

# Comprehensive management and monitoring with Citrix Director and EdgeSight

Understanding every aspect  
of your Citrix environment  
through a single pane of glass.

The latest generation of Citrix XenApp and XenDesktop delivers apps, data and desktops on a unified platform, allowing organizations to define and scale their virtual infrastructure in more ways, quickly, easily and economically. Citrix Director and EdgeSight complement this unified solution with comprehensive, integrated management and monitoring for every part of the Citrix environment. Customers can speed to resolution for user issues, monitor network performance and user experience, and gain insight into current trends to better plan for the future.

### **The power of centralized management and monitoring**

As customers plan for their XenApp and XenDesktop implementation or upgrade, a key consideration is the monitoring and management of the platform and the user experience it delivers. By having an in-depth understanding of current and expected behavior of the various components, administrators are better equipped to discover an issue before it impacts users. Furthermore EdgeSight tracks long term usage allowing administrators to trend usage and plan capacity and resources for future growth.

Director and EdgeSight, a newly integrated tool offered with XenApp and XenDesktop 7.x, addresses this need through real-time assessment, environment health monitoring and user troubleshooting.

Director and EdgeSight provides:

- Comprehensive monitoring and troubleshooting to understand every aspect of the Citrix environment
- The ability to correlate end-user experience with Citrix application and desktop delivery visibility into the Citrix protocol
- A single pane of glass solution for troubleshooting and monitoring
- Capacity management and insight into health and performance trends

This paper explores the capabilities of Director and EdgeSight, including EdgeSight Performance Management and EdgeSight network analytics, which leverages NetScaler Insights for real-time network insight into the Citrix protocol.

## Introducing Director and EdgeSight

In the past, Citrix customers have used Citrix Desktop Director for day-to-day management and helpdesk support for XenDesktop environments, and Citrix EdgeSight for full-time monitoring of the XenApp and XenDesktop environments. With the release of XenApp and XenDesktop 7, these products have been expanded and combined into a single architecture. Providing a detailed and intuitive overview of XenDesktop environments, Director and EdgeSight enable support and helpdesk teams to quickly and seamlessly perform crucial support tasks for users while monitoring and troubleshooting system issues before they become system-critical. A new data storage capability lets Citrix administrators capture baseline data to support historical trending and analysis, performance management, capacity management and network analysis.

Director and EdgeSight provide advanced analytics enabling performance management, capacity analysis and monitoring of the network.

With Director, administrators can:

- Gain greater visibility into the virtual environment through real-time assessment
- Accelerate troubleshooting by identifying the real-time context for failures, including auto-flagged configuration actions
- Resolve root causes quickly and effectively through actionable troubleshooting
- View user details at a glance with drill-down for additional insight

Formerly a standalone product, EdgeSight has now evolved into a fully integrated solution expanding the value of Citrix products such as Director. By providing insight into the entire environment rather than individual product silos, EdgeSight now offers a more comprehensive and holistic experience for Citrix administrators.

## EdgeSight Performance Management

The key to enabling performance management lies in the ability to provide advanced analytics using historical data. This allows customers to be proactive by understanding how the environment health has been trending and enabling the remediate actions before poor performance impacts their business. Adding auto-baselining capability, the ability to establish baselines based off of their own environment, enables IT to compare current trends to their own environment's historical trending.

Types of questions answered by EdgeSight Performance Management include:

- What has been the load on my published application servers over the past month compared to the previous month?
- What is the effect of the number of logged on users to the logon duration for these users?
- Have I had machine registration errors every Monday? What has been the past health trend?
- What is the number of peak sessions over the past 24 hours, week, month, year?

## EdgeSight network analytics

EdgeSight enables administrators to gain deep, real-time visibility into Citrix protocol from within the Director console. By understanding the impact of network latency and bandwidth on the performance of virtual desktops and applications, IT can more easily discover problems in the environment that may be affecting the end-user experience. Available for XenApp and XenDesktop Platinum Edition customers who have implemented Citrix NetScaler Enterprise or Platinum.

Types of questions answered by EdgeSight network analytics include:

- For a given XenDesktop user, what is the average client and server-side latency and jitter they are experiencing?
- Which XenDesktop users are consuming the most bandwidth over a given time period, such as daily, weekly or monthly?
- Which virtual channels are consuming the most bandwidth over a given time period?
- What are the top applications across all XenApp users, by up-time and total number of launches over a given time period?

## Customer benefits

Director and EdgeSight help customers address key priorities for their virtualized Citrix environments.

**Improved IT productivity** reduces time to resolution. Level 1 helpdesk staff can use an intuitive dashboard to more quickly identify where user issues originate, and whether the problem is in the network, the virtualized app or the virtual desktop. An actionable troubleshooting interface helps resolve the problem effectively without the need for elevation to Level 2.

