



New Teams Client Architecture Autopsy **A Look Under the Hood**

October 8th, 2024



Upgrade Your Time

Host & Speaker



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All attendee lines are muted

This is to prevent interruptions during the presentation.



Please submit questions via the Chat or Q&A panel

Your questions will be addressed directly during the webinar or in the Q&A section after the presentation.



The webinar is being recorded

After the webinar, we will send you a mail to give access to the recording and presentation slides.



Share your feedback with us

Use the link provided at the end to let us know what we can do better.

Microsoft Teams (New)

1. Architecture
2. Client App
3. Client Update process
4. Client .exe(s) and processes
5. Policies
6. Troubleshooting





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- Founded 2007, privately owned and funded
- HQ in Vienna (Austria)
- Offices in Germany, USA and The Netherlands
- panagendians work from >20 different locations

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Business Partner



OPTIMIZE

MICROSOFT 365
MICROSOFT TEAMS
AND MORE



ANALYZE

APPLICATIONS
SERVERS
MAIL

REDUCE

INFRASTRUCTURE
WORKLOAD
COST

Time
Your
Upgrade

MANAGE

NOTES
NOTES WEB
NOTES MOBILE

**We know that the new Teams client (v2.1)
is not new any longer, but ...**

What bothered us in the Teams Classic Client?

What bothered us in the Teams Classic Client?

Performance, Performance, Performance

- High CPU/Memory Usage
- Battery Usage

Workarounds?

- Use the Web client
- Disable GPU acceleration
- Disable – Read Receipts
- Clean/Remove Cache
- ... and much more!

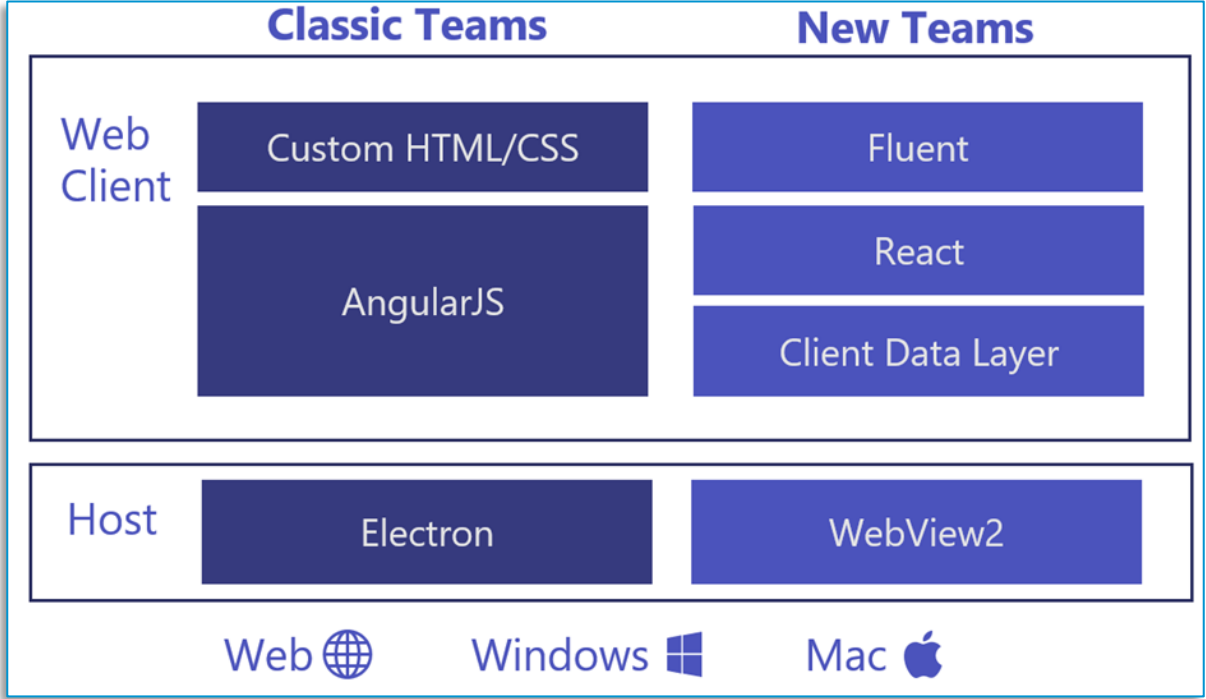
>	1.7.00.7956 (9)
>	1.7.00.6058 (8)
>	1.7.00.3653 (89)
>	1.7.00.27757 (1)
>	1.7.00.26062 (706)
>	1.7.00.24670 (102)
>	1.7.00.24657 (2)
>	1.7.00.21751 (35)
>	1.7.00.19353 (12)
>	1.7.00.1864 (8)
>	1.7.00.17051 (5)
>	1.7.00.15969 (29)
>	1.7.00.156 (5)
>	1.7.00.13456 (12)
>	1.7.00.10152 (8)
>	1.6.00.35961 (2)
>	1.6.00.33567 (1)
>	1.6.00.27573 (1)
>	1.6.00.26474 (1)
>	1.6.00.22378 (1)
>	1.6.00.20074 (1)
>	1.5.00.36367 (55)
>	1.5.00.12969 (1)
>	1.5.00.11865 (27)
>	1.3.00.21759 (24)
>	1.2.00.26774 (1)

~1%



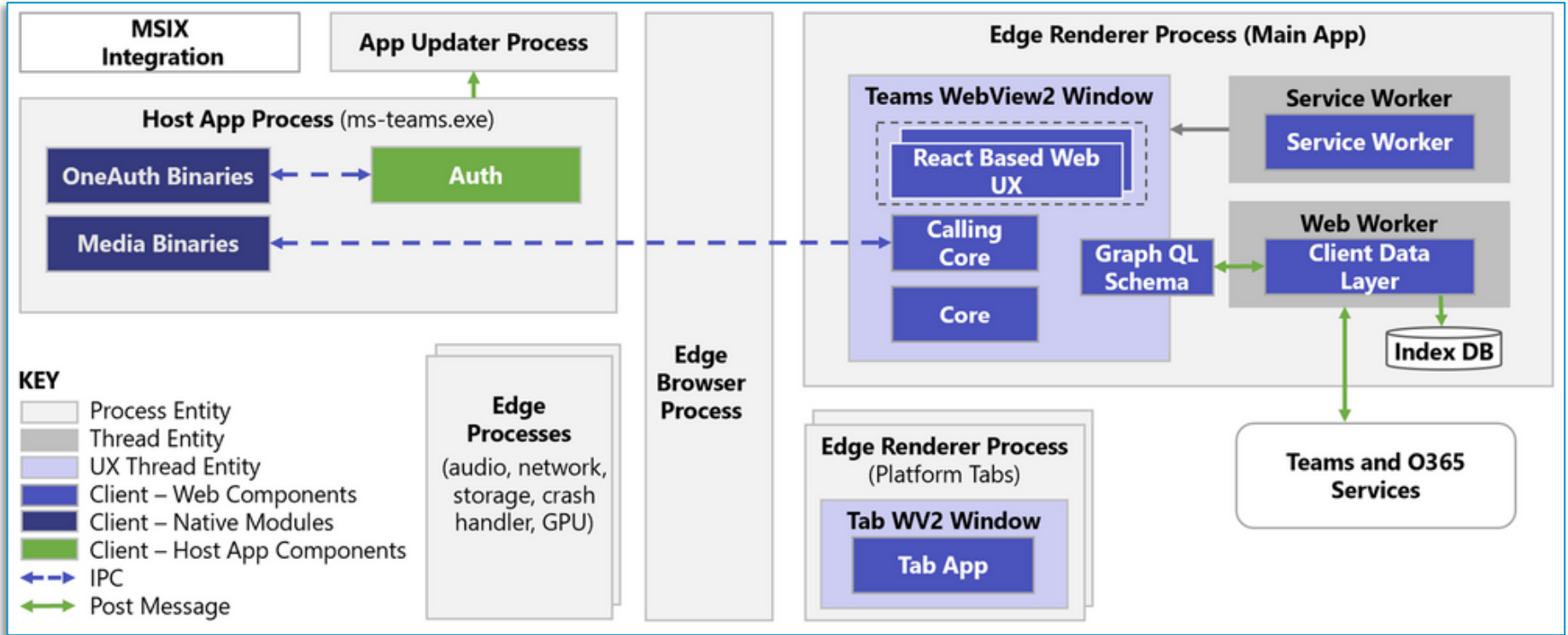
1. Architecture

Architecture – Differences between “Classic” and “New”



