cornerstone

Microsoft Teams Virtual Instructor Led Training

Edge Integration Guides

The virtual instructor led training (VILT) integration between Cornerstone Learning and Microsoft Teams provides clients a seamless experience to connect end users to virtual meeting sessions, provide the capability to track attendance, and scheduling tools for instructors.

Cornerstone Edge CSX

Version history

	Date	Description
1.0	June 2021	Original Document
2.0	July 2021	Updated Install & Setup Instructions > Setup Steps in Azure
3.0	July 2021	Updated the following sections: Prerequisites, Set-up Steps in Cornerstone, User Launches a Session, Update Session Roster
4.0	July 2021	Updated the following sections: Considerations, Instructor Launches a Session, Update Session Roster Added the following: User Workflow sub-section, Appendix C: FAQ
5.0	August 2021	User Workflow with and without SSO.
6.0	Nov 2021	New Application authentication model, Mark attendance based on time in session, Support for Breakout Rooms, Support for multiple Microsoft Teams accounts.
7.0	May 2022	Attendance calculation updates, External user vs. Guest account (explanation), Q&A
8.0	August 2022	Microsoft GCC/High considerations, enhanced Instructor mapping (via Email) Need to add an additional permission "OnlineMeetingArtifact.Read.All" in Microsoft Graph
9.0	March 2024	Support for co-organizers and extended options.

Table of contents

Overview

The Microsoft Teams Virtual Instructor Led Training (VILT) integration with Cornerstone Learning is a solution that provides users the ability to connect to virtual meeting sessions, and gives instructors scheduling tools and capabilities to track attendance.

The integration supports the following functionalities:

- Creating and/or updating a session (single or multi-part) directly in Cornerstone will create and/or update a corresponding meeting in Microsoft Teams
- Cancelling a session in Cornerstone will automatically cancel the corresponding meeting in Microsoft Teams
- Instructors may launch sessions from their "View Your Sessions" calendar in Cornerstone or from the email notification (if configured in Cornerstone)
- The attendee may launch a session from their "Transcript" in Cornerstone, the "Events Calendar" or from the email notification (if configured in Cornerstone)
- Update attendance roster via the integration
- Support for Delegated authentication and Application authentication
- The ability to associate multiple Microsoft Teams accounts to a single integration.
- Mark attendance based on time (%) in session.
- Breakout Rooms (only when using Application authentication)

Considerations

1. The following features are NOT supported:
   - Teams Live events
   - Option to set up a team or channel
   - Webinars
2. Instructors associated with the Teams VILT sessions in your Cornerstone portal must already exist in Teams (Azure Tenant), i.e. all instructors must have a Microsoft Teams license. The integration does not support creating and/or updating instructors (internal or external) in Teams.

3. The users in Cornerstone must be active and have a valid email address.

4. The integration does NOT support 'Guest' accounts. Ref.: Guest accounts vs. External users.

5. Migration of existing scheduled sessions with another virtual meeting provider to Teams is not supported.

6. The integration leverages the existing (corporate) SSO solution to launch or attend a virtual session (Ref. "User Workflow / Single Sign-On").

7. The "Time in Session %" feature does not take attendance in 'Breakout rooms' into account.

8. Microsoft's GCC High environment support is currently not in scope. Note: Microsoft GCC environment is supported.

9. The session part will be regenerated in MS Teams whenever there is an update to the primary instructor, in accordance with the restrictions imposed by the Microsoft Graph API.

Prerequisites

1. Cornerstone Learning
2. Microsoft 365 tenant with Microsoft Teams or Microsoft Office 365 subscription which includes Microsoft Teams
3. Microsoft 365 tenant admin access with Teams Administrator or Global Administrator permissions
   - Required to create an App Registration in Azure portal

Authentication

The integration supports two authentication options:
- Delegated authentication
- Application authentication

The integration does NOT support both application and delegated permissions at the same time for the same configuration in Edge Marketplace.

Delegated Authentication

Released in July 2021. The client needs to setup a regular user account which is assigned a Microsoft Teams license. This user account is used like a service account for the purpose of making API calls using the permissions assigned to this user. Ideally, this user account would not be associated with any instructor or actual user.

Application Authentication

This authentication type removes the need to setup a user/service account in addition to the Azure application registration. Cornerstone will be able to make all relevant API calls using application permissions, which can be configured by an Azure AD admin globally, or at a very granular level, on an instructor-by-instructor basis.

Note: Using Application Authentication is **recommended by Cornerstone**.

Comparison

	Delegated Authentication	Application Authentication
Setting up service account for the relevant API calls (using the permissions assigned to this user)	Yes	No
Service account visible in each virtual Teams session?	Yes	No
Support for Breakout Rooms	Yes, managed by users with co-organizer role	Yes
MS Teams role assigned to Instructor*	Co-organizer role	Organizer role
MS Teams role assigned to Secondary Instructor	Co-organizer role	Co-organizer role
Permissions required (in Azure)	User.ReadBasic.All OnlineMeetings.ReadWrite OnlineMeetingArtifact.Read.All	User.Read.All OnlineMeetings.ReadWrite.All OnlineMeetingArtifact.Read.All
Requires PowerShell tool to configure	No	Yes
Configuration and maintenance effort for Azure AD admins	Low: 1. One-time for the Azure App registration, service account user and Cornerstone Integration. 2. Manage client secrets token expiry (i.e. every 2 years)	Low to Medium: 1. One-time for the Azure App registration and Cornerstone Integration. 2. Permissions to be granted via PowerShell: a. One-time when applying the policy globally (low effort). b. Per Instructor when admins want to control granular access per Instructor (medium effort). 3. Manage client secrets token expiry (i.e. every 2 years)

* For more information on MS Teams roles and permissions:
https://support.microsoft.com/en-us/office/roles-in-a-teams-meeting-c16fa7d0-1666-4dde-8686-0a0bfe16e019

Install & Setup Instructions

It is strongly recommended to test the integration in either your Cornerstone Pilot or Stage environment before setting it up in Production.

Setup Steps in Azure

Step 1. Create an App Registration in Azure

1. Log in to your Azure portal (https://portal.azure.com).

2. Navigate to Azure Active Directory (AD).

3. Navigate to **App registrations** then click on **New registration**.
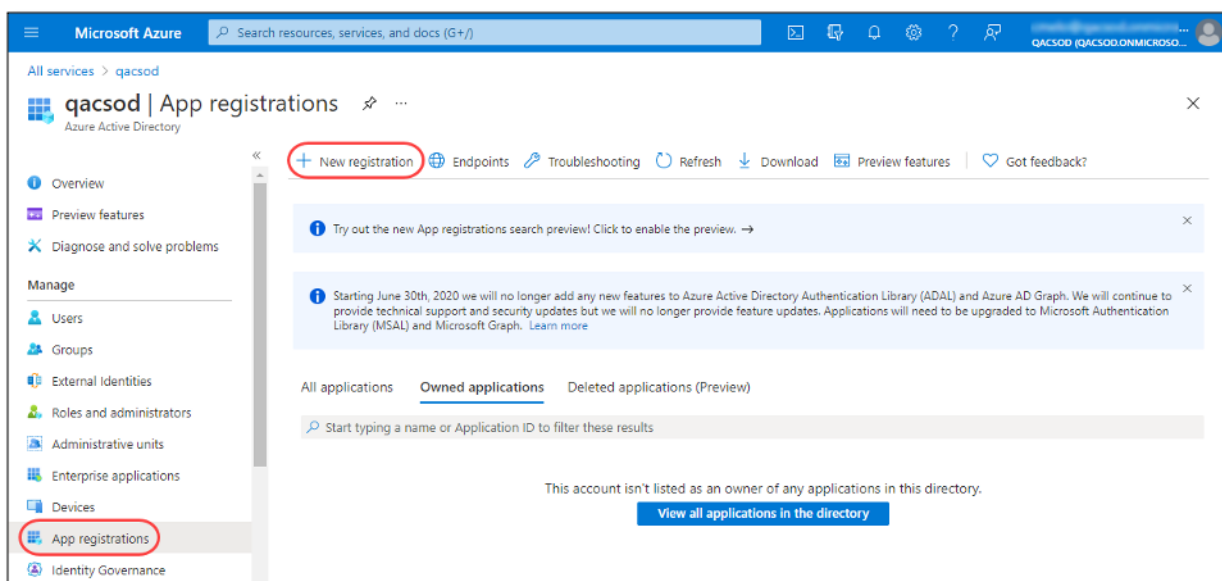
4. Complete the app properties as desired. Then click **Register**.
   Note the following:
   - The integration does not support the option Personal Microsoft accounts under **Supported account types**.
   - Redirect URI is not required for the integration.

5. Copy the values in **Application (client) ID** and **Directory (tenant) ID**. These values are required when setting up the integration in your Cornerstone portal.
   - NOTE: A service principal is generated when an app is created in Azure AD. The credentials (application ID, directory ID, and app secret) associated with the service principal are used to authenticate the integration with your Azure AD. This allows Cornerstone to connect to your Microsoft Graph APIs.

6. Navigate to **Certificates & secrets** and click on **New client secret** under the Client secrets section. Then, complete the client secret properties as desired. Click **Add**.
   - NOTE: When the client secret expires, you will need to create a new one and update the value in Cornerstone. Otherwise, the integration will not function successfully.

