

**SOLUTION BRIEF**

CA Technologies Application-driven Network Performance Management

How do you gain the  
network-level visibility  
you need to optimize  
the performance of  
your mission-critical  
applications?



A close-up photograph of a person's hands holding a black smartphone. The person is wearing a silver watch on their left wrist and a ring on their left ring finger. The background is blurred, showing what appears to be a laptop keyboard. A semi-transparent blue rectangular overlay covers the center of the image, containing white text.

CA Technologies offers a set of solutions for application-driven network performance management. Through these solutions, IT teams gain the breadth and depth of visibility needed to optimize the network infrastructure that end users rely on to deliver mission-critical applications and services, including voice and video.

# Executive Summary

---

## Challenge

Today, a large number and wide range of applications are running on enterprise networks, including latency-sensitive voice and video traffic, critical business applications and more. Many administrators are trying to manage their networks with basic network fault and availability monitoring tools. While these tools are fine for managing network devices and links, they don't deliver the fundamental insights administrators need to understand application performance and network traffic flows. With this limited visibility, administrators can't truly track and optimize application performance, and as a result, organizations suffer from poor service levels, suboptimal configurations and investments and reactive, inefficient operations—which can all have a significant impact on business performance.

---

## Opportunity

CA Technologies offers a set of solutions that enable application-driven network performance management. The company's solutions include CA Network Flow Analysis, CA Unified Communications Monitor and CA Application Delivery Analysis. These solutions can be used individually or in tandem, and enable you to centrally and efficiently track the applications and environments running on your network.

---

## Benefits

With ANPM solutions from CA Technologies, your IT team can gain comprehensive visibility into the performance of the network and all the applications that run on it. With these solutions, you can monitor traffic flows, latency metrics, anomalous traffic patterns, voice and video traffic and more—so you can gain the improved insights you need to speed troubleshooting, optimize service levels, manage resources more efficiently, reduce costs and deliver more business value.

Applications can run the gamut. Some can be lightweight, others highly resource intensive. Some can be for legitimate business use, others for personal entertainment, and others may be outright malicious.

## The Challenge

Particularly over the past few years, there's been an increasingly wide range of applications introduced, but they all have one thing in common: they're hitting your corporate networks. Now, at any given point, network resources may be supporting voice over IP, video over IP, Web applications, legacy applications, portals and e-commerce applications. Plus, your organization increasingly has users relying on your networks to access an array of cloud services, both with their computers and mobile devices.

The increase in the number of applications and the varied nature of application traffic traversing the network place increased demands on network capacity and make it all the more challenging to manage network performance.

Various applications have different levels of business criticality, attributes, performance requirements and risks. Applications can run the gamut. Some can be lightweight, others highly resource intensive. Some can be for legitimate business use, others for personal entertainment, and others may be outright malicious. Some may be trivial, while others may be business critical. To effectively manage today's networks, administrators need to be able to distinguish among these differing applications, so they can ensure critical services perform optimally and spot and mitigate threats and performance anomalies.

However, with standard network management approaches, your administrators can only track and manage performance by basic protocol and port information. Given so many different applications share common ports today, administrators can't gain detailed visibility into the specific applications going through the network, how they are performing and so on.

Lacking this application-level visibility, your organization's IT and operations staffs are apt to contend with significant challenges:

- Lower priority and personal user activities consume excessive resources, while the performance of critical business services suffers from costly outages and significant performance issues.
- It takes too long to isolate and troubleshoot application performance issues.
- It is difficult to understand how network changes and new infrastructure investments will affect different applications, leading to unintended degradations and outages.
- Money is wasted on underutilized infrastructure.

All these challenges can have a significant negative business impact, potentially eroding user productivity, revenues and customer loyalty.

---

## Opportunity

CA Technologies offers a set of solutions that enable application-driven network performance management (ANPM). These solutions deliver comprehensive, centralized views of all the metrics and measurements needed to understand, manage and optimize performance of critical applications running on the network.

CA Technologies delivers several robust products, including CA Network Flow Analysis, CA Unified Communications Monitor and CA Application Delivery Analysis, which can be used in tandem or individually, to address a range of technological and business imperatives. Through these integrated solutions, your organization can leverage a unified view of all the metrics being gathered, including application response times, network flow data, resource capacity, voice and video quality of service and more. Further, these offerings feature the open standards support that enables them to be effectively integrated with a range of third-party and custom IT management tools.

