



Practice Labs™



LMS Integration Quick Guide

April 2021

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LTI Integration

Learning Tools Interoperability (LTI) is a standard developed by the IMS Global Learning Consortium. Practice Labs is a certified LTI tool provider, enabling partners who are LTI compliant to integrate seamlessly with the Practice Labs platform.

This document details how to integrate with the Practice Labs platform from a Learning Management System (LMS). It covers the following:

- 1. Environments**
- 2. Parameters**
- 3. Integration**

Environments

Practice Labs has two environments, staging and production. Below is an overview of each.

Staging – stg.practice-labs.com

All new and existing partners must test their integration against the staging environment before proceeding to use the production environment. The staging environment is also used internally for testing updates, fixes and new features.

Any account created on stg.practice-labs.com will not be mirrored to the production website, removing any requirement to do a post-test clean-up process once integration has been successfully completed.

We recommend that you test with at least one Practice Lab title and module, and one Exam Prep title (if applicable). If required, additional tests can be performed in order to satisfy your own testing criteria.

The staging environment contains a very limited set of actual labs. Consequently, it is quite normal to receive the message shown in the screenshot below when trying to launch a title or module. If you are receiving this message after integration, then your integration has been successful. The lab assignment process takes place internally and is not tied or linked to the integration process.

In the rare circumstance that you need to test against a lab, please let us know at support@practice-labs.com so we can arrange for a lab to be made available.

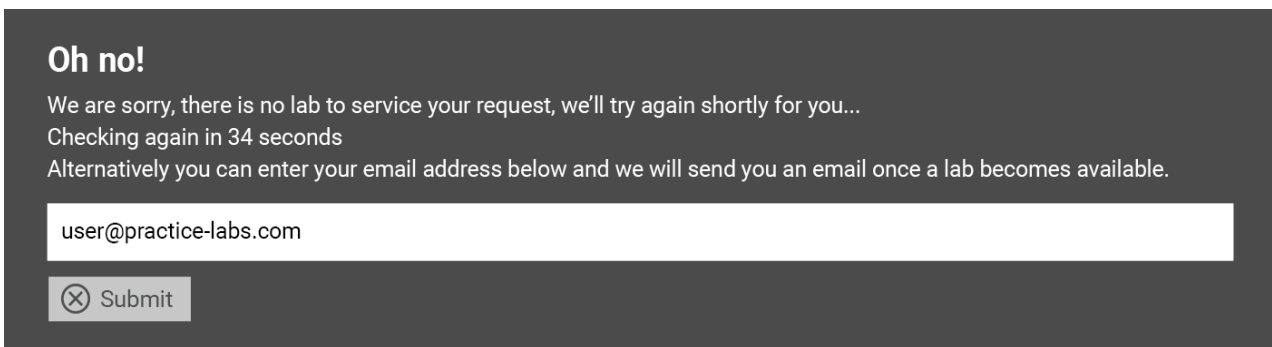


Figure 1 – Lab device error

Production – www.practice-labs.com

This is the Practice Labs live environment your users will connect to when logging in from your LMS instance. Lab resources are available in this environment and any accounts created using the LTI integration will be tracked.

Once you have successfully integrated within the staging environment, you are ready to integrate with the production environment. This should simply be a matter of changing your LTI parameters, as detailed in the next section.

Parameters

Just five parameters are needed to integrate with Practice Labs. Two of these are custom parameters, which are required to link directly to the title and/or module.

The five parameters

Launch URL

The launch URL determines the environment you will be granted access to:

| Environment | URL |
|-------------|---|
| Staging | <code>https://stgapi.practice-labs.com/Provider/Launch</code> |
| Production | <code>https://api.practice-labs.com/Provider/Launch</code> |

Consumer key

The consumer key is used for authentication and is different for each environment. The value for the **Consumer Key** will be sent to you for the relevant environments during the on-boarding process. If you have not received this, or have misplaced it, please contact the Practice Labs support team.

Shared secret

As with the consumer key, the shared secret is different for each environment and is also used for authentication. The value for the **Shared Secret** will be sent to you for the relevant environments during the on-boarding process. If you have not received this, or have misplaced it, please contact the Practice Labs support team.

Custom parameters

The final two values are GUIDs (Globally Unique Identifiers) that differ depending on which product you are accessing in the Practice Labs platform.

Our products

Practice Labs

To map to a Practice Lab title, you will need to define two custom parameters: the **ptitleid** and the **plmoduleid**.

ptitleid is the GUID which allow you to map the user to a specific title.

plmoduleid is the GUID which allow you to map the user to a specific module.