   - The max. period (Expires) is 24 months (Ref. Microsoft Help).
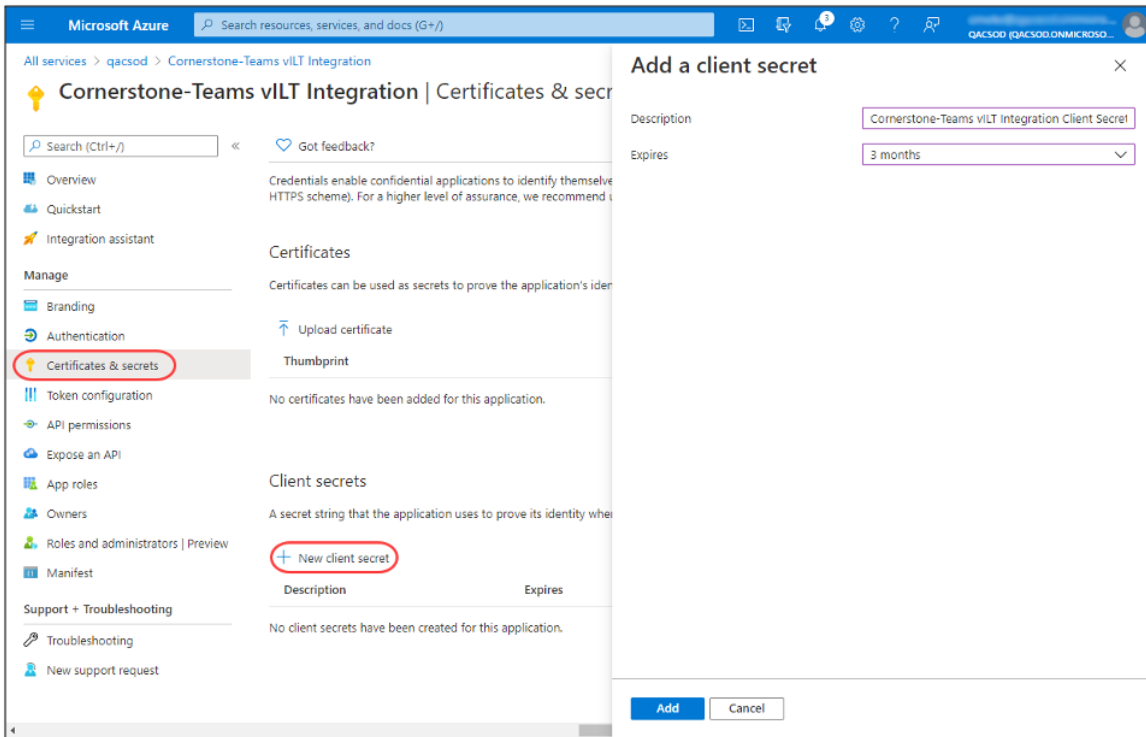
7. Copy the client secret under **Value**. This is required when setting up the integration in your Cornerstone portal.
   - NOTE: The client secret value will be masked and **not** copiable once you navigate away from the page. In this case, you will need to create new client secret.

8. Click on **Add a permission** again. Select **Microsoft Graph** then click on the

Microsoft Graph

Take advantage of the tremendous amount of data in Office 365, Enterprise Mobility + Security, and Windows 10. Access Azure AD, Excel, Intune, Outlook/Exchange, OneDrive, OneNote, SharePoint, Planner, and more through a single endpoint.

Depending on your authentication method, select **Delegated permissions** or **Application permissions**.

Request API permissions

< All APIs

Microsoft Graph
https://graph.microsoft.com/ Docs

What type of permissions does your application require?

Delegated permissions	Application permissions
Your application needs to access the API as the signed-in user.	Your application runs as a background service or daemon without a signed-in user.

Select the following permissions:

Delegated Authentication	Application Authentication
• User.ReadBasic.All • OnlineMeetings.ReadWrite • OnlineMeetingArtifact.Read.All	• User.Read.All • OnlineMeetings.ReadWrite.All • OnlineMeetingArtifact.Read.All

Click **Add permissions**.

9. Navigate to **API permissions** and click on **Grant admin consent for [your Azure tenant name]** then click **Yes**. The Status for all API permissions should now indicate "Granted for [your Azure tenant name].

Home > Csod-Teams vILT Integration
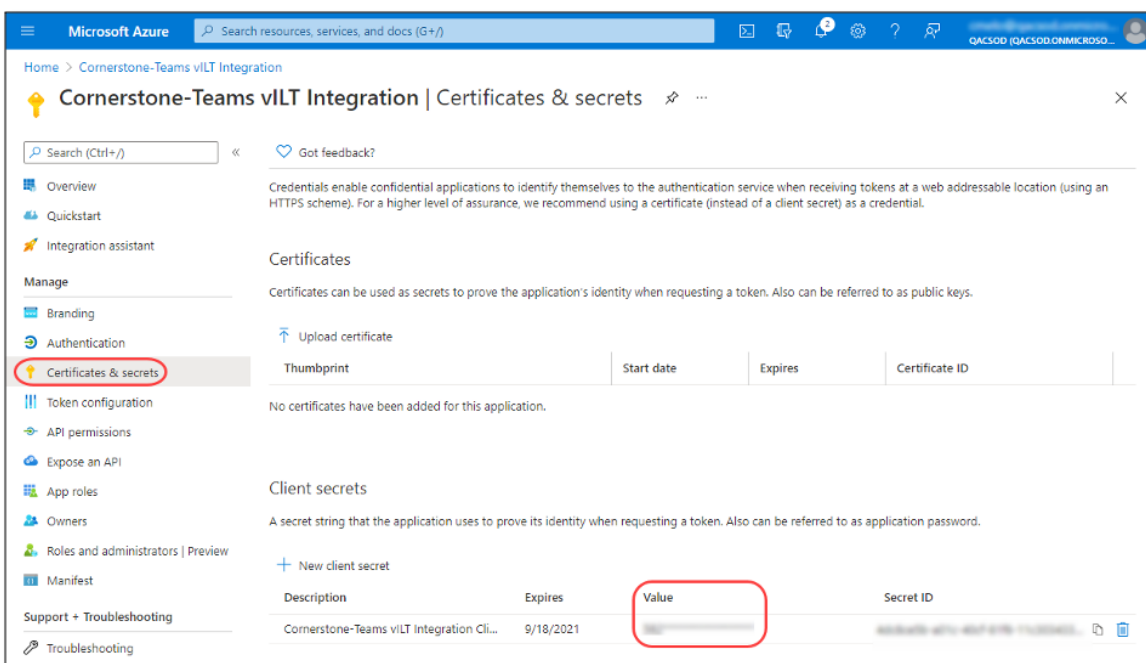
Csod-Teams vILT Integration | API permissions

Search (Ctrl+/)

Overview
Quickstart
Integration assistant

Manage
Branding
Authentication
Certificates & secrets
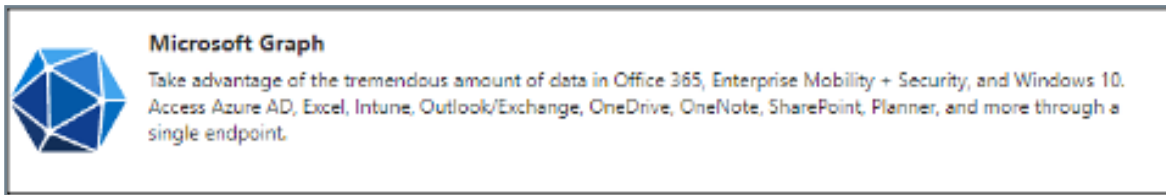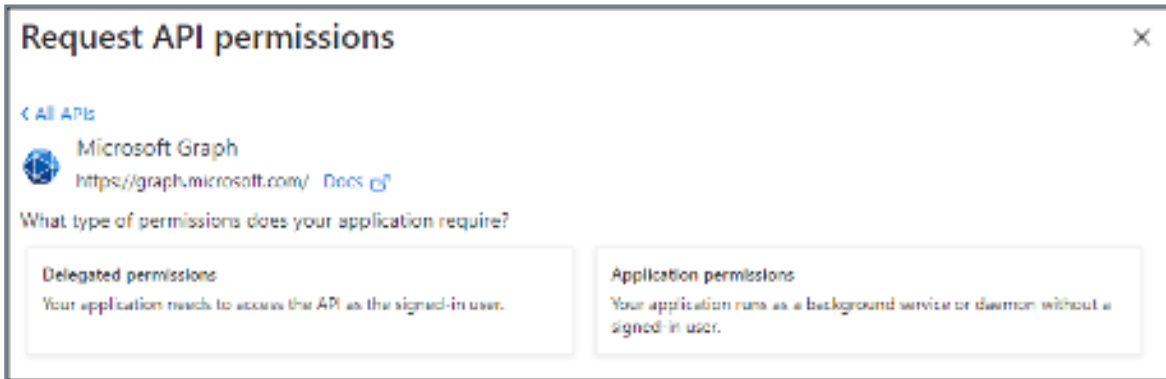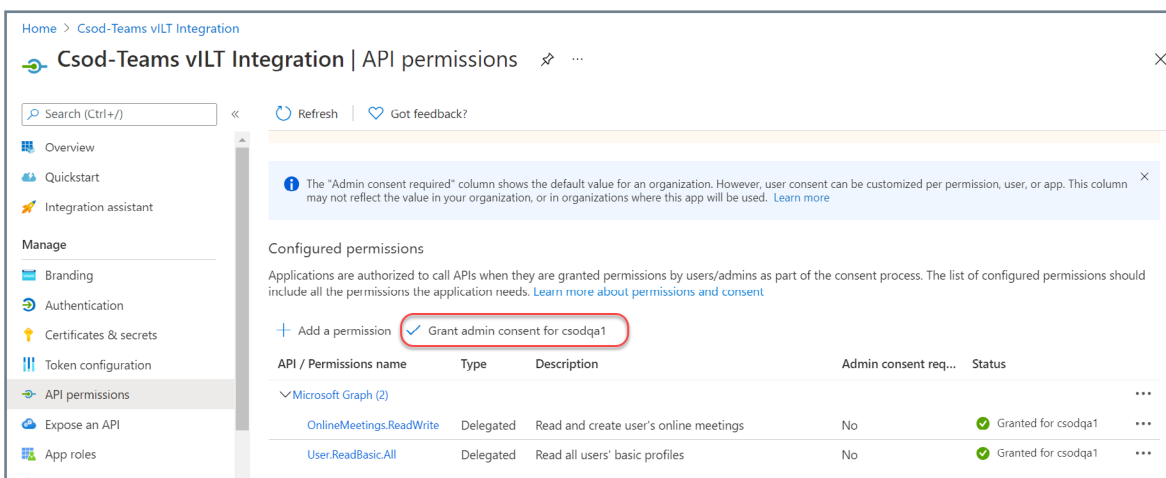Token configuration
API permissions
Expose an API
App roles
Owners

Refresh | Got feedback?