Source: <https://techcommunity.microsoft.com/t5/microsoft-teams-blog/microsoft-teams-advantages-of-the-new-architecture/ba-p/3775704>

Architecture – “New Teams Client”

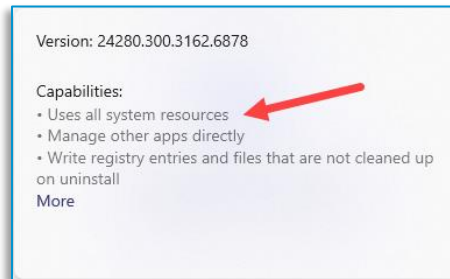
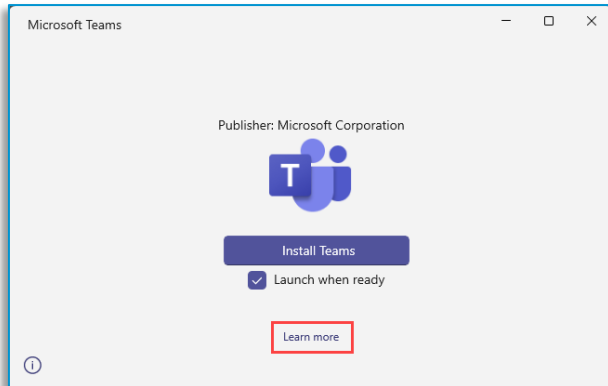


A 3D rendering of white, rectangular steps ascending from the bottom left towards the right. A white ladder with blue caps on its rungs is leaning against the first step on the left. A thin blue vertical line is positioned to the left of the section header text.

2. Client App

Microsoft Store App

- Windows App
 - AppX Package – Msix
- Container based
- Better Security
- Clean Registry
- Built-in auto update
 - AppInstaller framework



Apps > Installed apps > Microsoft Teams

Specifications

Publisher	Microsoft
Version	24280.300.3162.6878
App	266 MB
Data	19,7 MB
Total usage	286 MB

App permissions

Location
 Off

Camera
 On

Microphone
 On

Background apps permissions

Let this app run in background
Power optimised (recommended) ▾

Learn more about the options

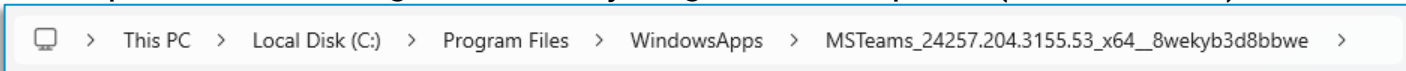
Runs at log-in

These start-up tasks can be configured to run when you log-in.

Microsoft Teams
 On

Configure start-up tasks

- **App path** %ProgramFiles%\WindowsApps\MSTeams_[version]_[Arch]_8wekyb3d8bbwe
 - Dynamic path, which changes with every single version update (build number)



- **User path** %LocalAppData%\Packages\MSTeams_8wekyb3d8bbwe
 - Appx package will be provisioned after first user windows logon
- **Webview2 path** %ProgramFiles(x86)%\Microsoft\EdgeWebView\Application

```
PowerShell 7 (x64)
PS C:\Users\cadler> Get-AppxPackage -Name MSTeams
RunspaceId      : 9eecbcde-d8f2-4d7e-b464-6b428d7ae512
Name            : MSTeams
Publisher       : CN=Microsoft Corporation, O=Microsoft Corporation, L=Redmond, S=Washington, C=US
PublisherId     : 8wekyb3d8bbwe
Architecture    : X64
ResourceId      :
Version         : 24257.204.3155.53
PackageFamilyName : MSTeams_8wekyb3d8bbwe
PackageFullName : MSTeams_24257.204.3155.53_x64_8wekyb3d8bbwe
InstallLocation : C:\Program Files\WindowsApps\MSTeams_24257.204.3155.53_x64_8wekyb3d8bbwe
IsFramework     : False
PackageUserInformation : {}
IsResourcePackage : False
IsBundle        : False
IsDevelopmentNode : False
NonRemovable    : False
Dependencies    : {}
IsPartiallyStaged : False
SignatureKind   : Developer
Status          : Ok
PS C:\Users\cadler> |
```

Disk consumption

- **Teams Classic** → incl. Electron binaries
- **Teams New** → **Shared Binaries (webview2)**
 - Partial data model: downloads only needed data

Apps > Installed apps > Microsoft Teams

Specifications

Publisher Microsoft
Version 24280.300.3162.6878

App 266 MB
Data 19,7 MB
Total usage 286 MB



Apps > Installed apps > Microsoft Teams


Specifications

Publisher Microsoft
Version 24280.300.3162.6878

App 0 bytes
Data 1,40 GB
Total usage 1,40 GB

Apps > Installed apps

 Microsoft Teams Microsoft 04.10.2024	1,40 GB	...
 Microsoft Teams classic 1.7.00.6058 Microsoft Corporation 01.03.2024	137 MB	...

Name	Art	Letzter Zugriff	Größe
 Microsoft Teams (work or school)	Universal	04.03.24, 15:51	18,51 GB

Screenshot – Raphael Köllner (LinkedIn)

- Teams Classic → incl. Electron binaries

- **Disk storage usage**

The new Teams app takes up about 50% less disk space than the classic version. To make it easier to distribute our client to Windows devices, we have added support for MSIX, which improves the dependability of installations and app updates, as well as reduces network bandwidth and disk space consumption. This packaging technology also shows the accurate disk space usage. Users may see larger disk usage than classic Teams in Windows settings, but the difference is mainly because the disk space related to Electron-based classic Teams is not fully and correctly shown.

Specifications

Publisher	Microsoft
Version	24257.204.3155.53
App	0 bytes
Data	1,40 GB
Total usage	1,40 GB

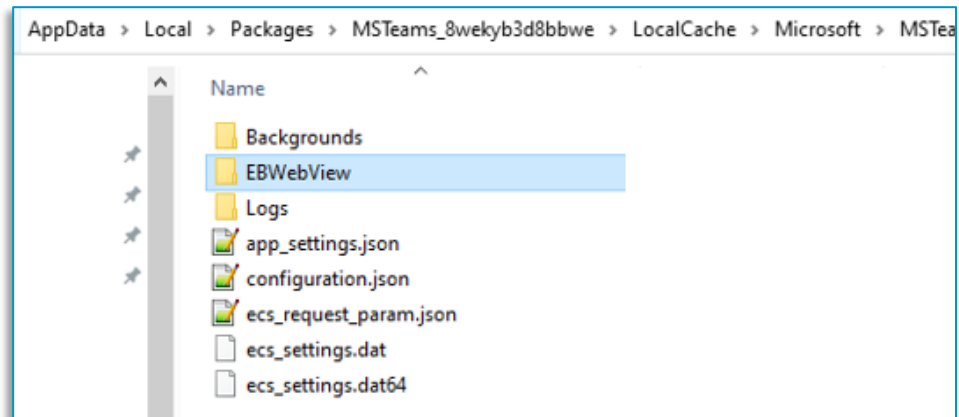
Name	Art	Letzter Zugriff	Größe
Microsoft Teams (work or school)	Universal	04.03.24, 15:51	18,51 GB

Screenshot – Raphael Köllner (LinkedIn)

Disk consumption – Why does the Teams New need so much?

