



Optimizing Digital Experience for M365 Users – Part I



## **Speakers**







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## **Before We Start**





#### 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**

Let us know what we can do better.

## **Agenda**



- > Part I:
  - Why TrueDEM?
  - > nexthink, ThousandEyes, audiocodes competing or complementary?
  - > Q & A
- > Part II:
  - > Architectural Overview
  - > TrueDEM Dashboards & Reports





## **Shift from Server Focus to User Experience**





On-Premises Infrastructure:

**GreenLight Server Monitoring** 

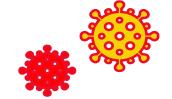




Hybrid IT Environments:

**OfficeExpert OpsAnalytics** 



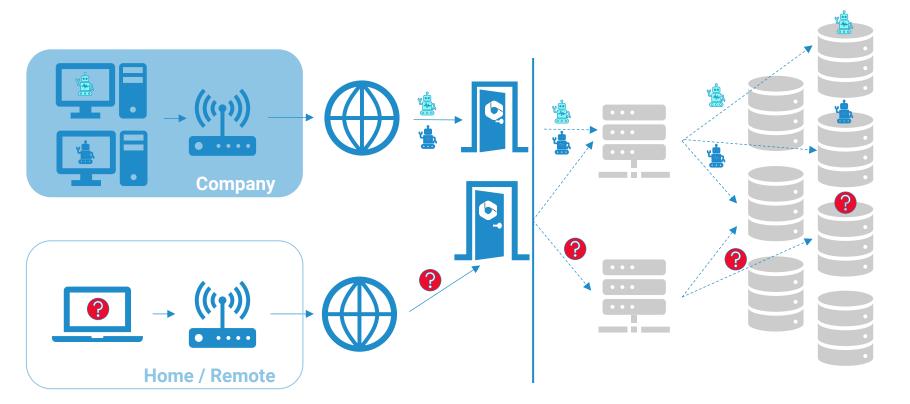


... and then COVID19 changed the World ...



## **Location based BOT Simulations**





## **Shift from Server Focus to User Experience**





**On-Premises Infrastructure:** 

**GreenLight Server Monitoring** 





Hybrid IT Environments:

**OfficeExpert OpsAnalytics** 





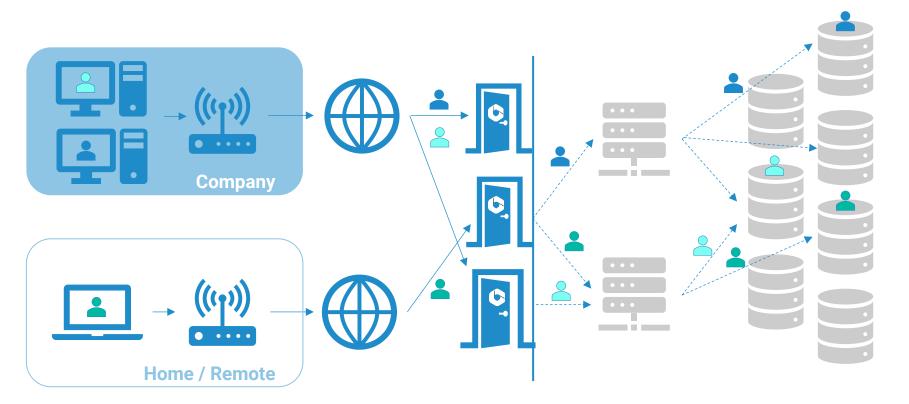
**Cloud Solution Operations:** 

**TrueDEM – End-to-End User Experience** 



## **True End User Context is key!**





## **VIPs: Constantly in Teams Meetings**











## **VIPs: Constantly in Teams Meetings**







#### **USERS DEVICE**

- Device type
- Hardware
  - \* CPU
  - \* Memory
  - \* Harddisk(s)
  - \* GPU
- OS & OS version
- Teams version
- Attached devices
  - \* Camera
  - \* Headset
- Drivers
- Installed Software
- Current running processes
- Hardware consumption



#### LOCAL NETWORK

- Company or home network
- Managed vs. Non-managed
- Bandwith
- Quality
- Hop's (routing)
- Wifi vs. Ethernet
- If Wifi
- \* Signal strength
- \* 2.4 vs. 5 Ghz
- \* Volatility
- If Company network
  - \* Switches
  - \* Firewalls

  - \* Proxies
  - \* 0oS
  - \* 3rd-party SaaS Security

\* ...



#### **ISP NETWORK**

- Direct Vs. VPN
- Hop's (routing)
- Bandwith
- Quality
- DNS
- Latency



#### MICROSOFT NETWORK

- Regional Ingress vs. unexpected far away - Authentication
- Hop's (routing)
- Bandwith
- Quality
- Service availability
- Service performance









# **Intracall Analytics with Teams Realtime Streaming Data**





## **Built for Microsoft 365**





And more ...

## Why TrueDEM?



It's only true if it's ...

