



How to troubleshoot Microsoft Teams Fehler



Michael Plettner

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19. Mai



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Michael Plettner

Co-Founder / CEO in2success GmbH

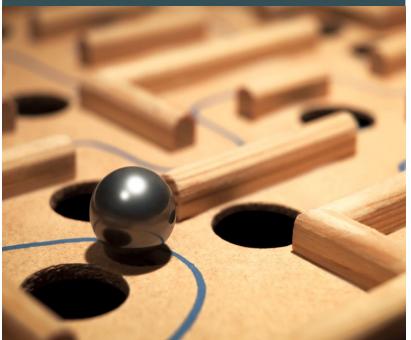


- Nähe von München
- @plemich / [LinkedIn](#)
- Microsoft UC Schwerpunkt seit 2006
- Lead der Teams User Group Deutschland
- Talk Microsoft 365 (Video-)Podcast
<https://www.talkm365.net>
- Co-Host Adoption & Change Forum München



Was erwartet Euch in der Session?

Herausforderungen



Debugging & Analytics
Client



Debugging & Analytics
Teams Plattform



Good to know



Herausforderungen

Microsoft Teams Debugging - Herausforderungen

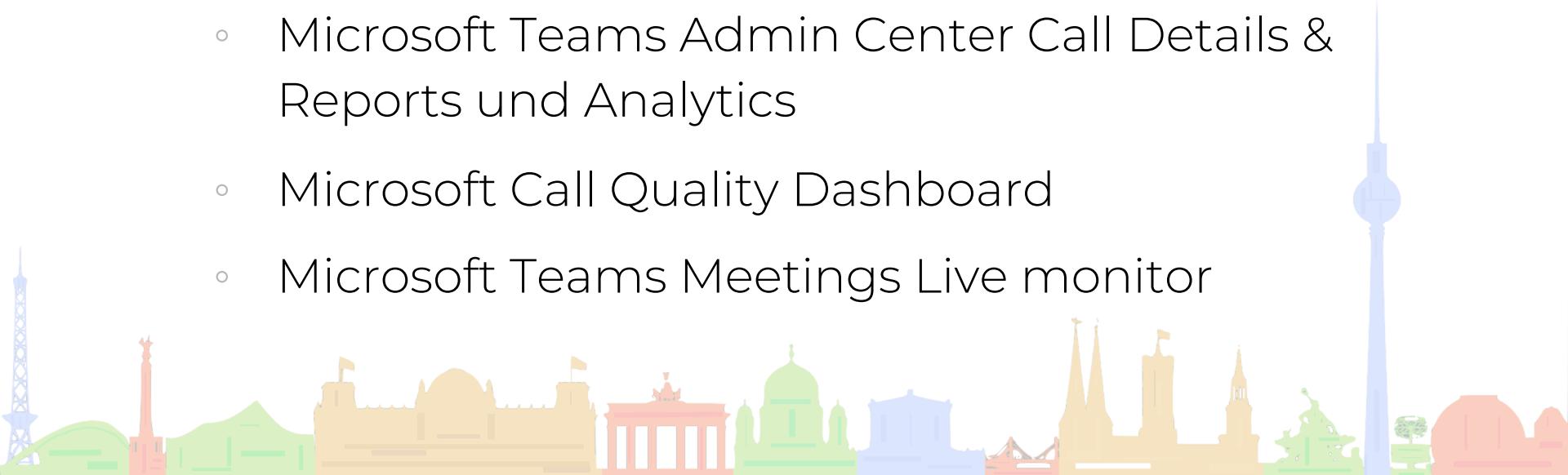
- Microsoft Teams ist ein reiner Cloud-Dienst
- Sammeln von Serverprotokollen ist nicht möglich
- Die Infrastruktur von Microsoft Teams wird weltweit gehostet
- Microsoft Teams-Client verbindet sich parallel mit verschiedenen Endpunkten und entscheidet anschließend, welcher Endpunkt der nächstgelegene und beste ist
 - Der Client verwendet HTTP REST API

Microsoft Teams Debugging - Herausforderungen

- Microsoft bietet keine „debugging tools“ für Microsoft Teams
- Client Tools zur Analyse und debuggender Client Verbindung
 - Wireshark
 - Fiddler
 - Edge Developer Tools
 - Call status in Besprechungen

