aruba
a Hewlett Packard Enterprise company

EBOOK

IT’s toughest user experience monitoring challenges

And how to solve them!

Overview

As soon as you enter your home, office, café, library or retail store what is the first thing that happens?

If you said, your phone, watch, iPad or laptop connects to the Wi-Fi network, you guessed right! Your customers and employees are increasingly relying on devices to interact, transact and explore within businesses. This results in an increased dependency on networks to connect people and businesses as never before!

Substandard network and application performance leads to increased help desk calls, immediate truck roll, extended troubleshooting time, productivity loss, and unhappy users. The responsibility of keeping the network up and running falls on IT teams, who are already facing the pressure of shrinking budgets and reduced support costs. The lack of accurate data and timely insight, manual processes, disconnected network monitoring tools and responsibility of maintaining business SLAs, makes this task even more challenging.

This eBook covers the top five challenges IT teams face and how they can be solved!

Dependency on network is immensely high - nearly 60% of business interactions are digital today, up from 36% in 2019[1]

Lack of precise insights means higher MTTR - nearly 70% of IT's time is spent addressing network issues[2]

Network visibility and agility are limited - 64% of enterprises still use 4 to 10 tools to monitor and troubleshoot their networks[3]

1. https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/how-covid-19-has-pushed-companies-over-the-technology-tipping-point-and-transformed-business-forever
2. Gartner, "5 Network Cost Optimization Opportunities," June 2019
3. https://www.arubanetworks.com/assets/infographic/Aruba_Unified-Infrastructure_Infographic.pdf

IT'S TOUGHEST USER EXPERIENCE MONITORING CHALLENGES:

1. **Maintaining access to critical applications**
2. **Remote monitoring and troubleshooting**
3. **Baselining performance and validating changes**
4. **Ensuring IoT device accessibility to network**
5. **Monitoring network performance issues on-demand**

CHALLENGE 1

Maintaining access to critical applications

Outlook is not working. Zoom calls are getting disconnected. CRM application isn't loading. Customers can't access the guest network or Netflix and social media apps! We have been there as end users and have opened complaint tickets about applications not working over Wi-Fi or the LAN.

Once a helpdesk ticket is created, the IT team must fix it as soon as possible. Delays not only cause a loss of revenue and productivity but also impact the user experience. Ensuring 24x7 uptime for critical apps requires end-to-end network visibility from the edge to the cloud. IT teams need to keep a close tab on network performance by adopting the following best practices.

1. http://contentz.mkt3416.com/lp/38068/360499/Ovum_Collaboration%202.0%20Report%20Final.pdf

The Cost:

Up to 68% of employees experience a late start of online meetings
because of an unstable network resulting in 3 hours/week of lost productivity[1]

$4000/day productivity loss*
due to poor performance of critical applications like MS Office on your network (*businesses with up to 200 employees)

CHALLENGE 1

Maintaining access to critical applications

24x7 proactive network monitoring

Continuous network monitoring from an end-user perspective helps IT teams proactively spot and fix network issues, measure business-defined SLAs and get ahead of outages.

Real-time Intelligent Alerts

IT teams spend the majority of their day troubleshooting network issues. These issues are of varying severity and IT teams must identify, segregate, and prioritize the critical issues from the rest. Real-time intelligent alerts not only enable IT teams to spend more time on important tasks but also reduce alert fatigue.

Internal application monitoring

These apps and services run the business, be it accounting, collaboration, communication, resource management, helpdesk, or CRM. IT teams need to ensure these critical applications are tested continuously throughout the day for accessibility and responsiveness.

Web application monitoring

IT teams need to identify significant web applications used on the network, define end-to-end user workflows on these applications, and automate the testing of these workflows to ensure high accessibility.

Captive Portal monitoring

If you are providing public Wi-Fi or guest access, you're probably using a captive portal. It is the very first brand touchpoint for your customer and must be a pleasant experience, for which teams need to continuously test and baseline the connectivity and responsiveness of the captive portal to ensure guest users are happy.