**End-to-End** 

100% End user context

Intracall Analytics with Advanced Realtime Data

## nexthink, ThousandEyes and TrueDEM



Competing OR Complementary



- Used by all larger panagenda customers
- Large and comprehensive solutions
- · Leaders in the DEX market
- Teams Call Quality (Microsoft CQD)





- Microsoft 365 User Experience Focus
- End-to-End in 100% User Context
- Advanced Teams Call Quality Analytics
- Intracall Analytics with Realtime Data



TrueDEM

## **Audiocodes & TrueDEM**



## Competing OR Complementary



- Microsoft Enterprise Voice Expert
- Session Border Controllers (SBCs)
- IP Phones, room solutions, Media Gateways
- Telephony Infrastructure Monitoring (OVOC)



- Microsoft Teams Client-Centric Solution
- Intracall Analytics with Realtime Data
- Microsoft 365 User Experience



TrueDEM

## **Easy Evaluation of TrueDEM**



## **Zero Complexity**

- Fast Azure Provisioning
- No complex configuration or integration
- Ask the expert
- Identify and resolve problems instantly
- Save days / weeks

## **Valuable Insights**

- M365 workload performance with Real User Simulation Scores
- Instant view on End User Experience
- Draw first conclusions
- Advanced Teams Call Analytics based on your real cases

## **Parameters for Cost of PoC**

- FREE 30 days with <250 users</li>
- ONLY IF Duration of PoC > 30 days
  - Amount of deployed devices
  - Azure Cost during PoC
  - Consulting

**Take the Fast Track** 

**Quality of Results** 

**Cost of PoC** 

## On the safe side with TrueDEM









Secure
Software
Development
Life
Cycle







# QUESTIONS?











# TrueDEM

**Optimizing Digital Experience** for M365 Users - Part II







## **Architectural Overview**

## **TrueDEM - Architectural Overview**



- Architecture 

  100% SaaS in Azure
- Endpoint Install (Agent) → Packaged Sideloading App (UWP)
  - No admin privileges required
  - Runs in user context
  - Lightweight background application
- Dynamic Data Collection → 15-minute frequency + real-time call data
- Frontend → Portal hosted in Azure (incl. Grafana)
- Supported Client Types
  - Windows10 & 11, macOS 13 and higher (ARM64)
  - Laptops, Desktops, (ThinClients), VDI (WTS, non-persistent, persistent)
  - VDI → AVD, AWS, Citrix, Omnissa, etc.

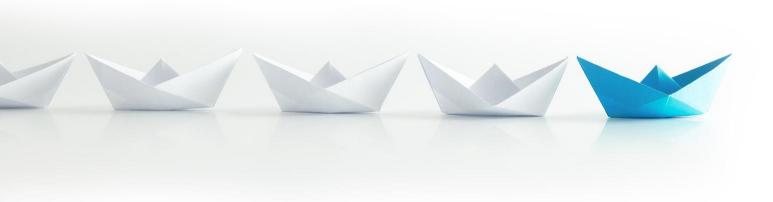
## **TrueDEM - Architectural Overview**



- Every customer has its own product instance → physically separated
  - Customers get a unique URL for the TrueDEM portal
- Instances can be provisioned in EU or US Azure Regions
- Simple Setup Process via Entra ID Enterprise Application Consents
- Enable/Disable TrueDEM for a customer takes a few clicks/seconds



## **TrueDEM Dashboards and Reports**





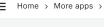


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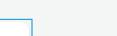






2

3





#### **User Search**

Search for an end-user; then access hardware, software and Teams Call Status



#### **Environment** Status

Current status, based on insights from your users and monitored services



#### Microsoft 365 App Status

Current application and functionality status based on insights from your monitored devices