ANPM solutions from CA Technologies enable you to:

- **Focus your efforts and network resources on optimizing the performance of business-critical applications.** With our ANPM offerings, you gain enhanced visibility into how application traffic and behavior affects end-user experience. Administrators can make decisions regarding network resource allocation and prioritization in order to further desired business outcomes.
- **Detect, isolate and resolve performance problems faster.** Detect anomalous patterns and behavior on the network, quickly determine the problem domain so the right team can be engaged, collect the additional details needed to determine root cause and resolve performance problems before they affect the end-user experience.
- **Optimize existing network resources and effectively plan for application rollouts.** Gain visibility into network capacity utilization, trending patterns and real-time and historical perspectives in order to make informed, cost-effective and business-aligned investment decisions.
- **Maintain effective quality of service (QoS) policies.** Managing QoS policies can be complex, and difficult to sustain consistently over time as individual devices are upgraded, re-configured or replaced. ANPM solutions from CA Technologies help you track and manage QoS policies to optimize the allocation of resources.

Following is more information about the capabilities CA Technologies solutions deliver.

### Network Traffic Analysis

To minimize network infrastructure costs, while ensuring service levels are optimized for high-priority applications and services, administrators need to understand who is consuming network resources, where they're going, what they're doing and what kinds of service levels they're receiving. CA Technologies offers the solutions that deliver the visibility and controls required to monitor, manage and optimize the performance of today's networks.

With CA Network Flow Analysis (CA NFA), administrators can quickly troubleshoot issues, identify top users and applications, implement service quality policies and track their efficacy. With these capabilities, your administrators can manage the capacity of network resources to maximize the service levels of the most critical applications and services.

To help administrators optimize network capacity and ensure resources are available for critical applications and services, CA NFA offers the visibility needed to distinguish between personal and business, and lower and higher priority activities, and to determine how the network is prioritizing various types of traffic, including rich-media applications.

CA NFA offers integration with Cisco Application Visibility and Control- (AVC) enabled devices. The solution can also leverage the NBAR2 standard, Cisco's innovative deep packet inspection (DPI) technology, which enables identification of more than 1,000 applications. With CA NFA and Cisco AVC, administrators can leverage NBAR2 in several key ways:

- **Application accounting.** Users can get a snapshot of applications traversing a given interface, along with traffic rate and volume, which can be tracked both by bytes and packet units.
- **Classification.** With these combined solutions, administrators can identify traffic by NBAR2 application signature. This allows organizations to set per-application policy controls, including quality of service. For example, your administrator can limit traffic rates for consumer-focused applications like Netflix, Pandora and iTunes, or guarantee bandwidth for real-time applications like VoIP and video, or business applications like WebEx, Office 365 and SharePoint.
- **Reporting.** Through CA NFA, your operations teams can leverage a range of reports, including:
  - NBAR2 session reports, which validate traffic and markings in raw data.
  - Application response time reports, which deliver information on response time metrics for applications, clients and servers.
  - Wide area application services (WAAS) segment reports, which provide pass-through information that helps administrators determine why a given flow is not optimized.

## Application Response Time Analysis

Understanding application response times between infrastructure components is critical to managing end-user experience, which is ultimately the most important measure of network performance. CA Technologies delivers an end-to-end response time monitoring solution that enables your IT team to gain the insights it needs to optimize the end-user experience. With CA Application Delivery Analysis (ADA), you can isolate the source of bottlenecks and verify the performance of applications delivered over the network.

By delivering comprehensive and timely insights into application performance, CA ADA can help you mitigate the risks of planned changes and unexpected events. The product helps you resolve problems faster, enabling you to quickly establish whether the cause of poor performance is in the

network, the server or the application itself. The solution also offers automated baselining, alerting and investigation capabilities that help further speed response when potential performance issues arise.

### Quality of Experience Monitoring in Unified Communications Environments

More than any other application type, unified communications requires an optimal quality of experience. CA Technologies offers a voice and video monitoring solution that your administrators can use to manage and optimize the network's quality of service and the quality of experience your unified communications environments deliver. With CA Unified Communications Monitor (CA UC Monitor), you can track, evaluate and report on key metrics across multiple vendors' unified communications environments, including Cisco Unified Communications Manager, Cisco Medianet, Microsoft Lync and Avaya. CA UC Monitor combines unified communications quality of experience monitoring and reporting with additional data collection and analysis to provide a comprehensive picture of how the converged network is supporting real-time applications.