Microsoft Teams Debugging - Herausforderungen

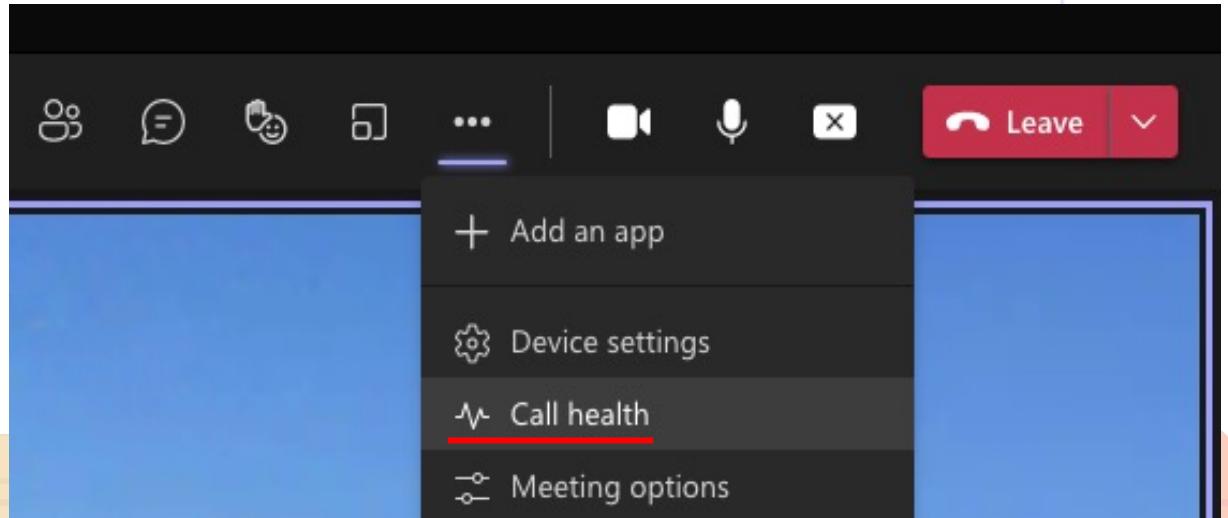
- Server Seite
 - Microsoft Teams Admin Center Call Details & Reports und Analytics
 - Microsoft Call Quality Dashboard
 - Microsoft Teams Meetings Live monitor



Debug Optionen – real life Erfahrungen

Anruf-Status in Teams Besprechungen und Anrufe

- Erste Analyse direkt zur Client Verbindung einfach im Zugriff



Your call is receiving data. Most metrics refresh every 15 seconds. Learn more
Last updated at: 18:06:28 CET

Network

Round trip time: 19.00 ms
Received packet loss: 0.00%

[View more network data](#) >

Audio

Sent bitrate: --
Received Jitter: 4.03 ms

[View more audio data](#) >

Video

Sent bitrate: 0.14 Mbps
Received bitrate: 2.1 Mbps
Sent frame rate: 14.97 fps
Sent resolution: 320 x 180 px
Sent codec: h264 sw
Video processing: Software enabled

[View more video data](#) >

Screen Sharing

Sent bitrate: 0.02 Mbps
Sent frame rate: 7.39 fps
Sent resolution: 1648 x 1078 px
Sent codec: av1 sw
Screen share send processing: Software enabled
Received bitrate: --
Received frame rate: --

Anruf-Status in Teams Besprechungen und Anrufe

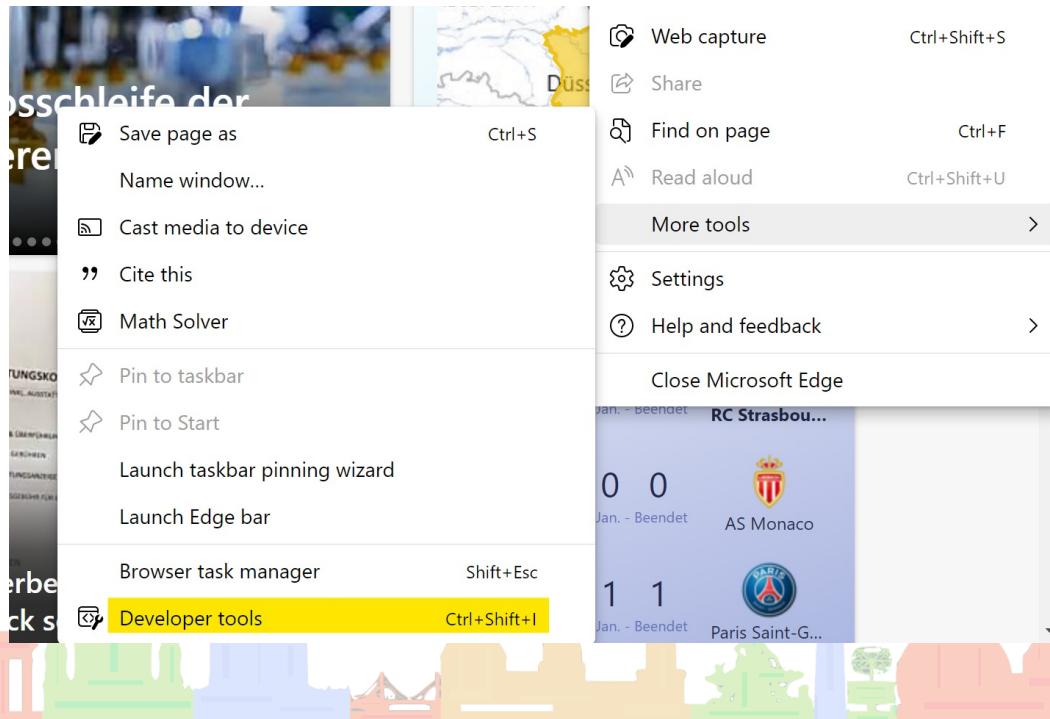
- Kann verwendet werden, um einen ersten Überblick über den Datenfluss und die Client-Verbindung zu erhalten
- Statistiken über Netzwerk, Audio, Video und Desktop Sharing
- Genutzte Bandbreite verschiedener Medien
- Ansicht in Echtzeit



