Implementation Guide

CUSTOMER

SAP SuccessFactors Learning Document Version: Q2 2017 - 2017-06-05

Implementing Adobe Connect Virtual Classrooms

Using Adobe Connect for Virtual Training



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What's New in the Connection to Adobe Connect

Keep track of the quarterly changes to how you connect SAP SuccessFactors Learning to Adobe Connect for virtual learning.

Q1 2017 - Present

Table 1: The following table summarizes changes to this guide for recent releases

| What's New | Description | More Info |
|------------|-------------|-----------|
| No Changes | No Changes | |

Q4 2016

Table 2: The following table summarizes changes to this guide for the Q4 2016 release

| What's New | Description | More Info |
|---------------------------------|--|--|
| Instructor VLS Passwords | Instructors can manage their VLS passwords for Adobe Connect or WebEx. | Enabling Instructors to Change their VLS Passwords [page 12] |
| Advice for Instructor Passwords | If the instructors' VLS accounts are strictly for instruction, you might want to manage them centrally. We added that distinction. | Configuring Instructors for VLS [page 10] |

Q3 2016

Table 3: The following table summarizes changes to this guide for the Q3 2016 release

| What's New | Description | More Info |
|----------------|---|-----------|
| Support Change | Although this does not affect your configuration or this guide, we updated the VLS connection to support Adobe Connect 9.5. | N/A |

Q2 2016

Table 4: The following table summarizes changes to this guide for the Q2 2016 release

| What's New | Description | More Info |
|------------|--|-----------|
| No Changes | We did not change this document for Q2 2016. | |

Q1 2016

Table 5: The following table summarizes changes to this guide for the Q1 2016 release

| What's New | Description | More Info |
|---------------------|--|---|
| Removed sync option | The sync option applied to on premises installations, but it is not relevant to cloud products. We removed the setting from documentation because it is no longer used. If it is present in the configuration files, it is ignored. | Adobe Connect Configuration Settings [page 7] |

Q4 2015

Table 6: The following table summarizes changes to this guide for the Q4 2015 release

| What's New | Description | More Info |
|------------|---|-----------|
| No Changes | We did not change this guide for Q4 2015. | |

1 SAP SuccessFactors Learning Virtual Learning Service (VLS)

The Virtual Learning Service (VLS) is the integration between virtual meeting rooms like WebEx, Microsoft Skype for Business, or Adobe Connect and SAP SuccessFactors Learning.

If your company holds training in online meeting spaces like WebEx, Microsoft Skype for Business, and Adobe Connect, you can use the Virtual Learning Service (VLS) to connect users directly to the meeting rooms where their training takes place. When the meeting spaces are connected through VLS, users can open a virtual meeting room by clicking a link in their assignments lists.

Depending on the capabilities of the meeting room vendor, SAP SuccessFactors Learning can also read the attendance list, time in attendance, and other reporting data. This saves instructors time later, when they post the outcomes of the training to records management.

2 Configuring the Virtual Learning Service

Configure the Virtual Learning Service (VLS) so that your users can open virtual meeting rooms directly from their *My Assignments* tile.

Context

When you configure the Virtual Learning Service (VLS), you create an API connection to a virtual meeting room vendor. That connection manages the virtual training sessions: users can launch them from their assignments and learning administrators can schedule them from the administration environment.

Procedure

1. Request a VLS configuration file from Customer Success.

By requesting a copy, you receive the latest XML version of the file. When you talk to Customer Success, tell them your meeting room vendor.

2. Configure the file for Adobe Connect.

Adobe Connect Configuration Settings [page 7]

- 3. Open the SAP SuccessFactors Learning administration environment.
- 4. Go to System Admin Configuration VLS Configuration .
- 5. Click Add New and add the configuration file.
- 6. Go to System Admin Configuration System Configuration LMS_ADMIN .
- 7. Find vleEnabled and change its value to true.