The "Admin consent required" column shows the default value for an organization. However, user consent can be customized per permission, user, or app. This column may not reflect the value in your organization, or in organizations where this app will be used. Learn more

Configured permissions

Applications are authorized to call APIs when they are granted permissions by users/admins as part of the consent process. The list of configured permissions should include all the permissions the application needs. Learn more about permissions and consent

+ Add a permission | ✓ Grant admin consent for csodqa1

API / Permissions name	Type	Description	Admin consent req...	Status
∨ Microsoft Graph (2)				
OnlineMeetings.ReadWrite	Delegated	Read and create user's online meetings	No	✓ Granted for csodqa1
User.ReadBasic.All	Delegated	Read all users' basic profiles	No	✓ Granted for csodqa1

Examples:

Configuration with **Delegated** permissions:

Configured permissions

Applications are authorized to call APIs when they are granted permissions by users/admins as part of the consent process. The list of configured permissions should include all the permissions the application needs. Learn more about permissions and consent

+ Add a permission   ✓ Grant admin consent for csodqa1

API / Permissions name	Type	Description	Admin consent requ...	Status	
∨ Microsoft Graph (3)					•••
OnlineMeetingArtifact.Read.All	Delegated	Read user's online meeting artifacts	No	✓ Granted for csodqa1	•••
OnlineMeetings.ReadWrite	Delegated	Read and create user's online meetings	No	✓ Granted for csodqa1	•••
User.ReadBasic.All	Delegated	Read all users' basic profiles	No	✓ Granted for csodqa1	•••

Configuration with **Application** permissions:

Configured permissions

Applications are authorized to call APIs when they are granted permissions by users/admins as part of the consent process. The list of configured permissions should include all the permissions the application needs. Learn more about permissions and consent

+ Add a permission   ✓ Grant admin consent for csodqa1

API / Permissions name	Type	Description	Admin consent requ...	Status	
∨ Microsoft Graph (3)					•••
OnlineMeetingArtifact.Read.All	Application	Read online meeting artifacts	Yes	✓ Granted for csodqa1	•••
OnlineMeetings.ReadWrite.All	Application	Read and create online meetings	Yes	✓ Granted for csodqa1	•••
User.Read.All	Application	Read all users' full profiles	Yes	✓ Granted for csodqa1	•••

Step 2a - Delegated Authentication:

IMPORTANT: Follow these steps only when setting up DELEGATED AUTHENTICATION.

For delegated authentication, you need to create a User in Microsoft 365 Admin Center. This user will be used as a service account which is required to retrieve attendance information from Microsoft Teams. Please note that this user will also appear in all Teams meetings as the Organizer. Instructors will have the Presenter role assigned to them.

1. Log in to your Microsoft 365 Admin Center (https://admin.microsoft.com).

2. Navigate to **Admin Center > Users > Active Users > Add a user** to create a user.

3. Complete the **Basics** tab as desired then click **Next**.

4. In **Product licenses**, assign the user to a product license then click **Next**.

5. In **Optional settings**, expand Roles then select the **User (no admin center access)** radio button. Click **Next**.

6. Under the **Finish** tab, review the settings then click **Finish Adding**.

7. Under the **User details** section, note the **Username** and **Password**. These credentials are required to set up the integration in Cornerstone.

Step 2b - Application Authentication:

> **IMPORTANT:** Follow these steps only when setting up APPLICATION AUTHENTICATION.

Application authentication removes the need to have a service account and allows instructors to assume the MS Teams Organizer role for meetings.

CsApplicationAccessPolicy

This method allows an administrator to tailor the CsApplicationAccessPolicy, enabling granular control over which users' online meetings the integration is permitted to interact with. This policy controls which users the integration can act on behalf of. It is important to ensure that the integration can act on behalf of instructors so that it can retrieve meeting attendance information.

Configuration

Configuring the **CsApplicationAccessPolicy** can only be done through **PowerShell**.

The following configuration should be performed by an administrator with admin access to Microsoft Teams.

1. You may need to upgrade your PowerShell version to at least 5.1 before installing the Microsoft Teams module.

2. Check your PowerShell version by running $Host.version from within PowerShell. We recommend using at least the version shown here:

Major	Minor	Build	Revision
5	1	18362	1593

   Instructions to install PowerShell 5.1 can be found here:
   https://docs.microsoft.com/en-us/skypeforbusiness/set-up-your-computer-for-windows-powershell/download-and-install-windows-powershell-5-1

   Subsequently, install the Microsoft Teams PowerShell Module:
   https://docs.microsoft.com/en-us/microsoftteams/teams-powershell-install

3. Connect to your Microsoft Teams using the Connect-MicrosoftTeams command, which will open a browser and allow you to log in with your Microsoft credentials. After successful login, the running PowerShell instance will be able to administer the Microsoft Teams instance that is associated with the account you used to log in to Microsoft.

4. Create a policy that contains the app id for the registered app you're working with.

   a. Save the Azure registered app id (GUID/UUID) into a [variable:](#).

   ```
   $appId = "your-app-id-here"
   ```

   b. Save the policy name into a variable:

   ```
   $policyName = "CSOD MS Teams Policy"
   ```

   c. Create a new policy:

   ```
   new-csapplicationaccesspolicy -identity $policyName
   ```

   d. Assign the registered application to the policy:

   ```
   Set-CsApplicationAccessPolicy -identity $policyName -appids @{add=$appId }
   ```

5. Assign that policy either **globally** or to **individual** users who will be instructors in the integration:

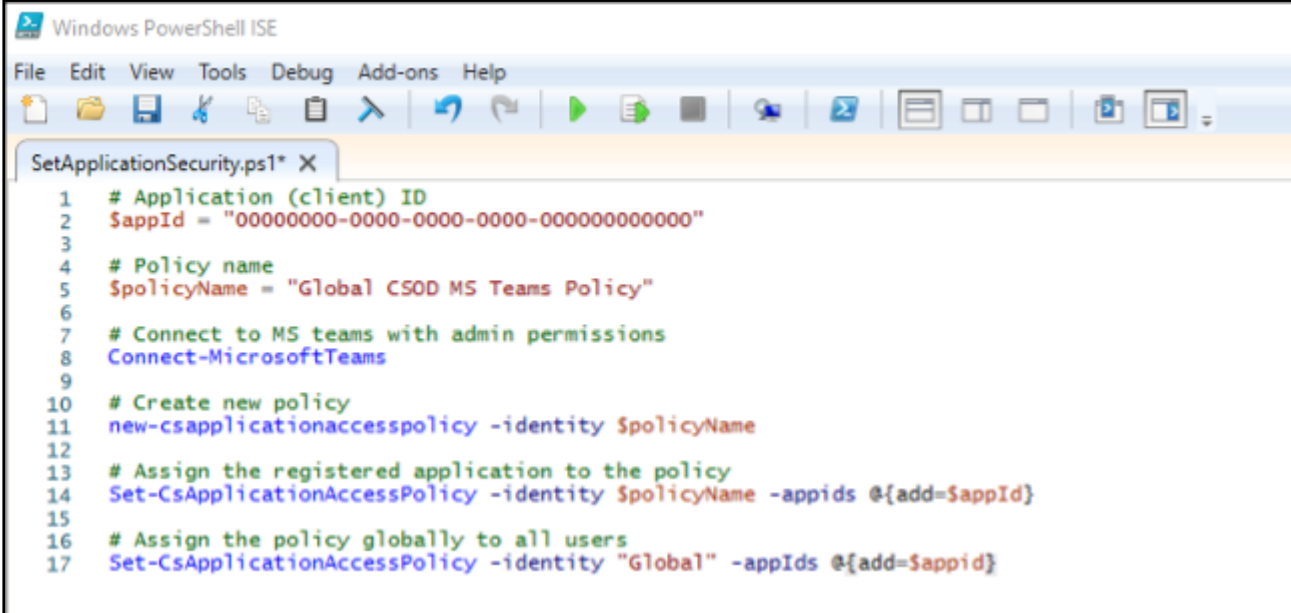   a. To assign the policy **globally** to all users:

   ```
   Set-CsApplicationAccessPolicy -identity "Global" -appIds @{add=$appid}
   ```

   b. To assign the policy to an **individual user** only:

   ```
   Grant-CsApplicationAccessPolicy -identity "someusername@example.com" -PolicyName $policyName
   ```

Example

PowerShell file (.ps1) to create and assign a global policy.


```
# Application (client) ID
$appId = "00000000-0000-0000-0000-000000000000"

# Policy name
$policyName = "Global CSOD MS Teams Policy"

# Connect to MS teams with admin permissions
Connect-MicrosoftTeams

# Create new policy
new-csapplicationaccesspolicy -identity $policyName

# Assign the registered application to the policy
Set-CsApplicationAccessPolicy -identity $policyName -appids @{add=$appId}

# Assign the policy globally to all users
Set-CsApplicationAccessPolicy -identity "Global" -appIds @{add=$appid}
```