(Policy) Troubleshooting mit Edge Browser

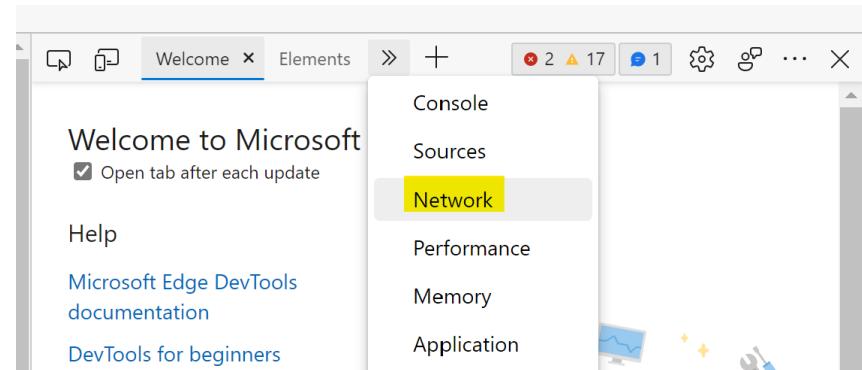
Policy Debugging mit dem Edge Developer Mode

- Starten Sie den Developer Modus im Edge-Browser



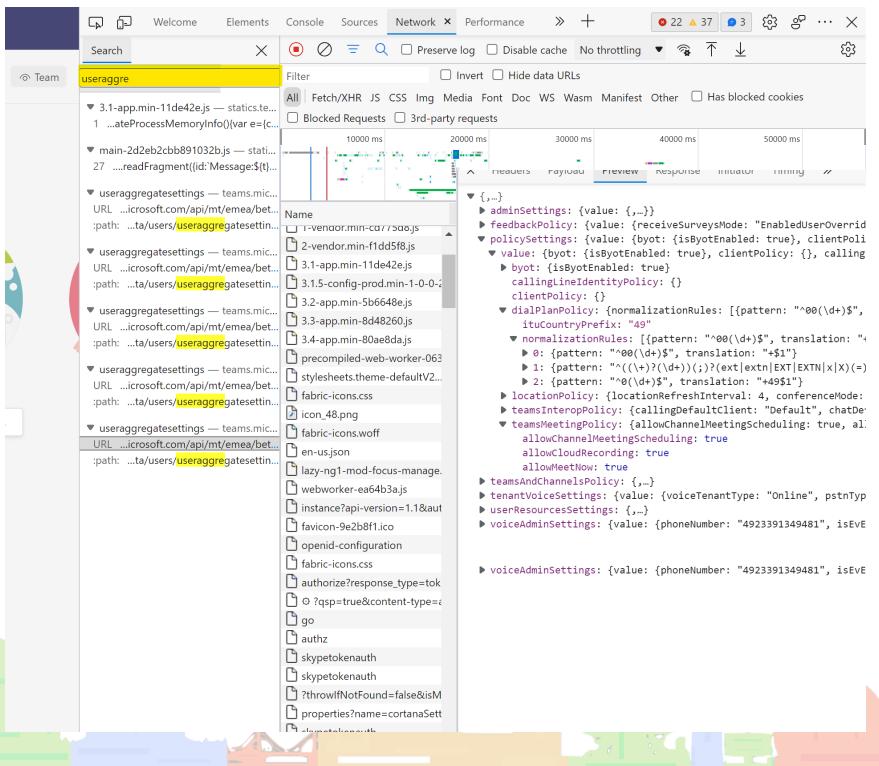
Policy Debugging mit dem Edge Developer Mode