Related Information

Adobe Connect Configuration Settings [page 7]

2.1 Sample Adobe Connect VLS Configuration File

To connect SAP SuccessFactors Learning with Adobe Connect, you add the Adobe Connect XML configuration file.

```
Sample Code
<?xml version="1.0" encoding="ISO-8859-1" standalone="yes"?>
   <description>Macromedia Breeze</description>
   <!-- The plateau connector class. This should not be modified. It is the
implementation class for Breeze. -->
   <connector_class>com.plateausystems.elms.framework.vle.
impl.BreezeConnector</connector_class>
   <xml api address>[Get from Adobe Connect Configuration]/xml api address>
   <server address>[Get from Adobe Connect Configuration]/server address>
   <username>[user name for Adobe Connect site]</username>
   <password>[password for Adobe Connect site]
   <learner group id>987654321/learner group id>
   <instructor group id>246813579</instructor group id>
   <learner_default_password>[default password]/learner_default_password>
   <elms url prefix>/vle</elms url prefix>
</connector>
```

2.2 Adobe Connect Configuration Settings

Set the values of the Adobe Connect configuration file to control how SAP SuccessFactors Learning communicates with Adobe Connect.

Table 7:

| Element | Description |
|-----------------|---|
| connector_class | Do not modify the connector class unless you are instructed to do so by SAP SuccessFactors Learning engineering team. |
| xml_api_address | API address provided by Adobe Connect. |
| server_address | The URL of your Adobe Connect meeting room server. The URL is provided by Adobe Connect. |
| username | The username of an Adobe Connect administrator. This user must be an administrator. |
| password | The password for the user that you typed in username. |

| Element | Description |
|-------------------------------|---|
| Ims_user_name_custom_field | When installing a new Adobe Connect server database for virtual learning, you add a custom field to hold the instructor ID. This can be any string, but it must match what you set up in Adobe Connect. For example, you can create a custom field called "LMS_Instructor_ID." |
| | Later, when SAP SuccessFactors Learning calls the Adobe Connect APIs to create the instructors, it puts our instructor ID as a value for this custom field. |
| Ims_user_type_custom_field_id | When installing a new Connect server database for virtual learning, you add a custom field to hold the type of user that the API creates. This can be any string, but it must match what you set up in Adobe Connect. For example, you can create a custom field called "LMS_User_Type." |
| | Later, when SAP SuccessFactors Learning calls the Adobe Connect APIs to create the instructors, it puts the value Instructor as a value for this custom field. |
| folder_id | When SAP SuccessFactors Learning creates a new virtual meeting, it creates it in the folder that you specify here. |
| learner_group_id | Adobe Connect requires a group ID for general users (those who dial in to the virtual meeting room as opposed to those who lead the meeting). You create the group in Adobe Connect and then type the ID of the group in this element. In the context of SAP SuccessFactors Learning, the general users are the learners. When SAP SuccessFactors Learning creates a new learner, the user is added to the learner group on the Adobe Connect side. |
| instructor_group_id | Adobe Connect requires a group ID for users who lead the meetings. You create the group in Adobe Connect and then type the ID of the group in this element. In SAP SuccessFactors Learning, those users are instructors. When SAP SuccessFactors Learning creates a new instructor, the user is added to the instructor group on the Adobe Connect side. |
| learner_default_password | The default account password for user/student. The minimum password length is four (4) characters and maximum password length is sixteen (16) characters. |
| elms_url_prefix | The Electronic Learning Management System (ELMS) URL is relative to the SAP SuccessFactors Learning server. For example, if the SAP SuccessFactors Learning server is http://tms.company.com/learning, then a value of /vle in elms_url_prefix points to http://tms.company.com/vle. |

3 Opening Virtual Courses Early

Open virtual courses early to allow participants to gather in the virtual meeting room before the instructor officially opens it.

Prerequisites

Configure either WebEx Training Center or Adobe Connect as a Virtual Training Service (VLS). You cannot open WebEx Meeting Center meetings early.

Procedure

- 1. Go to System Admin Configuration Global Settings .
- 2. In *Display Join option prior to session start* set the amount of time that participants can join before the instructor.

You can think of this setting as the online version of opening a room before instruction actually begins. It's unlikely that your participants and your instructor would arrive at exactly the same time, so you want to let your participants in a bit early.

4 Configuring Instructors for VLS

Configure instructors for the Virtual Learning Service (VLS) so that they can start virtual training sessions in virtual meeting rooms like WebEx or Adobe Connect.

