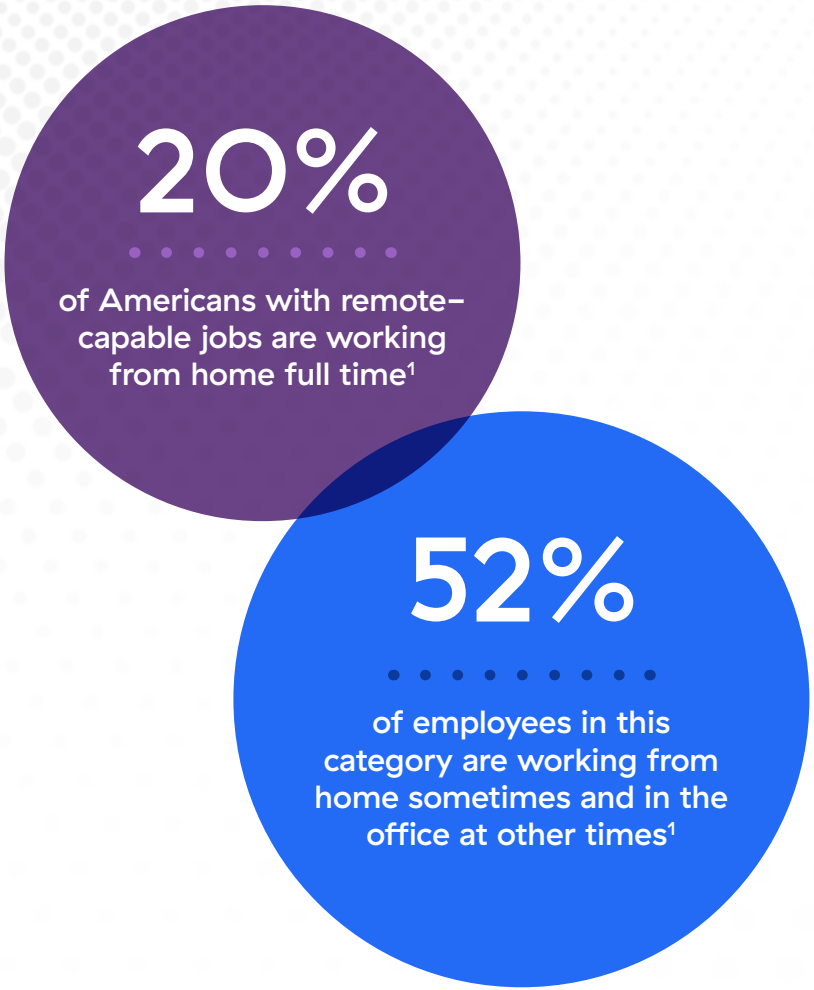
zscaler™

EBook

Cloud Intelligence: How to Boost Service Quality and Drive Down Ticket Volumes

Contents

eBook



Introduction

In today's world, service desk teams' jobs are harder than ever. It used to be that the majority of end users were located onsite or in branch offices, were using company-owned devices, and were connecting to resources in the corporate data center via network infrastructures that the organization administered. But those days are long gone.

Instead, people work from everywhere, need access to IT resources around the clock, and rely on a complex assortment of Software as a Service (SaaS) apps, cloud services, and legacy technologies. Currently, a full 20% of Americans with remote-capable jobs are working from home full time, while 52% of employees in this category are working from home sometimes and in the office at other times.[1]

The large-scale adoption of remote work makes it much more difficult for service desk teams to resolve tickets, since users' traffic flows into places they can't see. Before, these communications largely traveled within the campus network, whereas today, the entire internet is the corporate backbone and there can be thousands—or more—of remote networks (one for every work-from-home employee). All too often, the complex labyrinth of cloud services, routers, internet service providers (ISPs), and home WiFi networks that connectivity depends upon is hard to understand, nearly impossible to visualize, and even more challenging to troubleshoot.

At the same time, expectations for service teams are on the rise because employee productivity is so closely tied to the performance of digital tools and cloud applications. If a SaaS app that employees rely on goes down, the impact on their productivity—and the company's profitability—can be severe and immediate.

1. Source: Gallup, Indicators: Hybrid Work, Q2 2023.

Too Many Tickets, Too Little Time?

Because employees are much more dependent upon technology to get their jobs done, and because IT ecosystems are more complex, the total number of service desk tickets is skyrocketing. Since 2020, there's been a 35% increase in the total volume of support tickets that organizations have seen. Plus, the amount of time it takes to handle each ticket has increased from an average of 7.37 minutes to nearly 10 minutes.[2] This is because resolving tickets and diagnosing the root causes of end user–impacting incidents has gotten harder. The costs associated with these activities have continued to climb as well.

