** button.

Registration Settings
 This page is for entering the details of an external tool to be accessed from this installation of Blackboard. A tool may be initialized using XML via the "By XML" tab.

* Indicates a required field. Indicates unsaved changes.

Cancel Submit

Settings By XML

NAME

The following parameter is used to label the external tool being registered.

* Name
 This name is used to identify the external tool within Blackboard.

Description
 This description is used when creating a course tool.

CONNECTION DETAILS

The following parameters should be provided by the external tool provider and define the details required to make a connection to the external tool.

* Launch URL
 This is the URL to which users are redirected when they connect to the tool.

Consumer key
 This key uniquely identifies the installation of Blackboard to the tool provider. If the launch URL matches a registered domain which has a consumer key, the consumer key for the domain will be used.

Shared secret
 The value of this secret should also be known by the tool provider and is used to secure the connections between the servers. If the launch URL matches a registered domain which has a secret value, the secret for the domain will be used.

* Signature method
 The method for OAuth to use when signing messages sent to this tool provider.

MESSAGE TYPES

The following parameter identifies which messages are sent to the tool. The launch URL must be provided by the tool.

- The newly added LTI record will display on the Basic LTI Tools screen. Open the contextual menu next to the newly added LTI tool and select **Edit data settings**.

The screenshot shows the Blackboard interface for managing LTI tools. The page title is "Basic LTI tools" and it includes a breadcrumb trail: "Building Blocks > Installed Tools > Basic LTI tools". Below the title is a descriptive paragraph and a navigation bar with buttons for "System Settings", "Default Settings", "Register New Tool", "Services", and "Domains".

The main content is a table of registered LTI tools. The table has columns for various tool attributes and a contextual menu for each row. The "Taskstream Assignments (LAT)" row is highlighted in yellow, and its contextual menu is open, showing options: "Edit registration", "Edit data settings" (highlighted with a red box), and "Edit launch settings".

Status	Menu	Course tool	Group tool	User tool	System tool	Mashup	Name	Context ID	Context Title	User ID	User Name	Email	Roles	Splash screen	Open in	Messages	Services
<input checked="" type="checkbox"/>	✓	Tools	✓	✗	✗	✗	Taskstream Assignments (LAT)	✓	✓	✓	✓	✓	✓	✗	I	L	x x x
<input type="checkbox"/>	✓	Tools	✓	✓	✗	✓	Aqua		✓	✓	✓	✓	✓	✗	I	L	x x x
<input type="checkbox"/>	✓	Tools	✓	✗	✗	✗	staging		✓	✓	✓	✓	✓	✗	I	L	x x x

- Complete the Data Setting by filling out the following information:
 - **Context ID** – checked
 - **Value to use for context ID** - Database Key
 - **Context SourcedId** – checked
 - **Context Title** – checked
 - **ID history** – unchecked

Building Blocks > ... > Basic LTI tools > Data Settings: Taskstream Assignments (LAT)

Data Settings: Taskstream Assignments (LAT)

This page is for selecting the details of which data items are to be sent to the external tool.

* Indicates a required field. Indicates unsaved changes. Cancel Submit

CONTEXT DATA

The following parameters identify which elements of context data are passed to the tool. The tool provider should identify which parameters are mandatory or not used.

- * Context ID
Check this box to send the context ID to the external tool.
- * Value to use for context ID
Select which value to send as a context's ID.
- * Context SourcedId
Check this box to send the context sourcedId to the external tool.
- * Context Title
Check this box to send the context title to the external tool.
- * ID history
Check this box to send the history of former context ID and resource link ID values when the course is a copy of another.

- **UserID** - Required by tool
- **Value to use for User's ID** - Database Key
- **Source ID** – checked
- **User Name** - Required by tool
- **Email** - Required by tool
- **User Avatar** - unchecked
- **User Roles** – checked
 - Send institution role names – checked
 - Send course role names - checked

PERSONAL DATA

The following parameters identify which elements of personal data are passed to the tool. The tool provider should identify which parameters are mandatory, optional or not used. Setting a parameter to optional delegates the decision to the instructor.