#### Microsoft 365 Service Health

Service status and active incidents, self-reported by Microsoft



#### TrueDEM® Agent Status

Gain insight about agent health and deployment status



#### Microsoft 365 **Outage Analysis**

Administrators can select a resolved outage and validate the user impact



#### Microsoft Teams

Microsoft Teams and Enterprise Voice Insights

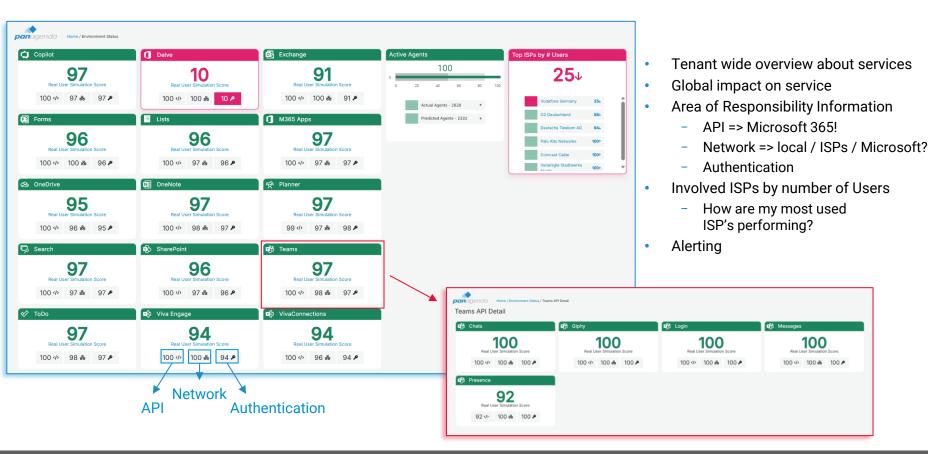


#### **Admin Reports**

Top technical reports available in the product, curated into a quick-access list

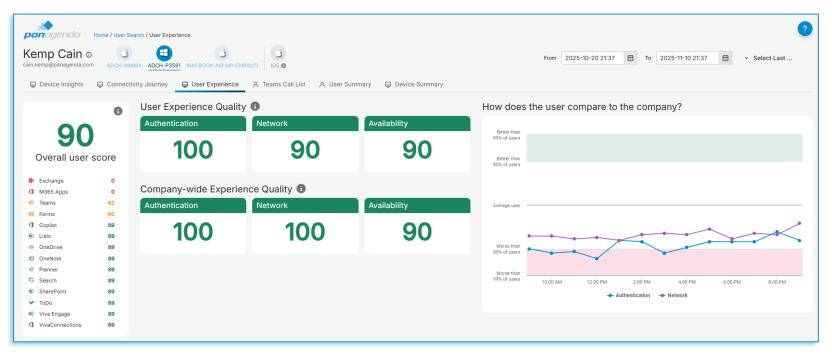
## **Environment Status**





## **Environment Status** → **User Experience**

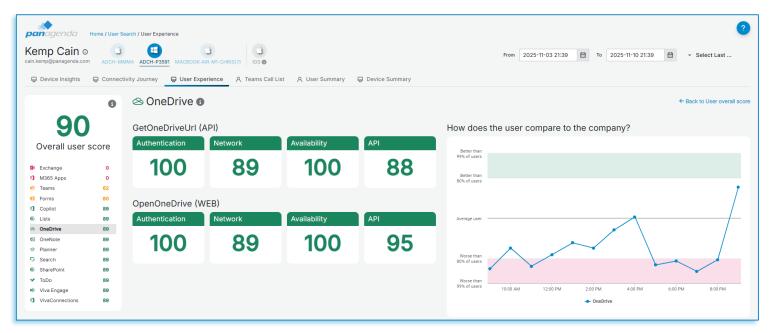




- User Experience Quality compared to Company
- Area of Responsibility Score for Authentication, Network and Availability
- End-to-End User Scores for all Measured Services

## **Environment Status** → **User Experience**

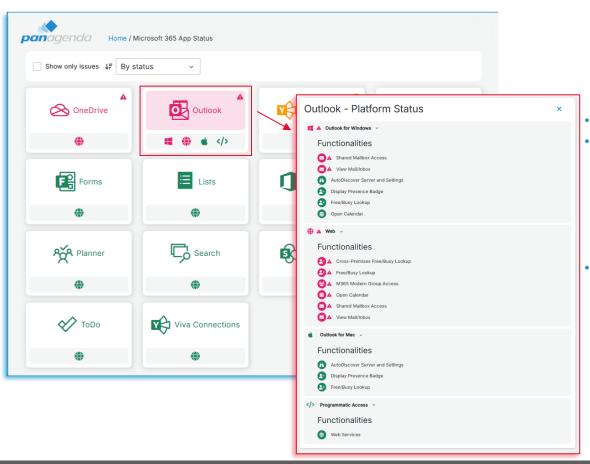




- Drill-down view to API level for Sub-Services.
- Area of Responsibility Scoring at Sub-Service Level
  - Authentication
  - Network (Local / ISP / Microsoft)
  - Availability → Reachability of the Service
  - API (Microsoft)

## **Microsoft 365 App Status**

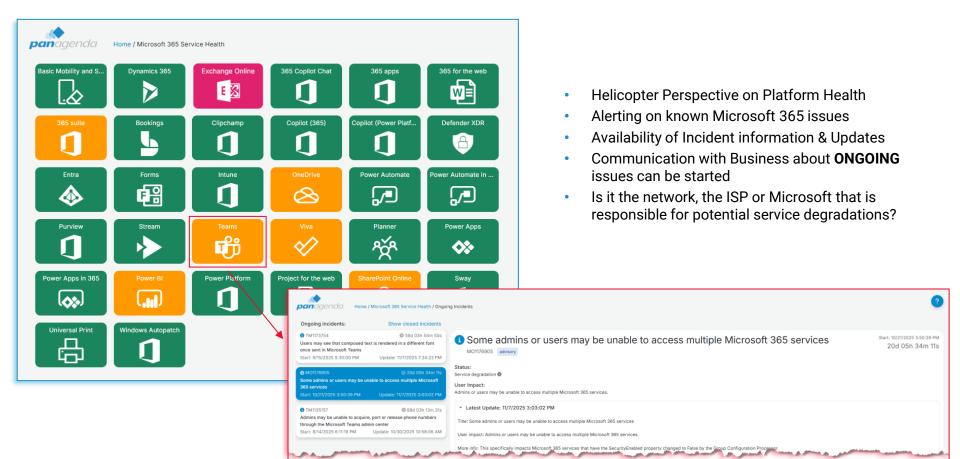




- Clarity about Service / App Status at functional level
- Differentiation between platforms
  - MacOS
  - Windows
  - Web
  - Mobile
  - Programmatic Access
- Ability to communicate workarounds