Other useful PowerShell commands (optional)

Get Information: Get information about users and their currently applied policy (shown as the "ApplicationAccessPolicy" column):

```
get-csonlineuser |ft -prop UserPrincipalName, ApplicationAccessPolicy -autosize
```

Assign policy: Assign the policy to specific users only

```
Grant-CsApplicationAccessPolicy -identity "someusername@example.com" -PolicyName $null
```

Specific user's policy: See a specific user's currently assigned policy

```
(get-csonlineuser "someusername@example.com").ApplicationAccessPolicy
```

Remove an application: Remove an application from the policy

```
Set-CsApplicationAccessPolicy -identity $policyName -appids @{remove=$appId}
```
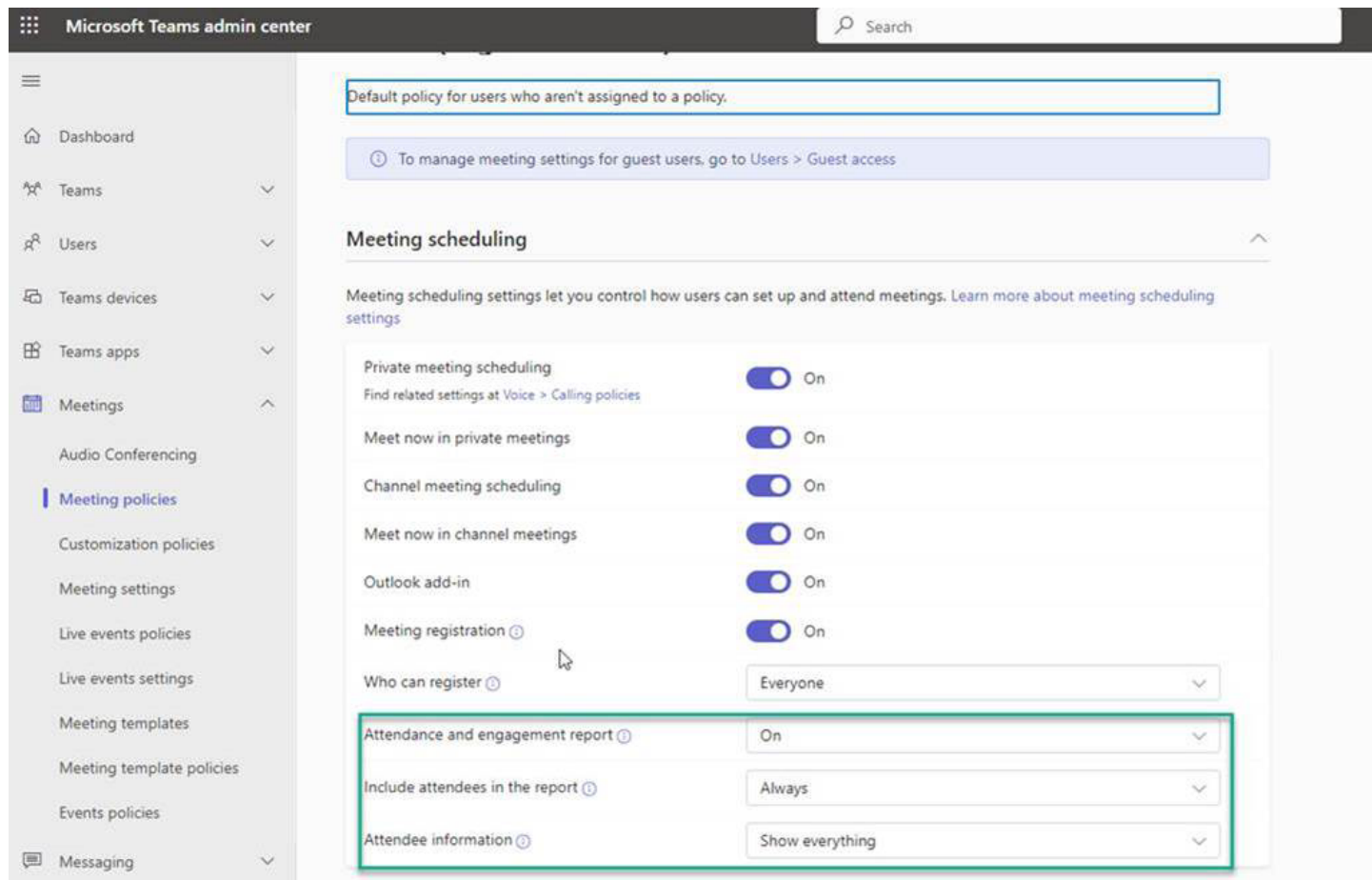
Remove a policy: Remove the policy

```
Remove-csapplicationaccesspolicy -identity $policyName
```

Step 3. Enable Attendance Report

1. Log in to your Teams portal (https://admin.teams.microsoft.com).

2. Meetings > Meeting Policies > Global

3. Attendance Report must be enabled (Turned on)

Setup Steps in Cornerstone

1. Log in to your Cornerstone portal.

2. Navigate to the Edge Marketplace (Admin Tools > Edge > Marketplace).

3. Search for Microsoft Teams vILT Integration then click on the integration tile.

4. The integration can be self-installed in your CSX Stage or Pilot to support your testing exercise.
   When ready to move to Production, please reach out to your Cornerstone Client Executive to have the integration installed in your CSX Production portal.

5. Review the terms and conditions then select the checkbox for I have read, understand, and agree to the above terms and conditions. Click on Install.

6. Click on **Configure Now**. You will be directed to the **Settings** page.

7. Configure the integration on the Settings page

Example

Credential Field Mapping	
Cornerstone Field Label	**Azure Field Label**
Tenant ID	Directory (tenant) ID (see set-up step 1.5)
App ID	Application (client) ID (see set-up step 1.5)
App Secret	Value (see set-up step 1.7)
Username	Username (see set-up step 2.7)
Password	Password (see set-up step 2.7)

a. **Integration Name**: This is a client-defined name used to identify the integration. The value will be displayed in the Provider drop down when creating a vILT event. This field is required.

b. **Tenant ID**: This is your organization's unique credentials which Microsoft uses to validate requests originating from Cornerstone. This field is required.

c. **App ID**: This is your organization's unique credentials which Microsoft uses to validate requests originating from Cornerstone. This field is required.

d. **App Secret**: This is your organization's unique credentials which Microsoft uses to validate requests originating from Cornerstone. This field is required.

e. **Username**: This field is ONLY required when using DELEGATED AUTHENTICATION. Keep this field empty when using application authentication. For delegated authentication, this is your organization's unique credentials which Microsoft uses to validate attendance update requests originating from Cornerstone. Please use the User Principal Name from Azure.

f. **Password**: This field is ONLY required when using DELEGATED AUTHENTICATION. Keep this field empty when using application authentication. For delegated authentication, this is your organization's unique credentials which Microsoft uses to validate attendance update requests originating from Cornerstone.

g. **Min. Attendance %**: The time in % (max. 100) the user needs to attend a virtual session before being recognized as completed. Set to 0 or keep empty to disable min. attendance tracking. Important: Cornerstone does not recommend a value higher than 80% to balance acceptable deviations.

h. **Integration ID**: This is an auto-populated and read-only field. You do not have to take any action on this field.

i. **Active**: Enable the toggle switch to enable the Teams VILT settings.

8. Click on **Save Settings** which will then take you to the Manage Integrations page.

9. Search for **Microsoft Teams vILT** Integration and enable the toggle switch.

Existing Integrations (July '21 release)

If a service account username and password are entered in the CSOD Edge tile, the integration will continue to use delegated authentication as it did up until now.

The integration should continue to function the same way that it has been functioning before this release. However, if service account username and service account password are removed, then the integration will use application authentication only.

Error Messages (Q&A)

When the error thrown has a code "AADSTSNNNNN", it means there is a problem connecting with Microsoft Graph which refers usually to errors found with either the settings provided are not correct or there are parameters missing or not correctly set up in Azure AD.

There is a variety of issues thrown when customers are setting up the integration. The validation messages will provide admins with details to give them tools to troubleshoot. Please notice the Edge Tile settings are saved although errors are thrown.

Create Events & Sessions

The process to create instructors, events, and sessions is identical to existing ILT workflows. Events created for VILT sessions must be associated with the Teams account configured on the Edge Settings page. Session information is sent to Teams upon saving the sessions.

Vendors and Instructors

After the configuration in the Edge Marketplace, a **new vendor** will be added (automatically) to the **Manage Vendors and Instructors** page. This vendor will need to be selected as the Primary or Secondary Vendor when creating an Event for the integration.

Instructors

The next step in configuration should be to add new instructors to the new MS Teams vendor. Click on the **Instructors** link.

Note: Instructors associated with the Teams VILT vendor in your Cornerstone portal must already exist in Teams, i.e. all instructors must have a Microsoft Teams license.

Session Cancellation

Enable the *"automatic cancellation of session on vILT provider side upon cancelling session in LMS"* for the new vILT vendor in Cornerstone.

Create Events

1. Navigate to ILT > Manage Events & Sessions. Alternatively, navigate to Admin > Tools > Learning > Catalog Management > Events & Sessions.

2. Click **Create New Event**.

3. Complete the desired event properties. In **Primary Vendor** or **Secondary Vendor**, select the appropriate option which will be the Integration Name configured in Settings. Click **Next**.

