Detect, Prioritize and Analyze Teams User Experience Issues with Martello Vantage DX

The Challenge

Microsoft Teams Call Quality Dashboard's (CQD's) lack of search, group and alert features makes Microsoft Teams voice and video quality issues difficult to detect. Its focus on *usage* rather than *problems* prevents the efficient prioritization and understanding of your Teams issues.
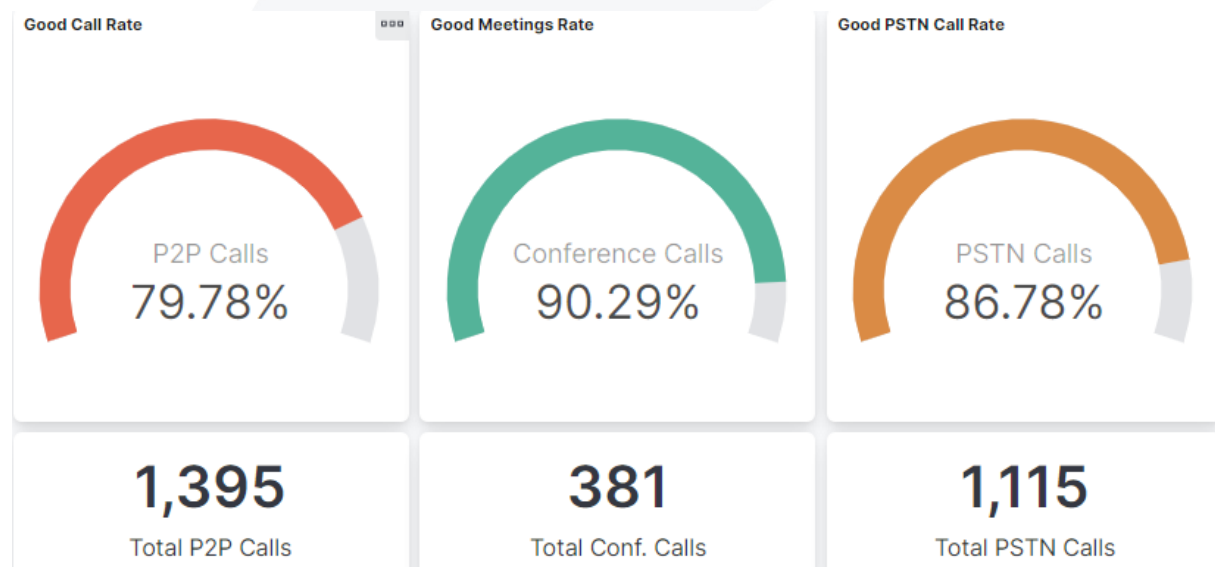
Overview

See how to immediately spot all Microsoft Teams user experience issues. Also see how to easily group them, drill down into the issues and look for specific problems to further analyze the root cause.

Let's Get Started! Teams Overview Dashboard

Let's start with the prioritization of incidents.

When you first arrive in Vantage DX you see the Teams Overview Dashboard which is designed to show your overall Teams user experience, highlight where your issues lie, what they actually *are*, their severity, who is affected and where you should best focus your efforts.

These first gauges show you by 'type of calls' the overall service quality you are providing to your users.

| Good Call Rate	Good Meetings Rate	Good PSTN Call Rate
P2P Calls	Conference Calls	PSTN Calls
79.78%	90.29%	86.78%
1,395	381	1,115
Total P2P Calls	Total Conf. Calls	Total PSTN Calls