## **Microsoft 365 Service Health**

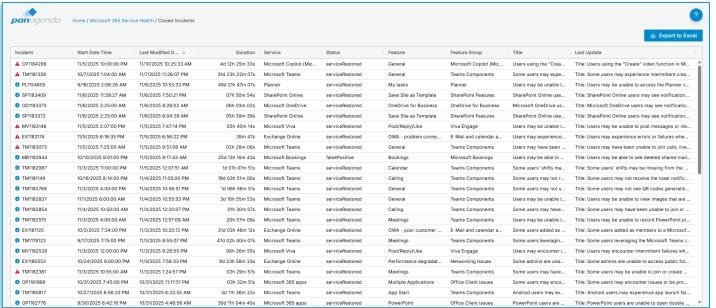




## **Microsoft 365 Service Health**



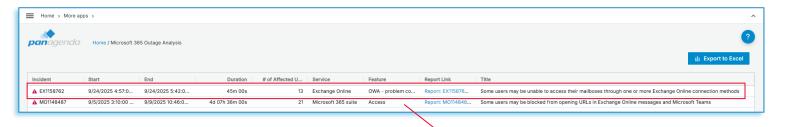




- Historical Reporting about closed Microsoft 365 Incidents
- Differentiation between Incidents and Advisories
- Complete history of updates and resolution
- Export to Excel (e. g. for PowerBI reporting)

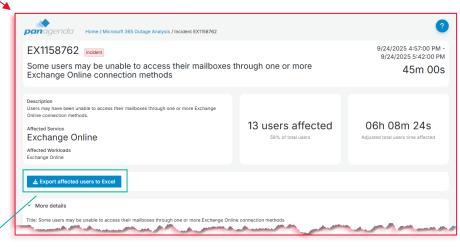
## **Microsoft 365 Outage Analysis**





- Automatic Reporting on Microsoft 365 Outages
- Proof of ACTUAL Impact (When / Where / Who)
- Detailed information to support the Service Credit Eligibility Claims
  - Users impacted
  - Total and Adjusted Time Affected per User

	A	В	C	D	E	F
1	User Principal Name	<b>User Display Name</b>	Service Down	<b>Total Time Affected</b>	Past Success Modifier	Adjusted Time Affected
2	craig.chaney@panagenda.com	Craig Chaney	FALSE	48m 00s	85%	40m 48s
3	dylan.ambrose@panagenda.com	Ambrose Dylan	FALSE	48m 00s	85%	40m 48s
4	leo.gill@panagenda.com	Leo Gill	FALSE	48m 00s	85%	40m 48s
5	mariana.dickey@panagenda.com	Dickey Mariana	FALSE	30m 00s	85%	25m 48s
6	kendal.gay@panagenda.com	Kendal Gay	FALSE	30m 00s	85%	25m 48s
7	grace.gross@panagenda.com	Grace Gross	FALSE	48m 00s	85%	40m 48s
8	rhys.hawkins@panagenda.com	Rhys Hawkins	FALSE	42m 00s	85%	36m 00s
9	rosalee.melvin@panagenda.com	Rosalee Melvin	FALSE	42m 00s	85%	36m 00s
10	yadira.redmond@panagenda.com	Yadira Redmond	FALSE	48m 00s	85%	40m 48s
11	leo.fritz@panagenda.com	Leo Fritz	FALSE	00m 00s	85%	00m 00s
12	anne.mcfadden@panagenda.com	Anne Mcfadden	FALSE	48m 00s	85%	40m 48s
13	kiersten.lange@panagenda.com	Kiersten Lange	FALSE	00m 00s	85%	00m 00s
14	avalon.carey@panagenda.com	Avalon Carey	FALSE	00m 00s	85%	00m 00s





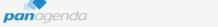
Q Search or jump to...