Yesterday's approach, in which service desk teams relied on complex arrays of multiple point solutions for application, network, and device performance monitoring, is no longer tenable. That approach left blind spots between the end user's device and the app, providing only a fragmented view into the application delivery chain. It was labor–intensive and time–consuming, since teams had to manually export and correlate data from multiple tools. It required extensive training, because each individual tool demanded a new skill set. And it left teams in reactive mode, trying to resolve problems after they'd been reported, confronting alert fatigue, and struggling to find actionable insights.

To resolve more tickets, faster, service desk analysts need fewer tools that are simpler to use. With annual job turnover rates in this field approaching 40%,[3] they also need solutions that are quick to learn—and that can transform the inherently complex process of troubleshooting into something that's straightforward and intuitive.

A modern digital experience monitoring platform can harness the power of AI to do exactly this. It will be able to gather data from devices, networks, and applications to pinpoint the root causes of issues quickly and automatically. Because the solution consolidates information from a wide variety of sources into a simple, easy–to–understand dashboard, it'll be possible to get new hires up to speed rapidly. And because it enables a proactive approach, you can close tickets faster—or prevent them from ever being opened in the first place.

The amount of time it takes to handle each ticket has increased from an average of

7.37 minutes to nearly 10 minutes[2]

2. "Helpdesk meltdown due to absenteeism, low morale and increased workload," *Computer Weekly*, February 2021.
3. "Metric of the Month: Annual Agent Turnover," *HDI*, August 2018.

Introducing Zscaler Digital Experience (ZDX)

Zscaler Digital Experience (ZDX) gives service desk analysts comprehensive, end-to-end visibility into all the factors that could potentially impact end user experience, and it presents its findings within an intuitive user interface that makes it easy to identify root causes. From cloud apps to home WiFi networks—and everywhere in between—ZDX continuously collects and automatically analyzes a broad array of performance metrics, making it possible to proactively identify and quickly resolve issues.

Let's take a look at what this looks like in practice. Here's how ZDX provides cloud intelligence across the entirety of the application delivery chain.

The ZDX Incident Dashboard

ZDX leverages AI and machine learning (ML) to correlate data across four areas:

- WiFi
- Last mile ISP
- Zscaler data center
- Application

The ZDX Incident Dashboard displays incidents that affect device performance for multiple users across all of those areas. The incident display can be filtered by:

- Geolocation
- Incident type (in which of the above areas is the incident taking place?)
- Time
- Impacted users

For each incident, you can drill down into granular details by viewing the Incident Details page. This tells you the incident's type, severity, epicenter, start and end times, and duration, as well as other key metrics.

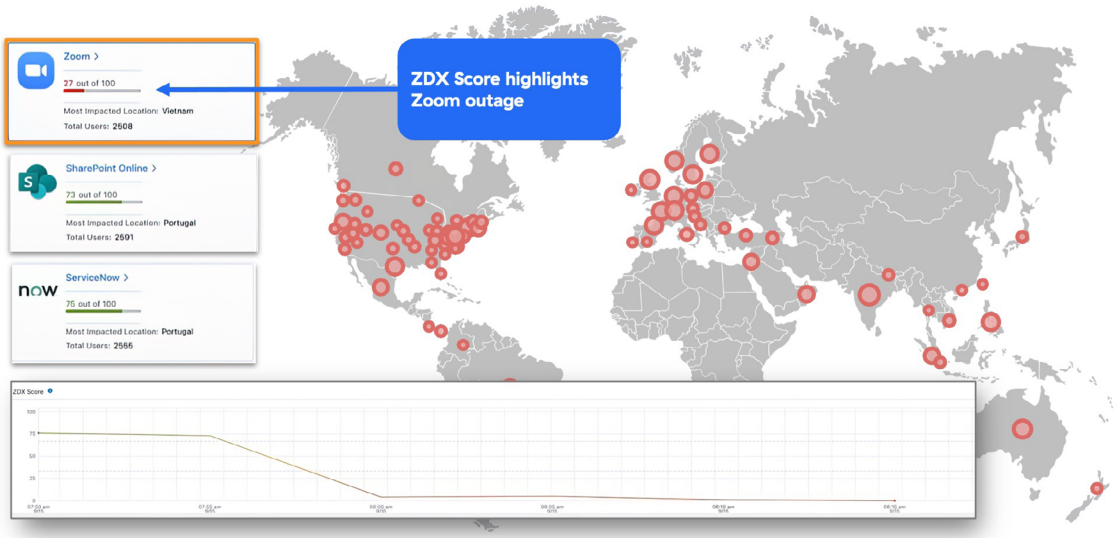
Application Outage: Zoom

One-Click Root Cause Analysis

ZDX can securely monitor any business's SaaS, public cloud, and private data center–hosted applications, offering a detailed view into individual end user experiences—even if these differ across regions or parts of the company. This enables ZDX to almost instantly identify the source of end user–impacting issues, including when they originate in a SaaS vendor's infrastructure.