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Note that any number under 95% should be of concern depending on your volume of calls – you can see that metric on the right.
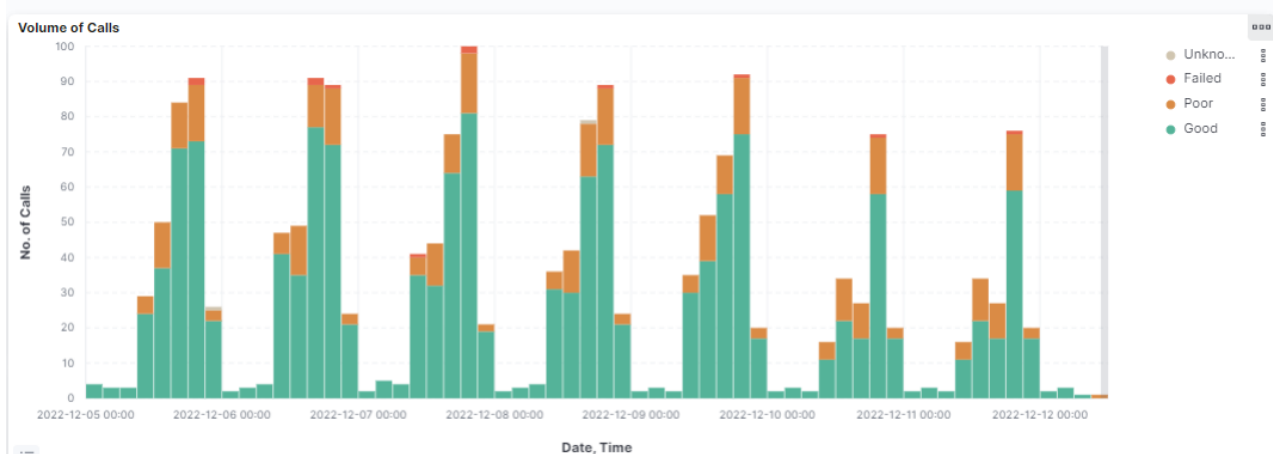
The Volume of Calls table lets you to detect usage patterns and see if you have issues at a specific time of the day, week, or month.

If a specific time is a matter of interest for you, you can click on a column. It opens a pop up asking you which filters you want to apply.
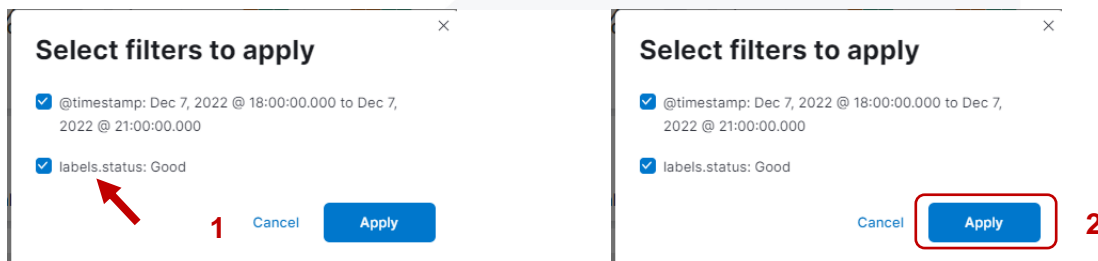

There is always the timestamp filter and depending where you click on the column of a call status filter. Unselect the second filter to see all the calls for that specific time period.

The entire overview is now filtered with this new time period, showing you the call quality gauges to highlight where the issues are and you can see who has been affected – this also shows your worst location for that period.

This is very useful to analyze what is going on during a high volume of bad calls. For example, it can help you to understand *where* they happen and to *whom*. Your will see later on that you can drill down to get a better understanding for the specific reason for these problems with Vantage DX.

Let's remove that time period filter for now by clicking on the time icon:

Ottawa   •   Geneva   •   Nice   •   Paris   •   Dallas   •   New York
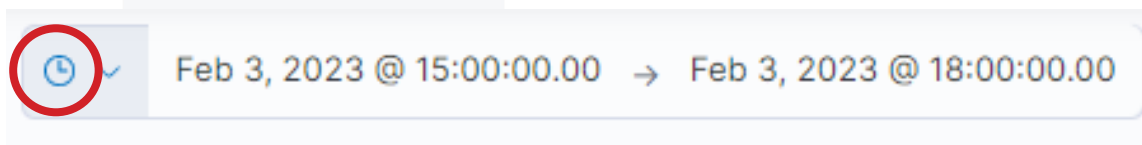
This is where you manage the time period of the information you want to see in our tool.
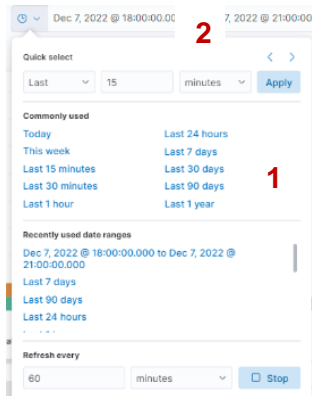
In section 1 you can quickly select a last time period of your choice.

If you click on section 2 you can easily define specific days and hours for the data you want to see.

Let's click on Last 7 days for the purpose of this walkthrough.

Note: If you haven't removed the second filter while clicking on a times tamp period you will see only the quality type of the calls you selected (good, poor failed) in the dashboard.