CHALLENGE 2

Remote monitoring and troubleshooting

Most helpdesk tickets are anecdotal, such as 'the Internet is down', 'Zoom calls are getting dropped', 'the POS terminal is not working, 'it's taking a lot of time to open MS office'. These issues are difficult for IT teams to replicate and identify whether the problem is an application, the network, a server, or an end device problem.

The difficulty increases when the IT team is supporting the business remotely. This results in truck rolls and extra effort to diagnose the issue. IT teams need real-time information so that they have the precise data for rapidly troubleshooting any issues, regardless of where they are. Let's see how this can be achieved with the help of remote monitoring tools.

Remote monitoring tools

These are network monitoring and troubleshooting tools deployed on the client-side - independent of the underlying network infrastructure. These tools continuously test network connectivity, availability, performance, and alert IT in real- time when important services get impacted.

These tools actively help IT troubleshoot networks by running configurable tests. These tools also capture and store historic data which helps the team do a root cause analysis of network issues that may have happened in the past, suggest the required fix and prevent the issue from happening again!

These tools work as your remote technicians and equip IT with precise set of data to rapidly fix issues and make most out of site visits - whenever they happen.

CHALLENGE 3

Baselining performance and validating changes

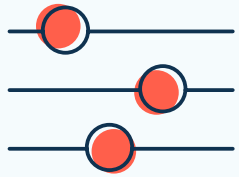
Businesses spend a fortune on digital transformation initiatives but often struggle to quantify the outcome. Baselining network performance enables businesses to understand how their network is maintaining a certain connectivity, availability, responsiveness, and signal strength – all averaged over a period of time.

This data is significant when IT team is validating network changes and is required to cross-reference historic data with new data to justify the network upgrade exercises. It also helps the team to identify issues which occurred due to a change in configuration or firmware early in the process, and take corrective measures, or hold vendors and service providers accountable if the data comparison shows degradation in the network's output.

Following are quick fixes for these two critical tasks.

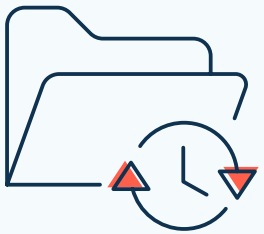
Dynamic network performance baselining:

Network performance should be dynamically baselined using an automated tool to reduce repetitive tasks and scope for error while factoring in seasonal traffic fluctuation, BYOD requirements and network blind spots identification.



Validating change management with historic data:

IT teams need easy access to historic data in a format that they can consume quickly. This can be achieved by using an intelligent network monitoring tool that can capture, process and export network data to provide a detailed comparison by parameter.



CHALLENGE 4

Ensuring IoT device accessibility to network

What do sensors, cameras, and automated machines have in common? They all use the network to communicate with users, transfer data, and perform various tasks.

Businesses are already dependent on these devices for security, warehouse management, AR/VR and various automated works. These IoT devices consume a major chunk of your network bandwidth, require low latency and are live 24x7. Unfortunately, IoT devices cannot open helpdesk tickets, making it complex for IT teams to ensure availability of these devices. Here is a non-complex way to ensure that IoT devices are working fine on your network.

15bn+

IoT devices will connect to enterprise infrastructure by 2029*

Monitoring IoT with IoT

A tool that can securely onboard on your network as a unique user and continuously access same services over same network path – much like IoT devices do on your network, is a hassle-free way to measure the experience of IoT devices on the network. This solution does not require code injection into your IoT software/firmware and does not disrupt the functioning and security aspects of both IoT device and the network.

* https://www.gartner.com/smarterwithgartner/gartner-predicts-the-future-of-cloud-and-edge-infrastructure