Here's an example:

At 7:55 AM PDT on September 15, 2022, ZDX detected an outage in the widely-adopted unified communications as a service (UCaaS) app Zoom, one that affected users around the world. The first indication that there was a problem was when the ZDX score associated with Zoom services suddenly and unexpectedly dropped. Upon further analysis, 502 HTTP Response Code errors indicated a Zoom outage, and the ZDX heatmap illustrated that the impact was global.

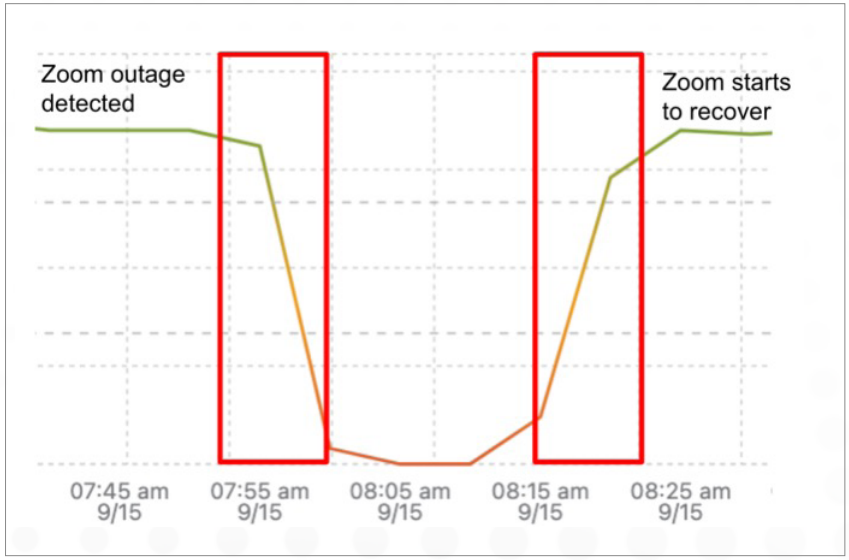


Zscaler's Digital Experience Dashboard showing Zoom global issues

ZDX Scores

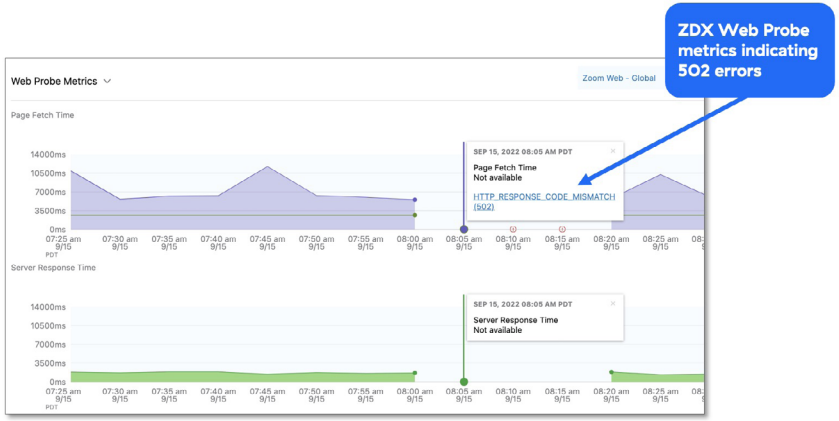
ZDX maintains a ZDX Score for each application it's monitoring. This score represents that application's performance for all users in an organization across all locations. ZDX Scores are displayed on the ZDX Admin Portal Dashboard, where it's possible to filter them by time period and individual application. ZDX Scores go from zero to 100, with lower numbers indicating poorer user experiences.

In the case of this incident, the ZDX Score for Zoom dropped to zero for a period of 35 minutes. With ZDX, service desk teams could quickly see that the service degradation wasn't limited to a single location or user.



ZDX Score indicating the degradation and recovery times in Zoom

The ZDX dashboard also provides Web Probe Metrics, which show page fetch and server response times for each app. In this case, the Zoom server did not respond for a period of time, resulting in 502 errors, which signify that a server has received an invalid response from another server while acting as a gateway or proxy.