Please note: if **plmoduleid** is left as an empty GUID (00000000-0000-0000-0000-000000000000), when the user launches the platform they will be taken to the lab title and not a module. This will also disable grade pass-back. If **plmoduleid** is present, the user will deep-link into the lab itself and grade pass-back will be available.

Exam Preps

To map to an Exam Prep title, you will need to define two custom parameters: the **plexamid** and the **plexammode**.

plexamid is the GUID which allows you to map the learner to a specific title.
plexammode is the MODE of the title the user will launch into.

Please note: if a **plexammode** value is not provided, users will not be able to launch into an Exam Prep title.

The method of retrieving these GUIDs – and the subsequent integration process – will depend on your LMS.

There are three methods:

1. The GUIDs can be fetched and integrated using the resource selection tool. This will allow you to choose your titles / modules and automatically input the custom parameters into your LMS (recommended approach if supported by your LMS).

If you are unable to use the resource selection tool, the Practice Labs support team can help you source the GUIDs. Integration then depends on whether your LMS allows for custom parameters:

2. If it does, you can manually input the custom parameters.
3. If not, you can use our non-custom launch URL.

All three methods are detailed within this document.

LMS integration with the resource selection tool

The ability to call up the resource selection tool will be dependent on your LMS. If your LMS allows, you can use the details below to set the tool up, enabling you to deep link into Practice Labs.

1. Have your 'customer key' and /or 'shared secret' to hand. If necessary, these can be obtained from the Practice Labs support team.
2. Navigate to the environment you want to launch using the relevant URL below:

Staging: <https://stgapi.practice-labs.com/Provider/Launch>

Production: <https://api.practice-labs.com/Provider/Launch>

3. When prompted, enter the customer key provided for the relevant environment.
4. When prompted, enter the shared secret provided for the relevant environment.

Save these settings to create your deep linking resource selection tool.

How to create a link to a Practice Lab title

Add a Practice Lab to your LMS using your resource selection tool.

1. When the pop-up loads, choose 'Practice Lab' as your resource (as per fig 2).
2. Select your Practice Lab title. The list will filter as you start typing into this field.
3. Choose your module. Here you can:
 - a. Stipulate a specific module for a user to launch into.
 - b. Opt for 'No module', which will allow the user to view the entire Practice Lab title when they login.
4. Select 'Confirm Lab' and close the pop-up. The relevant Practice Lab's GUIDs will automatically populate in your LMS.

Select content

Practice Labs™

Resource Selection

Resource:
Practice Lab

Practice Lab Title:
Cisco - 100-101 - Interconnecting Cisco Networking Devices Part 1

Practice Lab Module:
No Module - Allow the user to select

Please Note: If you do not select a Module, grading will be disabled and no score will be sent to your LMS.

Confirm Lab

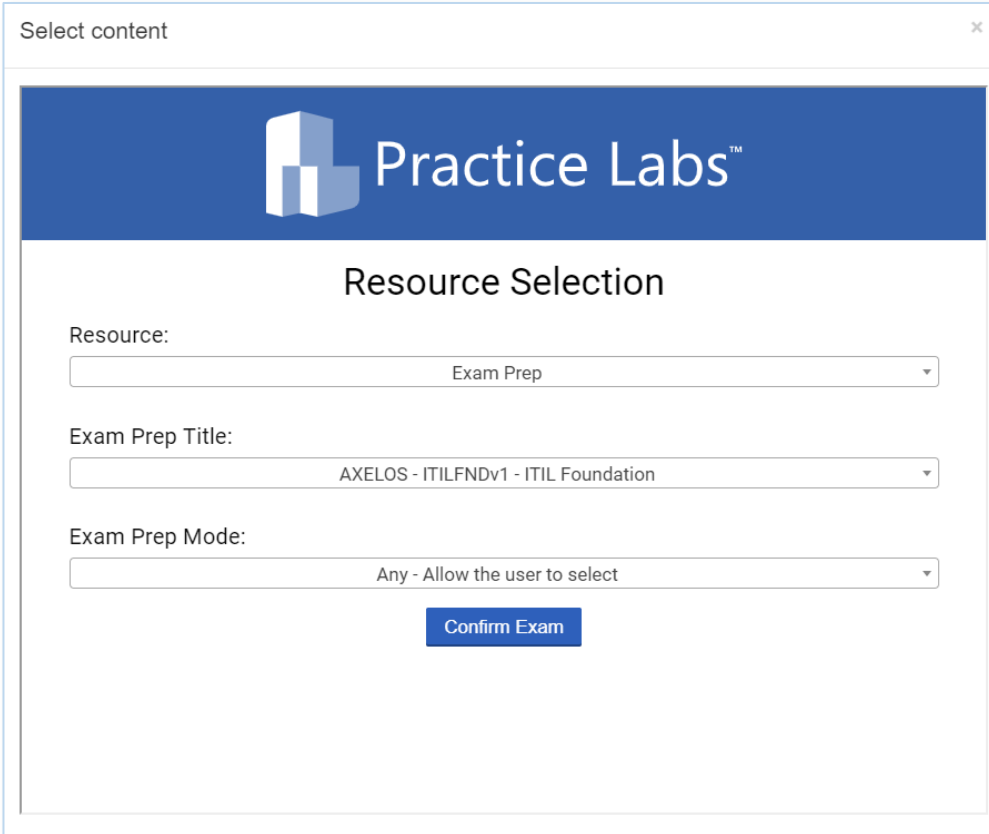
Figure 2 – Choose and confirm your Practice Lab title

