



## Tevron CitraTest APM® Case Study

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### Introduction

Tevron delivers an all encompassing customer-centric Solution for APM and testing of Citrix Presentation Server™ deployments in the enterprise. CitraTest APM measures and monitors end-to-end response time and overall application availability for a Citrix Access solution.



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1	INTRODUCTION .....	4
2	CITRIX ACCESS PLATFORM .....	4
2.1	SECURE ENDPOINT .....	4
2.2	ACCESS SECURITY AND CONTROL .....	5
2.3	DELIVERY SERVICES .....	5
2.4	PRESENTATION SERVICES .....	5
2.5	REAL-TIME COLLABORATION SERVICES .....	6
2.6	ACCESS MANAGEMENT AND SUPPORT .....	6
3	TEVRON CITRATEST APM.....	6
3.1	THE CITRIX APPLICATION MONITORING CHALLENGE .....	7
3.2	UNIQUE BENEFITS DELIVERED.....	7
3.3	OPEN ARCHITECTURE .....	7
3.4	EASE OF USE AND DEPLOYMENT .....	7
3.5	A CLOSER LOOK AT THE CITRATEST APM WEB CONSOLE .....	8
4	PARTNER BENEFIT .....	9
5	CONTACT INFORMATION .....	9

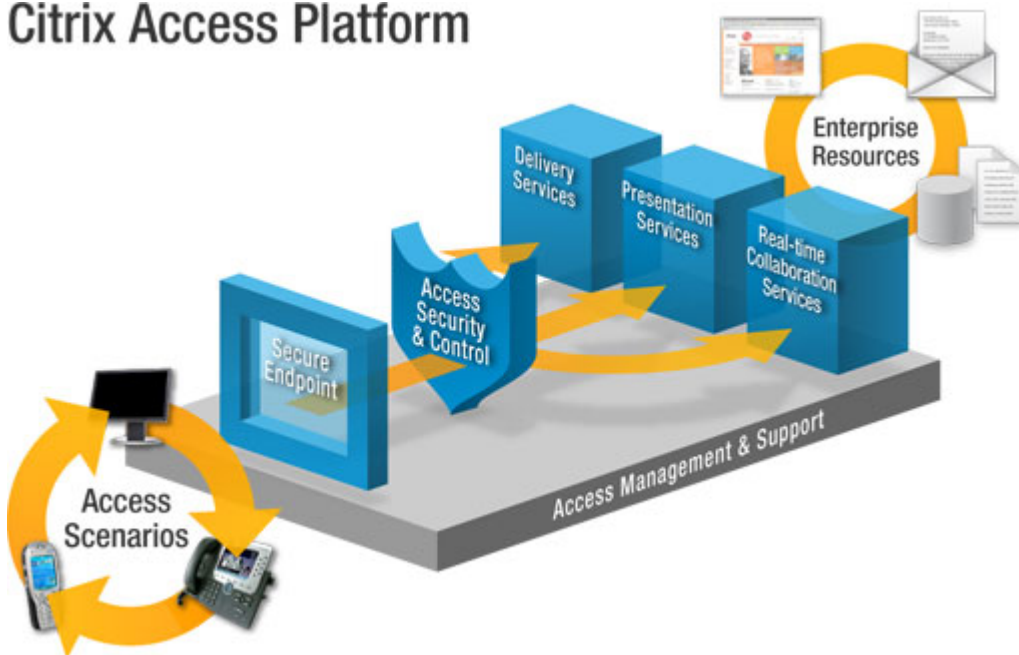
# 1 Introduction

Tevron CitraTest APM (Application Performance Management) is an enterprise monitoring solution that can measure and monitor the end-to-end response time and overall application availability for any application running on Citrix Presentation Servers™. Leveraging the Citrix Access Platform, Tevron is able to offer Citrix customers an all encompassing, flexible solution to measure and monitor their enterprise solution. This document contains information about the Tevron CitraTest APM solution as well as how it deploys on the Citrix Access Platform.

## 2 Citrix Access Platform

The following diagram shows the six key architectural elements required in an enterprise-level access platform as defined by Citrix:

### Citrix Access Platform



### 2.1 Secure Endpoint

Providing on-demand access starts with defining a secure end-point. Before granting access, administrators want to know who is trying to access what, where they are, and the device and network they're using. Authenticating user identity alone is not enough. The user's device, its state, and the network connection must also be authenticated to give the system the complete picture it needs to decide the appropriate level of access to grant and to ensure that the end-point is verifiably secure.