- Developer Modus im Edge-Browser starten
- Auf teams.microsoft.com gehen
- Zu „Netzwerk“ wechseln
- Nach "useraggregatesettings" suchen



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Policy Debugging mit Edge Developer Mode

- Developer Modus im Edge-Browser starten
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 - Nach "useraggregatesettings" suchen

Name	X Header Vorschau Antwort Initiator >
useraggregatesettings	<pre>tenantSettingsV2: {value: {isMicrosoftTeamsEnabled: true, branchSurvivabilityPolicy: {value: {branchAppId: "00000000-0000-0000-0000-000000000000", callingPolicy: {value: {allowPrivateCalling: true, allowGroupCalling: true, allowCallForwarding: true, allowCallForwardingToPhone: true, allowCallForwardingToUser: true, allowCallGroups: true, allowDelegation: true, allowPrivateCalling: true, allowVoicemail: "UserOverride", allowWebPSTNCalling: true, autoAnswerEnabledType: "Disabled", busyOnBusyEnabledType: "Disabled", callRecordingExpirationDays: 60, liveCaptionsEnabledTypeForCalling: "Disabled", musicOnHoldEnabledType: "Enabled"}, clientSettings: {}, educationAssignmentsAppPolicy: {}}, meetingPolicy: {value: {allowChannelMeetingScheduling: true, allowBreakoutRooms: true, allowCarbonSummary: true, allowCloudRecording: true, allowEngagementReport: "Enabled", allowIPVideo: true, allowMeetNow: true, allowMeetingCoach: true, allowMeetingReactions: true, allowMeetingRegistration: true, allowNDIStreaming: true, allowOutlookAddIn: true, allowParticipantGiveRequestControl: true}}}, value: {allowChannelMeetingScheduling: true, allowBreakoutRooms: true, allowCarbonSummary: true, allowCloudRecording: true, allowEngagementReport: "Enabled", allowIPVideo: true, allowMeetNow: true, allowMeetingCoach: true, allowMeetingReactions: true, allowMeetingRegistration: true, allowNDIStreaming: true, allowOutlookAddIn: true, allowParticipantGiveRequestControl: true}}</pre>



Teams Admin Center



Anruf-Statistik im Teams Admin Center

- Übersicht aller Besprechungen und 1:1 Anrufe eines Anwenders

Past meetings 81 meetings & calls ⓘ							
Meeting or call ID	Start time ↓	When	Participants	Duration	Activity type	Client	Audio
3bdb998e-f8b6-4b3d-ba...	May 17, 2022, 6:01 PM GM...	2 days ago	7 Participants	00:15:53	Conference	Microsoft Teams	Good
28ecf5b3-e317-48c3-9fe9...	May 17, 2022, 4:31 PM GM...	2 days ago	2 Participants	01:32:48	Conference	Microsoft Teams	Good
4cc429b2-42cb-4cdb-858...	May 17, 2022, 4:18 PM GM...	2 days ago	1 Participant	00:00:52	Conference	Microsoft Teams	Good
bd40600f-bcbc-46c7-921...	May 17, 2022, 2:15 PM GM...	2 days ago	2 Participants	00:00:00	Call	Microsoft Teams	Good
ba42fb6c-03f7-4730-8b3...	May 17, 2022, 10:29 AM G...	2 days ago	2 Participants	00:04:11	Conference	Microsoft Teams	Good
cce5074b-d3c0-43ca-bbe...	May 17, 2022, 10:23 AM G...	2 days ago	2 Participants	00:04:03	Conference	Microsoft Teams	Good
7aaf121e-be03-4d72-9f9...	May 17, 2022, 9:39 AM G...	2 days ago	1 Participant	00:02:02	Conference	Microsoft Teams	Good
622739dc-d547-4ecb-a8e...	May 17, 2022, 9:38 AM G...	2 days ago	3 Participants	00:36:01	Conference	Microsoft Teams	Good



Anruf-Statistik im Teams Admin Center

- Sehr detaillierte Informationen über PC, verwendete Geräte, Netzwerk usw.
- Ermöglicht tiefere Analysen
- Vom einfachen Überblick