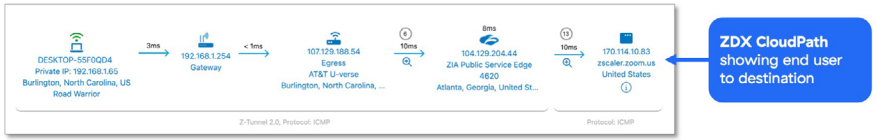


ZDX Web Probe metrics indicating 502 errors

For service desk team analysts who need to know why this is taking place, it's easy to find answers in ZDX. ZDX takes advantage of AI to automate the process of root cause analysis. When the ZDX Score falls below a certain threshold—indicating that user experiences are poor—the analyze score button appears on the ZDX dashboard. Simply click this button, and you'll receive insights into potential issues.

ZDX AI-Powered root case analysis

When an application is down, IT teams often think that the network may be the root cause. In case of the Zoom outage, ZDX has already verified that the problem was taking place at the application level, not due to the network. You can verify this by checking the Cloud Path metrics from the end user to the destination.



ZDX CloudPath showing end user to destination

Cloud Path

Cloud Path is a visualization that makes it easy to understand what's happening to traffic as it traverses different hop points. ZDX Cloud Path lets you view:

- A graph displaying latency or packet loss during a particular time period
- Hop and Command Line views that detail the full path from the user's device to the application or other destination

In this case, Cloud Path indicated that the problem lay with the SaaS app. This was soon verified by Zoom. According to its status page, the outage was reported at 8:17 AM PDT, services began to recover by 8:25 AM PDT, and Zoom reported the issue resolved by 8:49 AM PDT.

With ZDX, service desk teams were aware of the cause of the issue before it was published to Zoom's status page, and the ZDX dashboard provided granular insights into which geographies were affected. This made it easier for service desk analysts to understand the scope and duration of the outage.

Issues Starting and Joining Meetings

Incident Report for Zoom

Resolved

This incident has been resolved.

Posted 41 minutes ago. Sep 15, 2022 - 08:49 PDT

Monitoring

We have resolved the issue causing users to be unable to start and join Zoom Meetings. We will continue to monitor and provide updates as we have them.

Posted 53 minutes ago. Sep 15, 2022 - 08:37 PDT

Identified

We have identified the issue starting and joining meetings. We will continue to investigate and provide updates as we have them.

Posted 1 hour ago. Sep 15, 2022 - 08:30 PDT

Investigating

We are investigating reports of zoom.us being unavailable.

Our teams are currently investigating the service impacting event. Our engineers are investigating.