CHALLENGE 5

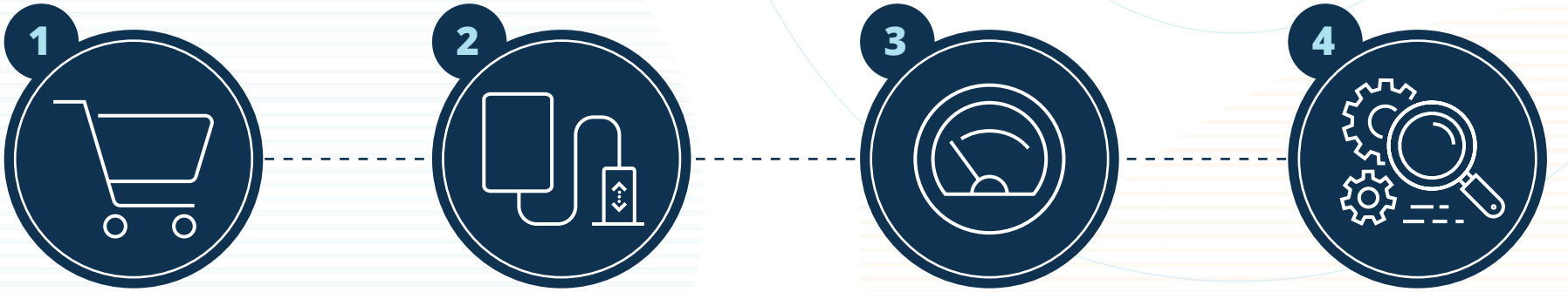
Monitoring network performance issues on-demand

COVID has tested the agility and scalability of IT teams. They have worked around the clock to scale the network and help healthcare providers, vaccination authorities, educational institutions and enterprises to provide required network support to caregivers, staff, students and employees.

We also witnessed the rise of pop-up clinics, high-performing network requirements in parking lots, floating hospitals, on-the-fly vaccination centres, the rise of esports and remote working environments. Since these ad hoc networks have to support critical functions, it is important to ensure that they are up and running and providing an acceptable end-user experience.

On-demand monitoring tools:

One of the simplest ways to achieve this is by deploying a zero-touch provisioning on-demand network monitoring tool that requires minimal IT expertise. Just ship it to the remote location, plug it into an Ethernet port and the tool starts measuring and reporting performance metrics. These tools work as your remote technicians and help IT teams to proactively monitor network performance and rapidly close any helpdesk tickets.



Ship the tool to your remote location

Plug it into an Ethernet port

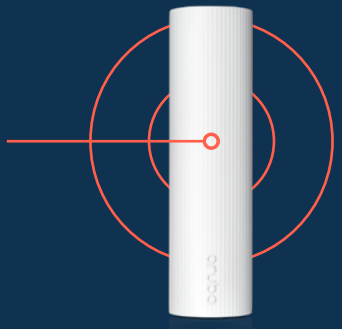
Tool starts monitoring performance metrics

Real time network performance data delivered to IT remotely

How Aruba User Experience Insight (UXI) saves the day!

AIOps powered Aruba UXI comprises of a cloud-hosted dashboard and sensors deployed onsite. Together they function as your remote technician.

The UXI *sensors* onboards onto your network as an end-user and actively monitor wireless and wired connections, providing a detailed performance analysis from an edge perspective via a highly intuitive cloud-hosted UXI *dashboard*.



Reasons to trust Aruba UXI:

Executes more than 0.5Billion tests per day

Help businesses save 20% per month

Deployed in over 50 countries

Highlights network issues within 2 minutes of deployment

Aruba UXI is designed to solve the toughest user experience monitoring challenges

1. Maintaining accessibility to critical applications

Aruba UXI executes 30K+ tests per day on your network - continuously testing the availability, reachability, responsiveness and other performance indicators. With WAT (Web Application Testing) feature of Aruba UXI, IT teams can test various end-to-end user workflows like hopping onto a website, logging in, clicking a button, and logging out of the web application. Internal applications such as CRM, printers and file servers hosted within the firewall can be easily configured on Aruba UXI for continuous performance testing on the network. Aruba UXI also supports captive portal monitoring, with UXI sensors testing the connectivity and responsiveness in a round-robin testing cycle.

Aruba UXI's Incident Detection is an AIOps powered alert mechanism that uses machine learning to dynamically set issues threshold and alert IT teams when a priority service gets affected. The alerts can be sent over email or as a webhook notification to Slack. It not only cuts down on alert fatigue but also helps IT teams to dedicate more time to fix important services.