May 13, 2022, 10:59 AM GMT+2

Overview Advanced Debug

Michael Plettner
Michael.Plettner@in2success.de

📞 44
Complete
01:02:57
Audio quality
Good

Device System Connectivity Network Service

Microphone

Device name	Jabra Link 370
Device driver	Microsoft: 10.0.22000.1

Speaker

Device name	Jabra Link 370
Device driver	Microsoft: 10.0.22000.1

Camera

Device name	Logitech StreamCam
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- Vom einfachen Überblick zu Fortgeschrittenen



Overview Advanced Debug

	Michael Plettner		Microsoft Teams
Microphone			
Device name	Jabra Link 370	-	-
Device driver	Microsoft: 10.0.22000.1	-	-
Speaker			
Device name	Jabra Link 370	-	-
Device driver	Microsoft: 10.0.22000.1	-	-
Camera			
Device name	Logitech StreamCam	-	-
Display			
Device name	Citrix Indirect Display Adapter; Intel(R) UHD Graphics 620	-	-

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Overview

Advanced

Debug

Report

Report time	May 13, 2022, 12:02 PM GMT+2
CallAnsweredModalities	Audio[0] = Bidirectional, Camera[0] = Bidirectional, Camera[1] = ReceiveFromPeer, Camera[2] = ReceiveFromPeer, Camera[3] = ReceiveFromPeer, Camera[4] = ReceiveFromPeer, Camera[5] = ReceiveFromPeer, Camera[6] = ReceiveFromPeer, Camera[7] = ReceiveFromPeer, Camera[8] = ReceiveFromPeer, Camera[9] = ReceiveFromPeer, Camera[10] = Disabled, AppSharing[0] = ReceiveFromPeer, Data[0] = Bidirectional
CallDurationInSeconds	3775.67
CallEndSubCode	0
CallOfferredModalities	Audio[0] = Bidirectional, Camera[0] = Bidirectional, Camera[1] = ReceiveFromPeer, Camera[2] = ReceiveFromPeer, Camera[3] = ReceiveFromPeer, Camera[4] = ReceiveFromPeer, Camera[5] = ReceiveFromPeer, Camera[6] = ReceiveFromPeer, Camera[7] = ReceiveFromPeer, Camera[8] = ReceiveFromPeer, Camera[9] = ReceiveFromPeer, Camera[10] = ReceiveFromPeer, AppSharing[0] = ReceiveFromPeer, Data[0] = Bidirectional
SelfParticipantRole	join
Skype_ResultCode	0
Skype_ResultDetail	LocalUserInitiated



Anruf-Statistik im Teams Admin Center

- Sehr detaillierte Informationen über PC, verwendete Geräte, Netzwerk usw.
- Ermöglicht tiefere Analysen
- Vom einfachen Überblick über Fortgeschrittene Ansicht



Overview Advanced Debug

Eric Schlufter
eric.schlufter@in2success.de

Michael Plettner
Michael.Plettner@in2success.de

Complete
00:00:32
Audio quality
Poor
Poor call quality was caused by the network.

Device System Connectivity Network Connectivity System Device

Network stream from Eric Schlufter to Michael Plettner

Average round-trip time	54 ms
Maximum round-trip time	77 ms
Average jitter	3 ms
Maximum jitter	18 ms
Average packet loss rate	1.29%
Maximum packet loss rate	17.12%

Network stream from Michael Plettner to Eric Schlufter

Average round-trip time	55 ms
Maximum round-trip time	77 ms
Average jitter	8 ms
Maximum jitter	20 ms

Anruf-Statistik im Teams Admin Center

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Inbound network

Average jitter	8 ms
Maximum jitter	20 ms
Average round-trip time	54 ms
Maximum round-trip time	77 ms
Average packet loss rate	26.34%
Maximum packet loss rate	62.75%
Maximum compressed samples	0
Compressed sample ratio	0.66%
Concealed sample ratio	14.86%
Stretched sample ratio	1.00%
Payload type	108
Payload description	SATIN
Sample rate	16,000 Hz

