


## Space Details

<b>Key:</b>	edgesight
<b>Name:</b>	EdgeSight
<b>Description:</b>	
<b>Creator (Creation Date):</b>	gregan (Jun 26, 2009)
<b>Last Modifier (Mod. Date):</b>	gregan (Jun 26, 2009)

### Available Pages

- Citrix EdgeSight Reporting Wiki (Beta) 
  - Contents
    - Getting Started with EdgeSight
      - Where to Start Using EdgeSight?
        - Introduction to EdgeSight for XenApp Video
      - Migrating from Resource Manager to EdgeSight
    - Monitoring
      - Introduction to EdgeSight Monitoring
      - Performance Monitoring
        - Experienced with Performance Monitoring?
        - New to Performance Monitoring?
      - Monitoring Farms
        - XenApp Farm Resiliency
          - Alerting on Critical Health Changes
          - Determining When a Data Collection Election Occurs
          - Farm Resiliency Using the Farm Monitor and Reports
          - Using EdgeSight to Monitor XenApp Infrastructure Servers
      - Understanding EdgeSight Alerts
        - System Alerts
        - Application Alerts
        - Network Alerts
        - Session Alerts
        - XenApp Alerts
          - Using EdgeSight Active Application Monitoring
        - XenDesktop Alerts
      - Dashboard Monitoring
    - Troubleshooting
      - Troubleshooting Using EdgeSight
        - Troubleshooting XenApp Application Servers
        - Troubleshooting XenApp Application Issues
          - Application Performance Factors
          - Monitoring Applications Proactively
          - Application Issue Troubleshooting
          - Real Time Troubleshooting of Application Issues
      - Troubleshooting Devices
      - Troubleshooting XenApp Infrastructure Servers

- Plan and Manage
  - What is Happening in My Environment?
    - Finding Information about the Clients in Your Environment
    - Detecting General Changes
    - Using the Dashboard and Reports for an Environmental Overview
    - What's Happening on My Network?
    - What's Happening On My Servers?
      - Updating Hardware and Software Inventories
    - What Are Users Up To?
  - XenApp Server Health
    - Fixing Existing XenApp Server Issues
    - Keeping Servers Healthy
    - Troubleshooting Changes to XenApp Servers
    - Uncovering Causes for Poor Server Performance
  - Generating EdgeSight Reports for Management
    - Branch Office Performance
    - Demonstrating SLA Compliance
- Track Usage
  - Monitoring License Usage
  - Exporting User and Device License Usage Data
  - Monitoring Published Applications Usage
  - Monitoring Session Duration
- Reports (Browse)
  - Introduction to Reporting
  - Guide to Interpreting Reports
    - EdgeSight Reporting Best Practices
    - Aggregating and Grouping Averages and Sums in EdgeSight Reports
    - How Group and Department Structure Impact Reporting
  - EdgeSight Report List
    - EdgeSight 5.4 Report List
    - EdgeSight 5.3 Report List
      - Report Sample, ICA Client Version
      - Report Sample, User Logon Counts
    - EdgeSight 5.2 Report List
      - Environmental Usage
      - ICA Printer IO
      - ICA Session Compression
      - ICA Session Latency
      - ICA Session Round Trip Time
      - Process Faults
      - Process Network Delay
      - Report Sample, CPU Utilization Management
      - Report Sample, IMA Service Availability

- Session Login Time
  - Session Login Time for a User Group
  - Session Startup Duration Details
  - System CPU
  - System Memory Usage
  - User Login Details for a User Group
  - User Summary for a User Group
  - XenApp Server Utilization
  - XenApp Summary
  - XenApp User Summary
- EdgeSight 5.0 and 5.1 Report List
  - Presentation Server Summary
  - Presentation Server User Summary
  - Sessions Created for a User Group
- EdgeSight Report List by Task
- EdgeSight Data
  - End User Experience Monitoring Overview
  - Understanding EdgeSight Data
  - How EdgeSight Calculates ICA Traffic Numbers
  - End User Experience Monitoring Data
    - Improving Slow Session Start Times
    - Session Latency
  - ICA Channel Data
  - Network
    - Why EdgeSight Network Data Differs from Network Monitoring Tools
    - Network Data
  - What Constitutes a Session for EdgeSight?
  - Adding a Custom Performance Monitoring Counter
  - Support for Citrix Performance Monitoring Counters
  - Report Counters Glossary
- Configuring EdgeSight for Your Environment
  - Configuring Alerts
  - Data Maintenance
- Custom Reports
  - Citrix Service Provider - License Usage Reports
  - Citrix Service Provider - Resource Usage per User Reports
  - Citrix Service Provider - Server Utilization Report
  - Citrix Service Provider - SLA Compliance Reports
  - License Server Usage Trends - Custom Report
  - Unique User Logon Counts - Custom Report
- EdgeSight for Load Testing
- Case Studies