4. On the **Availability** tab, define which users can find and register for the event. Click **Next**.

5. On the **Pricing** tab, define pricing details as needed. Click **Next**.

6. On the **Training Units** tab, define training unit details as needed. Click **Next**.

7. On the **Session Defaults** tab, define the **Minimum Registration** and **Maximum Registration**. Complete other fields as needed.

8. Click **Save**.

Create Sessions

1. Navigate to ILT > Manage Events & Sessions. Alternatively, navigate to Admin > Tools > Learning > Catalog Management > Events & Sessions.

2. Search for the event you created in Step 2 above.

3. Click on the calendar icon for the event.

4. Click on **Create New Session**. Note that this link may instead read as 'Create New {primary vendor name} Session' or 'Create New {secondary vendor name} session'.

5. On the **Schedule Wizard** tab, choose your session's frequency then click **Next**.

6. On the **Part Schedule** tab, enter the desired details.
   - In **Add Instructor**, select an instructor that has a corresponding user account in Teams. Selecting an instructor that does NOT exist in Teams will cause an error when saving the session. Admin can only add one Primary instructor who will be designated with the Organizer role and can additionally add up to 10 secondary instructors who will be assigned the Co-organizer role in MS Teams.
   - To add more than one session part, click the **Save & Add New Part** button. Each multiple part of a session will correspond to a separate meeting in Teams.

7. On the **Details**, **Availability**, **Emails**, **Pricing**, and **Training Units** tabs, enter details as needed.

8. On the **Summary** tab, click **Save**.

Update Sessions

1. Navigate to ILT > Manage Events & Sessions. Alternatively, navigate to Admin > Tools > Learning > Catalog Management > Events & Sessions.

2. Search for the appropriate event.

3. Click on the calendar icon for the event.

4. Search for the session you want to update.

5. Click the edit icon for the session.

6. Update session's details as needed then click the **Save** button

NOTE: The updates done at the session level in Cornerstone will propagate to the meeting in Teams. When the primary instructor is updated, the session part in Teams will be recreated. Otherwise, it will result in a simple update to the existing meeting created in MS Teams.

Extended Options

The extended options list should be accessible within the Session, under the "Extended Options" link. Administrators will have the ability to enable or disable each option as needed. Instructors will be able to view the meeting behavior and verify that settings align with the options integrated into the system. This enables instructors to understand and utilize the configured options effectively.

To Enable Extended Options for you vILT MS Teams provider:

1. Navigate to ILT>Vendors & Instructors

2. Search for the appropriate vendor

3. In the Vendor's page, click on "Enable Extended Options for vILT vendor"

Option Name	Type	Possible Values	Description
Allow Attendee To Enable Camera	Toggle (ON / OFF)		Indicates whether attendees can turn on their cameras.
Allow Attendee To Enable Mic	Toggle (ON / OFF)		Indicates whether attendees can turn on their microphone.
Allowed Presenters	Options	Everyone	• **Everyone**: Everyone is a presenter. • **Organization**: Everyone in the organizer's organization is a presenter. External participants will join as attendees. • **Organizer**: Only the organizer is a presenter.
Allow Meeting Chat	Options	Enabled Disabled Limited	• **Enabled**: Meeting Chat is enabled. • **Disabled**: Meeting Chat is disabled. • **Limited**: Meeting chat is enabled but only during the meeting call. NOTE- The following behavior was observed: • if chat is disabled it means that it is turned off for everybody (Both instructors and users) If chat is limited it means that it is limited only for users. Instructors can still use the Chat unlimited
Allow Teamwork Reactions	Toggle (ON / OFF)		Indicates whether Teams reactions are enabled for the meeting.
Lobby Bypass Settings - IsDialInBypassEnabled	Toggle (ON / OFF)		Specifies which participants can bypass the meeting lobby while joining through dial-in.

Lobby Bypass Settings	Options	Organizer	• **Organizer**: As the meeting organizer, you and any co-organizers can get into the meeting directly. Everyone else will wait in the lobby. • **Organization**: People in your org and people with guest access can get into your meeting directly. • **Organization and Federated**: Anyone from your organization and organizations with which your IT admin has set up a connection, or anyone to bypass the lobby. • **Organization: Excluding Guests**: Only people within your orgw can get into your meeting directly. Everyone else will wait in the lobby. • **Everyone**: Anyone who has access to the meeting link gets into the meeting directly, including people who call in. Depending on the meeting policy set up by your IT admin, people joining without a Teams account, people from untrusted organizations are placed in the lobby until someone from your organization or a trusted organization joins the meeting, even if the **Everyone** option is chosen.
Warning: the following settings can be defined only when creating a session. If sessions are updated, these settings cannot be changed.			
Record Automatically	Toggle (ON / OFF)		Indicates whether to record the meeting automatically.
Watermark Protection - Is Enabled for Content Sharing	Toggle (ON / OFF)		Specifies whether a watermark should be applied to a content type by the client application (content sharing).
Watermark Protection - Is Enabled for Video	Toggle (ON / OFF)		Specifies whether a watermark should be applied to a content type by the client application (Video)

Cancel Sessions

1. Navigate to ILT > Manage Events & Sessions. Alternatively, navigate to Admin > Tools > Learning > Catalog Management > Events & Sessions.

2. Search for the appropriate event.

3. Click on the selected event's calendar icon.

4. Find the session that you would like to cancel.

5. Click on the red 'X' icon under Options.

6. Complete the Cancel Session form then click **Submit**.

NOTE: The corresponding meeting in Teams will be automatically cancelled.

Launch a Session

Instructor Launches a Session

Instructors may launch the session from the **View Your Sessions** navigation link in Cornerstone, or from the email notification (if configured with the email tag INSTRUCTOR. LAUNCH.SESSION.LINK).

1. Navigate to ILT > View Your Sessions.

2. Search for your session and click on the corresponding time link which will launch the virtual meeting session in Teams.
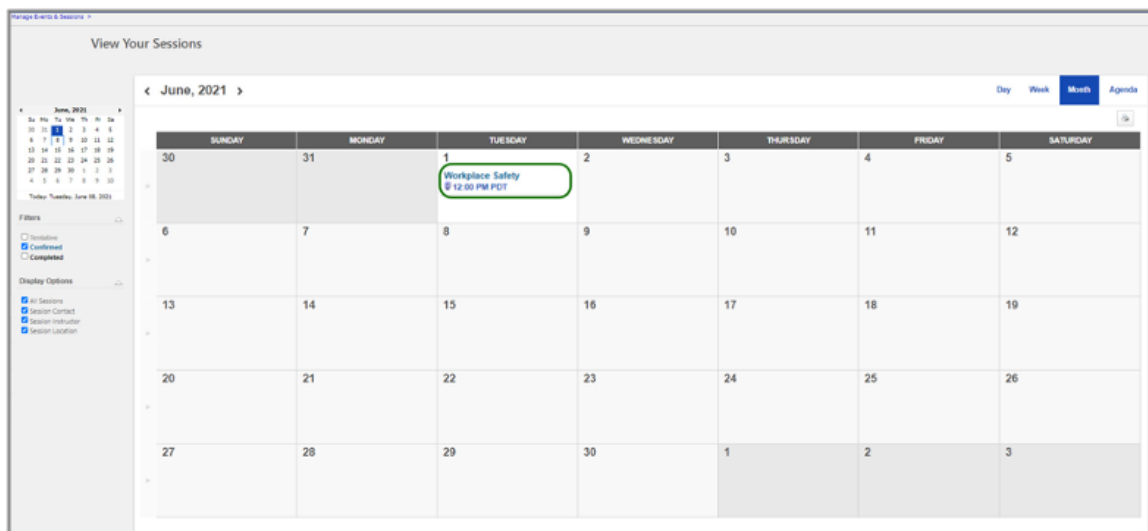
> **NOTE:** The time link is the **second link** in the calendar. Do NOT click on the Event title (first link).
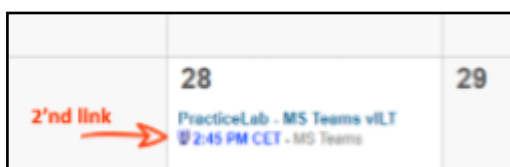
User Launches a Session

Learners have two possible methods to launch a session:

Method 1: Launching a session through Transcript

1. Navigate to your **Transcript** page.

2. Search for the session and click on **Launch** which will launch the virtual meeting session in Teams.
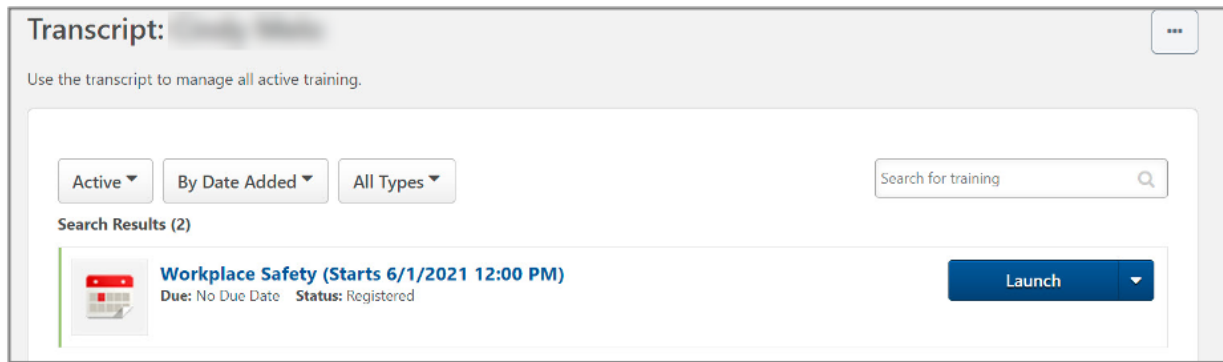
Method 2: Launching a session through email

If an administrator configured the ILT Session Register email with the LAUNCH. SESSION.LINK tag, learners will receive an email when they register for a session.