Sep 22, 2021, 6:04 PM GMT+2

Overview Advanced Debug

Report

Report time	Sep 22, 2021, 7:01 PM GMT+2
CallAnsweredModalities	Audio[0] = Bidirectional, Camera[0] = ReceiveFromPeer, Camera[1] = ReceiveFromPeer, Camera[2] = ReceiveFromPeer, Camera[3] = ReceiveFromPeer, Camera[4] = ReceiveFromPeer, Camera[5] = ReceiveFromPeer, Camera[6] = ReceiveFromPeer, Camera[7] = ReceiveFromPeer, Camera[8] = ReceiveFromPeer, Camera[9] = ReceiveFromPeer, Camera[10] = Disabled, AppSharing[0] = ReceiveFromPeer, Data[0] = Bidirectional
CallDurationInSeconds	3425.05
CallEndSubCode	****
CallOfferredModalities	Audio[0] = Bidirectional, Camera[0] = ReceiveFromPeer, Camera[1] = ReceiveFromPeer, Camera[2] = ReceiveFromPeer, Camera[3] = ReceiveFromPeer, Camera[4] = ReceiveFromPeer, Camera[5] = ReceiveFromPeer, Camera[6] = ReceiveFromPeer, Camera[7] = ReceiveFromPeer, Camera[8] = ReceiveFromPeer, Camera[9] = ReceiveFromPeer, Camera[10] = ReceiveFromPeer, AppSharing[0] = ReceiveFromPeer, Data[0] = Bidirectional
SelfParticipantRole	join
Skype_ResultCode	0
Skype_ResultDetail	ConversationEndedForAllOnService
ProcessedFinalAnswer	****
Connected	****
IsChatEscalatedToAudio	False



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Anruf-Statistik im Teams Admin Center

Einsatz-Szenarien

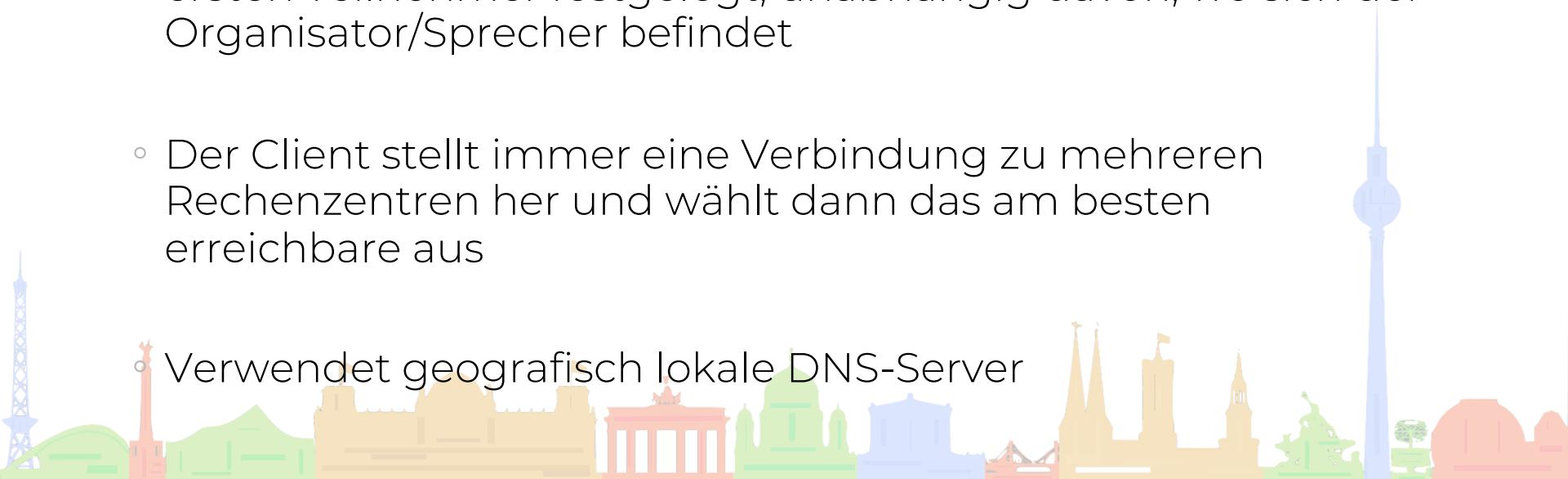
- Probleme mit
 - Netzwerk
 - Geräten
 - Qualität
- Kontrolle vorgenommener Änderungen (QoS)
- Gezieltes Troubleshooting bei einem User



