

Implementing Skype or Lync Virtual Classrooms

Using Skype or Lync for Virtual Training



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What's New in the Connection to Skype or Lync

Keep track of the quarterly changes to how you connect SAP SuccessFactors Learning to Lync or Skype for virtual learning.

Q3 2017 - Present

The following table summarizes changes to this guide for recent releases

What's New	Description	More Info
Clarified <code>site_name</code>	In configuration <code>site_name</code> is ignored, but is useful for administrators who need to distinguish multiple sites. We made this clear to avoid confusion.	Configuring Skype or Lync for VLS With Named User Accounts [page 9] Sample Microsoft Skype/Lync Configuration File [page 12]
Clarified instructor credentials	We clarified that the instructor credentials are to the Skype system.	Notes on Lync or Skype for Business VLS [page 6]

Q3 2016 - Q2 2017

The following table summarizes changes to this guide for recent releases

What's New	Description	More Info
No Changes	We did not change our advice for connecting to Skype or Lync.	N/A

Q2 2016

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

What's New	Description	More Info
We clarified the value for <code>url_api_address</code>	We clarified that the value of <code>url_api_address</code> should be like <code>https://lyncdiscover.<domain></code>	Sample Microsoft Skype/Lync Configuration File [page 12] Microsoft Skype/Lync Configuration Settings [page 13]

What's New	Description	More Info
We added a prerequisite to whitelist our URL.	Skype or Lync administrators should whitelist the URL of their Learning Management System (LMS).	Configuring Skype or Lync for VLS (Simplest: All Users Guests) [page 8] Configuring Skype or Lync for VLS With Named User Accounts [page 9]
We reiterated the code sample warning	We learned that some customers were copying and pasting the configuration samples into their system and having problems because of word wrapping in output file. We added a warning to prevent it in the future.	Sample Microsoft Skype/Lync Configuration File [page 12]

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 system for Microsoft Skype for Business or Lync.

You can have some options when setting up Skype or Lync.

[Notes on Lync or Skype for Business VLS \[page 6\]](#)

[Configuring Skype or Lync for VLS \(Simplest: All Users Guests\) \[page 8\]](#)

[Configuring Skype or Lync for VLS With Named User Accounts \[page 9\]](#)

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`.

2.1 Notes on Lync or Skype for Business VLS

Microsoft Skype for Business and Microsoft Lync are useful for your Virtual Learning Service (VLS) when you want to lead smaller scale training for your internal employees who all have a Skype or Lync user name.

We built the VLS connection to Skype/Lync to be a very lightweight implementation for companies who have an on-premises installation of Skype for Business 2016 or an on-premises Lync 2013. We assume that all users have an

account to Lync or Skype and that you are using it for internal training. Because of these assumptions and because we wanted it to be easy to configure, **some options are not available or are reduced.**

Simple Configuration Route by Using Guest Access, Robust Configuration for Named User Access

We have provided a simple configuration route if you plan to keep your training sessions under 250 people and if do not need named participants. Microsoft Skype for Business and Microsoft Lync limit the amount of guests in a session to 250. If you are using Skype/Lync for smaller group training or if you store user names in a custom column, this limit should not impact you.

If it is important that your users always log in to the training session as named users, or you need to exceed the 250 person limit, you can take an additional, optional step. You can provide their Skype or Lync user names in a user custom column.

Note

We support more than one Skype/Lync URL if your configuration requires it.

No Attendance Tracking

Microsoft Skype for Business and Microsoft Lync do **not** support attendance tracking. When a training session is over, an instructor or a learning administrator records attendance as if the training session took place in a physical classroom: they use the learning event recorder.

Instructor Accounts Not Created Automatically

Microsoft Skype for Business and Microsoft Lync do not distinguish between instructors/leaders and learners/participants, so there is no need to generate an instructor record in Skype/Lync from within the Learning Management System (LMS). Your instructors do need related user accounts, but this is standard for all VLS configuration.

Note

The instructor credentials are the instructor's Skype credentials.

Related Information

[Configuring Skype or Lync for VLS \(Simplest: All Users Guests\) \[page 8\]](#)

[Configuring Skype or Lync for VLS With Named User Accounts \[page 9\]](#)

2.2 Configuring Skype or Lync for VLS (Simplest: All Users Guests)

Configure Skype or Lync for Virtual Learning Service (VLS) to accept some functional limitations but also limit the chances for errors that prevent users from logging in to the VLS training session.

Prerequisites

Your Skype or Lync administrator must whitelist your SAP SuccessFactors Learning URL.

Context

The simplest configuration of Skype or Lync for VLS logs all users in as guests. Users type their name when they launch Skype or Lync, which is an extra step, but everyone in the meeting sees their names, and the instructor can take attendance. Because Microsoft cannot record attendance automatically back to the LMS, the instructor must take attendance **even if users logged in as named participants instead of guests**, so you lose very little by logging users in as guests. Your only loss is that Microsoft limits the amount of guests to 250. If you use Skype or Lync for small training events, then you are unlikely to reach the limit.