5



#### **User Search**

Search for an end-user; then access hardware, software and Teams Call Status



#### **Environment** Status

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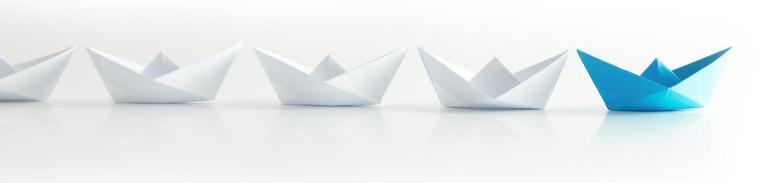
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# User Search, User Experience Page and Teams Call Analytics LIVE



Home > More apps >







#### **User Search**

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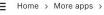
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Q Search or jump to...

ctrl+k









Home / Microsoft Teams

6





#### Tenantwide Overview

Call quality tenantwide overview



Teams Network Reports

Network related Teams Reports



**Enterprise Voice** 

Enterprise Voice Related Reports



Microsoft Teams

Versions

Microsoft Teams Versions across all Client Devices

#### Teams Relay Region Analysis

Distribution of Used Relay Region for Teams Calls



#### Teams Media Analysis

Analysis of Teams Media Usage and Platform by Department

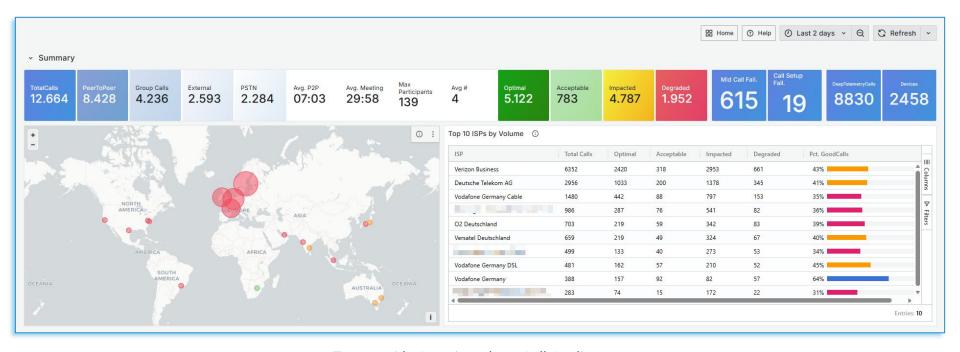


#### Live Teams Call Status

Live Teams Calls Status Dashboard

#### **Tenantwide Overview**

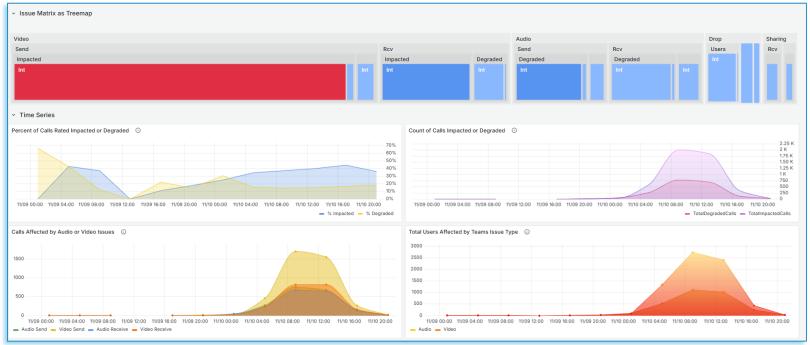




- Tentantwide Overview about Call Quality
- Clarity which Microsoft Datacenters handle calls
- Quantitative Distribution per Classification
- Involvement of ISP in Bad Call

#### **Tenantwide Overview**

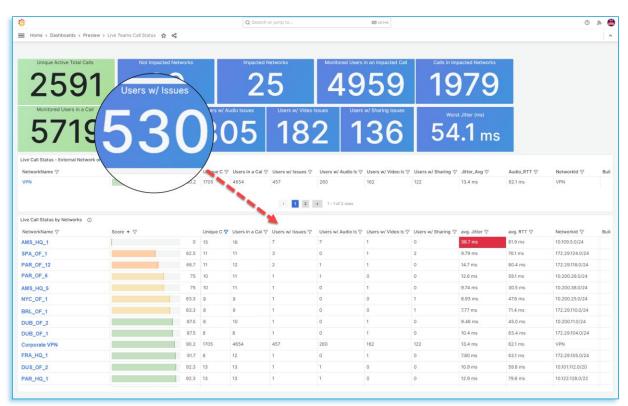




- Problem Distribution Video / Audio / Drop / Sharing
- Direction: Send or Receive
- Understanding of Impact
  - Internal Users vs. Externals
- Clarity about Timeline of issues
  - Is there a direct relation to an (ongoing) Microsoft or ISP problem?

#### **Live Teams Call Status**

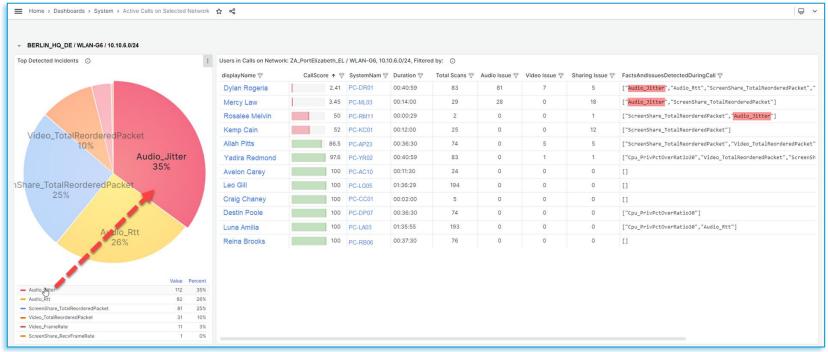




- Tenantwide Live Status overview for Teams Call
- Quantity of users in Impacted Calls
- Impacted Calls per Corporate Network
- Type of issues