With CA UC Monitor, you can:

- Track the specific performance metrics—such as mean opinion score (MOS), jitter, latency, call volume and utilization—that you need to maximize the quality of experience delivered by voice over IP and video applications
- Measure the impact of unified communications traffic on other applications
- Monitor quality, device health and performance of voice and video applications
- Gain the insights you need to identify type-of-service misconfigurations
- Report on key call set-up metrics and monitor calls in real time

### Anomaly Detection

Sophisticated anomaly detection is a vital underpinning capability for teams looking to take a more proactive approach to network security and performance. By leveraging anomaly detection, your administrators can gain the early insights they need to mitigate issues before users are affected and to spot malicious activities as early as possible to minimize the impact on application and network performance.

CA Technologies offers patented anomaly detection capabilities that dynamically adapt the network profile to ensure detection accuracy. Compared to alternatives that can only detect a minimal set of anomalies, our solution can identify up to 27 different anomalous traffic patterns. The solution leverages historical benchmarks to establish customary network performance, traffic composition and traffic volumes, and then offers automated alerts when anomalous behavior occurs.



Our solutions deliver the immediate alerts, fast insights and intuitive workflows needed to reduce downtime and performance issues.

## Central Dashboards and Reporting

It is by centralizing performance monitoring and management efforts on a single console that your IT teams can most fully reap the benefits of ANPM. CA Technologies can provide your IT teams with an effective and efficient way to track performance across your environments and business. With CA Performance Center, your team can monitor massive amounts and various types of metrics, including simple network management protocol (SNMP) performance information, non-SNMP data and availability data for networks, physical systems and virtual systems. The solution can also integrate traffic flow, capacity, application response, VoIP and video metrics from pre-integrated add-on tools—and display them all in a converged, productivity-enhancing user interface that can speed triage and resolution of service-threatening problems.

---

## Benefits

With the comprehensive, robust capabilities of ANPM solutions from CA Technologies, your network team can gain the visibility and intelligence it needs to understand the network within the context of the applications and services it supports. These solutions provide the visibility you need to efficiently manage complex, demanding enterprise networks. With these capabilities, your organization can realize a range of benefits:

- **Boost service levels.** Our solutions deliver the immediate alerts, fast insights and intuitive workflows needed to reduce downtime and performance issues. These solutions offer powerful dashboards and reports that enable administrators to quickly drill down to get the details they need to do root-cause analysis, so they can identify the source of issues—and address them—more quickly.
- **Better manage costs and resources.** ANPM solutions from CA Technologies enable your network teams to make proactive, data-driven decisions regarding network capacity, quality of service policies, infrastructure investments and planned application and service rollouts. With these solutions, your organization can better understand, predict and meet changing resource demands. These solutions also provide the insights you need to make more informed investment decisions and plans to address evolving technical and business requirements.
- **Deliver more business value.** With ANPM solutions from CA Technologies, your organization can start making decisions based on rich data, rather than guesswork. With this visibility, you can better prioritize resource allocations for services with the highest business impact. With these insights, your teams can be both more responsive and more proactive, and eliminate the subjective guesswork and finger pointing that have historically plagued IT teams. By managing networks with a focus on optimizing applications and business services, your IT team can get out of reactive firefighting mode, and elevate the dialog with business leadership and users to focus on proactive planning, decision making and cost management. Further, these solutions can help guide investments, so managers focus on the new capabilities that deliver maximum business impact.



---

## Conclusion

Managing networks so they support optimal application performance has never been more challenging, or more critical. Leverage ANPM solutions from CA Technologies, and your organization can harness the robust and comprehensive capabilities it needs to understand and optimize how business-critical applications perform on the network.



Connect with CA Technologies at [ca.com](http://ca.com)



### The CA Technologies Advantage

CA Technologies (NASDAQ: CA) provides IT management solutions that help customers manage and secure complex IT environments to support agile business services. Organizations leverage CA Technologies software and SaaS solutions to accelerate innovation, transform infrastructure and secure data and identities, from the data center to the cloud. CA Technologies is committed to ensuring our customers achieve their desired outcomes and expected business value through the use of our technology. To learn more about our customer success programs, visit [ca.com/customer-success](http://ca.com/customer-success). For more information about CA Technologies go to [ca.com](http://ca.com).