Posted 1 hour ago. Sep 15, 2022 - 08:17 PDT

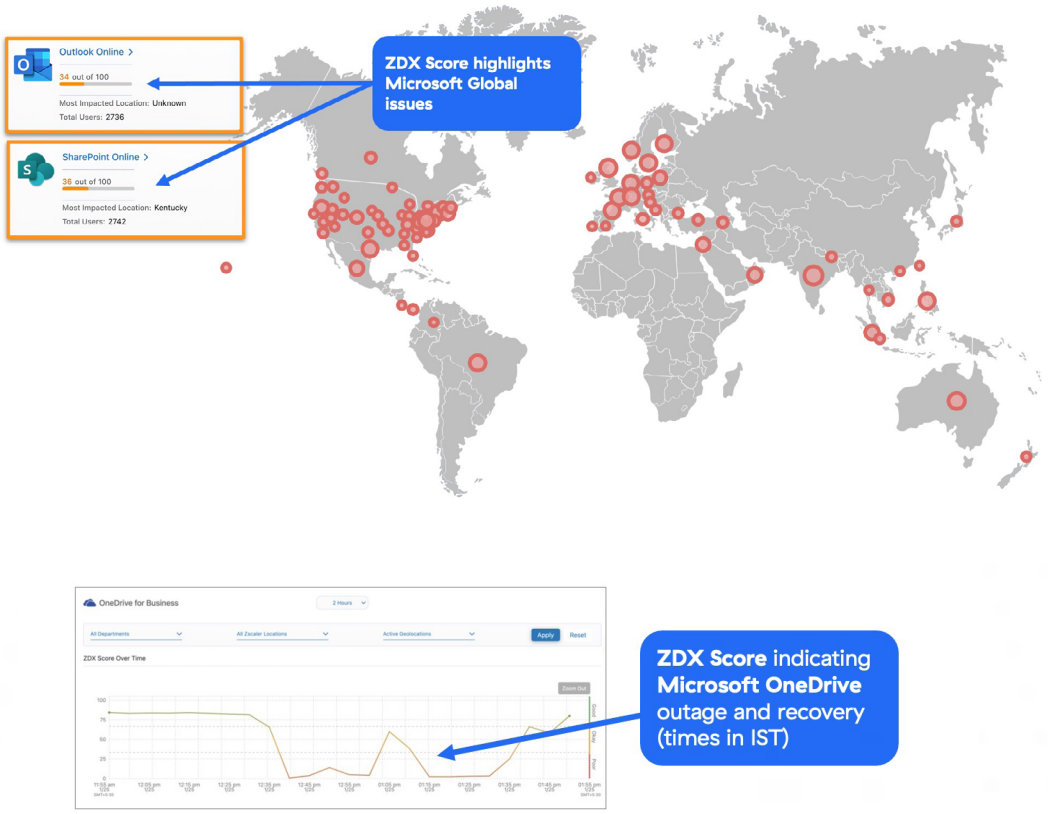
Cloud Services Outage: Microsoft Azure

Cloud Path Details Precise Cause of the Issue

ZDX provides deep insights into cloud service–impacting issues, so that service desk teams can quickly and accurately determine their root causes. This reduces mean time–to–resolve (MTTR) and first response time. It also makes it easy to report service degradations and outages to cloud providers—along with detailed evidence supporting the claim.

Our customers experienced this firsthand on January 24, 2023, when—at 11:10 PM PST—ZDX showed a substantial and unexpected drop in ZDX Scores for Microsoft Azure services around the world. Upon further analysis, our teams observed HTTP 503 errors—indicative of a Microsoft Azure outage—and the ZDX heatmap revealed that the impact was global.

During this outage, which lasted approximately 50 minutes, ZDX Scores for Microsoft OneDrive, SharePoint, and Outlook probes dropped to zero. Using ZDX, service desk teams could easily see that the service degradation wasn't limited to a single location or user.

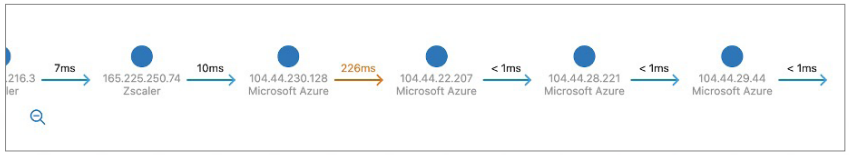


ZDX Score indicating Microsoft OneDrive outage and recovery (times in IST)

ZDX's AI-powered root cause analysis immediately identified a non-responsive application as the reason for the issue.

ZDX AI-powered root case analysis indicates the reason for the outage

Checking the Cloud Path metrics allows service desk team members to drill deeper, In fact, the ZDX Cloud Path shows that the issue is between two Microsoft Azure routers.



ZDX CloudPath showing end user to destination

The Microsoft Azure status page soon confirmed this outage, which was reported at 7:05 UTC, and was resolved by 9:45 UTC.

With ZDX Alerting, our customers were proactively notified about the problem. Incidents were automatically opened within our service desk integration—long before end users began to notice and report problems. Because IT teams could see that this was an issue between Microsoft routers—not parts of their internal networks—they didn't waste time on unnecessary troubleshooting or diagnostics. And far fewer tickets were generated, because advance notice meant there was no need for tickets.

ZDX Does the Heavy Lifting

Troubleshooting routers, whether they're part of an on-premises network or they're in the cloud, requires a specialized skill set that takes years to develop. With ZDX, there's no need to know how to identify high latency between routers, because AI does it for you. Service desk analysts are presented with the most relevant insights, on a need-to-know basis, that help them work efficiently and effectively.