For a limit of 250 participants (including instructors) and an extra sign-in step, you assure that users can always get in to the VLS training session. If, however, it is important for you that your users always log in not as guests but with their Skype or Lync user names, you can set up their user names in a user custom column. If the value in the custom column is not null and not recognized by Skype or Lync, then the user is not able to enter the meeting room.

Procedure

1. Go to SAP SuccessFactors Learning administration, and then go to ► [System Admin](#) ► [Custom Columns](#) ► [User](#) ►.
2. Click [Add New](#) to add a new custom column.
3. In [Add New User Custom Column](#), type a number in [Column Number](#), type **Skype or Lync ID** in [Label](#), and select [Referenced](#).

Write down the column number because you need it later.

4. In [Edit the User Custom Column](#), do **not** add any references.

You do not add references because you always want this column to be null for all users. The null value triggers the log in as guest.

5. Go to ► [System Admin](#) ► [Configuration](#) ► [VLS Settings](#) ► and open the Skype or Lync configuration file.
6. Add the column number that you added to `custom_column_number`.

For example, `<custom_column_number>200</custom_column_number>`

7. Paste the URL to your Skype or Lync server in `url_api_address`

For example, `<url_api_address>https://lyncdiscover.mysite.com</url_api_address>`

8. **Optional:** Change the value of `site_name`.

Site name is your way to distinguish this Skype or Lync server from among the other servers you have configured.

9. Save and close the configuration file.

Related Information

[Configuring Skype or Lync for VLS With Named User Accounts \[page 9\]](#)

[How SAP SuccessFactors Learning Attempts to Log Users into Skype or Lync \[page 11\]](#)

[Sample Microsoft Skype/Lync Configuration File \[page 12\]](#)

[Microsoft Skype/Lync Configuration Settings \[page 13\]](#)

2.3 Configuring Skype or Lync for VLS With Named User Accounts

Set up users' Skype or Lync accounts if you need more than 250 users in one Skype or Lync training session or if it is important to you that all users are **not** guests.

Prerequisites

Before you decide to add Skype or Lync user names to SAP SuccessFactors Learning, consider the simpler alternative: all users log in as guests. You must accept some limitations, but the management is easier.

Your Skype or Lync administrator must whitelist your SAP SuccessFactors Learning URL.

Context

If you want to use Skype or Lync for your VLS solution, and if you want all users to sign in under their Skype or Lync user names (and also avoid the 250 guest limit), then SAP SuccessFactors Learning needs to know the users' Skype or Lync user names. The first step in storing users' Skype or Lync user names is to create a custom column where it can be stored.

Procedure

1. Go to SAP SuccessFactors Learning administration, and then go to ► [System Admin](#) ► [Custom Columns](#) ► [User](#) and click [Add New](#) to add a new column.
2. In [Label](#), type **Skype or Lync ID** and in [Column Number](#), type a number that does not exist for other columns.

Make a note of the custom column number. You need it later, when importing users' Skype or Lync user names.

3. Clear the [Referenced](#) checkbox.
4. Click [Add](#).
5. Go to ► [System Admin](#) ► [Configuration](#) ► [VLS Settings](#) and open the Skype or Lync configuration file.
6. Add the column number that you added to `custom_column_number`.

For example, `<custom_column_number>200</custom_column_number>`

7. Paste the URL to your Skype or Lync server in `url_api_address`

For example, `<url_api_address>https://lyncdiscover.mysite.com</url_api_address>`

8. **Optional:** Add a comment to describe the server that you are linking to.

For example, if have servers for different organizations in your company, you can add a comment like this one:

```
<!-- Server for the Sales organization -->
```

This helps you distinguish this Skype or Lync server from among the other servers you have configured.

9. Save and close the configuration file.

Next Steps

Using a user connector or the import tool (► [System Admin](#) ► [Tools](#) ► [Import Data](#) ►), import users' Skype or Lync user names to the custom column.

Note

The user names that you import must have a domain. For example, `domain\UserID` or `userID@domain.com`.

Related Information

[How SAP SuccessFactors Learning Attempts to Log Users into Skype or Lync \[page 11\]](#)

[Configuring Skype or Lync for VLS \(Simplest: All Users Guests\) \[page 8\]](#)

[Sample Microsoft Skype/Lync Configuration File \[page 12\]](#)

[Microsoft Skype/Lync Configuration Settings \[page 13\]](#)

2.4 When you Need to Set up Skype or Lync User Names

Set up Skype or Lync user names in SAP SuccessFactors Learning if you plan to exceed 250 employees in one training room.

Microsoft has built a limitation into Skype and Lync that allows only 250 guests in one training room. You can exceed that number if the people joining the meeting sign in with a recognized user name.