- **EBWebView = Embedded Browser WebView**

- Default location for all user data

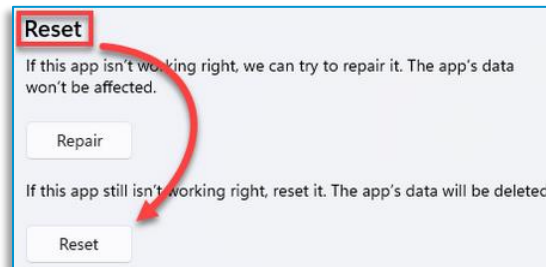
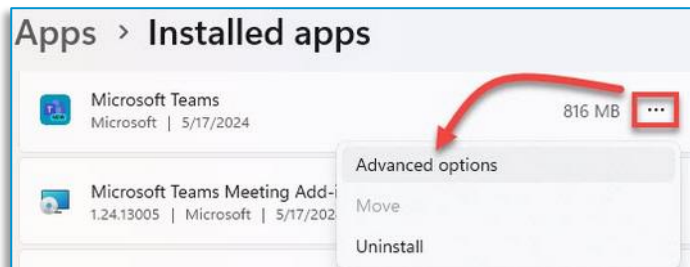
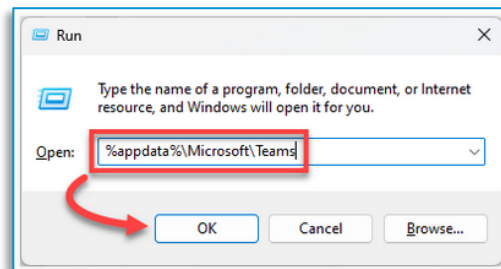


Disk consumption – What can we do?

- **Teams Classic**
 - Remove Cache

- **Teams New**

- Microsoft recommends a “Reset”
 - Impacts → losing user settings (e. g. dark mode settings ; Audio/Video settings ; localization and much more)



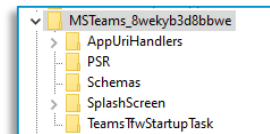
Disk consumption – A better recommendation

- **Go to the following folder**
 - %LocalAppData%\Packages\MSTeams_8wekyb3d8bbwe\LocalCache\Microsoft\MSTeams\EBWebView\WV2Profile_tfw
- **Delete the content of the following subfolders is sufficient (without losing any user data)**
 - Cache
 - IndexedDB
 - App and user data will be re-downloaded at the next start →
 - WebStorage
 - Storage for the access to other apps
 - Service Worker\CacheStorage
 - Code/Caching for Web/JS Scripts



- **Registry key's**

- HKEY_CURRENT_USER\SOFTWARE\Classes\LocalSettings\Software\Microsoft\Windows\CurrentVersion\AppModel\SystemAppData\MSTeams_8wekyb3d8bbwe



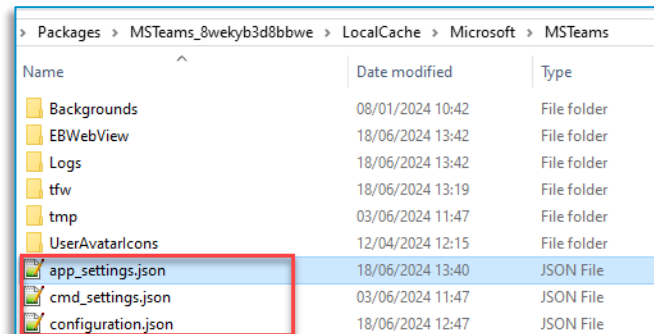
- **LocalAppData**

- %LocalAppData%\Packages\MSTeams_8wekyb3d8bbwe\LocalCache\Microsoft\MSTeams\

General settings: **app_settings.json** (former desktop-config.json)
Audio settings: **cmd_settings.json** (former storage.json)
configuration.json !

- %LocalAppData%\Publishers\8wekyb3d8bbwe\TeamsSharedConfig

Teams Meeting Add-In: **tma_settings.json**



3. Update process



Modern Lifecycle Policy


Article • 06/18/2024 • 3 contributors

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In this article

[Change notification](#)

[Continuity and migration](#)

 Please go [here](#) to search for your product's lifecycle.

The Modern Lifecycle Policy covers products and services that are serviced and supported continuously. Under this policy, the product or service remains in support if the following criteria are met:

1. Customers must stay current as per the servicing and system requirements published for the product or service.
2. Customers must be licensed to use the product or service.
3. Microsoft must currently offer support for the product or service.

Teams != WebView2 Updates

- **Microsoft Teams**

- Delivery optimization

- 100 = BITS

- 99 = disabled

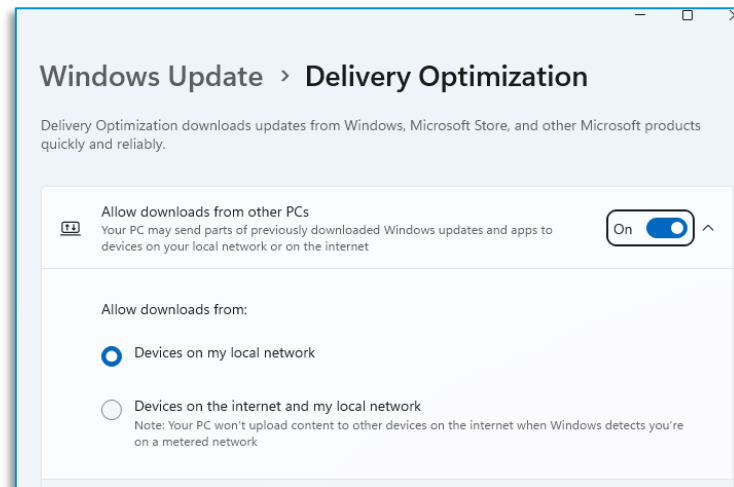
- 0 = http only

- [What is Delivery Optimization?](#)

- [Set up Delivery Optimization](#)

- [Delivery Optimization reference - Windows Deployment | Microsoft Learn](#)

- **WebView2**



Updates to WebView2

To keep WebView2 up to date with the latest security and reliability updates, WebView2 Runtime uses its own automatic update process, separate from the update channel used by Microsoft 365 Apps.

WebView2 Runtime is updated approximately a few times each month. Updates usually range in size from 5 MB to 30 MB, depending on the type of update. Differential updates and Delivery Optimization are used where possible. For information about managing these updates, see [Managing WebView2 applications](#).

Disable AutoUpdate?

disableAutoUpdate=1

Registry

Location: Computer\HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Teams
Name: disableAutoUpdate
Type: DWORD
Value: 1

Declared Configuration (DC) service	Process Declared Configuration do
Delivery Optimization	Performs content delivery optimiza
Print Management Service	Enables printing and scanning

Network 3

Network profile

Public

Your PC is hidden from other devices on the network and can't be used for printer and file sharing.

Private

For a network you trust, such as at home or work. Your PC is discoverable and can be used for printer and file sharing if you set it up.

