MANAGED SOLUTIONS

Fact Sheet

CROWN CASTLE

Digital Experience Monitoring

Cloud adoption and work-from-anywhere continue to bring better, more efficient ways to work. But all this new flexibility is also bringing new challenges to already complex IT environments. IT teams struggle with increasing gaps in visibility and control over end-user devices, local networks and connectivity to cloud apps.

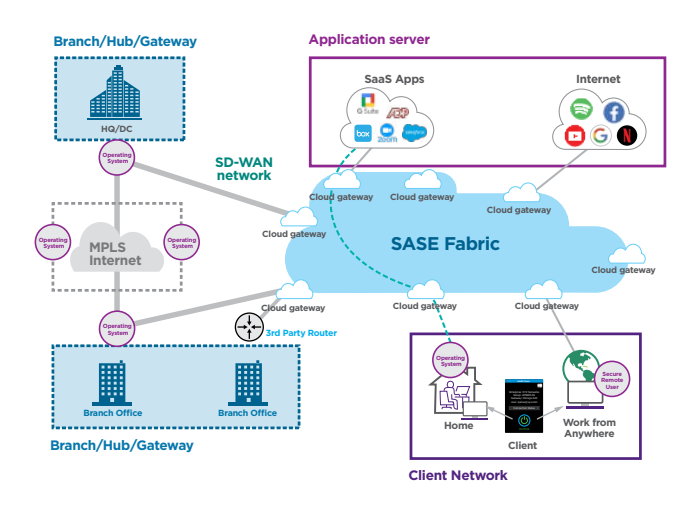
Digital Experience Monitoring (DEM) delivers unparalleled visibility across devices, networks and applications, allowing you to ensure seamless user experiences, quickly resolve performance issues, identify network misconfigurations and streamline operational efficiency. Thanks to DEM, your IT and security teams can more easily detect user traffic and applications performance issues while pinpointing their root cause more efficiently and spending less time troubleshooting.

How it works

DEM continuously measures performance and provides analytics for various segments including your users' devices, wi-fi, local network, SD-WAN network, internet and other applications. You'll be able to view performance issues at a glance, allowing you to quickly address them at the source. To implement DEM, the client:

1. **Is deployed** on an endpoint (laptop, mobile device, etc.), playing a key role in measuring and reporting metrics and troubleshooting.
2. **Measures and reports** the resource utilization of the user device. These metrics, including CPU and memory utilization, help troubleshoot performance issues that can happen when an end-user device is overused.
3. **Measures LAN performance** and provides an estimate of whether the device user experience and app performance might be impacted due to the local LAN network.
4. **Gathers additional metrics** from the local router, cloud gateway and applications.

The information is collected for each user and aggregated for historical reporting across different ISPs, user groups and application delivery points, providing insight into the issues that might be affecting users.



Key benefits

Optimized performance and reliability
Easily view how users are accessing and experiencing services, no matter where they are. IT teams can see and fix problems before users notice them, manage user expectations around performance issues or give tips on how to improve their experience.

Greater performance visibility
We provide detailed monitoring, sharing performance metrics for all segments between the user's device and the app they're accessing. Instead of siloed views from multiple tools, admins get a single, unified view.

Dedicated support and monitoring
Our DEM provides performance metrics for local networks, last-mile connectivity and your Managed SD-WAN network, including latency, jitter and loss to ISPs.

Key features

Endpoint monitoring
Monitor user device health with performance metrics on CPU, memory, disk and battery resources.

Wi-fi insights
Determine wi-fi quality for individual users by monitoring wi-fi signal, Tx/Rx rates, etc.

User experience ranking
Easily see individual user experiences in relation to their peers in the same region.

Application monitoring
Get performance insights for business apps, including DNS lookup time, TCP connect time, SSL handshake time, HTTP latency and time to first and last byte.

Unified analytics dashboard
End-to-end visibility across your SASE solution.

Automatic service degradation detection
Easily view whether service is degraded across a certain population or region.

Impact analysis
Determine scope and users affected by access and performance issues.

Global map visualizations
View a global overview of performance issues and users affected.

Advanced metrics
Use advanced probes to report autonomous system numbers, hop-by-hop data and more for each segment.

Self service
Empower users to improve their own user experience, like moving closer to a wi-fi access point.

Root cause analysis
Pinpoint the root cause of accessibility and performance issues based on network segment.

Continuous performance monitoring
See performance metrics across all segments regardless of where the user is located and what apps are accessed.

Native SD-WAN integration
Our Managed SD-WAN provides additional insights, policy control and a complete SASE solution.

Components to run DEM

1. **Lightweight client** is installed on the end-user's device. This comes standard with our Secure Remote User solution. It performs end-to-end monitoring of the user's network(s) and application performance by periodically sending synthetic probes.
2. **Cloud gateway** consolidates metrics from clients and reports them back to the analytics console. It enhances DEM data by conducting performance metrics of its own and is responsible for configuring DEM profiles on clients.
3. **Client and gateway performance data** are reported into our analytics. Our analytics platform then provides end-to-end visibility and actionable insights for all users. With this dashboard, your IT team can monitor user experiences and troubleshoot performance issues quickly.

Technical Specifications

Features are available through our Secure Remote User solution only.

Features	Standard Feature	Digital Experience Monitoring
Health monitoring of SaaS application connectivity	✓	✓
Health monitoring of custom application connectivity	✓	✓
Health monitoring of access network connectivity	✓	✓
User device health monitoring	✓	✓
Number of applications supported for health monitoring	3	50
Application and device health polling interval	15 minutes	5 minutes
Data retention	2 days	30 days
Advanced probes (ASN and hop-by-hop data)	–	✓
API-based access to DEM data	–	✓

Why Crown Castle?

Our unique, nationwide portfolio
With approximately 90,000 route miles of fiber, we own and operate one of the largest and densest fiber networks in the country with a presence in 23 of the top 25 US markets.

Our proven track record
In our 30+ years of experience owning and operating network assets we've seen it all and we're always ready to adapt to changing network trends.

Our deep expertise
We've worked with nearly every industry so we understand your unique opportunities and challenges and can tailor solutions to meet your goals.

Our solutions
We have your networking and security needs covered. Visit our infrastructure solutions page to learn more about our suite of solutions and how they can solve your toughest challenges.

CROWN CASTLE

Crown Castle owns, operates and leases more than 40,000 cell towers and approximately 90,000 route miles of fiber supporting small cells and fiber solutions across every major US market. This nationwide portfolio of communications infrastructure connects cities and communities to essential data, technology and wireless service—bringing information, ideas and innovations to the people and businesses that need them.

For more information, please contact 1-888-898-6336 or visit **CrownCastle.com**

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