Prerequisites

Before you can work with Virtual Learning Service (VLS), you must configure it. Configuring the VLS is a one-time implementation task. Please read our implementation guide for your meeting room vendor. Each server that you configure is available when you configure other parts of the application for VLS, like segments and instructors.

Add your instructors to SAP SuccessFactors Learning. Your instructors must be tracked in the system for VLS to work properly.

Context

For live training events, your instructors and students are often in different locations. Although you can fly your instructors and your participants to a central location, you can save money by configuring Virtual Learning Service (VLS). VLS integrates SAP SuccessFactors Learning and a virtual meeting room vendor so that the training and employees can meet online in a virtual meeting room.

Procedure

- 1. Go to Learning Instructors and search for the instructor who should have access to VLS.
- $2. \ \ \text{Go the Summary to verify that the instructor record has a first name, last name, and email address.}$
 - These fields are required to maintain VLS accounts in SAP SuccessFactors Learning.
- 3. Go to VLS Settings.
 - VLS Settings contains the VLS servers that you created when you configured your instance of VLS.
- 4. In Account ID, type the instructor's virtual meeting room ID. If the instructor does not yet have an account, type the account ID that you want the instructor to have.
- 5. In *Account Password*, type the instructor's virtual meeting room password. If the instructor does not have an account, type the password that you want the instructor to have.
 - This step applies if you have **not** allowed instructors to manage their own passwords. To save this step and to protect the privacy of your instructors, we recommend that you enable them to manage their own passwords.
 - The password must conform to password rules set by the meeting room vendor.

6. In Action, select what should happen when you apply the changes.

| Option | Description |
|-------------------------|--|
| Create New Account | Attempts to create a new account for the instructor. Select this option if the instructor does not yet have an account. |
| Use Existing Account | Tests the credentials of the instructor. If you type an incorrect <i>Account ID</i> or <i>Account Password</i> the system warns you. |

7. Click Apply Changes.

Next Steps

You can now set up virtual segments and assign the instructor as the primary instructor for the segment.

Related Information

Adding a Virtual Segment [page 13]

Adobe Connect APIs Called When Creating Instructors [page 20]

Adobe Connect APIs Called When Updating Instructors [page 22]

Enabling Instructors to Change their VLS Passwords [page 12]

5 Enabling Instructors to Change their VLS Passwords

Enable instructors to change their Virtual Learning Service (VLS) passwords if their meeting room accounts are personal accounts that they want to keep private.

Context

If you integrate SAP SuccessFactors Learning with a Virtual Learning Service (VLS), you can either require learning administrators to manage instructor passwords, or you can allow instructors to manage their own passwords. If the instructors' accounts are for the express purpose of conducting training and **not** the instructors' personal meeting room account, then you might want a learning administrator to manage the account passwords. But if the meeting room accounts are instructors' accounts, you should enable them to manage the password. You might also enable instructors to manage their own passwords to remove a bottleneck in your process.

i Note

Even if the accounts are for the express purpose of training and they are **not** the instructors' personal accounts, consider giving your instructors management responsibility to reduce workload on your administrators.

Procedure

- 1. Go to SAP SuccessFactors Learning administration and then go to System Admin Security Role Management.
- 2. Find and open the role you are using for your instructors.
- 3. Open Workflows.
- 4. Add the Edit Virtual Learning Account workflow.

6 Adding a Virtual Segment

Add a segment as a virtual segment when you want users to meet in a virtual meeting room like WebEx or Adobe Connect.

Prerequisites

Before you can work with Virtual Learning Service (VLS), you must configure it. Configuring the VLS is a one-time implementation task. Please read our implementation guide for your meeting room vendor. Each server that you configure is available when you configure other parts of the application for VLS, like segments and instructors.

A virtual segment must be started by an instructor, so you must create at least one instructor with VLS privileges, authorize the instructor to teach the course, and add the instructor as a resource to the virtual segment.

Context

When yo set up virtual segments, users can gather for training virtually. They click a link in their *My Assignments* tile and launch a virtual meeting room session where they can meet with the training. By using virtual segments, you can save on travel for training and still track training, including participation for completion, scheduling, attendance, and so on.