[Configure firewall and security settings](#)

Metered connection

If you have a limited data plan and want more control over data usage, make this connection a metered network. Some apps might work differently to reduce data usage when you're connected to this network.

Set as metered connection

On

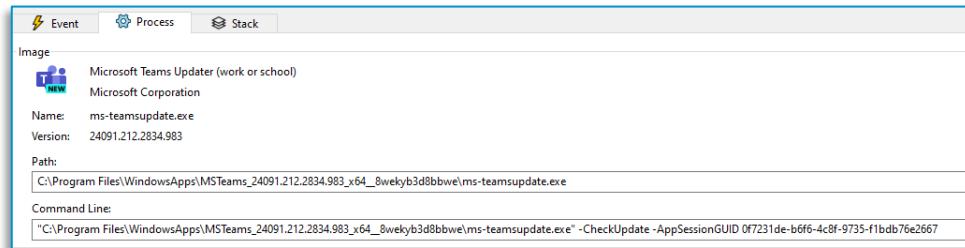
If you set a data limit, Windows will set the metered connection setting for you to help you stay under your limit.

[Set a data limit to help control data usage on this network](#)

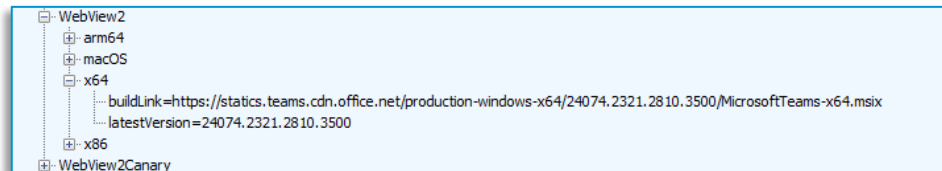
How does Teams know which update should be applied?

- **ms-teamsupdate.exe checks config service**

- https://config.teams.microsoft.com/config/v1/MicrosoftTeams/{currentVersion}ClientId=f649d466-68fe-40a3-b77a-0319703d9d1e&aaduserid={userid}&agents=TeamsBuilds,TeamsWebview2&audience=ring3_6&cloud=prod&cpuarch=x64&desktopVersion=/{currentVersion}&environment=prod&id={userid}&osplatform=windows&osversion=10.0.19045&teamslocale=en-us&teamsring=ring3_6&tenantId={tenantId}

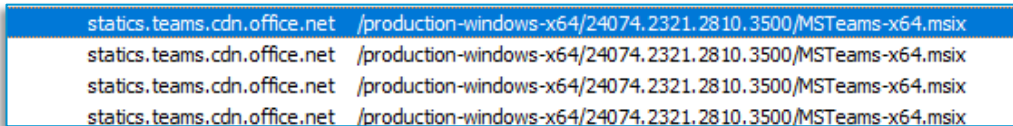


- **Compares installed with available version**

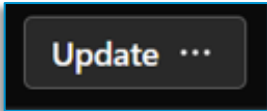


- **Downloads update via CDN**

- <https://statics.teams.microsoft.com/production-windows-x64/>



... and that happens periodically (often)



The screenshot shows two overlapping Windows File Explorer windows. The top window's address bar path is `Program Files > WindowsApps > MSTeams_24137.2216.2931.2440_x64_8wekyb3d8bbwe`, with the last part highlighted in red. The bottom window's address bar path is `Program Files > WindowsApps > MSTeams_24152.407.2925.6763_x64_8wekyb3d8bbwe`, also with the last part highlighted in red. Both windows show a sidebar with navigation options and a main pane with a table of folders.

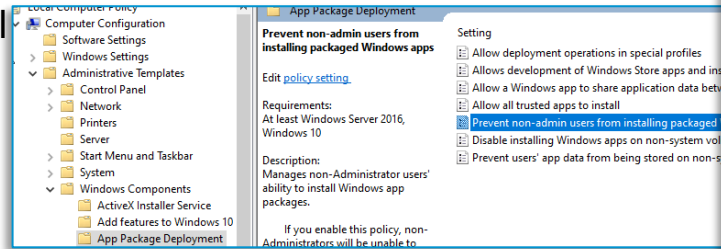
Name	Date modified
AppxMetadata	14/06/2024 12:26
arm64	14/06/2024 12:26
Audio	14/06/2024 12:26
client-bindings	14/06/2024 12:26
desktop-assets	14/06/2024 12:26
Images	14/06/2024 12:26
locale	14/06/2024 12:26
Msix.AppInstall...	14/06/2024 12:26
presence	14/06/2024 12:26

Name	Date modified	Type	Size
AppxMetadata	19/06/2024 12:47	File folder	
arm64	19/06/2024 12:47	File folder	
Audio	19/06/2024 12:47	File folder	
client-bindings	19/06/2024 12:47	File folder	
desktop-assets	19/06/2024 12:47	File folder	
Images	19/06/2024 12:47	File folder	

Update/Install issues

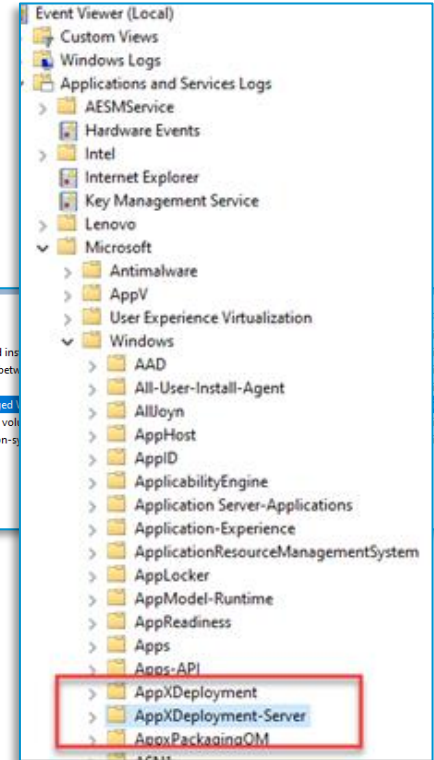
- **Delivery Optimization settings**
 - DODownloadMode = 100 /99
 - Get-DeliveryOptimizationLog | Set-Content C:\Logs\DO_export.log

- **GPO's**
 - Prevent non-admins from installing packaged Windows apps
 - Allow All trusted Apps to install



- **AppLocker rules**
 - <https://learn.microsoft.com/en-us/microsoftteams/applocker-in-teams>

- **EventViewer - AppXDeployment**



Install other versions of Teams? Sure thing!



Welcome to the build repository for Microsoft Teams

This repository contains multiple files:

- [defconfig](#) which shows daily builds, experimental builds, preview builds, and public builds for Microsoft Teams classic.
- [defconfig2](#) which shows builds in all rings for Microsoft Teams classic, Microsoft Teams (personal), Microsoft Teams, and Microsoft Teams Rooms.

<https://github.com/ltzlevie/MicrosoftTeams-msinternal>

URLs for the latest Teams (R1) build of Microsoft Teams:

Teams 2.1 – Microsoft Teams:

24277.3500.3159.6417 (win-x64) - published on Friday, October 4, 2024 at 12:43 AM with 184 MB: <https://staticsint.teams.cdn.office.net/production-windows-x64/24277.3500.3159.6417/MSTeams-x64.msix>
24277.3500.3159.6417 (win-x86) - published on Friday, October 4, 2024 at 12:44 AM with 173 MB: <https://staticsint.teams.cdn.office.net/production-windows-x86/24277.3500.3159.6417/MSTeams-x86.msix>
24277.3500.3159.6417 (win-arm64) - published on Friday, October 4, 2024 at 12:46 AM with 186 MB: <https://staticsint.teams.cdn.office.net/production-windows-arm64/24277.3500.3159.6417/MSTeams-arm64.msix>
24277.3500.3159.6041 (osx-x64 + osx-arm64) - published on Friday, October 4, 2024 at 1:26 AM with 325 MB: <https://staticsint.teams.cdn.office.net/production-osx/24277.3500.3159.6041/MicrosoftTeams.pkg>

<https://github.com/ltzlevie/MicrosoftTeams-msinternal/blob/master/defconfig2>

How often do we get updates?