- * User ID

Select whether the user's ID is to be made available.
- * Value to use for user ID

Select which value to send as a user's ID.
- * SourcedId

Check this box to send the user's sourcedId to the external tool.
- * User name

Select whether the user's name is to be made available.
- * Email

Select whether the user's email address is to be made available.
- * User Avatar

Check this box to send the URL for the user's avatar (if any) to the external tool.
- * User Roles

Check this box to send the user's roles to the external tool.
- * Send institution role names?

Check this box to send a parameter named `ext_institution_roles` to the external tool containing a list of the user's institution roles within Learn 9.
- * Send course role names?

Check this box to send a parameter named `ext_context_roles` to the external tool containing a list of the user's context roles within Learn 9.
- * Send observer roles?

Check this box to send details of users for whom the user acts as an observer.

- **Role Mappings** – For Learner role, check ‘Learner’. For all other roles except for Teaching Assistant and Guest, check ‘Instructor’.
- **Send administrator role** – unchecked
- **Allow guest access** – unchecked
- Click on **Submit** to confirm settings.

My Organization Courses Community Services System Admin Taskstream AMS

* Send course role names?
Check this box to send a parameter named ext_context_roles to the external tool containing a list of the user's context roles within Learn 9.

* Send observer roles?
Check this box to send details of users for whom the user acts as an observer.

COURSE ROLE MAPPINGS

The following table lists the Blackboard course roles in each row and the available LTI roles in each column. Select the LTI role(s) to be assigned to a user based on their role within Blackboard. A user may be assigned zero, one or more LTI roles.

* Role name

Role name	Instructor	Content Developer	Teaching Assistant	Learner	Mentor
Course Builder	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Evaluator	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Instructor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Learner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Teaching Assistant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Guest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

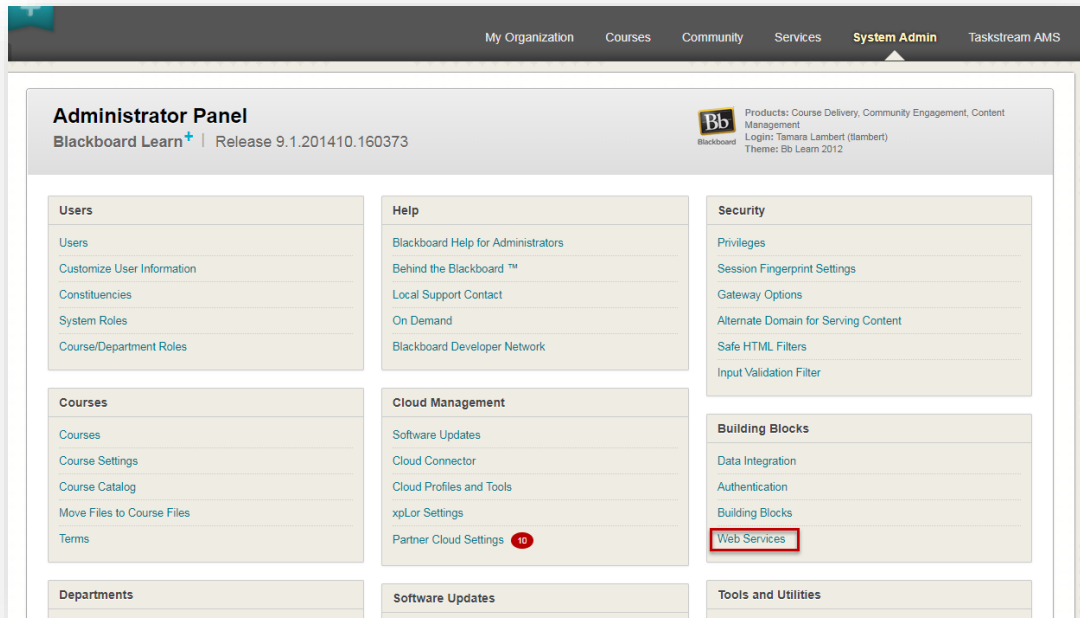
* Send administrator role?
Check this box to include the administrator role in the roles sent to the external tool when the user is a system administrator.

* Allow guest access?
Check this box to send a guest role for those not enrolled in the course and where no guest roles have been assigned above.

Click **Submit** to proceed. Click **Cancel** to go back.