- Case Study, Managing Application Rollout
- Case Study, Application Performance Solution
- Case Study, Troubleshooting Remote Applications
- EdgeSight Support
  - Release History
    - Citrix EdgeSight 5.2 and Citrix EdgeSight for Load Testing 3.6
    - Citrix EdgeSight 5.3 and EdgeSight for Load Testing 3.6.1
    - Citrix EdgeSight 5.4
  - Top EdgeSight Knowledge Center Articles
- Using the EdgeSight Wiki
  - About the Citrix EdgeSight Wiki
  - EdgeSight Wiki Community
    - EdgeSight TV
    - EdgeSight Wiki Spotlight
      - Christian Tobon
    - Who Are We? EdgeSight Wiki Editors and Contributors
  - Getting Involved in the EdgeSight Wiki
    - Creating an EdgeSight Wiki Article
    - EdgeSight Wiki Style
      - EdgeSight Wiki Editorial Policies
      - Formatting Sources and Citations for the EdgeSight Wiki
    - EdgeSight Wiki Syntax
      - Wiki Macros
    - Ways You Can Help
    - List of Stub Articles
- FAQ
- EdgeSight Wiki Site Map
- Home

## Citrix EdgeSight Reporting Wiki (Beta)

---

This page last changed on Oct 27, 2009 by [sarahv](#).



Welcome to the Citrix EdgeSight Reporting Wiki. The Citrix EdgeSight Reporting Wiki is a [collaborative authoring](#) encyclopedia project supported by Citrix EdgeSight Engineering. This is intended to be a collaborative Web site for the EdgeSight community. This Wiki is part of an initiative to enhance the information available about EdgeSight reports and is the primary source of information about reports.

This Wiki focuses primarily on historical reports. However, it also includes information about real-time reports and other helpful EdgeSight product information.

The EdgeSight Engineering and Documentation teams, as well as EdgeSight escalation engineers, technical support personnel and product managers regularly review the Wiki content, vetting it for technical accuracy.

We are hoping that this Wiki helps you find the reports you need, interpret the reports you choose, and find new ways to use reports. We also hope it provides an opportunity to converse with EdgeSight users with similar interests on the discussion tabs of each article.

## Getting Started

The Wiki is organized by the following types of information:

- [Where to Start Using EdgeSight?](#)
- [Contents](#)
- [EdgeSight Wiki Site Map](#)
- [Getting Involved in the EdgeSight Wiki](#)
- [EdgeSight Reporting Tasks for XenApp](#)
- [Migrating from Resource Manager to EdgeSight](#)
- [EdgeSight Report List](#)
- [EdgeSight Data](#)
- [Scenarios and Case Studies](#)
- [EdgeSight Reporting Best Practices](#)
- [Report Counters Glossary](#)
- [FAQ](#)
- [Release History](#)

You can access information either by searching for the name of specific reports or browsing to them as they are listed on the **Browse Reports** page.

## Comments

---

You guys must keep this site going. I see it's in Beta it needs to go production although I cant imagine why not more people are posting here. It's taken me a long time to scour the "internet" to compile some semblance of pertinent information I can use to educate myself about Edgesight. Keep up the great work please dont let this site fall by the wayside.

Posted by [chriscdw2](#) at Jun 02, 2011.

---

I agree. I was just scouring the internet myself for some helpful information, so I'll review the information submitted so far and hope that this site can lead to a good online community for future discussions. I've been evaluating version 5.3 for a bit and would like more on User and Session

information. Planning a new build for version 5.4 that was just released, and I want to evaluate the differences between the Basic and Advanced modes of operation.

Posted by at Aug 26, 2011.

---

Hi guys.

I'm happy to found this Wiki. That's nice idea.

Let's go to Keep update this site with more information. Thanks for spending time to help us. I'm was searching something about how to implement Citrix EdgeSight and how to explain their reports and, because that, i found this site.

Great job.

Omar Fernandes

Posted by [oferlandes.cavalcant](#) at Feb 07, 2012.

---

## Contents

---

This page last changed on Nov 10, 2009 by [sarahv](#).