Please note: when searching for your preferred Practice Lab title, the list will filter as you start typing into the field.


How to create a link to an Exam Prep title

Add Exam Prep titles to your LMS using your resource selection tool.

1. When the pop-up loads, choose 'Exam Prep' as your resource (as per fig 3).
2. Select your Exam Prep title. The list will filter as you start typing into this field.
3. Choose your mode. Here you can:
 - a. Select 'Exam Mode' (timed with no answers/explanations).
 - b. Select 'Learn Mode' (not timed, with answers and explanations available).
 - c. Select 'Assess Mode' (timed with no answers/explanations).
 - d. Select 'Any' and allow the user to decide when they login.
4. Click 'Confirm Exam' and close the pop-up. The relevant Exam Prep title's GUIDs will automatically populate in your LMS.



Select content

 Practice Labs™

Resource Selection

Resource:

Exam Prep Title:

Exam Prep Mode:

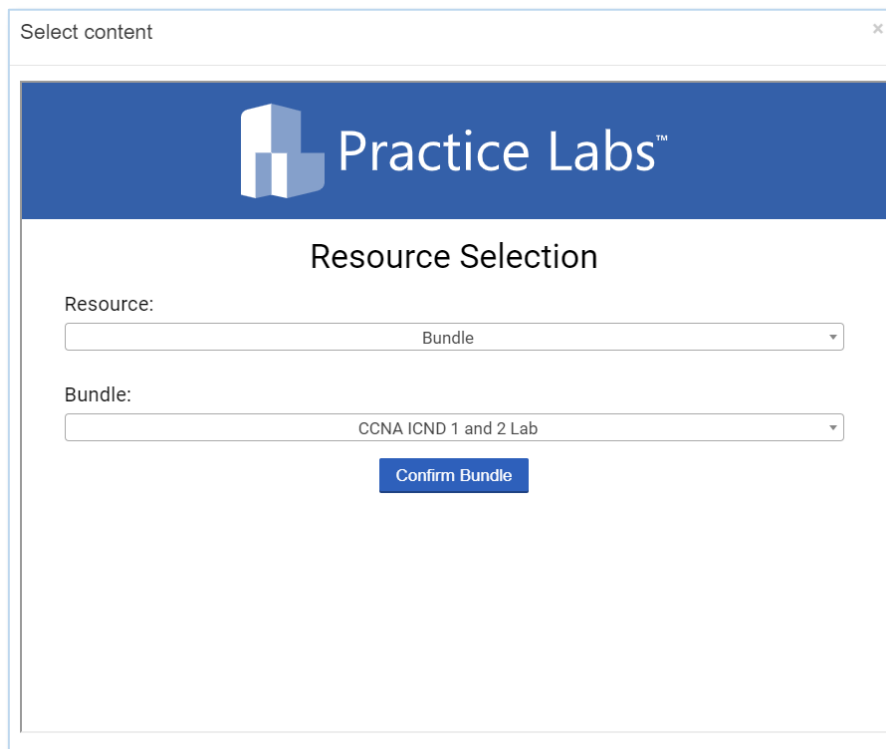
Figure 3 – Choose and confirm your Exam Prep title

Please note: when searching for your Exam Prep title, the list will filter as you start typing into the field.

How to create a link to a bundle

Bundles can be made up of Practice Lab titles, Exam Prep titles, or a mix of both. Add bundles to your LMS using your resource selection tool.

1. When the pop-up loads, choose 'Bundle' as your resource (as per fig 4).
2. Select your bundle. The list will filter as you start typing into this field.
3. Click 'Confirm Bundle' and close the pop-up. The relevant bundle's GUIDs will automatically populate in your LMS.