Cancel
Submit

- Ensure that the necessary Web Services have been made **Available** and **Discoverable**.



- Here is a list of web services that will need to be both **Available** and **Discoverable**

The screenshot shows the 'Web Services' management page in the Blackboard Administrator Panel. The page title is 'Web Services' and it includes sub-headers: 'Manage Web Services', 'Upload Web Services', 'Download Sample Tools', and 'Download All Documentation'. Below the sub-headers, there are dropdown menus for 'Availability' and 'Discoverability', and a 'Refresh' button. The main content is a table with the following columns: 'Web Service Name', 'WSDL Location', 'Available', 'Discoverable', and 'Logging'. The table lists 10 web services, with a red box highlighting the first five rows: Content.WS, Context.WS, Course.WS, CourseMembership.WS, and Gradebook.WS. At the bottom of the table, there are 'Refresh' and 'Displaying 1 to 10 of 10 items' controls, along with 'Show All' and 'Edit Paging...' buttons.

Web Service Name	WSDL Location	Available	Discoverable	Logging
Announcement.WS	https://bbdemo.taskstream.com:8445/webapps/ws/services/Announcement.WS?wsdl	Yes	Yes	Common
Calendar.WS	https://bbdemo.taskstream.com:8445/webapps/ws/services/Calendar.WS?wsdl	Yes	Yes	Common
Content.WS	https://bbdemo.taskstream.com:8445/webapps/ws/services/Content.WS?wsdl	Yes	Yes	Common
Context.WS	https://bbdemo.taskstream.com:8445/webapps/ws/services/Context.WS?wsdl	Yes	Yes	Common
Course.WS	https://bbdemo.taskstream.com:8445/webapps/ws/services/Course.WS?wsdl	Yes	Yes	Common
CourseMembership.WS	https://bbdemo.taskstream.com:8445/webapps/ws/services/CourseMembership.WS?wsdl	Yes	Yes	Common
Gradebook.WS	https://bbdemo.taskstream.com:8445/webapps/ws/services/Gradebook.WS?wsdl	Yes	Yes	Common
NotificationDistributorOperations.WS	https://bbdemo.taskstream.com:8445/webapps/ws/services/NotificationDistributorOperations.WS?wsdl	Yes	Yes	Common
User.WS	https://bbdemo.taskstream.com:8445/webapps/ws/services/User.WS?wsdl	Yes	Yes	Common
Util.WS	https://bbdemo.taskstream.com:8445/webapps/ws/services/Util.WS?wsdl	Yes	Yes	Common

- Back on the Basic LTI Tools page for the new tools entry, click Edit launch settings. Complete the Launch Setting by filling out the following information:

The screenshot shows the 'Basic LTI tools' management page. A table lists various tools with columns for Status, Menu, Course tool, Group tool, User tool, System tool, Mashup, Name, Context ID, Context Title, User ID, User Name, Email, Roles, Splash screen, Open in, Messages, and Services. The 'Taskstream Assignments (LAT)' tool is highlighted in yellow. A context menu is open over this tool, with 'Edit launch settings' selected and highlighted in a red box.

- **Open tool in - iFrame**

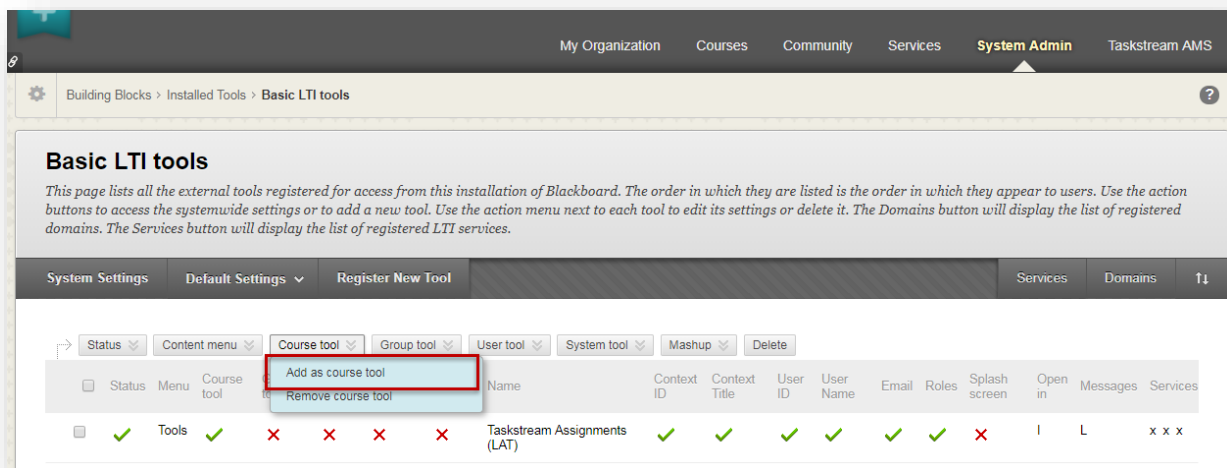
The screenshot shows the 'Launch Settings: Taskstream Assignments (LAT)' configuration page. It includes a 'CONNECT TO TOOL OPTIONS' section with the following fields:

- Open tool in:** A dropdown menu set to 'iFrame'. A red box highlights this dropdown. Below it is the instruction: 'Select where the tool should be opened.'
- Name of new window:** An empty text input field. Below it is the instruction: 'Enter a name to be given to the new window (default is a new, blank window).'
- Width of new window:** An empty text input field. Below it is the instruction: 'Enter a width to be given to the new window (only used for iframe, popup and overlay open options).'
- Height of new window:** An empty text input field. Below it is the instruction: 'Enter a height to be given to the new window (only used for iframe, popup and overlay open options).'
- Show splash screen?:** A checkbox that is currently unchecked. Below it is the instruction: 'Check the box to display the splash screen when launching the external tool.'

At the top right of the form area, there are 'Cancel' and 'Submit' buttons.

- Click on **Submit** to save settings.

- Finish setting up the newly added Basic LTI tool with the following steps:
 - Check the checkbox next to the newly added LTI tool and click on the **Course tool** button to select **Add as course Tool**.
 - Check the checkbox next to the newly added LTI tool and click on the **Display on menu** button to select **Assessments** or **Tools** depending on which option you want Faculty to see when they configure their own course.
 - Check the checkbox next to the newly added LTI tool and click on **Status** button to enable the tool.
 - The new LTI tool is now properly configured.



Part 2: Step-by-Step Setup Guide for the Taskstream LAT TS Coordinator (aka Assessment Coordinator)

LMS Mapping within Taskstream LAT DRF Program – Required for Student Experience

The screenshot shows the Taskstream LAT DRF Program Management interface. The top navigation bar includes links for taskstream | LAT, FOLIOS & WEB PAGES, LESSONS, UNITS & RUBRICS, STANDARDS, COMMUNICATIONS, RESOURCES, TS COORDINATOR, SYSTEM ADMIN, and ANALYTICS. The main header is "DRF Program Management" with a sub-header "History Majors". Below the header are several tabs: All Programs, Setup, DRF Template, Enrollment, Grouping, Resources, and Status. The "DRF Template" tab is selected. A "Directions" section provides instructions on how to use the DRF Template. Below the directions are four buttons: PREVIEW, PREFERENCES, EDIT THIS DRF TEMPLATE, and REMOVE THIS DRF TEMPLATE. The "LMS MAPPING" button is highlighted with a red box. Below the buttons is a section titled "Setup for Selected DRF Template 'Integration Test'". This section contains a table with columns for DRF Template Area, Number of Evaluators Per Submission, Additional Outside Evaluation, Due Date, Author Visibility of DRF, and Evaluator Visibility of DRF. The table lists three DRF Template Areas: CHIN101A - Elem. Mandarin Chinese 1, COMM100 - Intro to Comm. Theory, and HIST1103-001 - American Hist. Each area has two rows of assignments or requirements, each with an "Edit" button.