If you want to come back to the dashboards with *all* the type of calls, just close the filter that appears in the top left area of the screen:
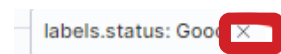
This will work to clear all filters no matter what you do with these dashboards. Any click generates a filter that you can always remove to come back to the initial state of the dashboard.
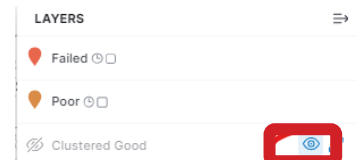
Now let's move on to the geographical map:

The map answers many questions: *Where* are my issues, what *type* are they and what are the *locations* you should prioritize. The stronger the heat color, the more issues you have at that location.

You can add and remove the good calls if you want by clicking the view icon.

We will hide them for now.

Below the map sits 2 tables. Your users experiencing the most issues on the left and the locations having the most problems on the right.

For each issue you have a quick overview of the situation, counting the issue over the period, and showing the connection type as well as the type of calls.

Ottawa   •   Geneva   •   Nice   •   Paris   •   Dallas   •   New York

In seconds, you can understand where your issues are, *who* has them and *where* to focus your efforts to quickly improve the situation.

Now, if you want to customize this dashboard to apply your own filter or to have a better sense of a specific country for example, or if you want to display specific issues like where are my Wi-Fi issues? or where do my users have low bandwidth? You can do that as well with our powerful data filtering capabilities on the top left:
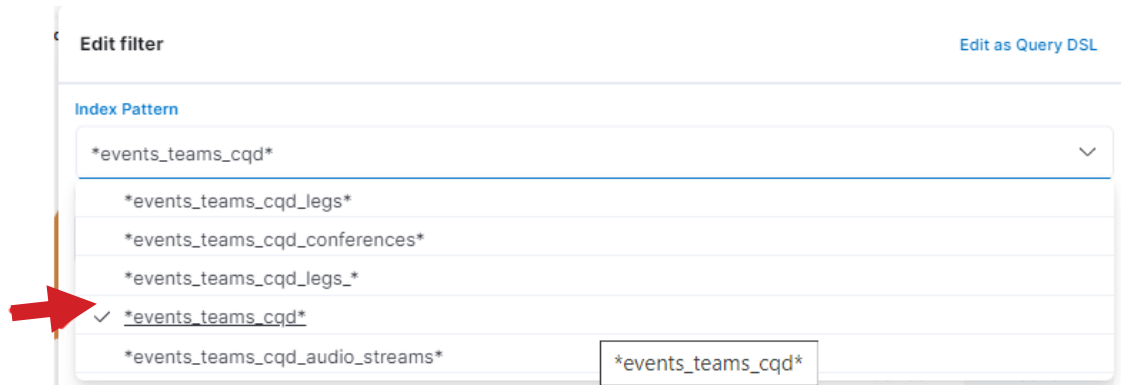
Now let's go further to understand the drill down capabilities.

If you click on:

> any user and then the "**+**" in the top affected users:

> or any location and then the "**+**" in the top affected location

You will open a pop up asking you if you want to either:

> **"Apply Filter"** to filter the view on that specific user or location.

>> o You can try that if you want. It will filter the dashboard with the data relative to this specific location or user. Don't forget to remove the filter at the top left of the screen to get back to your normal overview.
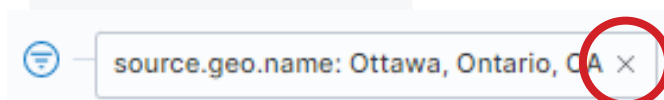
> **"Go to Users Dashboard"** to directly access the specific dashboard for that user or location

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   ○ This is how you drill down from one dashboard to another which lets you to get additional information on the location or user that you are investigating.

To access the location dashboard, you can either use the Top Affected Location list as we just saw or use the map directly.

If the location is not part of the top 10 most affected by Teams issues you won't find it on the list.

To do this you can go directly to the location dashboard and select the location or use the map to access it.

To do this go to the map and you can click on any location to get additional details.