The email will include a link that will allow learners to launch the virtual meeting session in Teams. Note that the user will be prompted to enter their Cornerstone log-in credentials before being directed to the Teams meeting. This is true unless the user has an active/open Cornerstone session or a Cornerstone SSO .

To access email administration, navigate to Admin > Tools > Core Functions > Email Management. To configure a template for the ILT Session Register email, search for

the ILT Session Register email type and click the Add Email option.

To include a link that users can click to launch their virtual session in the ILT Session Register email, the administrator can add the LAUNCH.SESSION.LINK tag to the body of the email. A functional link will replace the tag when the email is. This email tag functions for both single and multi-part sessions.
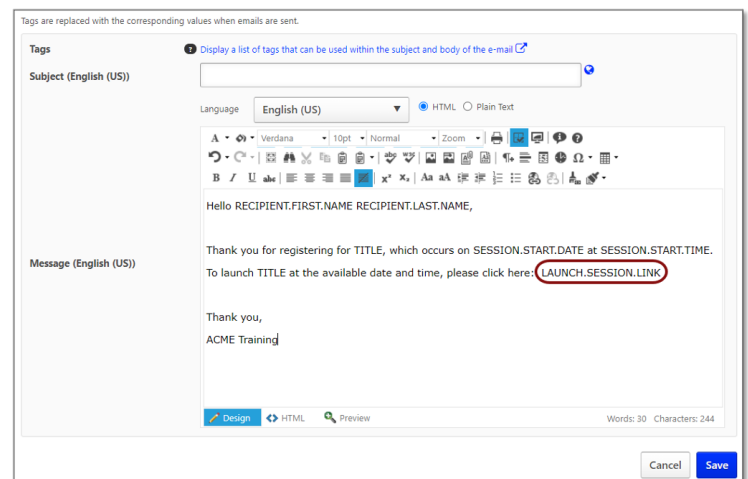
Method 3: Launching a session from Cornerstone Events calendar

Learners may launch the session from the **Events Calendar** in Cornerstone.
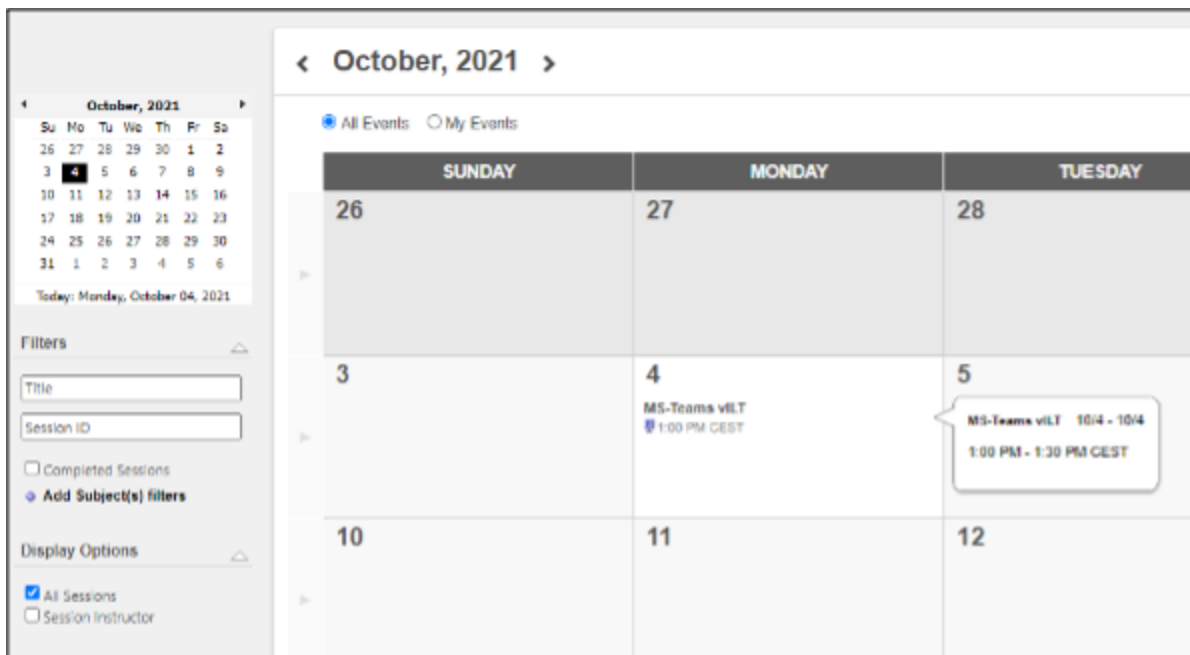
User Workflow / Single Sign-On

Below describes the expected behavior for when email tags are used to launch a session using the Microsoft Teams VILT integration.

Expected user workflow for Cornerstone portals WITH an existing SSO solution in place

1. If configured through Email Management, user (instructor/attendee) will get an email from Cornerstone with the link to launch the session.
   - Email tags to include in the email notification to display the link:
     » Instructor email notification: INSTRUCTOR.LAUNCH.SESSION.LINK
     » Attendee email notification: LAUNCH.SESSION.LINK

2. User clicks on the link and will be automatically logged into Cornerstone via their SSO.

3. User will be automatically forwarded to MS Teams session (i.e. no need to manually launch the MS Teams session from Transcript).

4. User completes the Microsoft Teams session.

5. Attendance will be tracked on the user's Transcript and session's Attendance and Scoring pages.

Expected user workflow for Cornerstone portals WITHOUT an SSO solution in place

1. If configured through Email Management, user (instructor/attendee) will get an email from Cornerstone with the link to launch the session.
   - Email tags to include in the email notification to display the link:
     » Instructor email notification: INSTRUCTOR.LAUNCH.SESSION.LINK
     » Attendee email notification: LAUNCH.SESSION.LINK

2. User clicks on the link and will be prompted to log into Cornerstone using credentials.

3. Upon login, user will be automatically forwarded to Microsoft Teams session (i.e. no need to manually launch the Microsoft Teams session from Transcript)

4. User completes the Microsoft Teams session.

5. Attendance will be tracked on the user's Transcript and session's Attendance and Scoring pages.

Update Session Roster

Once the session's scheduled completion date and time have passed, the instructor or admin will need to click on the **Update Attendance** button to trigger a session roster update.

This action prompts Cornerstone to request Teams for a list of users that have attended the session. To complete the attendance update and complete the session, click on **Submit Roster**.

Attendance Percentage Threshold (%)

If you have not configured the "Min. Attendance %", the user will be marked as attended when he/she launches the session regardless of how long they stayed in the meeting as long as there is time registered in the Attendance Report generated by MS Teams for each attendee (Time intervals exists in the Attendance Report per user)

For example, an attendee that launched a session but only stayed in the meeting for 2 minutes will still be marked as having attended the session.

If you have configured a "Min. Attendance %", the time in the session will be considered.

For example, if the session was open for 60 minutes, the threshold was configured with 50%, and the user leaves the session after 25 minutes, then the user will not be marked as completed.

With the introduction of the co-organizer role in the integration, the attendance calculation logic now takes into account the organizer's time in session as well.

Breakout rooms

Important: The time spend in Breakout rooms cannot be captured and consolidated back to the main MS-Teams session. This is a limitation in Microsoft Graph API's.

If it's intended to use breakout rooms, the "Attendance Percentage Threshold (%)" should be set to "0". It is possible to configure multiple integrations with different vendor configurations (Ref. Q&A)

Attendance Calculation Details

Overview

To select the type of attendance calculation desired per Session:

1. Open the Extended Options link in the Session details of the session you want to set up

2. Go to Attendance Calculation section

3. Select the desired attendance calculation type.

Instructor Based calculation

("MS-Teams" = Actual meeting time (Primary Instructor time in the session), "Session" = Scheduled session time in CSOD)

If this option is selected the duration of the meeting will be determined by the Primary instructor's time in meeting. Co-organizers are not considered.

If the Primary Instructor (Organizer in MS Teams) does not join the meeting, the integration cannot calculate attendance.

Time Based calculation

("MS-Teams" = Actual meeting time, "Session" = Scheduled session time in CSOD)

If this option is selected, the integration will take as reference the start time of the first user who joins the meeting whose role is either Organizer or Co-organizer.

Start Date	End Date	Time to calculate
MS-Teams started before Session start time	MS-Teams ended before or on Session end time	Session start time – MS-Teams end time
MS-Teams started after Session start time	MS-Teams ended before or on Session end time	MS-Teams start time – MS-Teams end time
MS-Teams started after Session start time	MS-Teams ended after Session end time	MS-Teams start time – MS-Teams end time

MS-Teams started before Session start time	MS-Teams ended after Session end time	Session start time – MS-Teams end time
MS-Teams started on session start time	MS-Teams ended on Session end time	Session start time – MS-Teams end time

Attendee's Drop-out

In case if a user drops out for a couple of minutes (for example due to connectivity issues) and rejoined again, the integration will calculate the overall attendance time.

Session Part Breaks

Session part breaks will not be considered for the calculation. The recommended practice for both instructors and attendees is to keep the session open during scheduled breaks.

Attendance Calculation Details

The **Update attendance** button will capture the attendance based on the configured threshold (%).

Instructor's Overwrite

The Instructor in Cornerstone remains responsible for marking the attendees as completed before submitting the roster. The Instructor can either confirm or overwrite (yes/no) the completion record based on own discretion.