	Ring 1.5 (IT Admins Preview)	Ring 3 (TAP)	Ring 3.6 (EA)	Ring 4 (Public)
21.3.2024	24074.2304.2771.8005 -	24060.2610.2771.7995 -	24060.2610.2771.7995 -	
22.3.2024				24033.813.2773.520 -
25.3.2024		24060.2615.2778.8710 -	24060.2615.2778.8710 -	
26.3.2024	24074.2310.2781.1984 -			
28.3.2024	24074.2312.2785.5306 -	24060.2619.2785.5310 -	24060.2619.2785.5310 -	
31.3.2024			24060.2623.2790.8046 -	24060.2623.2790.8046 -
1.4.2024		24074.2317.2792.3373 -		
3.4.2024	24091.203.2797.8390 -			
4.4.2024		24074.2320.2799.6852 -	24074.2320.2799.6852 -	
5.4.2024	24091.204.2801.1189 -			
8.4.2024	24095.2503.2805.9358 -			
10.4.2024	24091.205.2810.3215 -	24074.2321.2810.3500 -	24074.2321.2810.3500 -	24074.2321.2810.3500 -
11.4.2024		24091.206.2813.8995 -	24091.206.2813.8995 -	
12.4.2024	24102.2202.2815.1115 -			
17.4.2024	24102.2204.2823.2836 -			
18.4.2024		24091.209.2826.4509 -	24091.209.2826.4509 -	24074.2323.2827.4973 -
19.4.2024	24102.2206.2829.2518 -			
21.4.2024	24102.2207.2829.7571 -			
22.4.2024		24091.211.2830.1534 -	24091.211.2830.1534 -	
23.4.2024	24102.2208.2835.4230 -	24091.212.2834.983 -	24091.212.2834.983 -	
25.4.2024	24102.2209.2841.2542 -			
26.4.2024	24116.2502.2841.3203 -	24091.213.2841.2586 -	24091.213.2841.2586 -	
29.4.2024		24091.214.2846.1452 -	24091.214.2846.1452 -	24091.214.2846.1452 -
30.4.2024		24102.2213.2848.2706 -		
6.5.2024		24102.2219.2860.2337 -	24102.2219.2860.2337 -	
9.5.2024	24124.2304.2866.4284 -	24102.2220.2866.8552 -	24102.2220.2866.8552 -	
10.5.2024	24124.2306.2868.7316 -	24102.2221.2869.7473 -	24102.2221.2869.7473 -	24102.2223.2870.9480 -
13.5.2024		24124.2309.2873.2153 -	24124.2309.2873.2153 -	
17.5.2024	24137.2202.2884.4946 -			
22.5.2024			24124.2310.2880.4371 -	
23.5.2024		24124.2311.2896.3219 -	24124.2311.2896.3219 -	
31.5.2024				24124.2315.2911.3357 -
7.6.2024	24152.407.2925.6763 -			

StartTimeUtc	Label
2024-03-05 07:36:15.0130	msedgewebview2 - 122.0.2365.66 - Microsoft Corporation
2024-03-18 09:56:15.0190	msedgewebview2 - 122.0.2365.80 - Microsoft Corporation
2024-03-28 12:01:30.0040	msedgewebview2 - 122.0.2365.92 - Microsoft Corporation
2024-04-04 13:01:45.0660	msedgewebview2 - 123.0.2420.65 - Microsoft Corporation
2024-04-09 07:24:30.0130	msedgewebview2 - 123.0.2420.81 - Microsoft Corporation
2024-04-26 08:49:30.0020	msedgewebview2 - 123.0.2420.97 - Microsoft Corporation
2024-04-29 06:11:00.1750	msedgewebview2 - 124.0.2478.67 - Microsoft Corporation

Users will not get all updates at the same time



ChangeDate	Teams Version	ChangeType
2024-03-20 14:33:01	24046.2809.2757.3796	TimeWindowStart
2024-03-26 09:05:08	24033.813.2773.520	Downgrade
2024-04-04 14:16:07	24060.2623.2790.8046	Upgrade
2024-04-16 09:04:40	24074.2321.2810.3500	Upgrade
2024-04-23 09:10:39	24074.2323.2827.4973	Upgrade
2024-05-02 14:09:14	24091.214.2846.1452	Upgrade
2024-05-15 09:37:32	24102.2223.2870.9480	Upgrade
2024-06-05 11:05:29	24124.2315.2911.3357	Upgrade
2024-06-13 08:31:41	24137.2216.2931.2440	Upgrade





ChangeDate	Teams Version	ChangeType
2024-03-26 10:07:29	24033.811.2738.2546	TimeWindowStart
2024-04-03 13:33:51	1.7.00.1864	Downgrade
2024-04-04 08:49:37	24033.813.2773.520	Upgrade
2024-04-10 10:34:34	24060.2623.2790.8046	Upgrade
2024-04-22 10:22:43	24074.2321.2810.3500	Upgrade
2024-04-29 09:49:28	24074.2323.2827.4973	Upgrade
2024-05-14 08:03:13	24091.214.2846.1452	Upgrade



4. Client .exe(s) and processes

Teams New – Executables



-  ms-teams.exe
-  msteams_autostarter.exe
-  msteams_canary.exe
-  ms-teamsupdate.exe

Microsoft Teams Trampoline
msteams_canary.exe
asInvoker
Microsoft Teams










Runs at log-in

These startup tasks can be configured to run when you log-in.

Microsoft Teams



[Configure startup tasks](#)

 ms-teams.exe	24388	Running
 ms-teamsupdate.exe	29200	Running
 ms-teamsupdate.exe	17724	Running
 msedgewebview2.exe	13744	Running
 msedgewebview2.exe	24404	Running
 msedgewebview2.exe	9912	Running
 msedgewebview2.exe	17924	Running
 msedgewebview2.exe	17736	Running
 msedgewebview2.exe	27884	Running

```
<Applications>
  <Application Id="MSTeams" Executable="ms-teams.exe" EntryPoint="Windows.FullTrustApplication">...
</Application>
  <Application Id="MSTeams.Update" Executable="ms-teamsupdate.exe" EntryPoint="Windows.FullTrustApplication">...
</Application>
  <Application Id="msteamsautostarter" Executable="msteams_autostarter.exe" EntryPoint="Windows.FullTrustApplication">...
</Application>
</Applications>
```