High DNS Latency

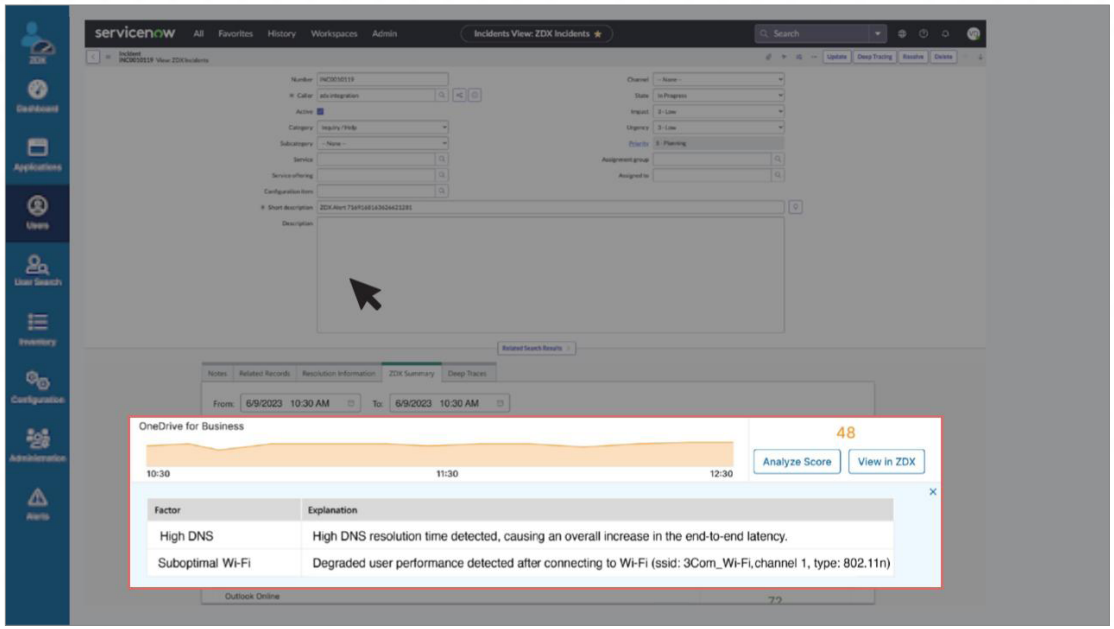
AI-Assisted Troubleshooting with Shareable Snapshots

In a world where hybrid work is the norm, service desk and network/IT operations teams often lack ownership of—and visibility into—the sources of problems that occur outside the corporate IT ecosystem. ZDX makes collaboration simpler and easier.

First of all, AI- and ML-powered root cause analyses expedite triage and resolution. Plus, ZDX's native integration with ServiceNow makes it so that a service desk analyst can escalate a ticket to a network specialist with a single click if that's called for.

Here's what this looks like.

For this incident, it's easy to see that the issue is high DNS latency.

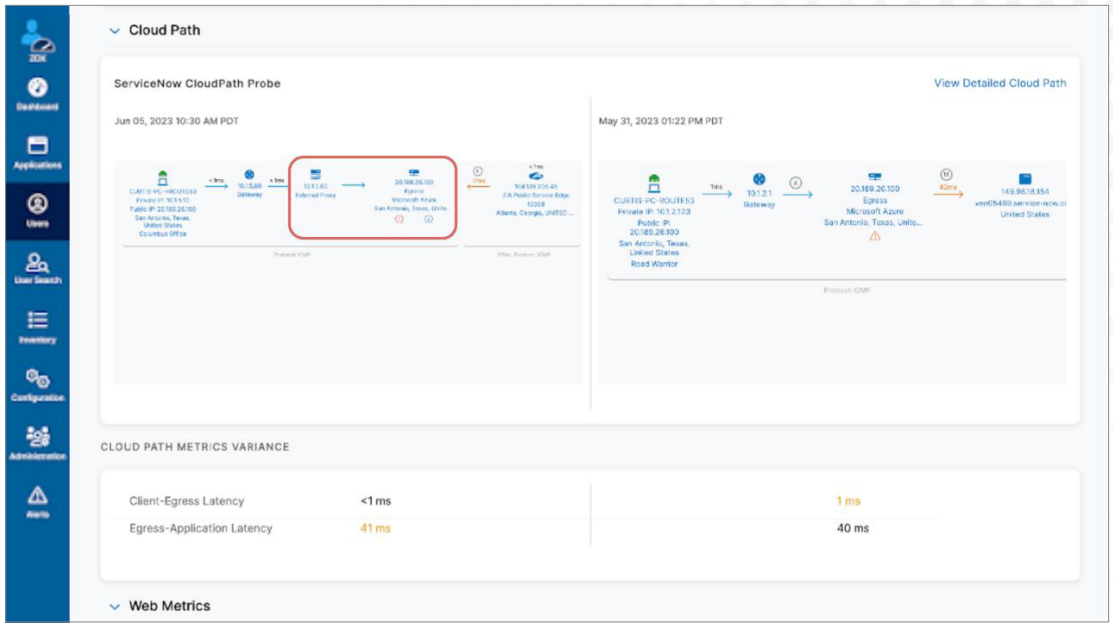


To enable the network team to continue with the analysis, service desk analysts can simply create a ZDX Snapshot for the network specialists (L3) to review.