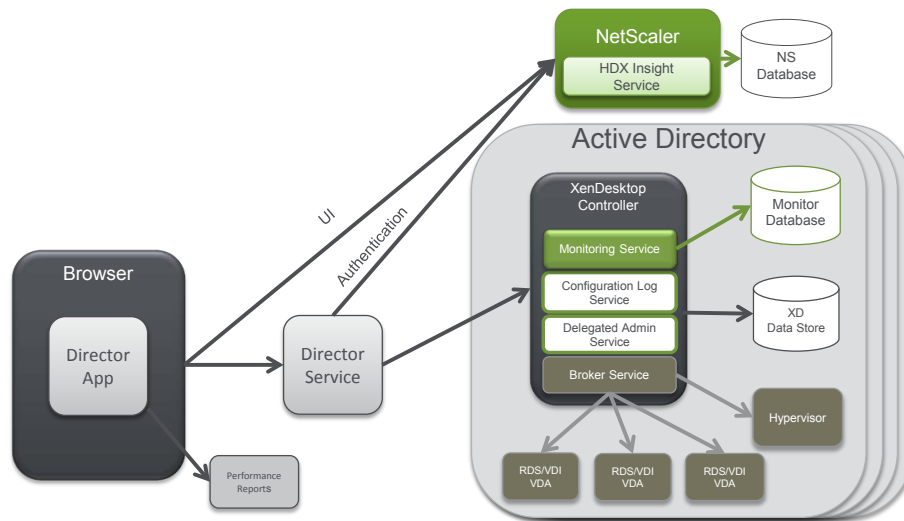
**Real-time environment monitoring** provides Level 2 staff with at-a-glance insight into the health and capacity of the environment. A baseline of the customer's environment is captured automatically to help track long-term performance and capacity trends. As a result, IT can more accurately define and maintain service-level agreements.

**User experience monitoring** helps IT understand the impact on configuration changes and other actions on users through End User Experience Monitoring (EUEM), a monitoring service that gathers and stores information on operational events.

**Performance management** based on the historical trending of health and performance data helps IT maintain optimal performance throughout the virtualized environment.

**Capacity assurance** is facilitated through detailed information on current usage within the environment. IT can more accurately map usage to capacity to better determine future capacity requirements.

## Solution architecture



**Figure 1.** Director and EdgeSight solution architecture

Director and EdgeSight together provide a solutions approach to management and monitoring, enabling IT to understand, troubleshoot, analyze and plan for its entire Citrix virtualized environment through a single solution with a unified console.

Real-time assessment metrics available include:

- Session usage
- Logon performance
- Connection and machine failures
- Load evaluation

The solution enables:

- Historical trends
- Experience comparisons
- Access to details
- Exporting data

IT can easily report on data such as historical trends and comparisons of the user experience under different conditions. Data can be exported for use in other analytics systems as well using a public API.

The Monitor Service is a new XenDesktop service for collection and managing the historical data shown in Director. It collects session usage, logon performance details, and connection and machine failure information. The Monitor

Service collects instrumentation in the VDAs and the Broker service as events. The events are pieced together onto a data model that can answer questions like “Where is all the time being spent during the logon process?” The data is stored in a logical monitor database, which can either be in the XenDesktop site database for small deployments or a separate database for larger enterprise deployments. Customers can pull data from ODATA API to put into CSV format.

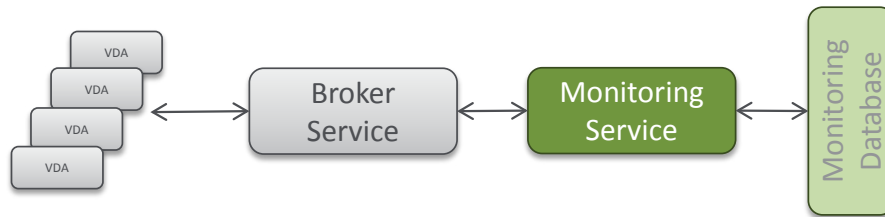


Figure 2. Event-based monitoring and historical data trending

### Summary

With XenApp and XenDesktop 7.x, the new Director console is optimized for helpdesk and real time troubleshooting that now includes built-in EdgeSight end-user experience analytics tools for long-term capacity management, resource planning, and assurance of Service Level Agreements. By integrating complete monitoring and managing tools into a single, unified solution, Director and EdgeSight help IT increase operational productivity and efficiency through a more holistic view of the Citrix environment. From resolving user issues more quickly to planning more accurately for future needs, IT gains the insight and actionable data it needs to deliver the best support for users and the business. For more information, please check out [www.citrix.com/XenDesktop](http://www.citrix.com/XenDesktop).



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