Let's zoom in on Canada then select Ottawa:
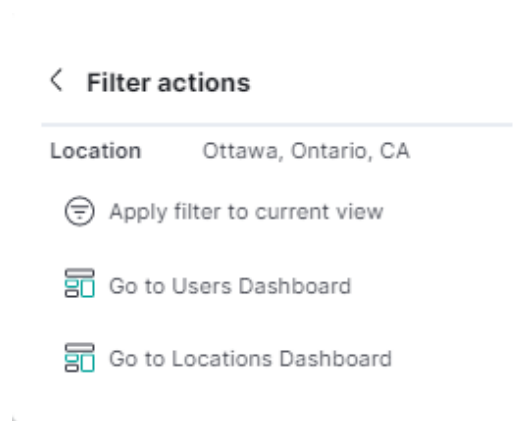

To open that pop up, you need to click on the red dot next to Ottawa.
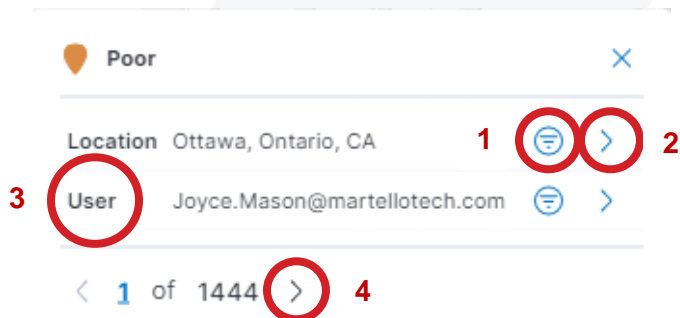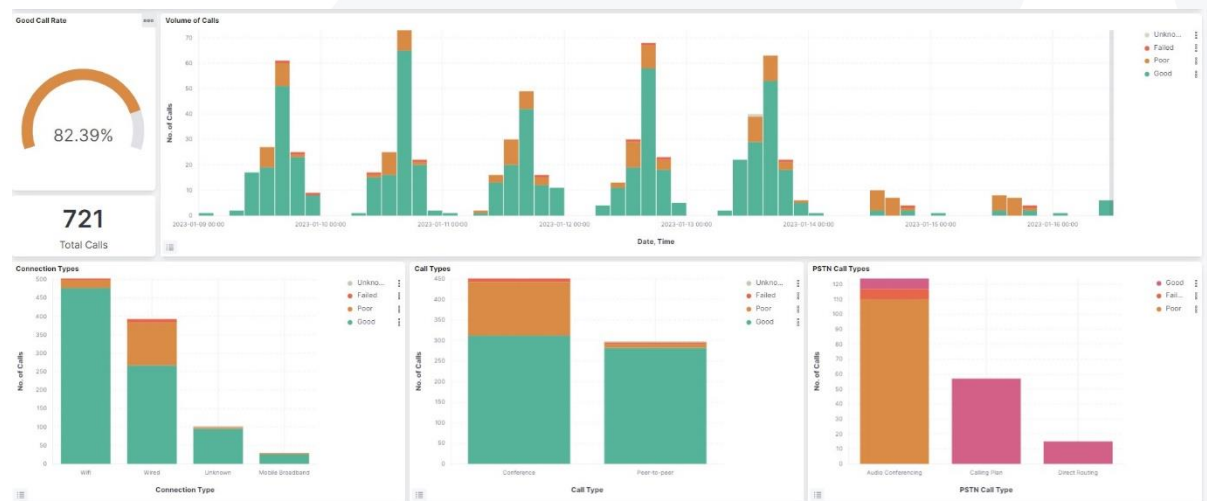
This contains actionable information:

The icon (next to "1") on the top line allows you to filter the dashboard by that location.

The ("**>**") greater than symbol (next to "**2**") opens a second pop up that lets you open the Location Dashboard associated to Ottawa. Let's do it.


We are now in Ottawa:

You can see right away the situation at play here. You can see globally that the Teams user experience quality is not optimal. Any good call rate below 90% is considered poor. On the right of this first gauge is the Volume of Calls table it lets you check if you have patterns of bad calls during a specific period of time. For example:

- More bad calls on a certain day of the week
- If you zoom in with the time period menu you can also check if you have more bad calls at specific times of days
- If the percentage of bad calls increases with the number of calls

Every column is actionable and will filter the entire dashboard with what you want to focus on.