This is the overall content for the EdgeSight Wiki site.

- [Getting Started with EdgeSight](#)
- [Monitoring](#)
- [Troubleshooting](#)
- [Plan and Manage](#)
- [Track Usage](#)
- [Reports \(Browse\)](#)
- [Configuring EdgeSight for Your Environment](#)
- [Custom Reports](#)
- [EdgeSight for Load Testing](#)
- [Case Studies](#)
- [EdgeSight Support](#)
- [Using the EdgeSight Wiki](#)
- [FAQ](#)
- [EdgeSight Wiki Site Map](#)

## Getting Started with EdgeSight

---

This page last changed on Nov 10, 2009 by sarahv.

- [Where to Start Using EdgeSight?](#)
- [Migrating from Resource Manager to EdgeSight](#)



## Where to Start Using EdgeSight?

This page last changed on Sep 15, 2011 by ronaldb1.

EdgeSight contains many powerful features and reports. Due to this rich feature set, new EdgeSight users are often unsure where to start.

This article provides an overview of several key features and suggestions as to where to start using EdgeSight.

### Table of Contents

- 1 [Introductory Video](#)
- 2 [What is EdgeSight?](#)
- 3 [What can I do with EdgeSight?](#)
- 4 [What are the different tasks that I can do with EdgeSight?](#)
- 5 [Where should I start?](#)
- 6 [What about Monitoring and Troubleshooting?](#)
- 7 [EdgeSight Functional Areas](#)
  - 7.1 [Monitor](#)
  - 7.2 [Troubleshoot](#)
  - 7.3 [Plan and Manage](#)
  - 7.4 [Track Usage](#)
  - 7.5 [Browse](#)
  - 7.6 [Configure](#)
- 8 [Where do I find EdgeSight information?](#)

## Introductory Video

[Introduction to EdgeSight for XenApp Video](#)

## What is EdgeSight?

EdgeSight is a performance and availability management solution for XenApp, Presentation Server, XenDesktop and endpoint systems. It monitors applications, sessions, devices, and the network in real time, allowing you to quickly analyze, resolve, and proactively prevent problems. EdgeSight also monitors Citrix License Servers and displays license usage information.

## What can I do with EdgeSight?

A lot. You can monitor the health of your XenApp Farm, get notified when an application crashes, and discover when there is a network problem before all your users call the Help Desk. You can see which applications are used most frequently and which users are using the applications. You can view the license usage of any Citrix product that uses the license server and determine if you may need to purchase more licenses. You can see which applications take up the most system resources and see which application have had the most problems over the last few months. You can even figure out why it takes a long time for a user launch a Published Application.

For those who are technically savvy the detailed real-time performance counters on XenApp servers, virtual device or endpoint will allow you to troubleshoot problems that are currently happening to a user.

## What are the different tasks that I can do with EdgeSight?

The EdgeSight console is separated into six major functional areas; Monitor, Troubleshoot, Plan and Manage, Track Usage, Browse, and Configure.

**Monitor** - Allows you to see performance and availability problems in your environment in real-time. If you are looking around to see if anyone is having problems start here.

**Troubleshoot** - Investigate performance and stability problems on a single device in real time. You would suspect that there is a problem with a device, application or user before using the troubleshooters.

**Plan and Manage** - This is all about performance and stability trends in your environment. Look here for the worst performing servers, applications and sites that your users are accessing.

**Track Usage** - If you want to know how what the most frequently used Published Applications are or how many Citrix licenses you have and how many are being consumed use these reports.

**Browse** - Browse through the list of historical reports.

**Configure** - These are the EdgeSight settings pages.

## Where should I start?

Start with the summary reports on the Plan and Manage page. If you are new to EdgeSight then you are probably looking for general information on your environment. These reports will show you summary data for your Farms, devices, and applications. If you see something of interest (e.g. large numbers of errors, or long login time) click on the report and you will be see more detail.

The reason for starting with the Plan and Manage page is that the summary reports display high level information about a lot of different things. If you don't know what you are looking for these reports will highlight the areas of interest. When you see a problem then you can drill into detail.

The Track Usage page is also a good place to start if you want to know who is using what. If you want to see License information you first have to tell EdgeSight which license servers to poll, this is done on the Configure tab.

## What about Monitoring and Troubleshooting?

Do you know what you want to monitor or which device you want to troubleshoot? If not then don't come here until you have a reason to do so, such as when a user calls the help desk to report a problem.