SAP SuccessFactors Learning can sign users into training rooms **without** an account as guests, but after the 250th person joins, the 251st person cannot be admitted to the meeting room. If you plan to keep your training sessions below 250 users, then the LMS does not need to know Skype/Lync user names, so you do not need to add them into custom columns.

Related Information

[Configuring Skype or Lync for VLS With Named User Accounts \[page 9\]](#)

[How SAP SuccessFactors Learning Attempts to Log Users into Skype or Lync \[page 11\]](#)

[Configuring Skype or Lync for VLS \(Simplest: All Users Guests\) \[page 8\]](#)

2.5 How SAP SuccessFactors Learning Attempts to Log Users into Skype or Lync

Understand how SAP SuccessFactors Learning attempts to log users in to Skype or Lync meetings so that you can develop a strategy for storing user names.

SAP SuccessFactors Learning attempts to log users in to meetings in the following order:

1. It looks in `custom_column_number`, which is in the VLS configuration file, to find the user custom column that stores the Skype or Lync user names.
 - If the user has a Skype/Lync user name in the custom column, and it recognizes the name, it logs the user in.
 - If the custom column is null, then the user is promoted for his or her name and Skype or Lync logs the user in as a guest.
 - If the custom column has a value, but the value is wrong, the user cannot log in to the Skype or Lync session.
2. If SAP SuccessFactors Learning cannot find a custom column number in `custom_column_number`, it tries to log the user in with the value of the users' SAP SuccessFactors Learning user IDs. For example, if a user's SAP SuccessFactors Learning user ID is jane.doe, and if the user's Skype/Lync name is also jane.doe, then the user jane.doe is logged in to Skype/Lync as jane.doe.

Related Information

[Configuring Skype or Lync for VLS With Named User Accounts \[page 9\]](#)

[When you Need to Set up Skype or Lync User Names \[page 11\]](#)

2.6 Sample Microsoft Skype/Lync Configuration File

The sample Microsoft Skype/Lync configuration file is an example of a final configuration file that connects the Learning Management System (LMS) to Skype or Lync.

Note

This code block can contain line breaks which are caused by margins and page wrapping. Please do not copy and paste it directly into your system. Instead, contact Customer Success for a copy.

Sample Code

```
<?xml version="1.0" encoding="ISO-8859-1" standalone="yes"?>
<connector>
  <description>Microsoft Skype connector</description>
  <!-- The SuccessFactors connector class. This should not be modified.
It is the implementation class for Skype Meeting Center -->
  <connector_class>com.plateausystems.elms.framework.vle.impl
.SkypeConnector</connector_class>
  <!-- ===== -->
  <!-- configuration parameters for Skype -->
  <!-- ===== -->
  <!-- Server specific information -->
  <url_api_address>https://lyncdiscover.<your domain></url_api_address>

  <!-- ===== -->
  <!-- configuration parameters for SuccessFactors -->
  <!-- ===== -->
  <!-- The ELMS server VLE configuration URL -->
  <elms_url_prefix>/vle</elms_url_prefix>
  <!--Session enrollment requires a user's Skype or Lync username.
The custom column number must be the custom column number on the user
record that contains the Skype or Lync username. -->
  <custom_column_number>200</custom_column_number>
</connector>
```

2.7 Microsoft Skype/Lync Configuration Settings

Element	Description
connector_class	Do not modify the connector class unless you are instructed to do so by SAP SuccessFactors Learning engineering team.
url_api_address	The Skype or Lync server root URL. This should be in the pattern: <code>https://lyncdiscover.<domain></code> .
elms_url_prefix	<p>The Electronic Learning Management System (ELMS) URL is relative to the SAP SuccessFactors Learning server. For example, if the SAP SuccessFactors Learning server is <code>http://tms.company.com/learning</code>, then a value of <code>/vle</code> in <code>elms_url_prefix</code> points to <code>http://tms.company.com/vle</code>.</p> <p>In most cases, you can use the default.</p>
custom_column_number	The custom column number on the user record that contains the users' Skype/Lync user names.

Related Information

[Microsoft Help for Lync Discover](#) ➔

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 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 you 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](#) (+).
2. Schedule the segment.
3. Click [Add Resources](#) (+) 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. 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.
7. Click [Save](#).

5 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*.

6 Troubleshooting

6.1 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 training organization to redirect employees to their [Learning Assignments](#) tile, which not only links the participants to the virtual training 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.

6.2 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.

6.3 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.

6.4 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.

6.5 Cannot set Password for Meeting Registration

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

6.6 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.

Important Disclaimers and Legal Information

Hyperlinks

Some links are classified by an icon and/or a mouseover text. These links provide additional information.

About the icons:

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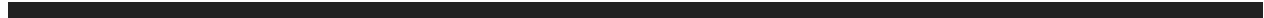
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Gender-Related Language

We try not to use gender-specific word forms and formulations. As appropriate for context and readability, SAP may use masculine word forms to refer to all genders.



**go.sap.com/registration/
contact.html**



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