Procedure

- 1. Go to Learning Scheduled Offerings Segments and then click Add Segments (3).
- 2. Schedule the segment.
- 3. Click Add Resources ($^{\textcircled{0}}$) and then click Instructor to add an instructor who can launch the virtual segment.
 - Virtual segments require a primary instructor who has a VLS account and who is authorized to teach the course. Without an instructor with a VLS account, there is no one to start the virtual training session. Additional metrics like total time in the VLS rely on the time that the instructor opens the virtual segment.
- 4. Select Segment is Virtual.
 - The system shows Segment is Virtual only if vleEnabled is set to true in System Admin Configuration System Configuration LMS_ADMIN. This step is part of setting up the VLS.
- 5. To allow external users (users **not** listed in **\| Users \| Users \|)** to log in to the virtual meeting room, type a password in VLS Password.

When internal users enter the meeting room through a link in an email message from the Learning Management System (LMS) or through their *My Assignments* tile, they are authenticated through the LMS. External users cannot be authenticated through the LMS and therefore need a password.

i Note

External users' attendance is **not** tracked in the LMS.

- 6. Ignore Session Type and Teleconferencing.
 - Session Type and Teleconferencing do not apply to Adobe Connect.
- 7. In session details, type text that you want to send to users in their email invitations to this virtual learning. For example, you can type dial in numbers or you can ask that users please mute their phones.
- 8. Click Save.

Related Information

Configuring Instructors for VLS [page 10]

7 Configuring VLS Segments to Record Learning Events

Configure VLS segments to record learning events so that internal users receive credit for attendance.

Prerequisites

Before you can work with Virtual Learning Service (VLS), you must configure it. Configuring the VLS is a one-time implementation task. Please read our implementation guide for your meeting room vendor. Each server that you configure is available when you configure other parts of the application for VLS, like segments and instructors.

Create at least one virtual segment on the scheduled offering. Without a virtual segment, you cannot record learning for the virtual segment.

Configure the VLS attendance processing Automatic Process Manager (APM): System Admin Automatic Processes VLS Attendance Processing

Context

By configuring VLS Segments to record learning events, you can assure that participants in virtual segments have been in the virtual room for a set period of time before they are marked complete.

Procedure

- 1. Go to Learning Scheduled Offerings and click View All to see Additional Settings for the scheduled offering.
- 2. Set Automatically record learning events after scheduled offering has completed.

| Option | Description |
|--------|--|
| Yes | We recommend setting to Yes so that the VLS Attendance Processing can automatically record learning events for virtual learning. |
| No | If you set to no, then you must use some other mechanism, like the learning event recorder to record the learning event. Instead of automatically reading the attendance from the meeting room vendor, you need to run a report from the vendor and select users who attended. |

3. Set Minimum Attendance Percentage for Credit.

Although you are not required to set *Minimum Attendance Percentage for Credit*, you gain some advantages with virtual learning. The system calculates attendees' participation time by dividing the total time of the

session (as determined by when the instructor launched and ended it) into the time that a user spent in the session.

4. Set For Credit Completion Status and Non-Credit Completion Status.

You set these two fields so that the VLS attendance processing APM can determine what status to assign to attendees.

5. Click Save.

8 Troubleshooting

8.1 User Attendance Not Tracked in VLS

If your users' attendance is not tracked in the VLS, chances are that they did not log in through SAP SuccessFactors Learning.

SAP SuccessFactors Learning Virtual Learning Service (VLS) works correctly users connect directly from SAP SuccessFactors Learning to the listed virtual classrooms. If users connect to their courses through the service directly, features like completion status do not work.

If this is the case, ask your trianing organization to redirect employees to their *Learning Assignments* tile, which not only links the participants to the virtual traning room but also keeps track of their training events, and a history of their participation. SAP SuccessFactors Learning automatically sends an .ics calendar file to users enrolled in training.

8.2 VLS Sessions Created Incorrectly

If your sessions are not created correctly in the VLS, chances are that they were not created through SAP SuccessFactors Learning.

The SAP SuccessFactors Learning VLS supports the features it needs to connect users and instructors to the virtual meeting rooms where training will take place. If the error in your session is related to one of the actions below, then check your configuration. If not, it could be that you edited the session outside of SAP SuccessFactors Learning.