Let's check for example all the calls made on Wi-Fi.
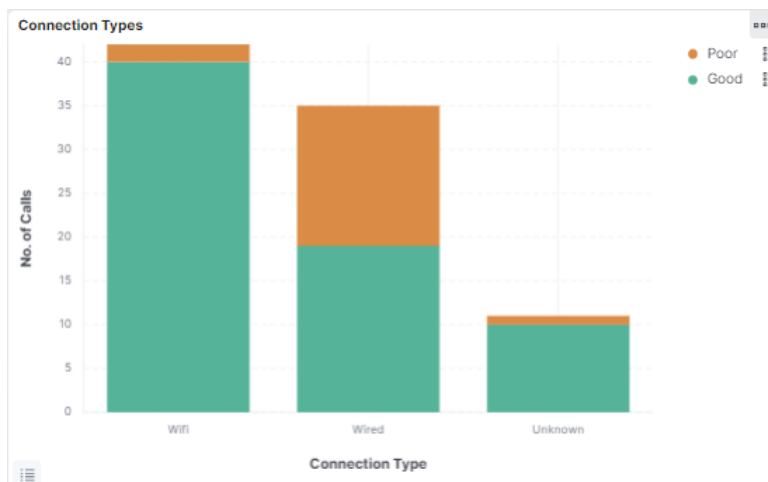
If you click on the Wi-Fi column on the green section, a pop up will open to ask you if you want *all* the Wi-Fi calls or *only* the Wi-Fi calls that are good (because you clicked on the green part).

Let's close the pop up and click on the orange part of the column.
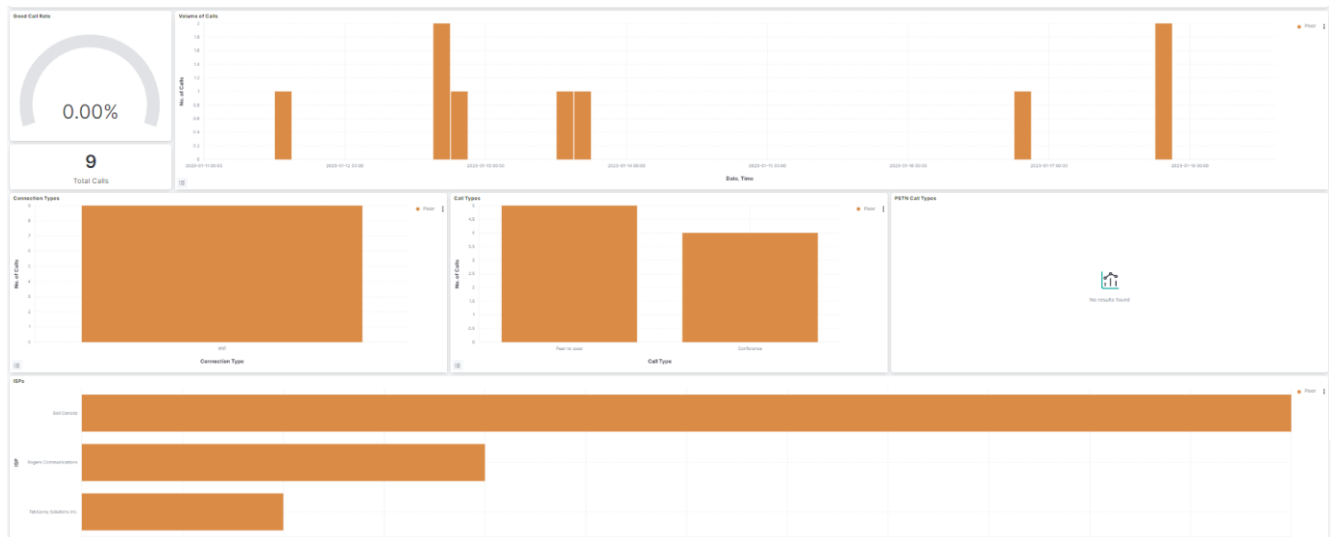

Now the pop up asks you if you want all the Wi-Fi calls or only the poor ones.

Let's keep both filters on to have the dashboard filtered by poor Wi-Fi calls.

Now you see:

- The Good Call Rate is at 0 because we only look at calls with Wi-Fi issues.
- The volume of the Wi-Fi calls over the period that is selected. This is useful to detect patterns of problems linked with a high volume of calls or with a specific time of the day or week depending on the time period selected.
- The type of calls made with Wi-Fi and if there are any PSTN among them.
- Which ISPs are used.

- And finally, who are the top users with Wi-Fi issues in that location.

You can also drill down to their specific user dashboard if you want. From the users' dashboards you will be able to then drill down again to specific calls you want to check.