### **Live Teams Call Status**





- Live insight into call problem distribution within a corporate network
- Direct access to impacted calls and users
- Severity Ranking by TrueDEM Call Score
- Detected issues during calls

#### **Live Teams Call Status**





- Deep dive into Call
- What happened when (type of issue & action)
- Media Usage Throughout the Call
- Change detection (Network and A/V codecs)



Q Search or jump to...

ctrl+k











Home / Microsoft Teams



#### Microsoft Teams Versions

Microsoft Teams Versions across all Client Devices



#### Tenantwide Overview

Call quality tenantwide overview



#### Teams Network Reports

Network related Teams Reports



#### **Enterprise Voice**

Enterprise Voice Related Reports



#### Teams Relay Region Analysis

Distribution of Used Relay Region for Teams Calls



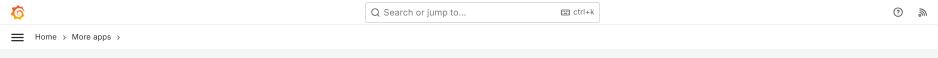
#### Teams Media Analysis

Analysis of Teams Media Usage and Platform by Department



#### **Live Teams Call** Status

Live Teams Calls Status Dashboard





Home / Microsoft Teams / Teams Network Reports



Managed Networks Call Overview

Managed Networks showing signs of Network-level Call Issues



#### WiFi Network Analysis

WiFi networks scored based on compatibility with Teams/UC standards



#### **Network Call** Quality

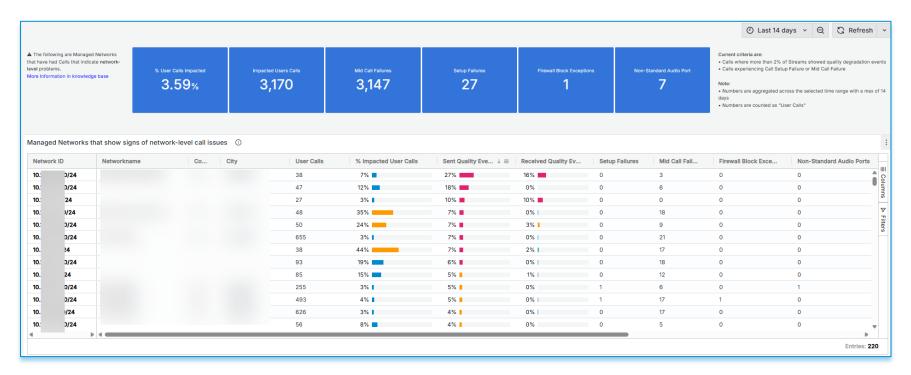
Corporate network call quality

8

9







Managed Network (with Network-related Call Problems)



Total User Calls 1,268	Users <b>156</b>	Devices 156	Teams Versions	Calls not using SATIN	Calls w/ Issues or Insights
Calls w/ CPU Load Problems	Setup Call Failures	Mid Call Fallures 54	Firewall Block Exception	Calls using TCP	Calls w/ non-standard Audio Ports
Calls w/ Jitter Problems	Calls w/ Video Problems	Calls w/ Audio Problems	Calls w/ VBSS Problems	Calls w/ Outdated Wifi	Calls w/ Poor Wifi Signal

- Details about a Managed Network (last 14 days)
- What is happening on this Network?





- Details about a Managed Network (last 14 days)
- Time Series (Number of Calls; Issues/Insights; Media Category)