The charts allow you to monitor the health of a Farm or troubleshoot a device that is currently having problems. These pages contained very detailed information so it's helpful to be familiar with performance counters, Windows Event Logs, and error messages in order to interpret this information.

As you become more familiar with EdgeSight and configure the alerts to trip when critical events occur you will find the Alert Console and Farm Monitor extremely helpful in finding problems before your users do.

## EdgeSight Functional Areas

### Monitor

EdgeSight allows you to track the performance, availability, and stability of critical devices and applications and quickly identify problems.

See the [Monitoring](#) pages for more info.

### Troubleshoot

EdgeSight lets you access both real-time and historical data. When troubleshooting problems in your environment, you will probably want to use mainly the real-time features, such as those found in the **Troubleshoot** tab. Directions for how to use these features are in the *EdgeSight User's Guide* and the online help.

Before attempting troubleshooting with EdgeSight, it is helpful to understand the source of problems and also how to resolve those problems in the environment you are monitoring. That is, if you are trying to resolve why a user is having slow XenApp sessions, it helps to understand the major causes of session latency on a farm. EdgeSight is only a monitoring product and consequently only displays metrics. Since the meaning of metrics vary by context, it is up to you to determine how to interpret the data and what metrics you need to evaluate. Fortunately, this Wiki is meant to aid with that task.

For more information in using EdgeSight for troubleshooting look at the following article:

[Troubleshooting Using EdgeSight](#)

## Plan and Manage

EdgeSight generates many reports about the user experience and about performance in general, which are further explained in [Generating EdgeSight Reports for Management](#). If you want to use EdgeSight data for status reports at weekly status meetings, familiarize yourself with how to run reports by reading the relevant section in the *EdgeSight User's Guide*.

You may also want to review the articles "Demonstrating Service Level Agreement (SLA) Compliance" and "What is Happening in My Environment?" for additional tips about ways to evaluate environmental status.

## Track Usage

New to version 5.3, EdgeSight has the ability to display license utilization for all Citrix products that use the Citrix License Server. Published Application usage and session duration reports allow business users to see the usage of applications and servers in an organization.

See the [Track Usage](#) pages for more info.

## Browse

This page lists all the historical reports within EdgeSight. Use the left pane to filter the list to just the report you are interested in.

See the [Reports \(Browse\)](#) page for more information

## Configure

Here you can create an alert, add a new EdgeSight logon, or change the number of days the data is kept before it is deleted.

See the [Configuring EdgeSight for Your Environment](#) page for more information,

## Where do I find EdgeSight information?

- **Product documentation.** As of EdgeSight 5.3, all new features and known issues, system requirements, installation, and management information for EdgeSight is located in Citrix eDocs.
- **User manuals.** The *EdgeSight User's Guide* is a scenario-based guide for EdgeSight Server Console users and is available from the Citrix Knowledge Center. \* **Online help.** EdgeSight and EdgeSight for Load Testing each contain their own online help systems. In contrast with the manuals, the online help tends to provide procedures and detailed information about navigating the user interfaces.
- **Forums.** Both [Citrix](#) and [BrianMadden.com](#) have forums devoted to either EdgeSight or performance monitoring in general.
- **The EdgeSight Wiki.** The EdgeSight Wiki is the primary vehicle for information about EdgeSight reports. Also, the Wiki provides extensive task-oriented scenarios integrating proven techniques from XenApp. The Wiki is designed to help Citrix administrators figure out how to resolve XenApp and (in the future) XenDesktop tasks using EdgeSight.

## Introduction to EdgeSight for XenApp Video

---

This page last changed on Apr 09, 2010 by [normanw1](#).

Introduction to EdgeSight for XenApp

---

### Comments

---

Nice knowledge piece for beginners

Cheers

Raj

Posted by at Feb 25, 2011.  
.....

Thank so much for this video. It really helped me understandig the basics of EdgeSight. I enjoyed it more than reading a paper about new stuff. I'm looking forward to more of the videos announced.

Posted by at Sep 07, 2011.  
.....

Awesome presentation!

Thank you.

Prince

Posted by at Nov 23, 2011.  
.....

## Migrating from Resource Manager to EdgeSight

---

This page last changed on Apr 28, 2010 by [ronaldb](#).

As of Citrix XenApp 5.0, XenApp (formerly known as Presentation Server) uses EdgeSight for performance reporting and monitoring instead of Resource Manager. In some editions of XenApp 5.0 for Windows Server 2008, a lighter version of EdgeSight is included that is known as Resource Manager (or sometimes Resource Manager powered by EdgeSight). Although similarly named, this XenApp 5.0 component is distinct from the version of Resource Manager included in Presentation Server 4.5 and earlier versions.