Frequently asked questions

Guest vs. External Users

When you need to communicate and collaborate with Learners/Attendees outside your organization (Azure tenant), Microsoft Teams has two options:

External access – MS federation user, for example an attendee logged-in with Microsoft account from another company or tenant.

Guest access – External user without using a MS federation account, for example an attendee with a private @gmail.com address.

Important: The MS Teams integration does NOT support 'Guest' accounts for Learners.

User (Attendee) Experience & Support (Guest vs. External User):

Registered user in CSOD	External User	Guest
Learner can launch training, for example from Cornerstone transcript	Yes	Yes
Learner must enter the name (in MS Teams) while launching the session	No	Yes
Learner need to wait in the lobby first (Instructor needs to admit)	Yes	Yes
Email is available/visible in the MS-Teams attendance report, and can be used/mapped to the Cornerstone user	Yes	No
Attendance will be tracked automatically in Cornerstone (via 'Update attendance button')	Yes	No

How to identify the User Type & Role in MS-Teams?

For guest users, the name will be displayed with the 'Guest' extension and tagged with "Meeting guest". External users will be tagged as "External".

Example:
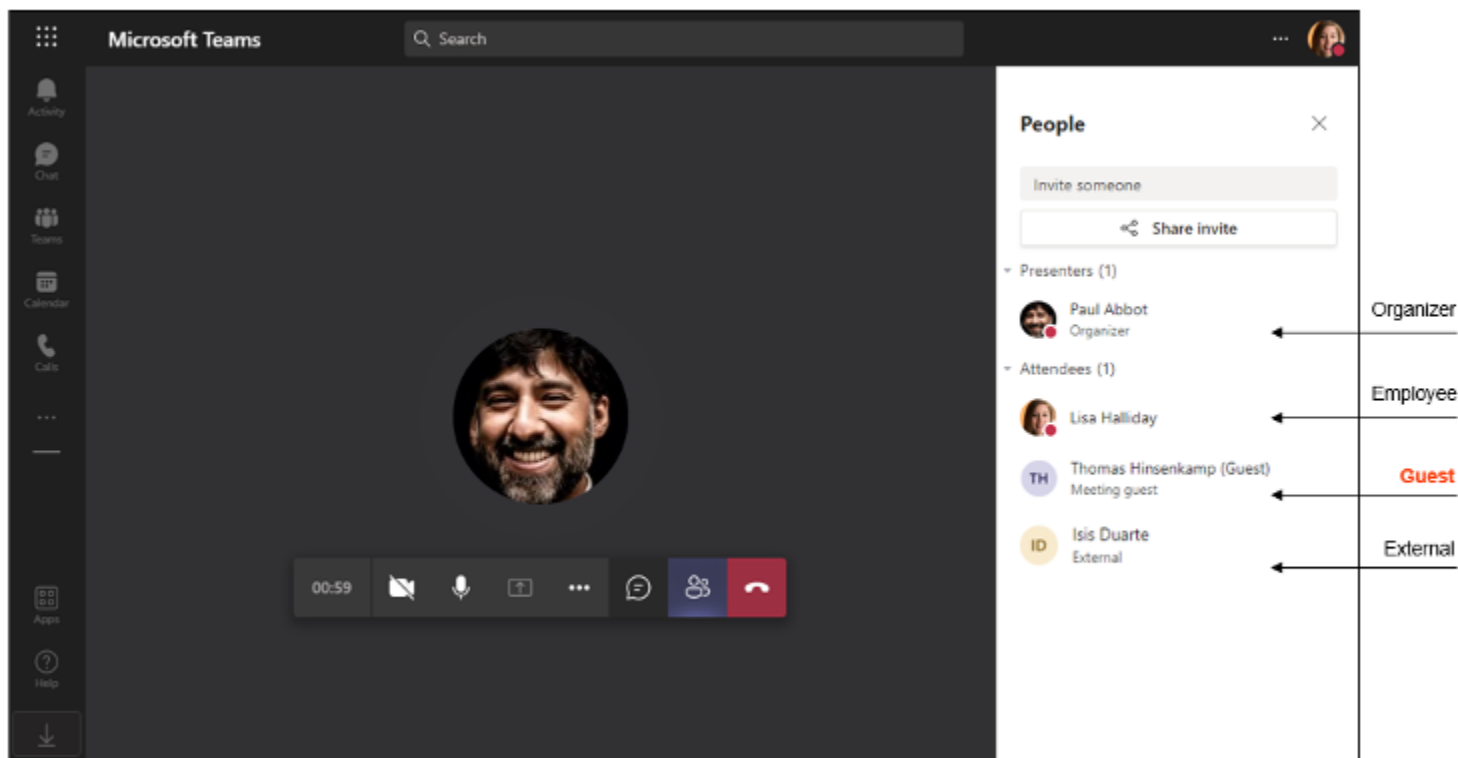
Helpful Resources:

Use guest access and external access to collaborate with people outside your organization:

https://docs.microsoft.com/en-US/microsoftteams/communicate-with-users-from-other-organizations

Manage external access:
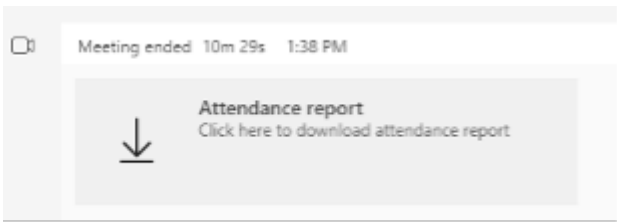
https://docs.microsoft.com/en-US/microsoftteams/manage-external-access

Integration questions

Question	Answer
Can you join the Teams session as an external user / guest (i.e. registered in Cornerstone, but not part of the organization's Azure AD tenant)?	If a non-Microsoft Teams user launches the session, the attendee will be directed to the meeting lobby until the user gets admitted to the meeting. This is a Teams feature and not dictated by the Teams VILT integration. Attendance will not be tracked automatically but can be tracked manually by the Instructor on session completion.
Are anonymous out-of-tenant guest attendees included in the Cornerstone attendance report?	Attendance details for any attendee who is NOT assigned to the session in Cornerstone are ignored by the integration.
Is the attendee's time in session or sub-session available?	This is currently not in scope of the Integration, but the instructor can download the attendance report from MS Teams to review the exact time in a session.
How do we make the session recording available to learners after the vILT session is done?	Recording is outside of the integration and dictated by what's available/ configured in MS Teams. With its current design, the integration does not touch the recording option.
What data points are available for reporting back into Cornerstone?	Session attendance is reportable when confirmed through Session Roster. Reporting (i.e. user attended the session) is possible via Reporting 2.0 standard reports, and API's.

Question	Answer
When is it possible to track attendance?	Attendance can be retrieved once the session has ended, if it has been properly finished (either the instructor ends the meeting, or all participants leave the meeting). Please wait until the end date/time of the session and consider a grace period (usually a couple of minutes) before updating the attendance. Attendance can't be tracked before the end date/time, for instance, if the session was scheduled to finish at 11:00 but it finished at 10:45, although all attendees have left and the instructor has finished the meeting, the attendance should be updated only after 11:00.
As an Instructor, is it possible to download the attendance report in MS-Teams?	Yes, please refer to the Microsoft documentation how to download the Attendance report in MS-Teams. For example, the download link should be visible in Teams "**Chat**" after the session has ended.
Is in email address in Cornerstone required?	Yes, users are mapped via the email address between CSOD and Azure.
Does the integration create an Outlook or MS- Teams calendar entry	This is not in scope of the integration. Customers have the option to configure Cornerstone email events to send out meeting invitations. After the user has accepted an invite, it is visible in the Outlook calendar. The sync of Teams calendar with Outlook calendar relies on your Microsoft setup and is not in scope of the integration itself.

Question	Answer
Do we need to 'enable' Breakout rooms support, e.g., using Extended Meeting options during event set up?	With application authentication, both the Primary Instructor and the Secondary Instructor will be automatically assigned the Organizer and Co-organizer roles, respectively, in MS Teams. This grants them the necessary permissions to manage breakout rooms. With Delegated Authentication, both the Primary and the secondary instructor(s) will be given the Co-organiser role and will have the permission to manage breakout rooms.
Is it possible to 'Try before you buy'?	Yes, it is the Cornerstone recommendation to test the integration first before enabling on Production. It is possible to enable and configure the integration on Stage & Pilot (free of charge) for an unlimited time.
How to enable the integration on Production?	Please reach out to your Sales representative to enable the integration on Production.
How to use "Breakout Rooms" and "Attendance Percentage Threshold (%)" together?	It is possible to configure 2x MS-Teams integrations in the Edge Marketplace, which will create 2x vendors: 1. MS Teams vILT (Breakout rooms): "Attendance Percentage Threshold (%)" = 0. 2. MS Teams vILT (No Breakout rooms): "Attendance Percentage Threshold (%)" > 0. This vendor should not be used with breakout rooms.

Technical, security & compliance questions

Question	Answer
Can the Microsoft Teams VILT integration be used in the same portal with other VILT integrations from other online meeting providers?	Yes
It is possible to have several vendors for the same integration, e.g. the client has several MS Team accounts (by country) and would like to replicate this set up?	Yes
I'm receiving an Error while creating or updating the session's schedule: e.g. "Invalid Data".	Please double check that: 1. The Instructor has been added successfully to the Vendor in Cornerstone. 2. The Instructor is a valid user in the connected Azure tenant. 3. The Instructor's email address in Cornerstone is the same as the UPN name (User Principal Name) or the email address in Azure.
What license is required for Users who want to use MS Teams?	Microsoft Teams is very "basic" software and is included in (virtually) every O365 license type. According to Microsoft documentation, even the lowest tier Office 365 subscription, Office 365 E1, includes MS Teams: https://www.microsoft.com/en-us/microsoft-365/enterprise/office-365-e1 Please reach out to Microsoft for any questions on licensing.
Why do we need less privilege (i.e. "User.ReadBasic.All") for delegated authentication, while we need more privilege (i.e. "User.Read.All") for application authentication?	Cornerstone is always following the principle of least privilege to make an integration work. Following the Microsoft Graph API documentation for Users and Online Meetings, there are different privileges required, based on your selected permission type (delegated vs application).