Teams New – Processes

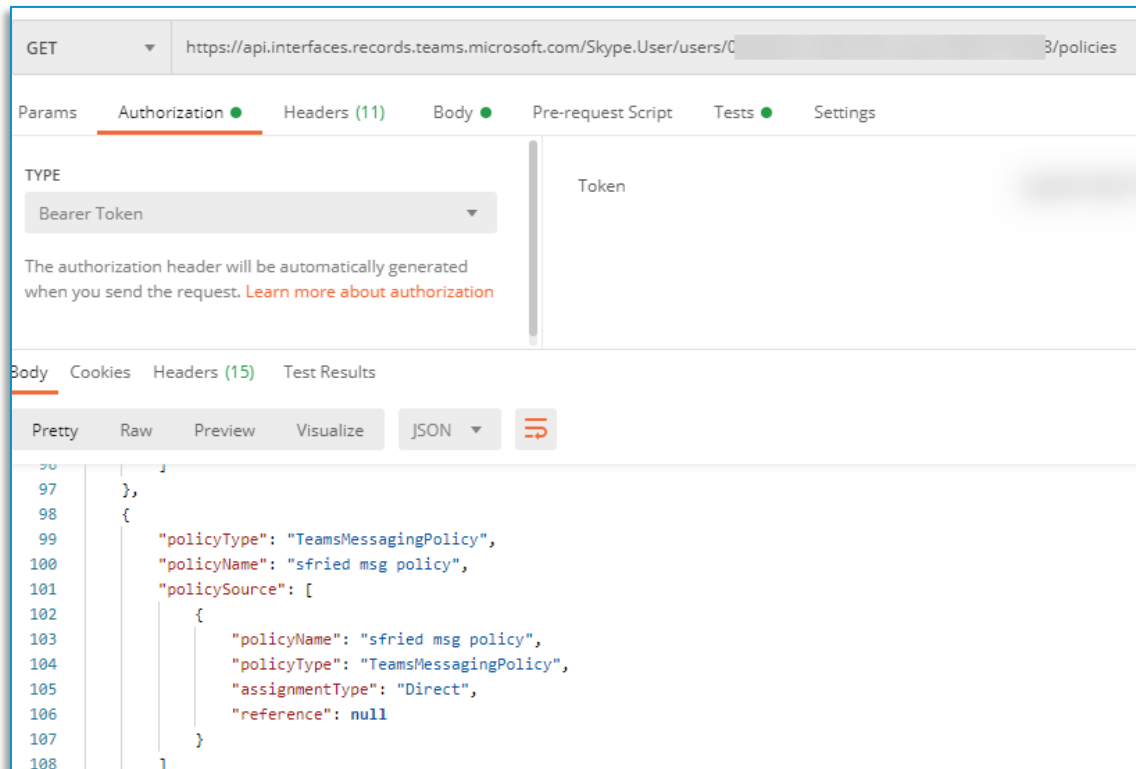
```
"C:\Program Files (x86)\Microsoft\EdgeWebView\Application\129.0.2792.79\msedgewebview2.exe"  
--type=crashpad-handler  
-----  
"C:\Program Files (x86)\Microsoft\EdgeWebView\Application\129.0.2792.79\msedgewebview2.exe"  
--type=gpu-process  
--noerrdialogs  
--user-data-dir="C:\Users\cadler\AppData\Local\Packages\MSTeams_8wekyb3d8bbwe\LocalCache\Microsoft\MSTeams\EBWebView"  
-----  
"C:\Program Files (x86)\Microsoft\EdgeWebView\Application\129.0.2792.79\msedgewebview2.exe"  
--type=utility  
--utility-sub-type=network.mojom.NetworkService  
-----  
"C:\Program Files (x86)\Microsoft\EdgeWebView\Application\129.0.2792.79\msedgewebview2.exe"  
--type=utility  
--utility-sub-type=storage.mojom.StorageService  
-----  
"C:\Program Files (x86)\Microsoft\EdgeWebView\Application\129.0.2792.79\msedgewebview2.exe"  
--type=utility  
--utility-sub-type=audio.mojom.AudioService  
-----  
"C:\Program Files (x86)\Microsoft\EdgeWebView\Application\129.0.2792.79\msedgewebview2.exe"  
--type=renderer
```

<https://learn.microsoft.com/en-us/microsoft-edge/webview2/concepts/end-user-faq>

A football player in a white and blue uniform is shown from the side, reaching up to catch a football. The background is a stadium with tall light towers under a cloudy sky. A vertical blue line extends from the top of the page down to the football.

5. Policies

Getting Policies



GET `https://api.interfaces.records.teams.microsoft.com/Skype.User/users/C.../policies`

Params Authorization Headers (11) Body Pre-request Script Tests Settings

TYPE
Bearer Token

Token

The authorization header will be automatically generated when you send the request. [Learn more about authorization](#)

Body Cookies Headers (15) Test Results

Pretty Raw Preview Visualize JSON

```
96  ],
97  },
98  {
99    "policyType": "TeamsMessagingPolicy",
100   "policyName": "sfried msg policy",
101   "policySource": [
102     {
103       "policyName": "sfried msg policy",
104       "policyType": "TeamsMessagingPolicy",
105       "assignmentType": "Direct",
106       "reference": null
107     }
108   ]
109 }
```

`https://api.interfaces.records.teams.microsoft.com/Skype.User/users/{userId}/policies`

Getting Policies



GET https://api.interfaces.records.teams.microsoft.com/Skype.Policy/configurations/TeamsMessagingPolicy/configuration/{nameofpolicy}

Params Authorization Headers (11) Body Pre-request Script Tests Settings

TYPE
Bearer Token

The authorization header will be automatically generated when you send the request. [Learn more about authorization](#)

Body Cookies Headers (15) Test Results

Pretty Raw Preview Visualize JSON

```
1 {}
2
3 "Description": null,
4 "AllowWmlPreviews": true,
5 "AllowOwnerDeleteMessage": false,
6 "AllowUserEditMessage": true,
7 "AllowUserDeleteMessage": true,
8 "AllowUserDeleteChat": false,
9 "AllowUserChat": true,
10 "AllowRemoveUser": true,
11 "AllowGiphy": true,
12 "GiphyRatingType": "NoRestriction",
13 "AllowGiphyDisplay": true,
14 "AllowPasteInternetImage": true,
15 "AllowMemes": true,
16 "AllowImmersiveReader": true,
17 "AllowStickers": true,
18 "AllowUserTranslation": true,
19 "ReadReceiptsEnabledType": "UserPreference",
20 "AllowPriorityMessages": true,
21 "AllowSmartReply": true,
22 "AllowSmartCompose": true,
23 "ChangeInChat": false, "ChangeInTeam": false, "ChangeInGroup": false
```

X-Ecs-Config:

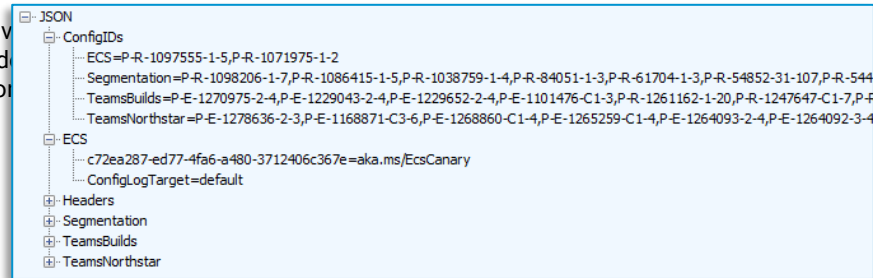
```
P-R-1251043-2-14-P-R-1174743-1-8-P-R-1156896-1-19-P-R-1133470-6-27-P-R-1114536-1-13-P-R-1114535-1-9-P-R-1113345-1-24-P-R-83821-2-2-P-R-1234869-7-21-P-R-1099132-2-7-P-R-1077171-5-18-P-R-66351-16-110-P-R-50197-3-6-P-D-50205-1-2-P-R-1037771-12-57-P-R-55118-1-4-P-R-1118262-3-45-P-R-1098134-1-28-P-R-1035432-1-4-P-R-1035417-1-4-P-R-1017673-5-14-P-R-79797-13-75-P-R-1252881-1-9-P-R-1247438-1-5-P-R-1234710-12-24-P-R-1109017-1-10-P-R-1099134-2-5-P-R-1067216-2-6-P-R-1052866-5-23-P-R-1043605-8-98-P-R-1036785-1-8-P-R-1014063-2-13-P-R-114725-18-150-P-R-1042871-16-P-R-66350-19-136-P-R-50196-5-13-P-D-50206-1-2-P-R-1068867-1-5-P-R-1051081-1-56-P-R-1045279-1-2-P-R-1045278-1-24-P-R-1045277-1-4-P-R-1045253-2-4-P-R-1248923-2-3-P-R-1141006-3-11-P-R-1040914-1-39-P-R-1036095-20-57-P-R-104326-1-18-P-R-94133-4-18-P-R-1220147-1-11-P-R-1082700-1-3-P-R-1059835-1-6-P-R-1058747-1-4-P-R-1052374-1-10-P-R-1050236-1-16-P-R-1050224-1-24-P-R-1028687-1-138-P-R-1166769-1-17-P-R-1154808-14-50-P-R-1152598-2-7-P-R-1133556-3-18-P-R-1128064-2-7-P-R-1107833-1-3-P-R-1104905-1-5-P-R-1104904-1-6-P-R-1104681-10-13-P-R-1104099-2-2-P-R-1099675-2-4-P-R-1078497-2-73-P-R-1064797-1-11-P-R-1064791-11-16-P-R-1061339-1-19-P-R-1057790-1-5-P-R-1052236-12-10-P-R-1039014-4-34-P-R-1026649-1-13-P-R-1017878-2-40-P-R-1010842-10-13-P-R-106334-2-2-P-R-95201-1-29-P-R-66065-24-214-P-R-1130642-1-12-P-R-112861-2-16-P-D-1108107-1-5-P-R-1022063-2-29-P-R-1084287-1-3-P-R-1073172-2-2-P-R-1070142-2-27-P-R-1063382-2-4-P-R-1064294-14-46-P-R-1051678-1-7-P-R-1037037-2-9-P-D-1100793-1-2-P-D-1083105-1-4-P-D-1035210-1-4-P-R-1142784-1-9-P-R-1141459-1-14-P-R-1132786-1-11-P-R-1101359-1-9-P-R-1096678-12-23-P-R-1095276-10-74-P-R-1092844-1-46-P-D-1078839-4-48-P-D-1078533-1-3-P-D-1047224-1-3-P-R-61553-2-4-P-R-1228695-1-43-P-R-1224844-2-8-P-R-1149263-2-35-P-R-96789-11-70-P-R-1173866-1-3-P-D-1091360-1-7-P-R-55151-11-3-P-R-69009-2-2-P-R-25081-1-8-P-R-26518-779171-1-P-R-81261-1-2-P-R-51163-1-14-P-R-75353-1-4-P-R-1257702-3-15-P-R-1259594-3-7-P-R-1251033-3-17-P-R-1249003-8-27-P-R-1247327-6-5-P-R-1247281-1-8-P-R-1146802-15-24-P-R-1117725-2-10-P-R-1108146-2-12-P-R-1094561-2-16-P-R-1099456-3-31-P-R-1097576-1-3-P-R-1095283-1-21-P-R-1086193-5-8-P-R-1087038-1-10-P-R-1079666-3-12-P-R-1079617-3-14-P-R-1069936-5-11-P-R-1069505-7-16-P-R-1068049-2-12-P-R-1061910-2-17-P-R-1054913-2-19-P-R-1045366-6-30-P-R-1041654-20-47-P-R-1029694-1-48-P-R-1023546-12-146-P-R-1019048-1-5-P-R-1014221-1-3-P-R-87570-1-15-P-R-80923-2-5-P-R-42748-3-248-P-D-1245762-1-5-P-R-1061619-1-4-P-R-1061620-1-2-P-D-66988-1-2-P-D-42683-1-3-P-R-1148755-2-21-P-R-1113346-1-17-P-R-39408-2-10-P-R-1266069-2-3-P-R-1221281-1-4-P-R-1015811-1-10-P-R-79743-1-2-P-R-77423-11-P-R-63356-6-17-P-R-46914-3-49-P-R-42997-1-3-P-R-42996-3-10-P-R-23584-1-103-P-R-73908-1-7-P-D-42892-1-23-P-R-70375-1-4-P-R-43594-1-6-P-R-48751-1-21-P-R-95884-1-6-P-R-1045845-10-17-P-R-1016482-4-6-P-R-50586-1-2-P-R-116463-1-5-P-R-51801-5-26-P-R-1237937-1-11-P-R-1232810-4-10-P-R-1168946-1-18-P-R-1117472-4-9-P-R-1051756-3-9-P-R-1038383-1-4-P-R-1037398-11-7-P-R-1021487-1-19-P-R-1006358-1-2-P-R-42445-1-13-P-R-45192-1-3-P-R-44125-1-3
```

<https://api.interfaces.records.teams.microsoft.com/Skype.Policy/configurations/TeamsMessagingPolicy/configuration/{nameofpolicy}>

How policies work in Teams New

- **Client start – ConfigID's will be downloaded**

https://config.teams.microsoft.com/config/v1/MicrosoftTeams/49_1.0.0.0?env=worker&buildType=production&virtualization=&browser=edge&osPlatform=windows&userId={userId}&tenantId={tenantId}&experienceBuild=24053101417&desktopVersion=1.0.0.0&agents=TeamsNorthstar,TeamsBuilds,Segmentation&ECSCanary=1



... and end up in the depths of LevelDB

- **config.teams.Microsoft.com**

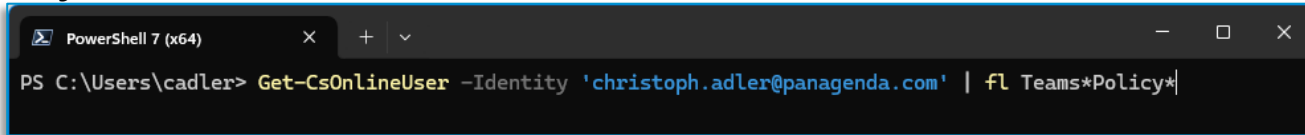
>> WestUS

as well as other services like
appsuggestions.teams.microsoft.com



Central Control?

- **Only available tool: Get-CsOnlineUser**

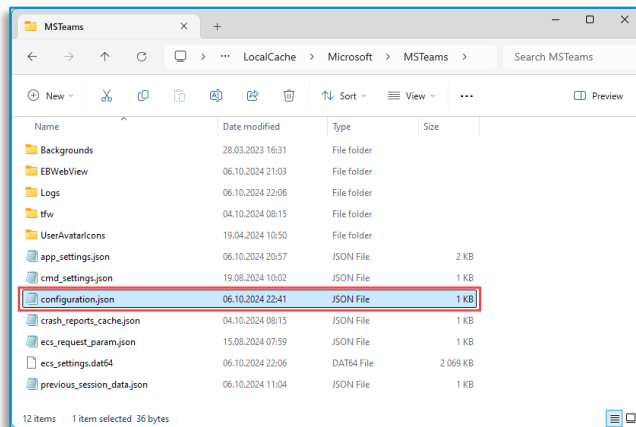
A screenshot of a PowerShell terminal window. The title bar reads "PowerShell 7 (x64)". The command prompt shows the user running the command: `Get-CsOnlineUser -Identity 'christoph.adler@panagenda.com' | fl Teams*Policy*`. The terminal has a dark background with light-colored text.

```
PS C:\Users\cadler> Get-CsOnlineUser -Identity 'christoph.adler@panagenda.com' | fl Teams*Policy*
```

- **No `gpresult` or similar available**
- **Unfortunately, there is no control if policies are actually active on a computer**

Manual Override?