This article assumes that you are familiar with Presentation Server 4.5 Resource Manager usage and architecture.

### Table of Contents

- 1 [What is EdgeSight?](#)
- 2 [How is EdgeSight Different from Resource Manager?](#)
- 3 [EdgeSight Components](#)
  - 3.1 [EdgeSight Editions](#)
  - 3.2 [Where do I find the... feature?](#)
    - 3.2.1 [Dashboard](#)
    - 3.2.2 [Performance Monitoring Counters](#)
- 4 [What's Next?](#)
  - 4.1 [Key Points for Transitioning from Resource Manager](#)
  - 4.2 [Key Points for EdgeSight Deployments](#)
- 5 [FAQs](#)
- 6 [EdgeSight Versions](#)
- 7 [See Also](#)
- 8 [References](#)

Note: For clarity and consistency with the overall Wiki content, this article refers to the EdgeSight component including the Resource Manager version of it as "EdgeSight." However, when EdgeSight is included as a feature of XenApp, it is also marketed under the name, "Application Performance Monitoring."

## What is EdgeSight?

Citrix EdgeSight for XenApp is a performance management application that can monitor not only XenApp servers but also other non-Citrix devices on a network, such as servers or client devices, which it classifies as endpoints. EdgeSight can also monitor user sessions and traffic over the ICA virtual channels. Administrators can use EdgeSight to evaluate the impact of changes to their environment, such as growth, patches, upgrades, and migrations quantitatively.

Examples of tasks EdgeSight can perform include running reports to help determine the causes of slow session start times, session latency, application crashes, and use at an administrator's weekly status meetings. Administrators can also use EdgeSight to monitor resource usage, the number of sessions on specific servers, what applications users run on those servers, and other aspects of the user experience.

EdgeSight includes a separately-installed component known as EdgeSight for Load Test, which lets administrators simulate loads on farms for application and scalability testing.

## How is EdgeSight Different from Resource Manager?

EdgeSight captures more data than Resource Manager. Unlike Resource Manager, EdgeSight captures Process Errors, Process Faults, Process Hangs, Thread Counts, and quite a few other metrics. EdgeSight monitors back-end connections between the XenApp server and application and/or database servers. Measurements include network latency, delay and volume per user-session.

One key difference is that EdgeSight provides information about the end-user experience through its End User Monitoring features. You can use these metrics to run reports, such as the [Session Startup Duration Details](#) report, which can help determine causes of slow session start times.

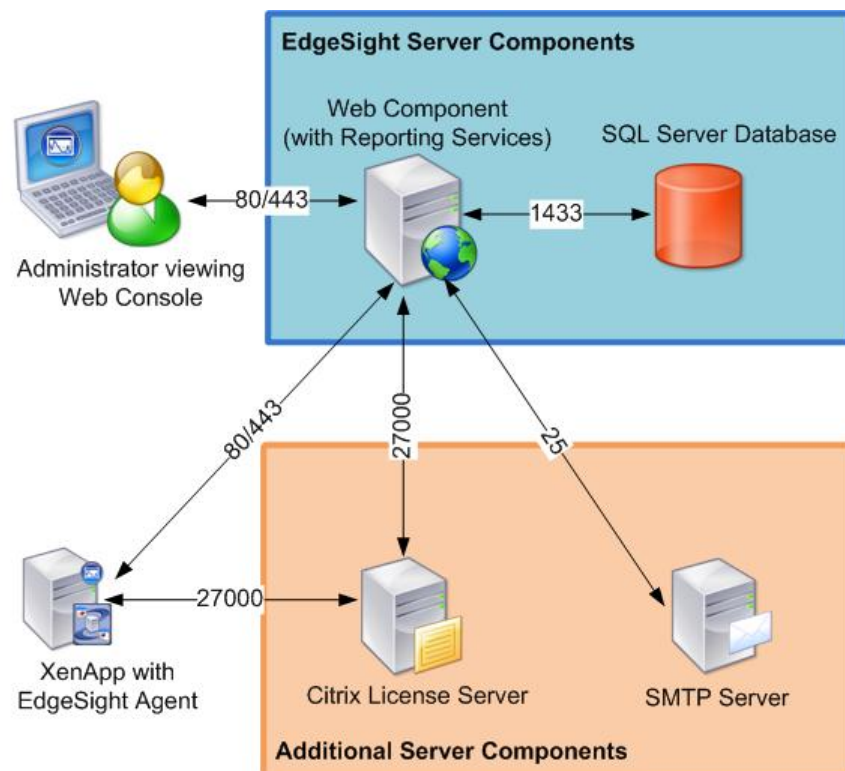
EdgeSight also provides more report output formats than Resource Manager. EdgeSight lets you output reports as PDFs, in Excel, and plain text. Unlike Resource Manager, EdgeSight also lets administrators subscribe to these reports. This means administrators can, for example, specify for EdgeSight to generate and email specific reports to administrators every week the night before their weekly staff meeting.