This snapshot lets L3 specialists dig deeper right away, saving time. There's a "compare" feature that makes it easy to see which factors have changed since the ZDX score began to decline. The side-by-side comparison view provides an overview of the problem, so that specialists can quickly identify the right focus areas, and rapidly implement lasting fixes. Instead of just sending along notes about the issue, service desk teams can pinpoint the exact problem, and have confidence that everyone's on the same page, because they're all looking at the same data, from just one tool.

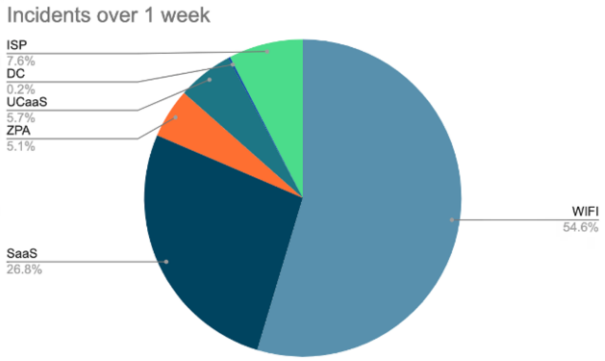
ZDX snapshots can also be used as a training tool. Even new hires with limited experience can get up to speed fast, since they can learn directly from the monitoring solution itself.

In the example here, there's a service chain between a third-party proxy and the Zero Trust Exchange: that's where the DNS configuration needs to be checked.

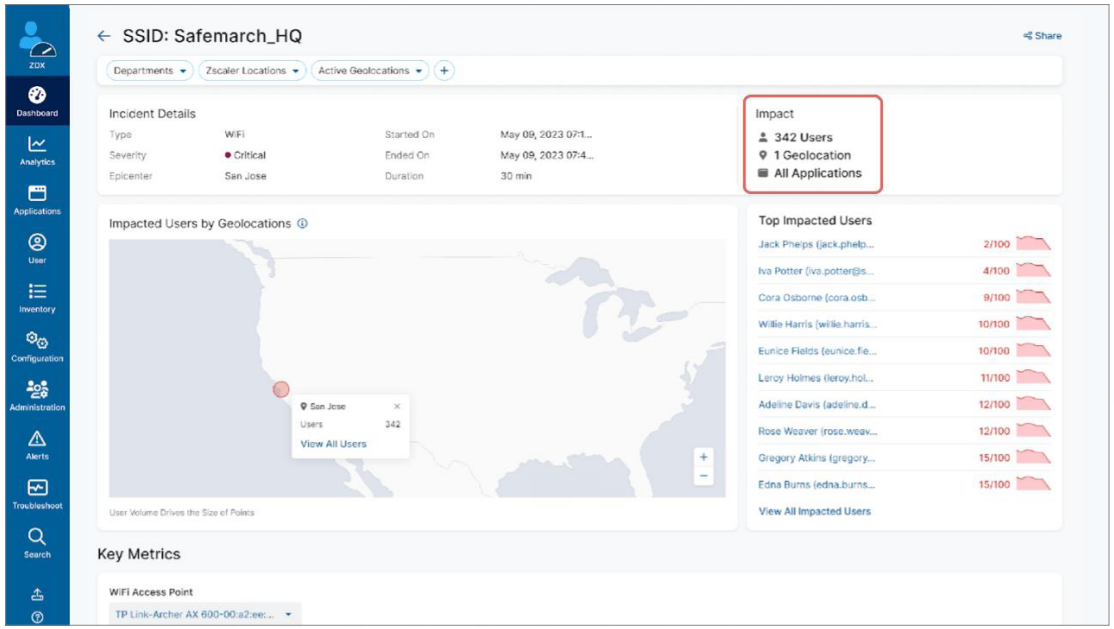


ZDX also incorporates the ZDX Incident Dashboard. This lets teams see the big picture—highlighting the areas where issues are occurring most frequently.

The Incident Dashboard takes advantage of ML models that can detect problems in applications, WiFi, Zscaler data centers, last mile and intermediate ISPs, and endpoints. It also relies on automated, AI-powered correlation to give service desk analysts a picture that's both broad and detailed.



The dashboard shows all incidents that have taken place within the last two weeks, detailing who was impacted, when, and where. You can drill down further into incident details to see the exact size of the area impacted, its epicenter, and whether other users were also affected. You can also categorize the list of impacted users, specifying, for instance, groups whose status needs further verification.



Relevant metrics are displayed for every incident, showing what may have triggered it.