- Theoretically via **configuration.json** - but not recommended



```
{ } configuration.json ✕
```

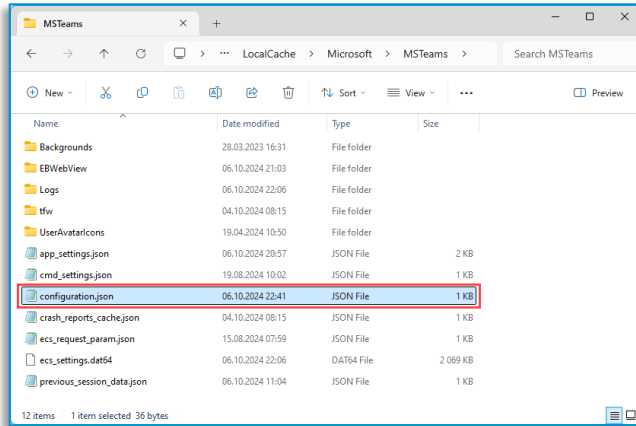
```
C: > Users > cadler > AppData > Local > Packages > MSTeams_8wekyb3d8bbwe > LocalCache > Microsoft > MSTeams > { } configuration.json > ...  
1 {"messaging/enableDeleteChat": true}
```



6. Troubleshooting

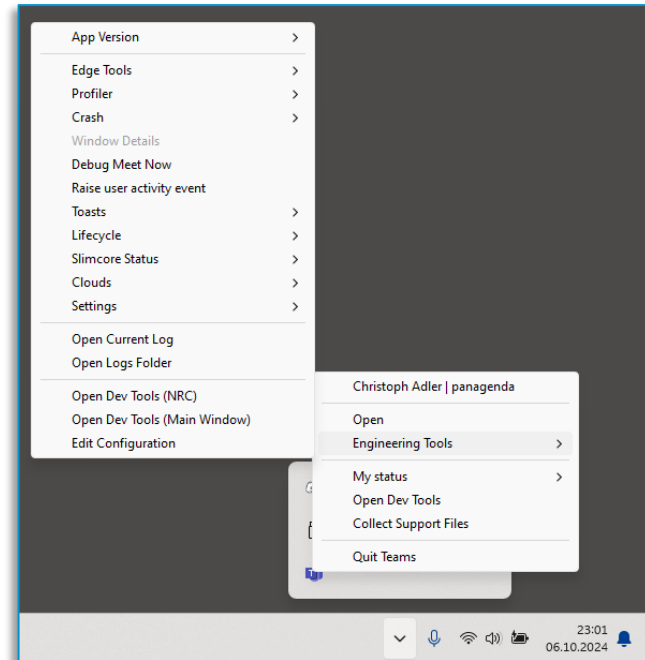
Very helpful – Developer Mode

- **Via configuration.json**



```
{ } configuration.json X
```

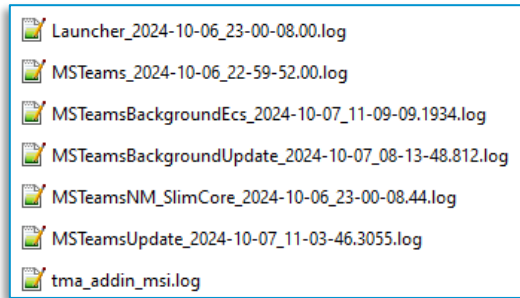
```
C: > Users > cadler > AppData > Local > Packages > MSTEams_8wekyb3d8bbwe > LocalCache > Microsoft > MSTEams > { } configuration.json > ...  
1 {"core/devMenuEnabled": true}
```



Teams New – Log files

%LocalAppData%\Packages\MSTeams_8wekyb3d8bbwe\LocalCache\Microsoft\MSTeams\Logs

Launcher_*.log
MSTeams_*.log
MSTeamsBackgroundUpdate_*.log
MSTeamsBackgroundEcs_*.log
MSTeamsNM_SlimCore_*.log
MSTeamsUpdate_*.log
tma_addin_msi.log



```
22:38.661306+02:00 0x00000fc8 <ERR> WIL: D:\a_work\1\s\src\base\winregutils.cpp(42)\ms-teamsupdate.exe!00007FF792D5592D: (caller: 00007FF792C5A325) LogHr(310002 The system cannot find the file specified.  
22:38.661306+02:00 0x00000fc8 <ERR> WIL: D:\a_work\1\s\src\base\winregutils.cpp(102)\ms-teamsupdate.exe!00007FF792C5AFDC: (caller: 00007FF792C72785) LogHr(30002 The system cannot find the file specified.  
22:38.661306+02:00 0x00000fc8 <ERR> WIL: D:\a_work\1\s\src\base\winregutils.cpp(42)\ms-teamsupdate.exe!00007FF792C5B16B: (caller: 00007FF792C72785) LogHr(330002 The system cannot find the file specified.
```

Teams New – Client issues during start

What to do if the New Teams client crashes at startup?

Process Name	PID	Operation	Path
ms-teams.exe	20732	Process Start	
ms-teams.exe	20732	Thread Create	
ms-teams.exe	20732	Load Image	C:\Program Files\WindowsApps\MSTeams_24091.212.2834.983_x64__8wekyb3d8bbwe\ms-tea
ms-teams.exe	20732	Load Image	C:\Windows\System32\ntdll.dll
ms-tear.exe	20732	Load Image	C:\Windows\System32\hmpalart.dll
ms-teams.exe	20732	Load Image	C:\Windows\System32\kernel32.dll
ms-teams.exe	20732	Load Image	C:\Windows\System32\KernelBase.dll
ms-teams.exe	20732	Load Image	C:\Windows\System32\shlwapi.dll
ms-teams.exe	20732	Load Image	C:\Windows\System32\msvcrt.dll
ms-teams.exe	20732	Load Image	C:\Windows\System32\user32.dll
ms-teams			Microsoft Teams (work or school)
ms-teams			Microsoft Corporation
ms-teams			C:\Program Files\WindowsApps\MSTeams_24091.212.2834.983_x64__8wekyb3d8bbwe\ms-teams.exe
ms-teams			ull.dll
ms-teams.exe	20732	Load Image	C:\Windows\System32\msvc_p_win.dll
ms-teams.exe	20732	Load Image	C:\Windows\System32\ucrtbase.dll
ms-teams.exe	20732	Load Image	C:\Windows\System32\advapi32.dll
ms-teams.exe	20732	Load Image	C:\Windows\System32\sechost.dll
ms-teams.exe	20732	Load Image	C:\Windows\System32\vpcert4.dll
ms-teams.exe	20732	Load Image	C:\Windows\System32\bcrypt.dll
ms-teams.exe	20732	Load Image	C:\Windows\System32\ole32.dll
ms-teams.exe	20732	Load Image	C:\Windows\System32\combase.dll
ms-teams.exe	20732	Load Image	C:\Windows\System32\ws2_32.dll
ms-teams.exe	20732	Load Image	C:\Windows\System32\shell32.dll
ms-teams.exe	20732	Load Image	C:\Windows\System32\SHCore.dll
ms-teams.exe	20732	Load Image	C:\Windows\System32\wintrust.dll
ms-teams.exe	20732	Load Image	C:\Windows\System32\oleaut32.dll
ms-teams.exe	20732	Load Image	C:\Program Files\WindowsApps\MSTeams_24091.212.2834.983_x64__8wekyb3d8bbwe\sqlite
ms-teams.exe	20732	Load Image	C:\Windows\System32\wininet.dll

Short Recap



Recap on the New Teams client

- **Improved User Experience**
- **Better client framework**
- **A lot is undocumented**
- **VDI is different (as always)**
- **Troubleshooting improved slightly**



THANK YOU!



Your Feedback Matters to Us



SCAN ME