Citrix's secure end-point technologies can analyze the user's access scenario and enable appropriate access from both corporate-managed devices and uncontrolled or employee-managed devices, without opening unintended doors into your network or leaving confidential information behind (on a kiosk computer, for example). Citrix secure end-point technologies include end-point scanning, device and user authentication, universal access clients, access session isolation, and real-time diagnostic agents.

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## 2.2 Access Security and Control

Given the ubiquity of viruses and mal-ware, most network architects know they can no longer assume that even corporate-owned devices, or inside-the firewall access attempts, are “safe”. They’ve come to realize that the ultimate access security solution must start with the assumption that all access devices are “dangerous,” all networks are “dirty,” and all access attempts are “hostile”. The Citrix Access Platform’s access security and control element takes a “VPN everywhere” approach to this challenge as part of its “Secure by Design” model. Once the platform grants the user access, enterprise resources can be delivered in multiple ways, controlled to a very granular level of access, as determined by the built-in intelligence of the system and its automatic sense-and-respond capabilities. Depending on who and where users are and what device and network they’re using, they may be granted different levels of access—the ability to preview applications and documents but not edit them, or edit but not save locally, or edit but not print. Enabling Citrix technologies include single sign-on, advanced end-point scanning and authentication, access policies, SSL encryption, granular access control, granular action rights control, and enterprise portal integration. Citrix products for access security and control include Citrix Access Gateway, the Advanced Access Control option, and Citrix Password Manager.

## 2.3 Delivery Services

Through intelligent interpretation between applications, networks, and users, the Citrix Access Platform provides high-performance, optimized delivery services to ensure the best access experience to any enterprise resource, whether native or Web-based, based on the user’s role, device, network, and location, as well as the specific application request being made. The platform’s built-in “intelligence” automatically chooses the best possible delivery method for each unique access scenario, to ensure the best access experience in terms of speed, security, availability, and reliability. For browser-based applications, the best delivery method is optimization. Application data that must be delivered to the user’s access device is “optimized” when delivered with maximum performance, availability, and security. Optimizing application delivery over the network requires an integrated approach that combines application acceleration, layer 4-7 traffic management, SSL acceleration, and robust application security, as provided by the Citrix Access Platform. The platform also adapts delivery of applications and information on the fly to appropriately match the form factor of the user’s device.

Citrix solutions that provide optimized, adaptable application delivery include Citrix NetScaler Application Switch, Citrix NetScaler Application Accelerator, and Citrix Application Gateway with Citrix Voice Office.

## 2.4 Presentation Services

For client/server and desktop-based applications, the best delivery method is virtualization. Instead of deploying, managing, updating, and securing a vast array of heterogeneous clients on each individual user’s access device, a single instance of the application is installed on a “presentation server” that is deployed in the datacenter. This server “virtualizes” application delivery by passing only screen pixels, keystrokes and mouse movements over the wire instead of actual data. This process is transparent to end users who have the same experience as if they were using each application locally, while IT administrators have a far more cost-effective, easy-to-manage, and secure method for providing access to these centralized applications.

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Through virtualization, presentation services increase access speed, application performance, and network security, and reduce network bandwidth consumption by eliminating the traditional requirement of transferring entire applications over a network.

Since a holistic access strategy requires the ability to access desktop resources, individual Windows PCs can be virtualized, too. With Citrix, users can easily and instantly get a “good-as-being-there” access experience through any web browser to their remote desktop PCs, thus increasing productivity and immediately delivering ROI.

Citrix solutions that enable application and desktop virtualization include two market leaders, Citrix Presentation Server and Citrix GoToMyPC.

## **2.5 Real-Time Collaboration Services**

Shared access to applications for multiple users is the function of the platform’s real-time collaboration services element. These services enable secure, instant online collaboration—desktop and application sharing as well as virtual workgroup conferencing. With these services integrated into the platform, Citrix makes it easy to conduct on-the-fly or scheduled presentations with a prospective customer, perform live demonstrations in real-time, collaborate on documents, diagrams, and presentations with colleagues no matter where they are, and provide online training to customers and employees. Within seconds, employees can be improving their productivity and generating more revenue.

Citrix GoToMeeting, the industry-leading instant online meeting service, is a key component of the Citrix Access Platform.

## **2.6 Access Management and Support**

The Citrix Access Platform enables IT organizations to implement a service-oriented approach to enterprise resource provisioning. Running a service-oriented environment requires a robust system for enabling IT teams to provide end-to-end operations control. IT administrators need be able to observe, monitor, and measure enterprise resource usage across the entire environment while managing and controlling access. They also need to be able to easily diagnose and correct any user and system problems.