- Create and update users: Meeting room accounts need to be created and updated for instructors, if you manage your instructors in SAP SuccessFactors Learning.
- Create, update, or delete events: When you create a virtual meeting room segment of a scheduled offering, update it, or delete it, the system creates, updates, or deletes the event on the virtual meeting service.
- Enroll and withdraw users from a meeting: When you add users to a learning item or remove them, the system adds and removes them from the meeting room.
- Get meeting and user information: The system communicates meeting information between SAP SuccessFactors Learning and the meeting room service.
- Get EventHost URL and Get EventJoin URL: The system needs the URL for the instructor (host) to start the event and for users to join the event from their learning assignments.
- Get Host Attendance: The system gets the host attendance for the total duration of the session.
- Get Student Attendance: The system gets the student attendance for the duration of attendance for each student. Learning administrators can then report on users' participation.

8.3 Users Cannot Connect to Virtual Training

Before you implement Virtual Learning Services (VLS), you should make sure that your network allows your users to launch your virtual meeting room.

By configuring your network and testing it to make sure that your users can launch your virtual meeting room, you can test the SAP SuccessFactors Learning configuration end to end. You can set up a VLS session, assign it to a test user, and make sure that the user can launch the virtual meeting room.

A closed firewall port is the most common issue when connecting to virtual meeting rooms. We recommend that you open the firewall before you begin configuring the VLS to connect to your chosen vendor. Check with your vendor about the ports they use.

8.4 Users Cannot Join Before Meeting Starts

If your users cannot join before the instructor starts the meeting, check your configuration and your meeting room vendor.

If you set System Admin Configuration Global Settings Display join option prior to session start, your users can join before the meeting starts. They remain on hold until the leader (the instructor) joins.

8.5 Cannot set Password for Meeting Registration

If you cannot set a password for meeting registration, check your virtual meeting room vendor.

8.6 Virtual Learning Service Time Zone Troubleshooting

When setting up Virtual Learning Service (VLS) configuration files, you should be able to use the default time zone mappings, but time zones are a likely source of trouble. Use this information to troubleshoot time zone problems.

Time Zone Mapping Issues

The SAP SuccessFactors Learning time zones are standard Java time zones. The timezone maps in the VLS configuration files link the SuccessFactors time zone to the VLS server time zone. WebEx, for example, uses numbers for its time zones, so the system must map the Java syntax (for example, America\New_York) to the WebEx syntax (for example, the number 11).

Time zone mappings are contained in the VLS configuration files, in the timezones element. Each timezone child of timezones is a link. For example, the following links "America/New_York" from SuccessFactors syntax to 11 from the WebEx syntax. The name attribute contains the SuccessFactors syntax and the value attribute contains the VLS syntax.

```
<timezone name="America/New_York" value="11" />
```

In almost every case, you can use the default time zone mappings. However, if participants in your meetings describe time zone issues, you can check the map for their time zone to make sure that it is right.

Linux/Unix Time Zone Issues for On-Premise Customers

If you are an on-premise customer who serves SAP SuccessFactors Learning from an application server running on Unix or Linux, you must set the TZ variable, and you must set it to a value that appears in a name attribute of all maps for your VLS configuration.

9 Adobe Connect APIs Called for VLS

9.1 Adobe Connect APIs Called When Creating Instructors

When you create an instructor in SAP SuccessFactors Learning, we call the Adobe Connect APIs principal-update and acl-field-update.

principle-update

We call principle-update to create an Adobe Connect account associated with the instructor. Immediately after this call, we call acl-field-update.

Table 8:

| Data sent by SAP SuccessFactors Learning | Maps to this parameter in Adobe Connect |
|--|---|
| First name from the instructor record | first-name |
| Last name from the instructor record | last-name |
| The value of Account ID for the particular Adobe Connect server in Learning Instructors VLS Settings | login |
| The value of Account Password for the particular Adobe Connect server in Learning Instructors VLS Settings | password |
| The value 0(zero) | has-children |
| The value user | type |

group-membership-update

We call group-membership-update to add the user to the instructor group.