DRF Template Area	Number of Evaluators Per Submission	Additional Outside Evaluation	Due Date	Author Visibility of DRF	Evaluator Visibility of DRF
CHIN101A - Elem. Mandarin Chinese 1					
Assignment 1	1	No	None	All	All
Assignment 2	1	No	None	All	All
COMM100 - Intro to Comm. Theory					
Assignment 1	1	No	None	All	All
Assignment 2	1	No	None	All	All
HIST1103-001 - American Hist.					
Requirement (rename)	1	No	None	All	All
Requirement (rename)	1	No	None	All	All

- Once the Blackboard data has been transferred into Taskstream LAT, a TS Coordinator needs to map the Blackboard course sections to the DRF requirements. This must be done to allow students to access Taskstream LAT directly through Blackboard and/or to allow evaluators to send grades back to Blackboard.
- To map course sections to a DRF program, the TS Coordinator must access the DRF Template tab from within Program Management, then click on the **LMS Mapping** button.

taskstream | LAT FOLIOS & WEB PAGES LESSONS, UNITS & RUBRICS STANDARDS COMMUNICATIONS RESOURCES TS COORDINATOR SYSTEM ADMIN ANALYTICS

LMS Mapping

History Majors

Welcome to the LMS Mapping page, here you can drag and map one, multiple, or all courses onto categories and requirements.

Categories and Requirements

Search:

- ◆ CHIN101A - Elem. Mandarin Chinese 1
 - ◆ Assignment 1
 - ◆ Assignment 2
- ◆ COMM100 - Intro to Comm. Theory
 - ◆ Assignment 1
 - Introduction to Communication Theory
 - ◆ Assignment 2
- ◆ HIST1103-001 - American Hist.
 - ◆ Requirement (rename)
 - Survey of American History
 - ◆ Requirement (rename)

Available Course Sections

Search:

Past Courses
 Present Courses
 Future Courses

+ Age of Shakespeare and Donne	+ Design and Manufacturing II	+ Enterprise Finance
+ Alex's Course--Test Lock-Out	+ Design and Manufacturing II	+ Enterprise Finance
+ Behavior of Materials	+ Design and Manufacturing III	+ Fluid Mechanics
+ Behavior of Materials	+ Design and Manufacturing III	+ Fluid Mechanics
+ Behavior of Materials	+ Design and Manufacturing III	+ Gender and the Cinemat
+ Blackboard Cheating Course2	+ Dynamics & Vibrations	+ Global Business Strategy
+ Cartoon Animation 111 - Section A	+ Dynamics & Vibrations	+ Global Business Strategy
+ Cartoon Animation Section B	+ Dynamics & Vibrations	+ Global Business Strategy
+ Controls	+ EDU 500	+ Heat Transfer
+ Controls	+ Education Course 5	+ Heat Transfer
+ Controls	+ Elementary Mandarin Chinese II	+ Heat Transfer
+ Debates in American Politics	+ English 121 - Section B	+ Integration Training - Me
+ Design and Manufacturing I	+ English 121 - Section C	+ Introduction to Commu
+ Design and Manufacturing I	+ English 335 - Section B	+ Investment Banking
+ Design and Manufacturing I	+ English 335 - Section C	+ Investment Banking
+ Design and Manufacturing II	+ Enterprise Finance	+ Investment Banking