Good to know

Good to know

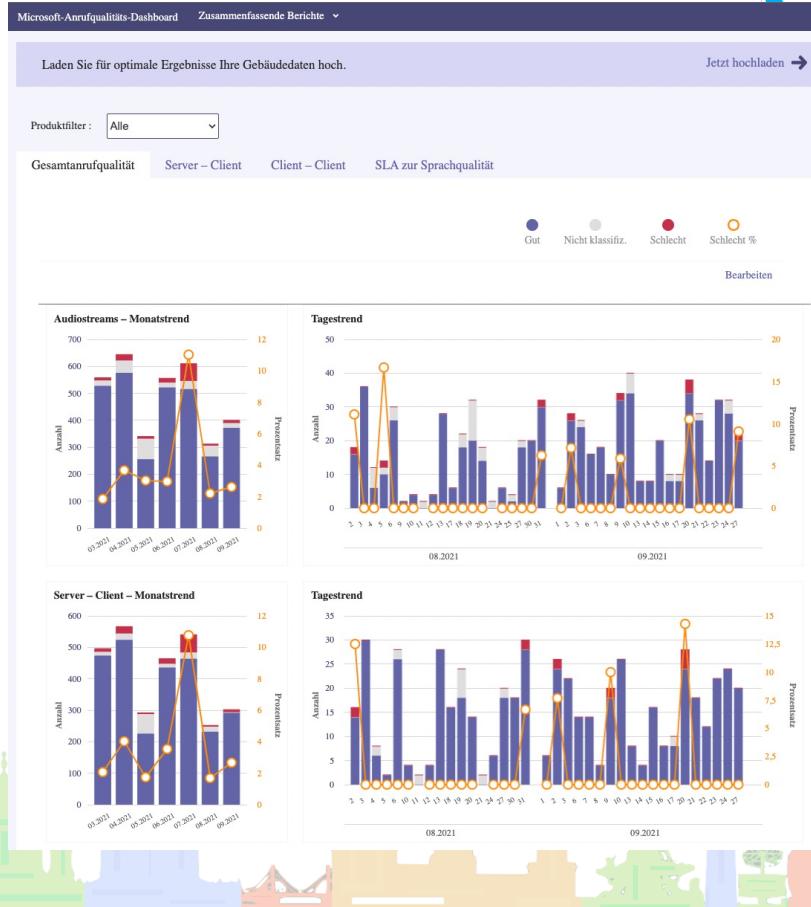
- Das Datenzentrum für Microsoft Teams-Meetings wird vom ersten Teilnehmer festgelegt, unabhängig davon, wo sich der Organisator/Sprecher befindet
- Der Client stellt immer eine Verbindung zu mehreren Rechenzentren her und wählt dann das am besten erreichbare aus
- Verwendet geografisch lokale DNS-Server



CQD und User Adoption

Call Quality Dashboard

- Berichtsübersicht mit guten Standardberichten und individuellen Berichten
- Berichte mit individuellen Informationen möglich



User Adoption mit dem TAC?

- Die andere Seite
des Teams Admin
Center



Usage reports

Analytics and reports will help you create different types of reports to get insights and information about Teams usage. These reports will help you better understand usage patterns so you make better business decisions. [Learn more](#)

[View reports](#)

[Downloads](#)

Report

Date range

Teams usage

Last 30 days

[Run report](#)