Table 9:

| Data sent by SAP SuccessFactors Learning | Maps to this parameter in Adobe Connect |
|--|---|
| The user name of the instructor that was returned from principle-update. | principal-id |

| Data sent by SAP SuccessFactors Learning | Maps to this parameter in Adobe Connect |
|---|---|
| Value of lms_user_type_custom_field_id from the configuration file. | group-id |
| true | is-member |

acl-field-update

We call acl-field-update after principal-update to add account information to the instructors' Adobe Connect account.

Table 10:

| Data sent by SAP SuccessFactors Learning | Maps to this parameter in Adobe Connect |
|--|--|
| Principal ID returned from principal-update so that Adobe Connect can identify the account that was just created | acl-id |
| The value email | field-id |
| The email address from the instructor record | value (where field-id is email) |
| The value you set in lms_user_name_custom_field_id in the configuration file. | field-id |
| The instructor ID from the instructor record | value (where field-id is the value from lms_user_name_custom_field_id) |
| The value you set in lms_user_type_custom_field_id in the configuration file. | field-id |
| The value Instructor | value (where field-id is the value from lms_user_type_custom_field_id) |

Related Information

Adobe Connect APIs Called When Updating Instructors [page 22] Configuring Instructors for VLS [page 10]

9.2 Adobe Connect APIs Called When Updating Instructors

When you update an instructor in SAP SuccessFactors Learning, we call the Adobe Connect APIs acl-field-list, acl-field-info, principal-update, and acl-field-update.

acl-field-list

We call acl-field-list with the instructor's ID to get the person's Adobe Connect principal ID.

Table 11:

| Data sent by SAP SuccessFactors Learning | Maps to this parameter in Adobe Connect |
|--|---|
| The value you set in lms_user_name_custom_field_id in the configuration file. | field-id |
| The instructor ID from the instructor record | filter-value |

acl-field-info

The call to acl-field-list gets the instructor's principal ID from Adobe Connect. The acl-field-info call assures us that we are getting the user as an instructor (as opposed to another type of user or the instructor's personal account).

Table 12:

| Data sent by SAP SuccessFactors Learning | Maps to this parameter in Adobe Connect |
|--|---|
| The principle ID returned from the call to acl-field-list. | acl-id |
| The value you set in lms_user_type_custom_field_id in the configuration file. | filter-field-id |

principle-update

The call to principle-update updates the instructor record.

Table 13:

| Data sent by SAP SuccessFactors Learning | Maps to this parameter in Adobe Connect |
|--|---|
| The principle ID returned from acl-field-info | principal-id |
| First name from the instructor record | first-name |
| Last name from the instructor record | last-name |
| The value of Account ID for the particular Adobe Connect server in Learning Instructors VLS Settings | login |
| The value of Account Password for the particular Adobe Connect server in Learning Instructors VLS Settings | password |
| The value 0(zero) | has-children |

acl-field-update

We call acl-field-update after principal-update to add account information to the instructors' Adobe Connect account.

Table 14:

| Data sent by SAP SuccessFactors Learning | Maps to this parameter in Adobe Connect |
|--|--|
| Principal ID returned from principal-update so that Adobe Connect can identify the account that was just created | acl-id |
| The value email | field-id |
| The email address from the instructor record | value (where field-id is email) |
| The value you set in lms_user_name_custom_field_id in the configuration file. | field-id |
| The instructor ID from the instructor record | value (where field-id is the value from lms_user_name_custom_field_id) |
| The value you set in lms_user_type_custom_field_id in the configuration file. | field-id |
| The value Instructor | value (where field-id is the value from lms_user_type_custom_field_id) |

Related Information

Adobe Connect APIs Called When Creating Instructors [page 20] Configuring Instructors for VLS [page 10]

9.3 Adobe Connect APIs Called When Creating a Segment

When you schedule a segment in SAP SuccessFactors Learning, we call the Adobe Connect APIs sco-update, permissions-update, acl-field-list, and acl-field-info.

sco-update

We sco-update to create the session record itself.