Home WiFi Help

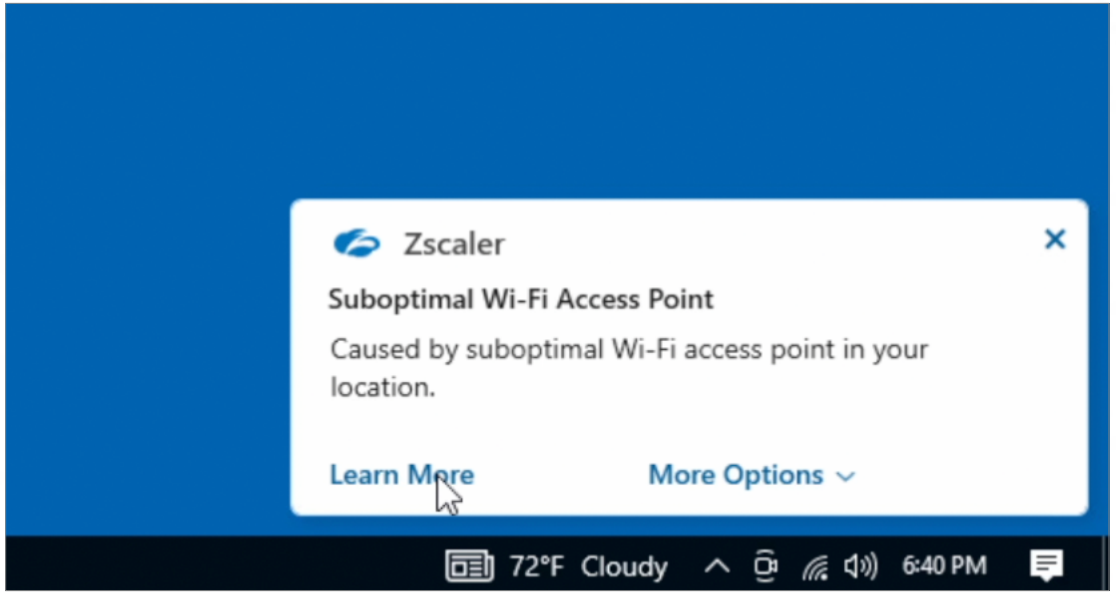
Self Service Capabilities

Since working from home (or the neighborhood coffee shop) is just about ubiquitous, problems with local WiFi networks are among the most common causes of connectivity issues, but service desk teams often aren't armed with the tools they'd need to diagnose and resolve WiFi problems.

With ZDX, they may no longer need to do this.

ZDX now empowers end users to fix their own digital experience–impacting issues if the fix is within their control. A lightweight AI engine running in Zscaler Client Connector notifies users of issues like poor WiFi connectivity or high resource utilization, and then offers suggestions on how users can resolve those issues themselves.

There are several major benefits: end users can restore their own productivity faster—with no need to call the service desk—and service desk teams will see lower ticket volumes. Overall, employees' experiences will be better, and they can keep their productivity up, with fewer lasting disruptions.



Zscaler Digital Experience (ZDX) Makes Your Job Easier and Your End Users Happier

Zscaler Digital Experience (ZDX) helps service desk teams provide end users with great experiences across all locations, devices, and apps, while accelerating ticket resolution times and decreasing overall ticket volumes. But it does much more than this.

ZDX empowers service desk analysts to be the best user support professionals they can possibly be, giving them the insights they need to become overnight experts at diagnosing and resolving user-impacting issues. ZDX provides service desk teams with the technical knowledge they need to succeed in a hybrid-first world, enabling them to become productive collaborators within today's complex IT ecosystems. With ZDX, it's easy to document and manage Tier 1 and Tier 2 support processes, ensuring effective IT utilization for rapid incident resolution. And it's possible to contribute to—and learn from—expert conversations about networking, circuitry, telephony, and other systems, so that service desk analysts can help optimize connectivity and ensure top-notch performance.

Ultimately, ZDX can boost individual team members' technical and leadership skills, transforming them into tomorrow's highest-achieving professionals—and today's most effective.

Experience your world, secured.™

About Zscaler

Zscaler (NASDAQ: ZS) accelerates digital transformation so that customers can be more agile, efficient, resilient, and secure. The Zscaler Zero Trust Exchange protects thousands of customers from cyberattacks and data loss by securely connecting users, devices, and applications in any location. Distributed across more than 150 data centers globally, the SASE–based Zero Trust Exchange is the world's largest inline cloud security platform. Learn more at **zscaler.com** or follow us on Twitter **@zscaler**.

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