Top Users — Displays up to 50 Users

⬆ Export

Users	No. of Calls	Top User Experience	Top Call Type	Top Connection Type	IP	Poor / Failed Reason(s)
Wilson.Russell@martellotech.com	3	Poor	Peer-to-peer	Wifi	70.27.136.144	Round Trip Time
Aiden.Tucker@martellotech.com	1	Poor	Conference	Wifi	-	Video Frame Rate
Catherine.Robinson@martellotech.com	1	Poor	Conference	Wifi	108.162.140.221	Video Frame Rate
Joyce.Mason@martellotech.com	1	Poor	Conference	Wifi	52.115.134.231	Video Frame Loss
Maddie.Grant@martellotech.com	1	Poor	Peer-to-peer	Wifi	173.34.176.140	Jitter
Tony.Thompson@martellotech.com	1	Poor	Peer-to-peer	Wifi	173.34.242.85	Video Frame Loss, Wifi Signal Strength
Wilson.Grant@martellotech.com	1	Poor	Conference	Wifi	76.64.40.166	Video Frame Rate

Depending on the condition you are looking for, the table will always show you the users that are the most affected by it. It is extremely handy to understand who is affected by various parameters like: Wi-Fi, low bandwidth, audio devices, Teams client version, etc…

For now, let's remove the filters to get back to our global Ottawa results.

The graphs stay the same, but we are back with all the Ottawa data which means you can see:

- The overall success rate for the chosen period
- The volume of calls for that period in Ottawa

- How are people connected?
  - This allows you to spot, for example, if a larger than normal number of bad calls are happening on Wi-Fi which means you would directly suspect the network equipment in this location.
- The type of calls they perform.
  - Are problems happening more with conference over peer to peer or is it even, as in this above example?
- The type of Teams Phone PSTN calls they are using.
  - This allows you to check if one time period has disproportionate errors over others to ease the troubleshooting.

Right below is the chart highlighting the ISPs in use in this location to support the internet traffic:
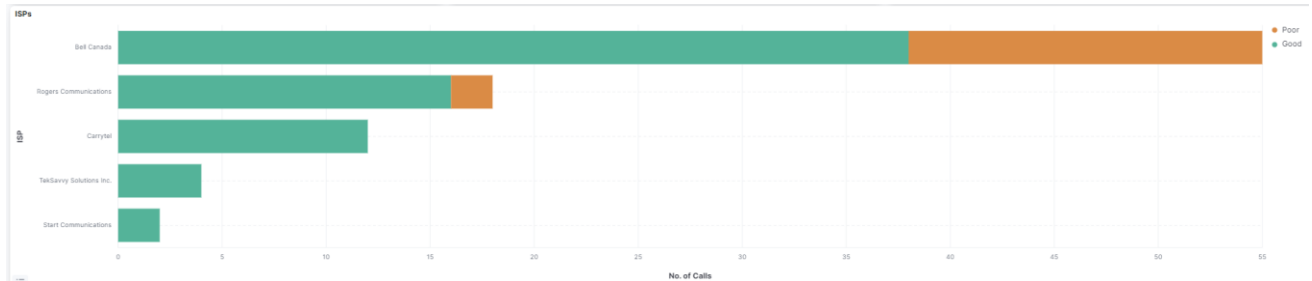
This is extremely important to help you identify if one of the ISPs is delivering the majority of issues in a specific location. This would be an initial indicator of an ISP problem or outage that we will be able to confirm lower in this dashboard.

Below you can see the top users for this location.

Top Users — Displays up to 50 Users

⬆ Export

Users	No. of Calls	Top User Experience	Top Call Type	Top Connection Type	IP	Poor / Failed Reason(s)
kmills@martellotech.com	75	Poor	Conference	Wired	161.100.2.34	Round Trip Time, Packet Loss, Video Frame Rate
adarnell@martellotech.com	15	Poor	Conference	Wired	161.122.102.90	Round Trip Time, Packet Loss, Video Frame Rate
aeverett@martellotech.com	15	Poor	Conference	Wired	161.68.88.12	Round Trip Time, Packet Loss, Video Frame Rate

As already explained, this table is very handy to detect who are the users that are the *most* affected by any condition or filter you want to put in the dashboard.

We have just done the exercise for the poor Wi-Fi calls. And this will also work for wired, mobile, or any custom condition you want to filter the dashboard with.

Let's continue onto the location dashboard.

Here you have a second dashboard that provides the results of our Network Path Diagnostic features.