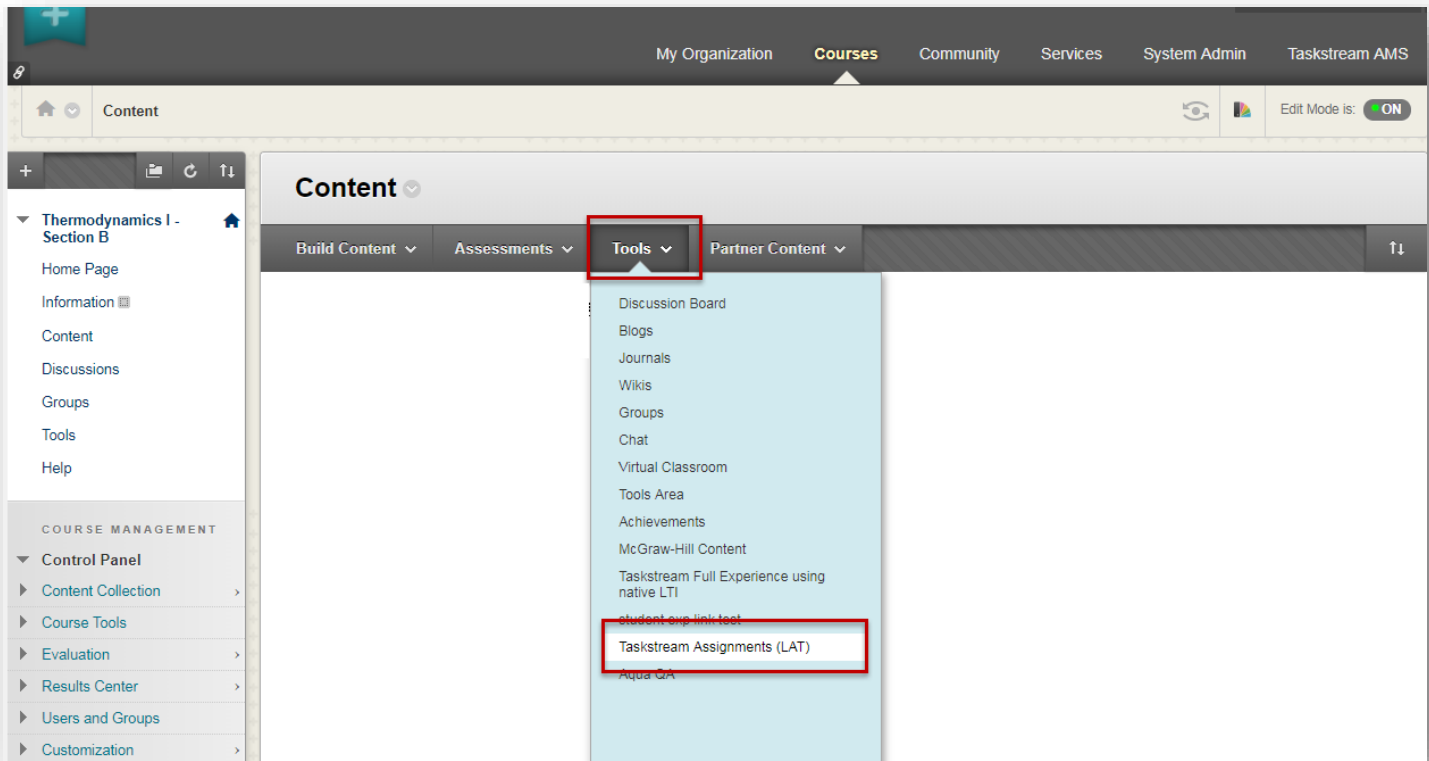
- On the left panel is a list of your DRF structure, while the right panel shows all the Blackboard course sections that were imported into Taskstream LAT. All course sections are initially set as dark blue, but once a course section becomes mapped, the color will become a lighter shade of blue.
- There are two approaches to mapping the Blackboard course sections against a DRF Category or Requirement. First off, click **Display Preferences** to search by either course name or by course number.
- If the DRF Category name contains a portion of the Blackboard course name or course number, such as "EDU 101", then clicking the **Auto Map All Courses** button will try to automatically map the Blackboard course sections against the appropriate DRF area.
- Another approach is to use the Search bar to look for a specific course. The system will filter the course section results based on the search text. You can then manually click and drag the course section over to the left panel against the appropriate the DRF area.
- Some shortcuts include:

- Select more than one course section at a time by holding the CTRL key + clicking multiple course sections
 - Drag course sections(s) onto a DRF category to apply mapping to all of the requirements in that category.
-

Part 3: Step-by-Step Setup Guide for either Blackboard Admin or Faculty

Student Experience: How to add an External Tool to a Blackboard course to enable Student Experience

- Within a Blackboard course, you can add a direct link into the equivalent Taskstream DRF Program.
- On the top-right corner, make sure **Edit Mode is: ON**.
- Click on the **Content** link for the course.
- Depending on how your Blackboard admin configured it, you should see an option with the Taskstream label (such as **Taskstream Assignments**) under either the **Assessments** or **Tools** menu. Select it.



- In the **Configure Tool** page:
 - **Name** – Make up a meaningful name (e.g. Taskstream Assignments) for the new external tool, which will be displayed to students in the Content page.
 - **Description** – DO NOT enter any description.
 - **User Id** – Required by tool
 - **User name** – Required by tool
 - **Email** – Required by tool

My Organization Courses Community Services System Admin Taskstream AMS

Content > Taskstream Assignments (LAT) > Configure Tool

Configure Tool: Taskstream Assignments (LAT)

The Basic LTI tool allows connections to any compliant external tools.