Apps usage

PSTN blocked users

PSTN minute and SMS (preview) pools

PSTN and SMS (preview) usage

Teams device usage

Teams live event usage

Teams usage

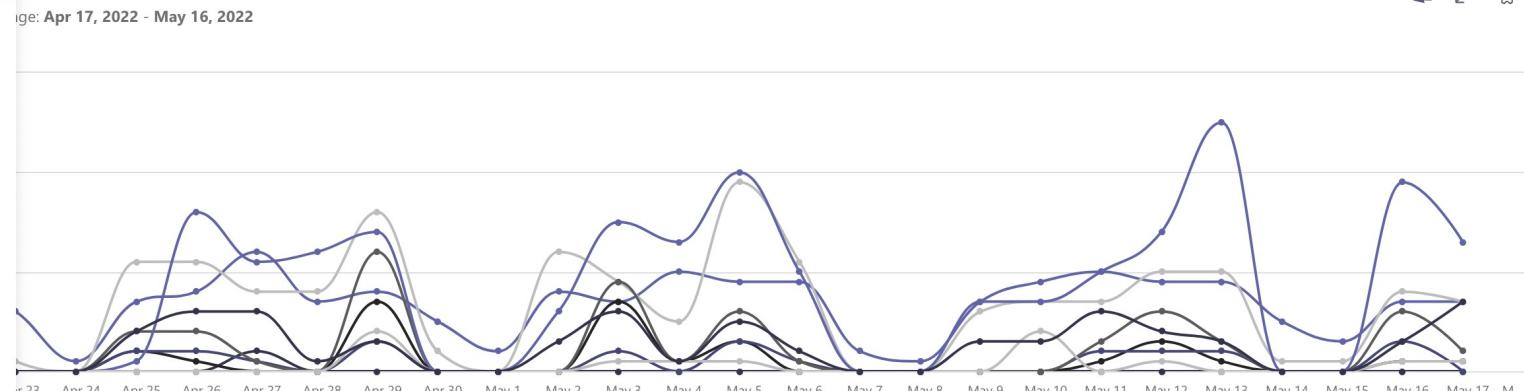
Teams user activity

Information protection license

Virtual Visits usage

Audio Conferencing dial-out usage

Date: Apr 17, 2022 - May 16, 2022



14

Total active users

37

Active channels

2

Guests

40

Reply messages

27

Post messages

77

Channel messages

263

Reactions

20

Mentions

78

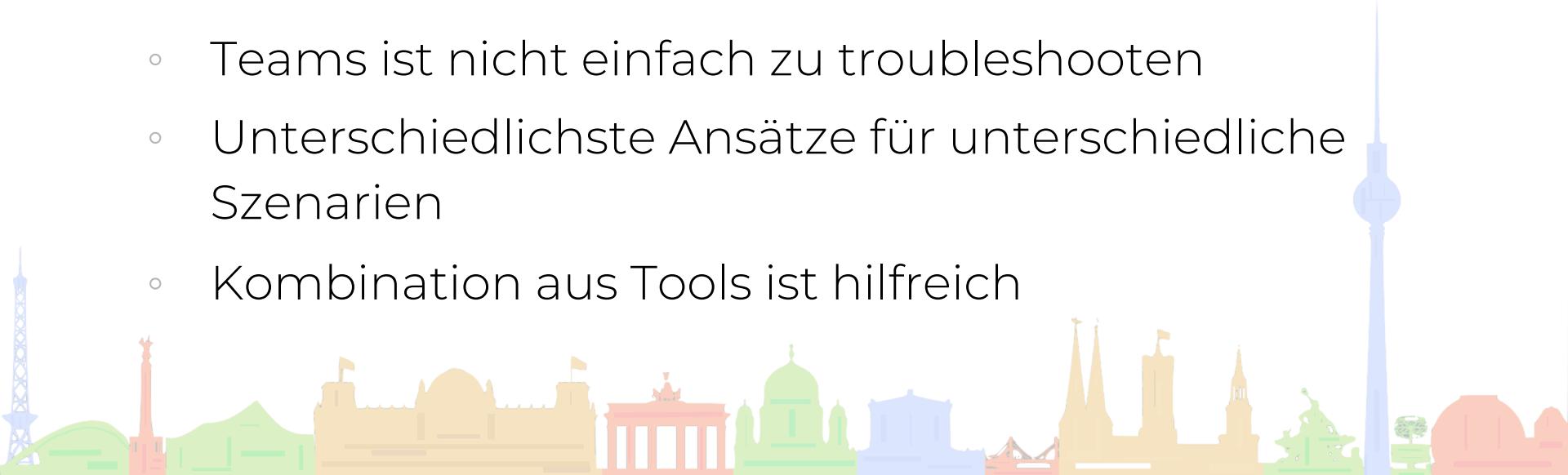
Meetings Organized

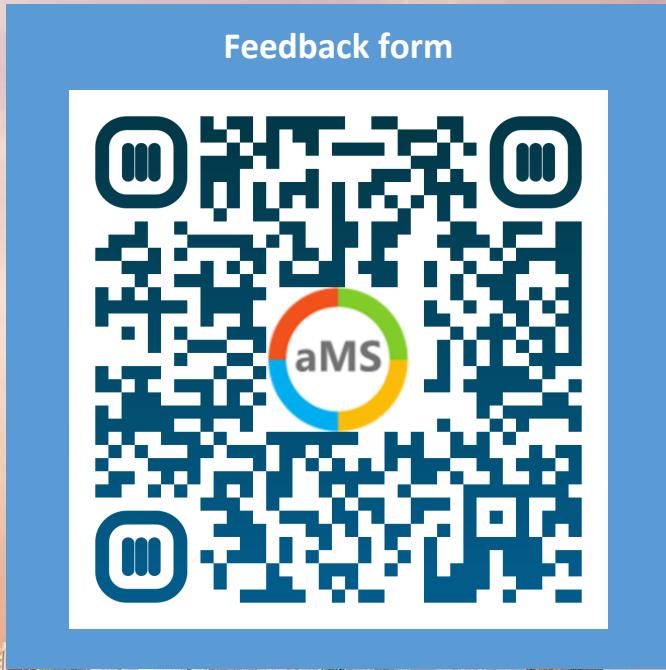
Zusammenfassung



Zusammenfassung

- Teams ist nicht einfach zu troubleshooten
- Unterschiedlichste Ansätze für unterschiedliche Szenarien
- Kombination aus Tools ist hilfreich





A collage of architectural images. On the left, a modern building with a curved, multi-layered glass facade. In the center, the historic Potsdamer Platz skyscraper with its distinctive stepped profile. On the right, another modern building with a curved glass facade.

THANK YOU!
Danke Schön!