Teams Version	Users	Devices	Total User C	Issues/Insig	Video Issues	Audio Issues	ScreenShari	Audio Jitter	Audio RTT	Audio Loss Rate	Video RT
5227.205.3936.6644	29	29	95	12	0	5	0	4	3	0	0
5227.205.3936.6644	66	66	313	36	0	12	1	10	4	0	0
5212.2204.3869.2204	89	89	500	55	1	18	0	13	10	0	1
5212.2204.3869.2204		33	295	41	1		0	10	5	0	0
	33					12		0			
25198.1109.3837.4725	9	9	37	11	0	0	0		0	0	0
5185.410.3812.8024	4	4	29	1	0	1	0	1	0	0	0
sues By Device Type  SystemProductName	Devices	Users	Total User C	Issues/Insig	Video Issues	Audio Issues	ScreenShari	Audio Jitter	Audio RTT	Audio Loss Rate	Video R
HP EliteBook 840 14 inch G1	53	53	383	42	0	6	0	6	7	0	0
ID FILE-D1-040 44 In-b CO	22										0
	33	33	239	25							
HP ZBook Power 16 inch G1	18	18	114	19	1	11	0	7	5	0	1
HP ZBook Power 16 inch G1 HP EliteBook 840 G8 Noteb	18 16	18 16	114 181	19 33	1	11 6	0	7 5	5 4	0	0
HP ZBook Power 16 inch G1 HP EliteBook 840 G8 Noteb HP EliteBook 840 G8 Noteb	18 16 13	18 16 13	114 181 93	19 33 2	0 0	11 6 0	0 0	7 5 0	5 4 0	0 0	0
HP ZBook Power 16 inch G1 HP EliteBook 840 G8 Noteb HP EliteBook 840 G8 Noteb HP ZBook Power 15.6 inch G	18 16 13 8	18 16 13 8	114 181 93 70	19 33 2 12	1 0 0	11 6 0 5	0 0 0	7 5 0 3	5 4 0 2	0 0 0	0 0
HP ZBook Power 16 inch G1 HP EliteBook 840 G8 Noteb HP EliteBook 840 G8 Noteb HP ZBook Power 15.6 inch G HP ZBook Power 15.6 inch G	18 16 13 8 7	18 16 13	114 181 93	19 33 2	0 0	11 6 0	0 0	7 5 0	5 4 0	0 0	0
HP ZBook Power 16 inch G1 HP EliteBook 840 G8 Noteb HP EliteBook 840 G8 Noteb HP ZBook Power 15.6 inch G HP ZBook Power 15.6 inch G	18 16 13 8	18 16 13 8	114 181 93 70	19 33 2 12	1 0 0	11 6 0 5	0 0 0	7 5 0 3	5 4 0 2	0 0 0	0 0
HP ZBook Power 16 inch G1  HP EliteBook 840 G8 Noteb  HP EliteBook 840 G8 Noteb  HP ZBook Power 15.6 inch G  HP ZBook Power 15.6 inch G	18 16 13 8 7	18 16 13 8	114 181 93 70	19 33 2 12	1 0 0	11 6 0 5	0 0 0	7 5 0 3	5 4 0 2	0 0 0	0 0
IP ZBook Power 16 inch G1 IP EliteBook 840 G8 Noteb IP EliteBook 840 G8 Noteb IP ZBook Power 15.6 inch G IP ZBook Power 15.6 inch G  Date of the ZBook Power 15.6 inch G	18 16 13 8 7	18 16 13 8	114 181 93 70 56	19 33 2 12 9	1 0 0 0	11 6 0 5 2	0 0 0 0 1	7 5 0 3	5 4 0 2	0 0 0	0 0 0
#P ZBook Power 16 inch G1 #P EliteBook 840 G8 Noteb #P EliteBook 840 G8 Noteb #P ZBook Power 15.6 inch G #P ZBook Power 15.6 inch G  **Description**  **Descripti	18 16 13 8 7	18 16 13 8 7	114 181 93 70 56	19 33 2 12 9	1 0 0 0 0 0 0 0 Total User C	11 6 0 5 2	0 0 0 1	7 5 0 3 2	5 4 0 2 0	0 0 0 0	0 0 0
HP EliteBook 840 14 inch G9 HP ZBook Power 16 inch G1 HP ZBook Power 16 inch G1 HP EliteBook 840 G8 Noteb HP ZBook Power 15.6 inch G HP ZBook Power 15.6 inch G  sues By Operating System OS_Build 22631 26100	18 16 13 8 7 4 CS Major	18 16 13 8 7	114 181 93 70 56	19 33 2 12 9	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	11 6 0 5 2	0 0 0 0 1	7 5 0 3 2	5 4 0 2 0	0 0 0 0 0	0 0 0 0

- What is happening on a Managed Network (last 14 days)
- Grouped by Teams Versions, Device; OS