Table 15:

| Data sent by SAP SuccessFactors Learning | Maps to this parameter in Adobe Connect |
|--|---|
| The value you set in folder_id in the configuration file. | folder-id |
| The value meeting. | Туре |
| The name of the segment/scheduled offering. | Name |
| The start date and time of the segment. | date-begin |
| The end date and time of the segment. | date-end |
| The description of the segment. | description |
| The selected default template for the Adobe Connect session. Administrators select a default segment when they update the segment. | source-sco-id |

permissions-update

We call permissions-update to make the meeting public so that any participants who have the link (in their *My Assignments* tile) can open the meeting.

Table 16:

| Data sent by SAP SuccessFactors Learning | Maps to this parameter in Adobe Connect |
|--|---|
| The value view-hidden. | permission-id |
| The meeting ID returned from sco-update. | acl-id |
| The value public-access | principal-id |

acl-field-list

We call acl-field-list to look up the principal ID in Adobe Connect based on the instructor IDs for all instructors in the segment (both primary instructors and secondary instructors).

Table 17:

| Data sent by SAP SuccessFactors Learning | Maps to this parameter in Adobe Connect |
|--|---|
| The value from lms_user_name_custom_field_id in your configuration file. | field-id |
| The instructor IDs for both primary and secondary instructors associated with the segment. | filter-value |

acl-field-info

The call to acl-field-list gets the instructor's principal ID from Adobe Connect. The acl-field-info call assures us that we are getting the user as an instructor (as opposed to another type of user or the instructor's personal account).

Table 18:

| Data sent by SAP SuccessFactors Learning | Maps to this parameter in Adobe Connect |
|--|---|
| The principle ID returned from the call to acl-field-list. | acl-id |
| The value you set in lms_user_type_custom_field_id in the configuration file. | filter-field-id |

permissions-update

We call permissions-update a second time to assign presenter rights to instructors. This call uses the principal IDs of the instructors.

Table 19:

| Data sent by SAP SuccessFactors Learning | Maps to this parameter in Adobe Connect |
|--|---|
| The value presenter. | permission-id |
| The meeting ID returned from sco-update. | acl-id |
| The principal ID of the instructor. | principal-id |

9.4 Adobe Connect APIs Called When Updating a Segment

When you update a segment in SAP SuccessFactors Learning, we call the Adobe Connect APIs sco-update, permissions-update, sco-info, acl-field-list, and acl-field-info.

sco-update

We sco-update to create the session record itself.

Table 20:

| Data sent by SAP SuccessFactors Learning | Maps to this parameter in Adobe Connect |
|--|---|
| The value you set in folder_id in the configuration file. | folder-id |
| The value meeting. | Туре |
| The name of the segment/scheduled offering. | Name |
| The start date and time of the segment. | date-begin |
| The end date and time of the segment. | date-end |
| The description of the segment. | description |
| The selected default template for the Adobe Connect session. Administrators select a default segment when they update the segment. | source-sco-id |

permissions-update

We call permissions-update to make the meeting public so that any participants who have the link (in their *My Assignments* tile) can open the meeting.

Table 21:

| Data sent by SAP SuccessFactors Learning | Maps to this parameter in Adobe Connect |
|--|---|
| The value view-hidden. | permission-id |
| The meeting ID returned from sco-update. | acl-id |
| The value public-access | principal-id |

sco-info

We call sco-info to look up the meeting information we need for subsequent calls.

Table 22:

| Data sent by SAP SuccessFactors Learning | Maps to this parameter in Adobe Connect |
|--|---|
| The meeting ID | sco-id |

acl-field-list

We call acl-field-list to look up the principal ID in Adobe Connect based on the instructor IDs for all instructors in the segment (both primary instructors and secondary instructors).

Table 23:

| Data sent by SAP SuccessFactors Learning | Maps to this parameter in Adobe Connect |
|--|---|
| The value from lms_user_name_custom_field_id in your configuration file. | field-id |
| The instructor IDs for both primary and secondary instructors associated with the segment. | filter-value |

acl-field-info

The call to acl-field-list gets the instructor's principal ID from Adobe Connect. The acl-field-info call assures us that we are getting the user as an instructor (as opposed to another type of user or the instructor's personal account).