30%

of enterprises will adopt AI-enabled tools to augment traditional monitoring approaches by 2023, up from 2% today*

2. Remote monitoring and troubleshooting

Aruba UXI sensors support plug and play deployment. Once activated they start testing performance of the Wi-Fi, Ethernet, DNS, DHCP and Gateway from an end- users' point of view and continuously monitor key performance metrics like connectivity, responsiveness, accessibility, load, bandwidth, throughput, latency, jitter loss and packet loss. Under the hood these sensors are Linux-based devices which can run commands like get http, trace, ping for a step-by-step triage, when issues are detected. IT team can access all the data along with packet capture file, up to 30 days, via the cloud hosted dashboard.

* Gartner, "Use AIOps for a Data-Driven Approach to Improve Insights from IT Operations Monitoring Tools," May 2020

Aruba UXI is designed to solve the toughest challenges faced by IT teams

3. Baselining performance and validating changes

Aruba UXI leverages AIOps to analyze network trends and dynamically baseline network performance. Using the intuitive UXI dashboard, your network ops team can quickly compare how your network is performing 'before' and 'after' of a network upgrade, configuration/ firmware changes or new components additions.

4. Ensuring IoT devices accessibility to network

UXI sensors connect to your network from the edge like IoT devices do, continuously access IoT specific applications – Internal and web based, and alert IT team when certain connections or applications are not accessible on the network.

5. Monitoring network performance issues on-demand

Ship Aruba UXI sensors to your remote locations, install the zero touch deployment sensors near your end users, configure the Wi-Fi/Wired network and critical applications for testing, and let UXI baseline network trend, test bandwidth, responsiveness, availability, throughput and load capacity of your network – all from an edge perspective. Get precise insight into end user experience on your workstation from the Aruba UXI dashboard.

Aruba UXI advantage:

Always on remote technician

AIOps powered Intelligent Alert

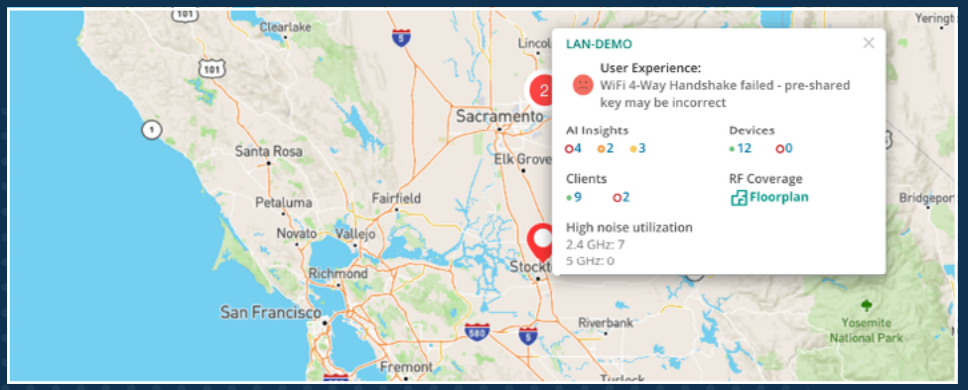
Step-by-step triage on issue detection

Vendor agnostic

Aruba Edge Services Platform (ESP)

Aruba ESP (Edge Services Platform) is the industry's first AI-powered, cloud-native platform to automate, unify, and protect the Edge. Aruba Central is a powerful cloud networking solution that functions as the management and orchestration console for Aruba ESP. Aruba Central offers unmatched simplicity for today's networks and provides a single point of control to oversee every aspect of wired and wireless LANs, WANs, and VPNs across campus, branch, and remote office locations.

Aruba User Experience Insight (UXI) completes IT's understanding of application and network health by measuring it from the end user perspective. UXI sensors deliver continuous monitoring and testing of wireless and wired performance, reporting any anomalies directly to the Aruba Central network health dashboard. When a problem is detected, IT is quickly notified through Aruba Central and can then access the full UXI dashboard for advanced troubleshooting. Aruba UXI complements the AIOps capabilities within Central by offering granular and timely user experience insights.



Learn more about how Aruba UXI can help your IT solve the toughest challenges in easiest way!

Explore Aruba UXI

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