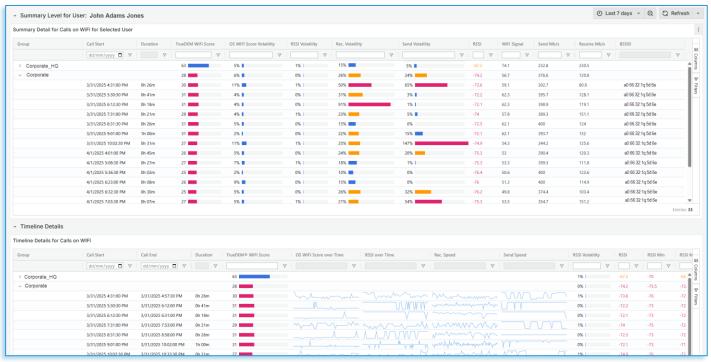


all Start	Issue(s) ↓	UserId	Avg. Audio Jitter	Max. Audio Jitter	Avg. Audio Loss Rate	Max. Audio Loss Rate	Avg. Video Rtt	Max. Video Rtt	Avg. Video Loss Rate	Max. Video Loss Rate ≡	Wifi V
/10/2025 8:31:05 AM	Video RTT Over Threshold, CPU Use Over Threshold		20.8	26.4	0%	0%	217.8	489	0%	0%	
10/2025 12:51:30 PM	TCP Detected, Mid-Call Failure(s), Exclusive Use of Non-Satin Codec		26.1	26.8	0%	0%	64	65	0%	0%	
6/2025 3:04:00 PM	TCP Detected, Jitter Over Threshold		54	70.3	0%	0%	101.5	909	0%	0%	
7/2025 2:16:30 PM	TCP Detected		6.9	10.1	0%	0% I					
7/2025 2:16:00 PM	TCP Detected		7.3	7.3	0%	0%					
7/2025 1:44:30 PM	TCP Detected		5.9	7.3	0%	0%					
/7/2025 1:20:00 PM	TCP Detected		6.9	16.8	0%	0%	53.1	65	0%	0%	
/7/2025 10:22:00 AM	TCP Detected		8.4	9.1	0%	0%					
/5/2025 10:02:00 AM	TCP Detected		14.1	101.3	0%	0%	31.5	110	0%	0%	
/11/2025 10:01:30 AM	Screen Sharing Loss Over Threshold, CPU Use Over Threshold		11.5	11.7	0%	0%	21	22	2%	5%	
/10/2025 2:31:00 PM	Screen Sharing Loss Over Threshold		11.9	14.7	0%	0%					
/6/2025 11:05:00 AM	Screen Sharing Loss Over Threshold		14.7	54.5	0%	0%					
/6/2025 4:11:00 PM	Poor Wi-Fi Signal		10.7	11.7	0%	0%	172.4	198	0%	0%	6
/6/2025 3:03:00 PM	Poor Wi-Fi Signal		9	13.1	0%	0%	137.3	169	0%	9%	6
/6/2025 2:07:01 PM	Poor Wi-Fi Signal		9.5	12.9	0%	0%	20.3	39	0%	0%	6
/5/2025 1:30:30 PM	Poor Wi-Fi Signal		9.1	14.4	0%	0%	21.8	26	0%	0%	6
/6/2025 2:56:30 PM	Mid-Call Failure(s), Memory Use Over Threshold		27.6	36.3	096	0%	51.8	257	0%	0%	
/6/2025 10:07:00 AM	Mid-Call Failure(s), Memory Use Over Threshold		10.7	11.8	0%	0%	79.8	96	0%	0%	
/5/2025 10:04:30 AM	Mid-Call Failure(s), Memory Use Over Threshold		12.9	15.6	0%	0%	27.2	69	0%	0%	

- Details about a Managed Network (last 14 days)
- What Calls have taken place on this network and what was the Quality?
- Including TrueDEM Calls Insights → See "Issue(s)" column

## **WiFi Network Analysis**

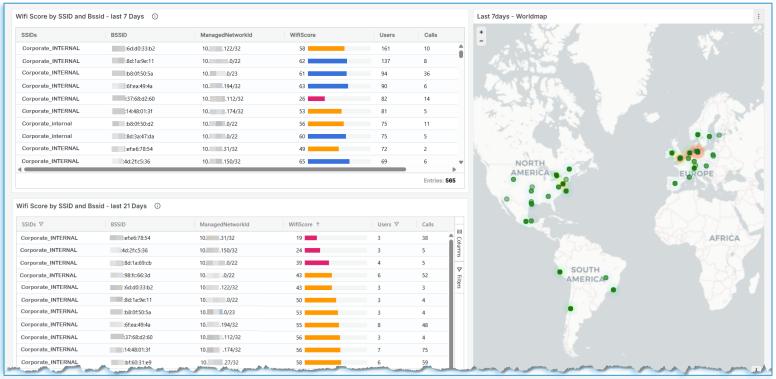




- Wi-Fi Network Volatility Analysis
- In-depth Timeline Analysis
  - Score over time
  - Volatility, RSSI & other metrics over time
  - Receive and Send Speed

## **WiFi Network Analysis**





- Tenantwide Wi-Fi Network Analysis
- Geographical Visualization
- Wi-Fi Scoring by SSID and Bssid

# TrueDEM - What we couldn't show today





## **Teams Reports**

- Teams Versions
- Network Call Quality
- Enterprise Voice
- Teams Relay Region Analysis
- Teams Media Analysis

## **Admin Reports**

- Outlook Versions
- ISP Overview
- Device Hardware

#### ... and more!

## **Again** → **Easy Evaluation of TrueDEM**



## **Zero Complexity**

- Fast Azure Provisioning
- No complex configuration or integration
- Ask the expert
- Identify and resolve problems instantly
- Save days / weeks

## **Valuable Insights**

- M365 workload performance with Real User Simulation Scores
- Instant view on End User Experience
- Draw first conclusions
- Advanced Teams Call Analytics based on your real cases

#### **Parameters for Cost of PoC**

- FREE 30 days with <250 users</li>
- ONLY IF Duration of PoC > 30 days
  - Amount of deployed devices
  - Azure Cost during PoC
  - Consulting

**Take the Fast Track** 

**Quality of Results** 

**Cost of PoC** 



# QUESTIONS?







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# THANK YOU!







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