Table 24:

| Data sent by SAP SuccessFactors Learning | Maps to this parameter in Adobe Connect |
|--|---|
| The principle ID returned from the call to acl-field-list. | acl-id |
| The value you set in lms_user_type_custom_field_id in the configuration file. | filter-field-id |

9.5 Adobe Connect APIs Called When Deleting a Segment

When you delete a segment in SAP SuccessFactors Learning, we call the Adobe Connect APIs sco-delete.

sco-delete

Table 25:

| Data sent by SAP SuccessFactors Learning | Maps to this parameter in Adobe Connect |
|--|---|
| The meeting ID of the segment to be deleted. | sco-id |

9.6 Adobe Connect APIs Called when Starting a Session

When you start a session in Adobe Connect, we call the Adobe Connect APIs login, acl-field-list, acl-field-info, principal-update, acl-field-update, and principal-create.

login (for Administrator to start session)

We call ${\tt login}$ with the admin ID one time to log in to the virtual session.

Table 26:

| Data sent by SAP SuccessFactors Learning | Maps to this parameter in Adobe Connect |
|--|---|
| The user ID of the admin | login |
| The password of the admin | password |

acl-field-list

We call acl-field-list with the instructor's to get the person's Adobe Connect principal ID.

Table 27:

| Data sent by SAP SuccessFactors Learning | Maps to this parameter in Adobe Connect |
|--|---|
| The value you set in lms_user_name_custom_field_id in the configuration file. | field-id |
| The instructor ID from the instructor record or the user ID from the user record (membership in the virtual session) | filter-value |

acl-field-info

The call to acl-field-list gets the instructor's principal ID from Adobe Connect. The acl-field-info call assures us that we are getting the user as an instructor (as opposed to another type of user or the instructor's personal account).

Table 28:

| Data sent by SAP SuccessFactors Learning | Maps to this parameter in Adobe Connect |
|--|---|
| The principle ID returned from the call to acl-field-list. | acl-id |
| The value you set in lms_user_type_custom_field_id in the configuration file. | filter-field-id |

principle-update

The call to principle-update updates the instructor record if it is found. This syncs the SAP SuccessFactors Learning information with the Adobe Connect information at the time that the virtual session is started.

Table 29:

| Data sent by SAP SuccessFactors Learning | Maps to this parameter in Adobe Connect |
|---|---|
| The principle ID returned from acl-field-info | principal-id |
| First name from the instructor record | first-name |
| Last name from the instructor record | last-name |

| Data sent by SAP SuccessFactors Learning | Maps to this parameter in Adobe Connect |
|--|---|
| The value of Account ID for the particular Adobe Connect server in Learning Instructors VLS Settings | login |
| The value of Account Password for the particular Adobe Connect server in Learning Instructors VLS Settings | password |
| The value 0(zero) | has-children |

acl-field-update

We call acl-field-update after principal-update to add account information to the instructors' Adobe Connect account.

Table 30:

| Data sent by SAP SuccessFactors Learning | Maps to this parameter in Adobe Connect |
|--|--|
| Principal ID returned from principal-update so that Adobe Connect can identify the account that was just created | acl-id |
| The value email | field-id |
| The email address from the instructor record | value (where field-id is email) |
| The value you set in lms_user_name_custom_field_id in the configuration file. | field-id |
| The instructor ID from the instructor record | value (where field-id is the value from lms_user_name_custom_field_id) |
| The value you set in lms_user_type_custom_field_id in the configuration file. | field-id |
| The value Instructor | value (where field-id is the value from lms_user_type_custom_field_id) |

login (for instructors and participants)

We call \log in with the found instructor or user IDs to log in to the virtual session. If the instructor or User id is not found, the system calls principle-update to create a new user, acl-field-update to update the metadata, and then calls \log in to log the instructor in.

Table 31:

| Data sent by SAP SuccessFactors Learning | Maps to this parameter in Adobe Connect |
|--|---|
| The user ID of the instructor | login |
| The password of the instructor | password |

group-membership-update

We call group-membership-update to update the instructor group for the meeting.

Table 32:

| Data sent by SAP SuccessFactors Learning | Maps to this parameter in Adobe Connect |
|---|---|
| The user ID of the user | principal-id |
| The group ID from learner_group_id in the configuration file. | group-id |
| The text true | is-member |

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