Question	Answer
Why does the vILT integration needs access to basic user data?	Users in Cornerstone and Teams are connected by email address. In order to use Microsoft Graph APIs, Cornerstone must convert the email to UPN (userPrincipalName), which requires access to basic user data.
Where can I learn more about the Microsoft "permissions" required for the integration?	Please refer to the Microsoft Graph permissions reference.
The attendance is not being tracked correctly?	Check your Teams policy (Attendance Report), which must be "enabled. https://admin.teams.microsoft.com/ Meetings > Meeting Policies > Global
For "Delegated Authentication" only: • Does the service account provided for the integration support MFA? • Does the integration support federated authentication with 3rd parties to authenticate the service account user? • Can the service account authentication work if the domain forces login credentials through a login page? • For the service account provided, do we need to update the password in Cornerstone after changing the password in Azure? • Does the service account provided for the integration support "Conditional Access"?	No No No Yes No

Question	Answer
How is the information (i.e. App ID / App Secret) from Azure stored in Cornerstone?	The data is stored in a dedicated Edge configuration database. Please refer to the Cornerstone Technology Overview for database encryption.
We have an on-premise ADFS, which is synchronized to Azure AD. Does this make a difference for the end users, or for the service account used for delegated authentication?	This is a common setup for many companies. It does not make a difference if this is a cloud- only account, or a synchronized federated account. Finally, it just needs to be an account in Azure AD.
What will happen with the vILT configuration (in Pilot/Stage) after a copy-down?	https://csod-external.force.com/supportcentral/s/article/Are-vILT-integrations-overwritten-during-a-copy-down?language=en_US
How does the MS-Teams vILT integration support Data Privacy and Data Sovereignty aspects, like GDPR?	Cornerstone takes privacy and security concerns seriously. All integration related components are co-located with the main CSOD application. For example: If the portal is hosted in the EU, all integration related components are hosted in the EU as well, no data will be sent outside the EU, and there should be no requests coming from a server outside the EU.
What data is being send to MS Teams and being received from MS Teams (using the MS Graph API)?	Cornerstone > MS Teams: • CSOD sends information about the meeting (including scheduled time, the name of the meeting, and the instructor's email address). • CSOD does NOT send the meeting attendee roster to MS Teams – CSOD only receives information back about who attended. MS Teams > Cornerstone: • CSOD queries basic user related information by either using the GUID (User's unique object ID in Azure) or their UPN (User Principal Name) in order to translate between the two. • CSOD receives information about the meeting, including the meeting attendance report, from MS Teams. The attendance report includes the attendee information (including their email addresses).

Question	Answer
Which role will each participant get in MS-Teams?	This is dependent on the default configuration of the presenter role in MS teams. When enabled, participants would get the Presenter role, else the Attendee role.
How are Cornerstone users and Azure/Teams users connected?	Learners: • Learners are connected via the email address. Instructors: • Instructors are connected: 1) via the Azure UPN name and the Cornerstone email address. 2) via the Azure email address and the Cornerstone email address. The system will try to connect via UPN first, before trying to connect via the email address.

Appendix

A. Cornerstone Security Permissions

Permission Name	Permission Description	Category
Edge Marketplace - Manage	Grants access to the Marketplace service for Edge Integrate where the administrator can browse and purchase third-party integrations that can be used to extend the Cornerstone system. This permission cannot be constrained. This is an administrator permission.	Edge
Edge Integrations - Manage	Grants access to the Integrations service for Edge Integrate where the administrator can configure, enable, and disable their third-party integrations that are used within the Cornerstone system. This permission cannot be constrained. This is an administrator permission.	Edge
ILT Schedule Part Occurrence	Allows the admin to create more than one ILT session schedule part at the same time using a part occurrence schedule wizard. This is an administrator permission.	Learning - Administration
Sessions – Cancel	Grants ability to cancel instructor led training sessions. This permission works in conjunction with Events – View and Sessions – View permissions. This is an administrator permission.	Learning - Administration
Sessions - Create	Grants ability to create new instructor led training sessions. This permission works in conjunction with Events - View and Sessions - View permissions. Administrators can only create sessions for events for which they have the availability to view. When adding users to a session in which the session roster is full, this permission grants the ability to increase the session's available seats. This permission can be constrained by OU, User's OU, Instructor, User as Instructor, Facility, Facilities Owned by User, ILT Provider, User's ILT Provider, User, and User Self and Subordinates. This is an administrator permission.	Edge

Permission Name	Permission Description	Category
Sessions - Edit	Grants ability to edit/update existing instructor led training sessions. This permission works in conjunction with Events - View and Sessions - View permissions. Administrators can only edit sessions for which they have the availability to view and edit. When adding users to a session in which the session roster is full, this permission grants the ability to increase the session's available seats. This permission can be constrained by OU, User's OU, Instructor, User as Instructor, Facility, Facilities Owned by User, ILT Provider, User's ILT Provider, User, and User Self and Subordinates. This is an administrator permission.	Learning - Administration
Sessions - View	Grants view-only access to instructor led training sessions, enabling the user to view all details/ options that were selected when the session was created. This permission works in conjunction with the Events - View permission. This permission can be constrained by OU, User's OU, Instructor, Facility, Facilities Owned by User, ILT Provider, User's ILT Provider, User, User as Instructor, and User Self and Subordinates. This is an administrator permission. Adding an OU constraint and a provider constraint to this permission results in an "AND" statement.	Edge
ILT Vendors - Create	Grants ability to create new training Vendors (Providers). This permission works in conjunction with the Vendors - View permission. This is an administrator permission.	Learning - Administration
ILT Vendors - Update	Grants ability to edit/update existing training Vendors (Providers). This permission works in conjunction with the Vendors - View permission. This is an administrator permission.	Learning - Administration
ILT Vendors - View	Grants view only access to instructor led training vendors (providers), via the ILT Vendors and Instructors screen. This is an administrator permission.	Learning - Administration

Permission Name	Permission Description	Category
Instructor Requests - Manage	Grants ability to approve or deny instructor requests for ILT sessions. This permission works in conjunction with the Vendors - View, and Instructor Requests - View permissions. This is an administrator permission.	Learning - Administration
Instructor Requests - View	Grants view-only access to instructor led training session Instructor Requests, via the ILT Vendors and Instructors screen. This permission works in conjunction with the Vendors - View permission. This is an administrator permission.	Learning - Administration
ILT Evaluations - Print	Grants ability to print evaluations at the session level for any session within the permission constraints. This permission can be constrained by Instructor, ILT Provider, User's ILT Provider, and User as Instructor. This is an administrator permission.	Learning - Administration
Sessions - Create Child Sessions	Grants ability to create new instructor led training child sessions available when the backend setting to allow multiple providers for a session is enabled. When the multiple providers backend setting is enabled, administrators need this permission to create child sessions even if they have the Sessions - Create permission. This permission works in conjunction with Events - View and Sessions - View permissions. This is an administrator permission. Note: This permission is visible in the system even if the backend setting to allow multiple providers for a session is disabled. However, the functionality to create child sessions is only granted when the backend setting is enabled.	Learning - Administration
LO Attachments - Manage	Grants ability to upload attachments to learning objects. Administrators with this permission are automatically granted the LO Attachments - View permission. This permission can be constrained by User's ILT Provider, Provider, and ILT Provider. This is an administrator permission.	Learning - Administration
LO Attachments - View	Grants ability to view the learning object attachments that are set to be available to administrators. This permission can be constrained by User's ILT Provider, Provider, and ILT Provider. This is an administrator permission.	Learning - Administration

Permission Name	Permission Description	Category
Roster - Manage	Grants ability to manage instructor led training session rosters, including updating attendance, and marking the ILT session complete to update student transcripts. A variety of other features are available depending upon additional roster permissions. This permission works in conjunction with Events - View, Sessions - View, and Roster - View permissions. This permission can be constrained by Instructor, User as Instructor, ILT Provider, and User's ILT Provider. This is an administrator permission.	Learning - Administration
Roster - View	Grants view-only access to instructor led training session rosters. This permission works in conjunction with Events - View and Sessions - View permissions. This permission can be constrained by Instructor, ILT Provider, User's ILT Provider, and User as Instructor. This is an administrator permission.	Learning - Administration
Events - Create	Grants ability to create new instructor led training events. This permission works in conjunction with Events - View permission. This permission can be constrained by OU, User's OU, ILT Provider, and User's ILT Provider. This is an administrator permission.	Learning - Administration
Events - Edit	Grants ability to edit/update existing instructor led training events. This permission works in conjunction with Events - View permission. This permission can be constrained by OU, User's OU, ILT Provider, and User's ILT Provider. This is an administrator permission.	Learning - Administration
Events - View	Grants view-only access to instructor led training events, enabling the user to view all details/options that were selected when the event was created. This permission can be constrained by OU, User's OU, User's ILT Provider, and ILT Provider. This is an administrator permission.	Learning - Administration

B. Support

- For Cornerstone-related questions, post your Teams integration questions on <u>Ask an Expert: Integrations in Success Center</u>.

- To report Cornerstone-related Teams integration issues, submit a ticket through Support Central.

- To share enhancement ideas related to the Teams integration, post your suggestion on <u>Suggestion City: Edge in Success Center</u>.