Select content

Practice Labs™

Resource Selection

Resource: Bundle

Bundle: CCNA ICND 1 and 2 Lab

Confirm Bundle

Figure 4 – Choose and confirm your bundle

Please note:

When searching for your bundle, the list will filter as you start typing into the field.

If the configuration of your organisation does not include bundles, you will not be able to make this selection.

When selecting a bundle, it will not be possible to view grades within your LMS as you will be accessing each title at title level and not module level, which is required for grades to be passed back.

Launch URLs for Practice Labs

Either of the URLs below will display, depending on which launch environment you require.

Staging:

```
https://stgapi.practice-labs.com/Provider/LaunchWithCourseAndModule/{pltitleId}/{plmoduleId}
```

Production:

```
https://api.practice-labs.com/Provider/LaunchWithCourseAndModule/{pltitleId}/{plmoduleId}
```

Launch URLs for Exam Prep

Either of the URLs below will display, depending on which launch environment you require.

Staging:

```
https://stgapi.practice-labs.com/Provider/LaunchWithCourseAndModule/{plexamid}/{plexammode}
```

Production:

```
https://api.practice-labs.com/Provider/LaunchWithCourseAndModule/{plexamid}/{plexammode}
```

Launch URLs for bundles

Either of the URLs below will display, depending on which launch environment you require.

Staging:

```
https://stgapi.practice-labs.com/Provider/LaunchWithCourseAndModule/{pltitleId}/00000000-0000-0000-0000-000000000000
```

Production:

```
https://api.practice-labs.com/Provider/LaunchWithCourseAndModule/{pltitleId}/00000000-0000-0000-0000-000000000000
```

Please note: the `plmoduleId` will always be 00000000-0000-0000-0000-000000000000 for bundles.

```
https://devapi.practice-labs.com/Provider/LaunchWithCourseAndModule/232f0511-49e3-4cd8-924e-7d097f178063/bef3db82-6738-4381-ab57-37343033044a
```

Figure 16 – Tool URL Post Resource Selection

Please note: if the 'Tool URL' is amended, the launch may not work.

LMS with custom parameters

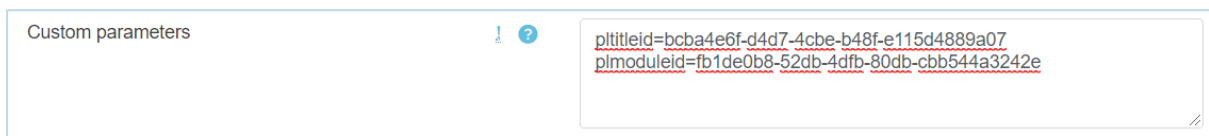
If your LMS has a 'custom parameters' field, you can manually enter the resource GUID's as outlined below.

Practice Labs and bundles

To map to a Practice Lab title or bundle, you will need to define two custom parameters; the **pltitleid** and the **plmoduleid**.

pltitleid is the GUID which allow you to map the user to a specific Practice Lab title.

plmoduleid is the GUID which allow you deep-link the user to a specific module.



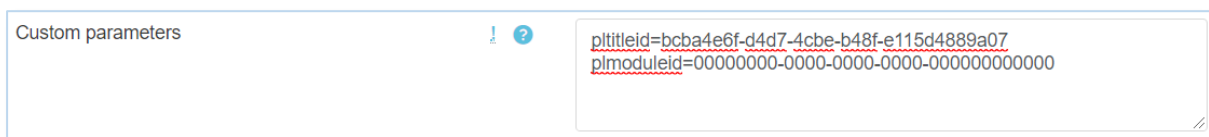
Custom parameters

! ?

pltitleid=bcba4e6f-d4d7-4cbe-b48f-e115d4889a07
plmoduleid=fb1de0b8-52db-4dfb-80db-cbb544a3242e

Figure 6 – Example of a Practice Lab title and module's custom parameters

Please note: if **plmoduleid** is left as an empty GUID, when the user launches the platform they will be taken to the lab title and not the module. This will also disable grade pass-back. If **plmoduleid** is present, the user will deep-link into the lab itself and grade pass-back will be available.



Custom parameters

! ?

pltitleid=bcba4e6f-d4d7-4cbe-b48f-e115d4889a07
plmoduleid=00000000-0000-0000-0000-000000000000

Figure 7 – Example of a Practice Lab title's custom parameters

Please note: the **plmoduleid** will always be **00000000-0000-0000-0000-000000000000** for bundles.

For a full list of the **pltitleid** and **plmoduleid** parameter values, please contact the Practice Labs support team.