Recent Failed Vantage DX Diagnostics Tests — Displays up to 50 Tests

⬆ Export

Service	Date	End Time	Reason(s)	Failure Found at	Failure Found at IP	Site Name	Location
Microsoft Teams	2022-12-14	13:39	Packet Loss, Round Trip Time	Bell Backbone	64.230.99.132	kmills@martellotech.com	Ottawa, Ontario, CA
Microsoft Teams	2022-12-14	13:39	Packet Loss, Round Trip Time	Bell Backbone	64.230.99.132	Ottawa Office	Ottawa, Ontario, CA
Microsoft Teams	2022-12-14	13:24	Packet Loss, Round Trip Time	Bell Backbone	64.230.99.132	kmills@martellotech.com	Ottawa, Ontario, CA
Microsoft Teams	2022-12-14	13:24	Packet Loss, Round Trip Time	Bell Backbone	64.230.99.132	Ottawa Office	Ottawa, Ontario, CA
Salesforce	2022-12-14	13:09	Packet Loss, Round Trip Time	Level 3 Communications	4.30.180.198	kmills@martellotech.com	Ottawa, Ontario, CA
Salesforce	2022-12-14	13:09	Packet Loss, Round Trip Time	Level 3 Communications	4.30.180.198	Ottawa Office	Ottawa, Ontario, CA
Salesforce	2022-12-14	12:54	Packet Loss, Round Trip Time	Level 3 Communications	4.30.180.198	kmills@martellotech.com	Ottawa, Ontario, CA
Salesforce	2022-12-14	12:54	Packet Loss, Round Trip Time	Level 3 Communications	4.30.180.198	Ottawa Office	Ottawa, Ontario, CA
Salesforce	2022-12-14	12:39	Packet Loss, Round Trip Time	Level 3 Communications	4.30.180.198	kmills@martellotech.com	Ottawa, Ontario, CA
Salesforce	2022-12-14	12:39	Packet Loss, Round Trip Time	Level 3 Communications	4.30.180.198	Ottawa Office	Ottawa, Ontario, CA

Vantage Diagnostics is our network path performance monitoring tool.

For that to work you need to install a small agent (windows service) either on the site – here in Ottawa – or on the user you want to monitor and then troubleshoot.

This probe is checking the latency between every hop on the route to the Microsoft cloud service and will discover who owns each hop and then alert you in the case of a performance problem.

What you see above are the results of the latest tests operated from our Ottawa office. You can test the route to Microsoft Teams and to any other end point - whether it is a cloud service or even an on-premise application or device.

You can clearly see that the problem for Teams is at the Bell Backbone which is introducing Packet Loss and Round-Trip Time at a particular hop. This confirms the previous issues with the user experience of the calls going through that ISP.

With network path monitoring you can immediately identify where the latency comes from, who is responsible and then who to contact – in this case the ISP – to fix the issue.

If you want to go deeper on our network path performance monitoring capabilities, please review our video Track Microsoft and a Third Party's Quality of Service with Martello Vantage DX: https://youtu.be/WWsi6CuIUD4.