* Indicates a required field. Indicates unsaved changes.

Cancel Submit and Launch Submit

TOOL INFORMATION

Enter the details to appear on the content page for this link.

* Name
Title of content item

Description
For the toolbar, press ALT+F10 (PC) or ALT+FN+F10 (Mac).

Path: Words: 0

PERSONAL DATA

The following parameters identify which elements of personal data are passed to the tool. The tool provider should identify which parameters are mandatory, optional or not used. Setting a parameter to optional delegates the decision to the instructor.

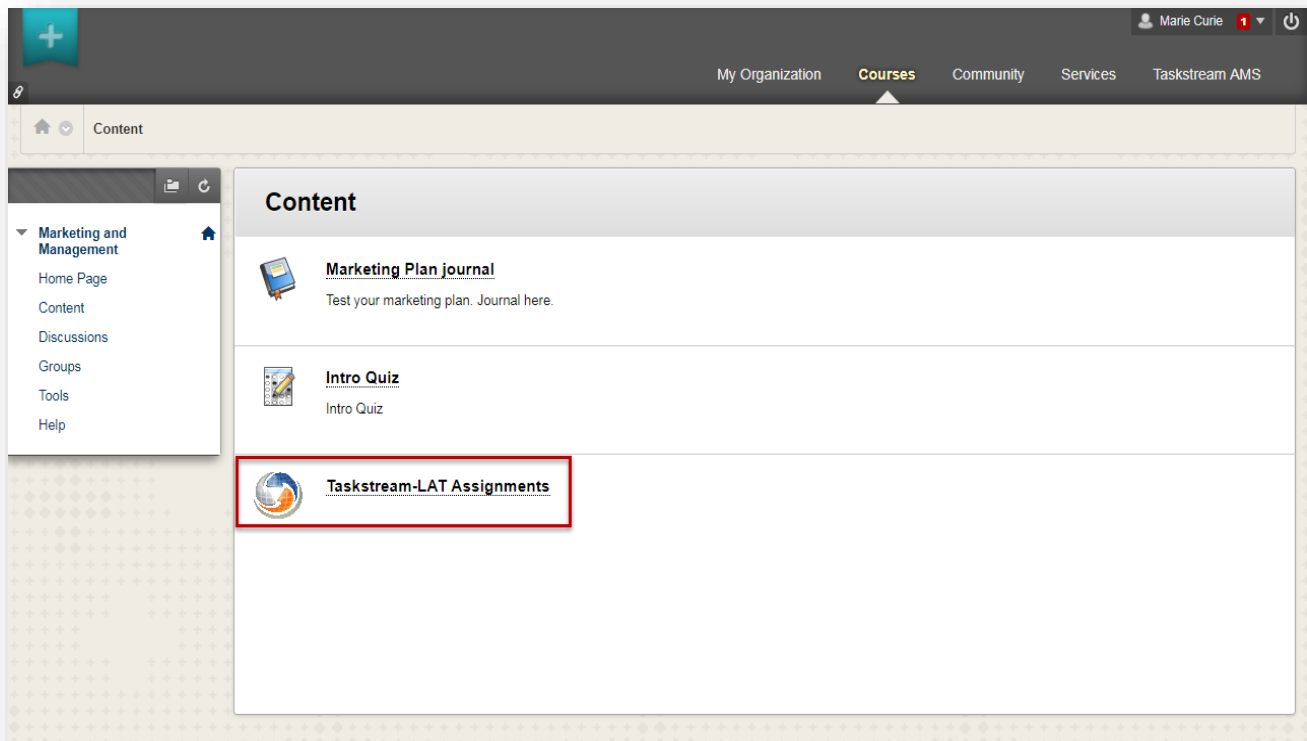
* User ID
Select whether the user's ID is to be made available.

* User name
Select whether the user's name is to be made available.

* Email
Select whether the user's email address is to be made available.

