



# Avoiding downtime with advanced planning

## Service assurance for high-quality patient experience

Dealing with network downtime in an increasingly on-demand world is a constant struggle for industries, especially for healthcare. Whether it's an application slowdown, bandwidth bottleneck, security breach or scheduled IT system upgrade, setbacks cause great stress for patients, caregivers, IT staff and hospital leadership ultimately responsible for care at their facilities. Providing service assurance and application reliability requires proactivity, from gaining visibility across the entire IT infrastructure to downtime drills and change management.

### MONITORING ALL TRAFFIC FOR TRENDS IN REAL TIME

"The amount of services that have gone electronic has dramatically increased in the last decade within healthcare," said Eileen Haggerty, senior director for enterprise business operations at NetScout Systems. These includes data-rich services that support patient care, such as EHRs (electronic health records), e-scripts, digital imaging and telemedicine. "This typically means working with different vendors supporting different technologies," she noted. "That multi-vendor nature may introduce interoperability issues, and that creates a compelling juncture for a variety of degradations or downtime."

Network downtime also impacts HIPAA requirements for availability and security, she added, whether due to a security breach or a hefty database backup. That's why Haggerty recommends organizations first and foremost gain full visibility of all system and application activities. Relying solely on each vendor's monitoring tools could show operational efficiency for that solution, while a more comprehensive scan can more easily detect network anomalies for faster resolution and reduced disruption of patient impacting services.

### MINIMIZING DOWNTIME AT TUCSON MEDICAL CENTER

Tucson Medical Center (TMC) in Arizona recently underwent two major initiatives that dramatically expanded its network. One was a new 200,000-square-foot surgery tower that involved many new surgical technologies and impacted other applications. The second was the opening of a new multi-function facility in another part of town. Both expanded the use of the EHR and associated technologies.

Despite IT challenges with both projects, TMC has not experienced an application service outage. Systems-related outages remain rare due in large part to the ability to virtualize and build in redundancy. The biggest challenge is the growing complexity of the network architecture and all of the systems and devices that rely on the network.

"We have a structured and orderly process for managing all our applications. In all cases, we document well and plan well. So if something goes wrong, it's usually found before go live," said Susan Snedaker, director of IT infrastructure and operations at TMC.

She believes a strong change management mindset and well-established, written processes drive high reliability and relatively short downtimes. So does striving for simplicity and collaborating on problem-solving.

"The one-offs are going to happen; it's just the nature of the work we do," she pointed out. "But to the extent that we can plan things, reduce that complexity and reduce that rush to get something done – that almost always improves outcomes."

Haggerty noted that a good patient care experience involves more than good bedside manners and proper treatment in a safe and secure environment. "That experience also changes when a person, probably nervous, is at the registration desk or on the phone and told the computers are slow today, and it may take a while to get some information," she said. "Healthcare organizations consider this seriously because they want that patient to be stress-free and to go home feeling better on all levels."

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Susan Snedaker,  
Director of IT  
Infrastructure and  
Operations  
TMC

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