The Citrix Access Platform delivers these capabilities and includes Citrix Common Infrastructure Technology that enables the component products of the platform to interact as a system and be centrally monitored and managed through a single console. In addition, Citrix GoToAssist is the most secure, reliable and powerful way to provide on-demand remote technical support, enabling external contact centers and internal help desks to generate a rapid return on investment. Results are increased first-call resolution rates, reduced incident-handling times, lower total call volumes and savings due to reduced travel costs, plus increased customer satisfaction.

## **3 Tevron CitraTest APM**

Tevron’s CitraTest® APM solution is an all encompassing APM solution that addresses the needs of End-to-End Response Time, Availability Monitoring, and SLA Enforcement across any organization.

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All measurements are based on the Real User Experience and nothing is installed on the Citrix application server.

### 3.1 The Citrix Application Monitoring Challenge

When monitoring any Citrix hosted application, the key challenge is to know how any application is responding at any point across the enterprise based on the real user perspective. How do your customers see applications perform from their client access points? Does every location experience the same performance? Through the use of Tevron's CitraTest® APM, every user transaction can be replicated and executed periodically from every client access point. All these real user measurements are then collected and analyzed. Application performance thresholds can be set and alerts can be generated when those thresholds are exceeded. This approach gives IT organizations the ability to proactively and continuously manage every application across the enterprise preventing system down time and saving time and money.

### 3.2 Unique Benefits Delivered

Tevron's CitraTest® APM supports every application across the enterprise with one powerful solution. Any activity a Real User performs can be exactly replicated to be used as a measuring stick. Because the production environment is not changed in any way and all measurements are taken from the client perspective, the benchmarks and application availability metrics are exactly what the real users see and experience. This critical information can then be used to find and correct application performance issues before end users find them.

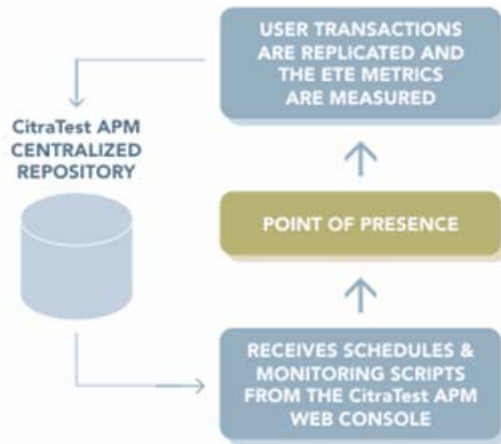
COMPATIBILITY:	ACCURACY:	REAL WORLD ENVIRONMENT:
<ul style="list-style-type: none"><li>★ Supports Every Application that is Accessible from a Windows Client</li><li>★ Supports All Windows Versions</li><li>★ Full Firewall Support (Inside &amp; Outside)</li></ul>	<ul style="list-style-type: none"><li>★ Real Time End-To-End Monitoring</li><li>★ Replicate All User Transactions</li><li>★ Measure and Enforce Service Level Agreements</li></ul>	<ul style="list-style-type: none"><li>★ The Real User Environment is not changed in any way</li><li>★ No software is installed on the application server(s)</li><li>★ No software is installed on the database server(s)</li></ul>

### 3.3 Open Architecture

Tevron's core monitoring technology is based on an open architecture allowing IT organizations to integrate this solution seamlessly into their current methodologies. All performance results can be shared with any application. In addition, full support for Microsoft MOM 2005 is also offered along with support for several other Event Management and Performance Systems.