Exam Prep

To map to an Exam Prep title, you will need to define two custom parameters: the **plexamid** and the **plexammode**.

plexamid is the GUID which allows you to map the user to a specific title.
plexammode is the MODE of the title the user will launch into.

Available **plexammode** values:

| Mode | GUID | Description |
|--------|--------------------------------------|---|
| Any | 00000000-0000-0000-0000-000000000001 | User choice 'Learn mode' or 'Exam mode' |
| Exam | 00000000-0000-0000-0000-000000000002 | 'Exam mode' exam |
| Learn | 00000000-0000-0000-0000-000000000003 | 'Learn mode' exam |
| Assess | 00000000-0000-0000-0000-000000000005 | 'Assess mode' exam |

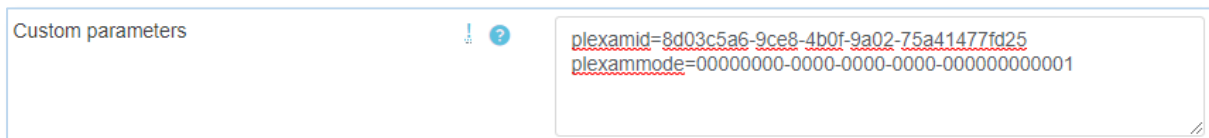


Figure 8 – Example of an Exam Prep's custom parameters

For a full list of the **plexamid** parameter values, please contact the Practice Labs support team.

Please note: if a **plexammode** value is not provided, users will not be able to launch into an Exam Prep title.

LMS without custom parameters

In the situation where a custom LMS does not offer a 'Custom parameters' field, we have created a custom 'Provider path' which contains all the custom parameters in one 'launch URL'.

Practice Labs and bundles

To map to a Practice Labs title and module or bundle you will need to define two custom parameters at the end of our launch URL: the **pltitleid** and the **plmoduleid**.

pltitleid is the GUID which allow you to map the user to a specific title.

plmoduleid is the GUID which allow you to map the user to a specific module.

For a full list of the **pltitleid** and **plmoduleid** parameter values please contact the Practice Labs support team.

Please note:

If you want users to launch directly into a title without specifying a module, enter the following as the **plmoduleid** 00000000-0000-0000-0000-000000000000

The **plmoduleid** will always be 00000000-0000-0000-0000-000000000000 for bundles.

Exam Prep

To map to an Exam Prep title, you will need to define two custom parameters: the **plexamid** and **plexammode**.

plexamid is the GUID which allows you to map the learner to a specific title.

plexammode is the MODE of the title the user will launch into.

Available **plexammode** values:

| Mode | GUID | Description |
|--------|--------------------------------------|---|
| Any | 00000000-0000-0000-0000-000000000001 | User choice "Learn mode" or "Exam mode" |
| Exam | 00000000-0000-0000-0000-000000000002 | "Exam mode" exam |
| Learn | 00000000-0000-0000-0000-000000000003 | "Learn mode" exam |
| Assess | 00000000-0000-0000-0000-000000000005 | 'Assess mode' exam |

Please note: if a **plexammode** value is not provided, users will not be able to launch into an Exam Prep.

Launch URLs for Practice Labs

Either of the URLs below will display, depending on which launch environment you require.

Staging:

```
https://stgapi.practice-labs.com/Provider/LaunchWithCourseAndModule/{pltitleId}/{plmoduleId}
```

Production:

```
https://api.practice-labs.com/Provider/LaunchWithCourseAndModule/{pltitleId}/{plmoduleId}
```

Launch URLs for Exam Prep

Either of the URLs below will display, depending on which launch environment you require.

Staging:

```
https://stgapi.practice-labs.com/Provider/LaunchWithCourseAndModule/{plexamid}/{plexammode}
```

Production:

```
https://api.practice-labs.com/Provider/LaunchWithCourseAndModule/{plexamid}/{plexammode}
```

Launch URLs for bundles

Either of the URLs below will display, depending on which launch environment you require.

Staging:

```
https://stgapi.practice-labs.com/Provider/LaunchWithCourseAndModule/{pltitleId}/00000000-0000-0000-0000-000000000000
```

Production:

```
https://api.practice-labs.com/Provider/LaunchWithCourseAndModule/{pltitleId}/00000000-0000-0000-0000-000000000000
```

Please note: the `plmoduleId` will always be `00000000-0000-0000-0000-000000000000` for bundles.

```
https://devapi.practice-labs.com/Provider/LaunchWithCourseAndModule/232f0511-49e3-4cd8-924e-7d097f178063/bef3db82-6738-4381-ab57-37343033044a
```

Figure 16 – Tool URL Post Resource Selection

Please note: if the 'Tool URL' is amended, the launch may not work.