To finish with this location dashboard, we can scroll down a bit further and discover the results of the synthetic transactions we were performing from Ottawa to proactively detect and qualify any degradation of service quality.
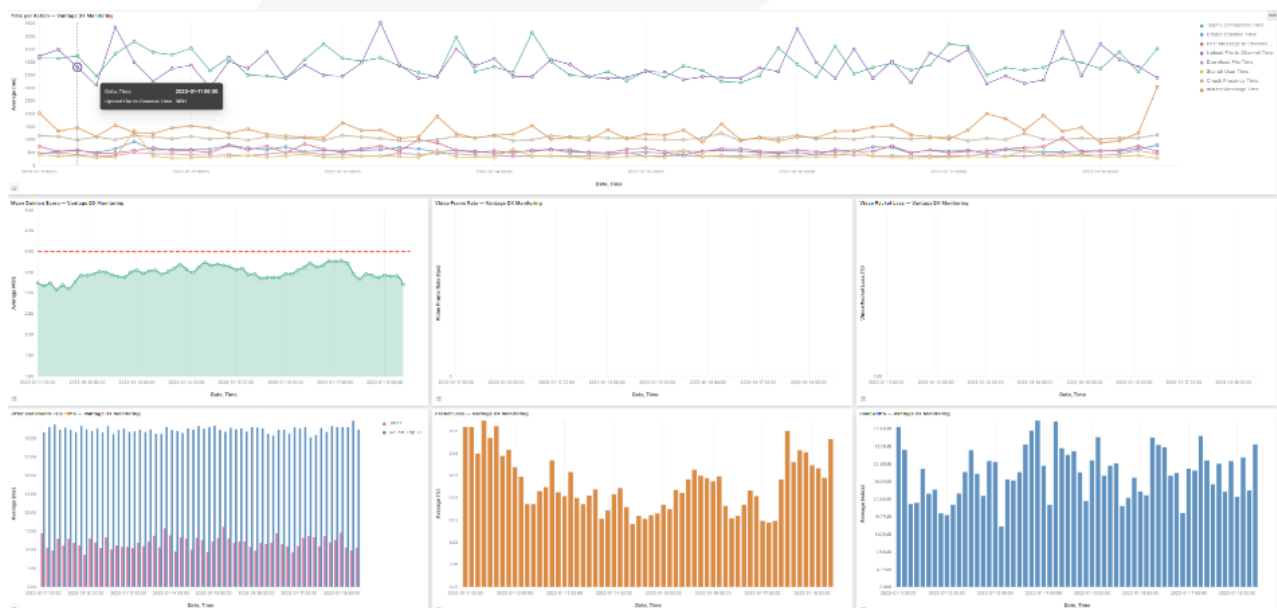
Martello Vantage DX provides you with robots that are windows services. These robots are using Microsoft Teams and Microsoft 365 applications exactly the same way a user would.

The difference though, is that a robot uses the Microsoft suite *continuously*, detects any service degradation, alerts when degradation happens and also reports on the general performance of every application.

Very few of your real users can do that 😊 nor would they take the time to log a ticket if they did have a poor experience.

In this location dashboard we only show the results for Teams collaboration as well as Audio and Video calls. But the robots can test *every* Microsoft 365 workload continuously. If you want to know more about our synthetic transactions feature set, please check out our video "Detect Microsoft 365 And Microsoft Teams Outages with Martello Vantage DX": https://youtu.be/O1eulbZDJ1w for more details.

The first chart you see provides the results of the tests on the collaboration part of Teams.
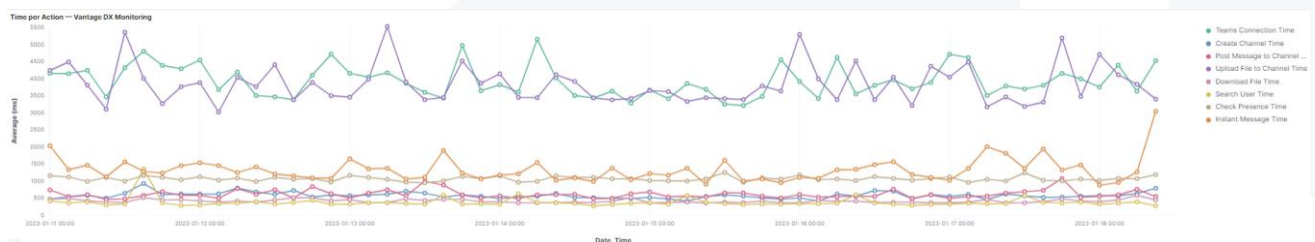
It gives you the overall performance for your users in the desired location you have selected when they upload a document, download it, chat, write on a channel, etc…

Right under this table you can see the results of the Voice and Video calls with the resulting network statistics that we measure during these continuous automatic calls.

The goal of these continuous tests is to be able to spot degradation of service quality at any time of the day or night and provide an early alert to your team to proactively prevent an issue from becoming a real issue when your users are relying on Microsoft Teams.

It will detect how any change in the network is affecting the user experience or how any issue that is occurring during off-hours will impact your business lines when they are back to work.

Overview

You have seen how easily you can see where your problems lie, their type, and who is affected in the context of the volume of calls overtime.

You also have drilled down to specific locations to analyze exactly *what* is happening from different viewpoints including a real user, the network path and through proactive service quality.

Hopefully this has given you a glimpse at how easy it is to identify, prioritize and understand the issues that are occurring at your most critical locations.

But to work proactively on these issues you need to get alerted when it matters most to *you* and not be waiting in front of your screen or for users to open an IT ticket and notify you.

Watch the video in the series where we show you how "Proactively Support Users With Microsoft Teams User Experience Alerting using Martello Vantage DX":
https://youtu.be/ILsxQjRpzko