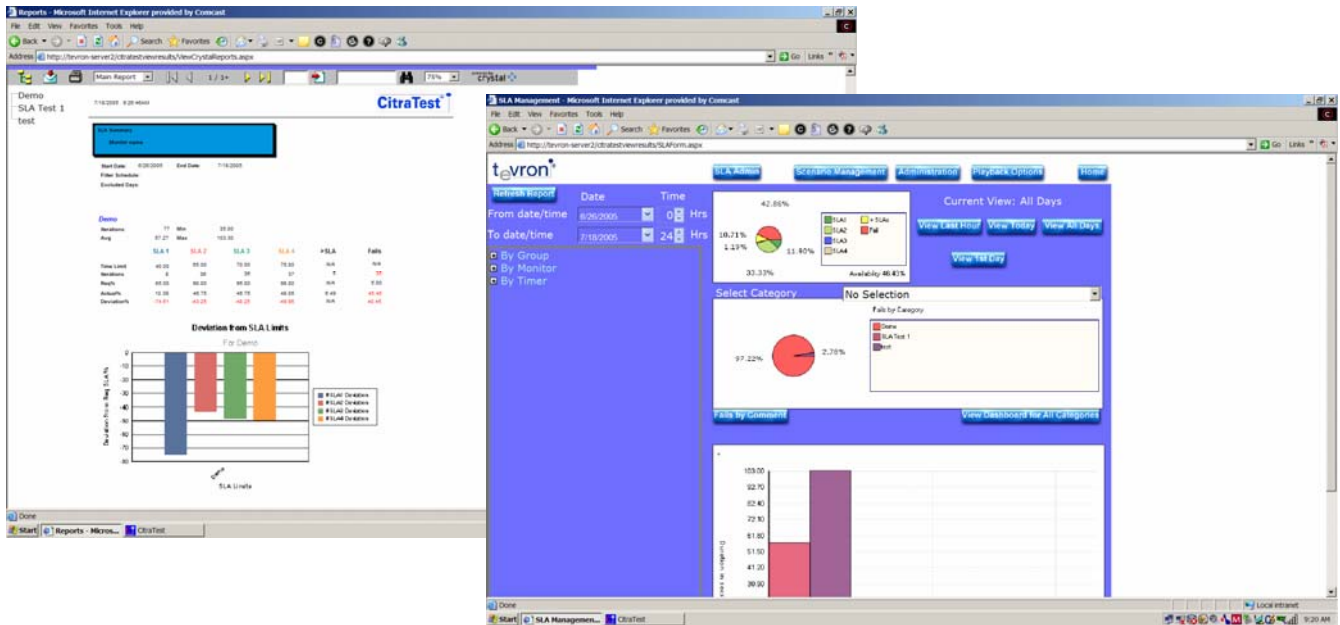
### 3.4 Ease of Use and Deployment

Tevron's CitraTest® APM can easily be deployed across the enterprise to actively monitor all enterprise applications. There is no limit to the number of applications or the number of locations that can be monitored. This solution is easy to use and the user experience scripts are easy to create and deploy. All results are stored in a central database that is accessible via a Web based console. SLA reports based on application, location, and user type are automatically generated on a daily basis for IT Managers to analyze.



### 3.5 A Closer Look at the CitraTest APM Web Console

Tevron’s CitraTest® APM Web Console allows IT Managers, IT Engineers, and other authorized users the ability to review and analyze the End User Performance of any application at any point of presence (monitoring PC) across the global enterprise.



- SLA Management and Reporting  
 Detailed SLA and Management Reports can be quickly generated for any application on a real time basis. In addition, reports can be created from an historical standpoint.
- Advanced Scheduling & Deployment  
 Detailed script (user transactions and activity) execution schedules can be created and seamlessly transferred to all Points of Presence (monitoring PCs) across the enterprise. All



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monitoring scripts that are included in each schedule will automatically be deployed to the various Points of Presence in preparation for execution.

- User Groups, Application Groups, and Location Groups  
Groups can be created and managed for users, applications, and locations which associate various Points of Presence via a unique name (Boston office, London office, Paris office, Frankfurt office, etc.).

## **4 Partner Benefit**

Tevron's solutions are the perfect complement to Citrix's ISV community looking to ensure customers that application delivery and performance are consistent with user expectations. Tevron also allows customers to modify server load to simulate high use scenarios which can be difficult to measure without Tevron's tools. Citrix Solution Advisors are also advised to consider Tevron's APM solutions as deployment testing can ensure customers purchase the correct amount of hardware without guessing or buying unneeded equipment.

## **5 Contact Information**

For more information about Tevron and Citrix, please contact the following sales representatives:

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**Citrix Systems, Inc.** (<http://www.citrix.com>)

*USA & Canada:* 800-4-CITRIX (800-424-8749)

*Europe, Middle East & Africa:* Find a Citrix Solution Advisor at

<http://www.citrix.com/English/partners/findAreseller.asp>.

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- India: 1600-425-8065
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- Japan: 813 5740 2960
- Malaysia: 1800 803 807
- New Zealand: 0800 930 700
- Philippines: 1800 1611 0212
- Singapore: 800 616 1697
- South Korea: 0030 861 0050
- Taiwan: 0080 1611 351
- Thailand: 001800 611 2801



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