Part 4: Step-by-Step Setup Guide for the student within Blackboard

Student Experience: How to submit work into Taskstream LAT while within Blackboard



- A Content link (e.g. Taskstream Assignments) should be available within the Blackboard course for you (the student) to connect into Taskstream. This link will allow you to connect into the Taskstream DRF requirement(s) and to submit your work.

The screenshot shows a Blackboard course page for 'Taskstream-LAT Assignments'. The top navigation bar includes 'My Organization', 'Courses', 'Community', 'Services', and 'Taskstream AMS'. The user 'Marie Curie' is logged in. The page title is 'Taskstream-LAT Assignments'. A sidebar on the left lists 'Marketing and Management' with sub-items: Home Page, Content, Discussions, Groups, Tools, and Help. The main content area features a 'Taskstream-LAT Assignments' header with the Taskstream logo (Powered by taskstream). Below the header, a message states: 'If any of your Taskstream assignments are missing, please contact your instructor or the Taskstream Coordinator at your Institution.' Two assignments are listed:

- Integration - Student Experience
Marketing and Management: Analysis of Marketing plans
Status: Work Not Started
- Integration - Student Experience
Marketing and Management: Business Management report
Status: Evaluated

- Upon clicking on the link within the Blackboard course, you are redirected to a screen that lists all the Taskstream DRF requirement(s) associated to the Blackboard course.
- The screen displays the following information:
 - DRF Program Name
 - DRF Category Name: DRF Requirement Name
 - Student Work Status
 - Taskstream Requirement Due Date (if one exists)
- Click on the link that best represents what you are trying to submit work for.

- You are initially taken to the **Directions** section. You can review any of the directions and/or evaluation method for the assignment.
- Click the **Work** link to begin submitting your work.
- Click the **Attachments, Text & Image** or **Videos** button to submit your work content for evaluation purposes.
- Follow through the subsequent screen to add your work and then click **Save and Return**.
- If you have added some content, the **Submit Work** button becomes available. Click it once you are ready to submit for a formal evaluation.
- You can review the status of the work submission by clicking the **Results & Comments** link.

Part 4: Step-by-Step Setup Guide for the Taskstream LAT evaluator

How to send a grade score into Blackboard

The screenshot shows the Taskstream LAT evaluator interface. At the top right is a "Save Draft" button. Below it is the "Attach files - Optional (Up to 3 files)" section, which includes a table with columns for "NAME", "FILE (5 MB MAX)", and "VISIBLE TO AUTHOR?". The table has one row with an empty "NAME" field, a "Choose File" button, and a checked "VISIBLE TO AUTHOR?" checkbox. Below the table is an "Add More Files" button.

The "Next Steps" section is on the left, with a vertical bar indicating the current step: "Decide what to do with this evaluation".

The main content area has three radio button options:

- Send back for revision**
This report will be sent back as a provisional evaluation to help guide the author's revision. The author will have to resubmit work in order to be re-evaluated.
Save a copy of this submission?
 - Yes** - A snapshot of this submission will be saved for both author and evaluator records, and the author will be prompted to create a new submission from scratch (although they will be able to view their previous submission for reference).
 - Allow author to import previous submissions into current submission
 - No** - A snapshot of this submission will NOT be saved to either the author or evaluator records, but the author will be able to overwrite this submission rather than start from scratch. Send external email notification
- Record as final but release evaluation to author later**
- Record as final and release evaluation to author now**
Author will immediately receive this evaluation report.
 - Send external email notification

The "Transfer to Blackboard Gradebook" section is highlighted with a red box. It contains a checked checkbox for "Send final score:" followed by an input field, "/100" with a dropdown menu, and "overall comments". Below this is the text: "The final score will be added to the queue to be sent."

At the bottom are buttons for "CANCEL", "CHECK SPELLING", "SAVE DRAFT", "PREVIEW", and "SUBMIT EVALUATION NOW".

- For the Taskstream LAT evaluator who is about to score a student assessment, there is now an option to **Transfer to Blackboard Learn Gradebook**.
- Since it is likely the Taskstream scoring method is not on a 100-point scale, you will need to determine out of a 100-point scale what you think the student deserves to see in the Blackboard grade book.
- Enter an integer value in the **Send final score** field.
- Select the Blackboard “assignment” to send the score to.
- Click **Submit Evaluation Now** and the score will be sent to Blackboard.