However, unlike Resource Manager, EdgeSight does not have SMS support or scripts that run based on events per say. Alert actions can be configured to run a remote process based on a specific alert occurrence, essentially allowing an administrator to perform any task.

For a more complete description of the differences between the two components, see [EdgeSight 4.5 for Citrix XenApp Environments: Transitioning from Resource Manager](#), CTX116798.

## EdgeSight Components

The main components are the agents, the server, and an administration and reporting console. In addition, EdgeSight requires SQL Server Reporting Services for the generation of reports, and Citrix License Server for Windows for software licensing management. (Refer to the *EdgeSight Installation Guide* for required software versions.) The following figure shows Citrix EdgeSight components in relation to one another.



*EdgeSight components in relation to one another. The port numbers are displayed on the connection lines.*

EdgeSight comprises two main components:

- **Citrix EdgeSight for XenApp Agent.** Software that runs on Citrix XenApp servers and records information about user sessions, client and server performance, application usage, and network connections. Data is collected, correlated, and stored in a local database and uploaded to Citrix EdgeSight Server on a daily basis.
- **Citrix EdgeSight Server.** Gathers performance data from Citrix servers and other devices (end-points). Administrators can also configure real-time alerts for notification of critical system events. The following components make up the EdgeSight server:
  - **Database Server.** Stores the data uploaded from end-user systems.
  - **Web Server.** Displays performance and availability information in a wide range of standard reports through the Citrix EdgeSight Server Console.
  - **Citrix EdgeSight Server Console.** This Web-based console allows users to display reports and drill down into data to isolate and resolve problems. EdgeSight users can display data

directly from an agent database for use in problem resolution. The console can be run from any workstation using a supported browser.

## EdgeSight Editions

There are two modes of EdgeSight available with XenApp:

- Citrix EdgeSight in Basic Mode, also sometimes known as Resource Manager powered by EdgeSight
- Citrix EdgeSight in Advanced Mode

The mode available with XenApp depends on the edition level (Advanced, Enterprise, or Platinum), as well as the XenApp product version. As previously stated, both editions of EdgeSight are referred to collectively as EdgeSight. More information can be found in the EdgeSight Administrator's Guide.

### *Where do I find the... feature?*

If you have been using Resource Manager for a long time, you will probably begin trying to use EdgeSight by looking for features you use frequently in Resource Manager. Here is some information about how to find similar features in EdgeSight.

### Dashboard

EdgeSight has a dashboard that lets you define a list of up to six parameters for a group of up to 20 servers. EdgeSight queries the agents running on these servers and refreshes the dashboard at a defined interval. To see the dashboard, in EdgeSight 5.0, click the **Configure** tab and click **Real-Time Dashboard**. See the online help for further directions.

### Performance Monitoring Counters

If you display Windows Performance Monitoring counters in EdgeSight, you might want to begin learning EdgeSight by using features with these counters. For more information, see the section for people experienced with performance monitoring in [Where to Start Using EdgeSight?](#)

## What's Next?

To begin using EdgeSight as a performance monitoring solution, start by reviewing some of the whitepapers and documentation on migration:

- [EdgeSight 4.5 for Citrix XenApp Environments: Transitioning from Resource Manager](#), CTX116798
- When planning an EdgeSight deployment, it is important to be aware of key differences in EdgeSight's architecture, including best practices for the EdgeSight database and recommendations for the agent deployment. Start by looking at the Planning section of [CTX116798](#); this section provides a good introduction to best practices EdgeSight deployments. Then review the information in the [Citrix EdgeSight Installation Guide](#).

To get EdgeSight up and running, review the configuration and account information in the [Citrix EdgeSight Administrator's Guide](#) and then become familiar with EdgeSight's general functionality by reviewing the following:

- [Citrix EdgeSight User's Guide](#). This guide provides case studies of how administrators can use EdgeSight to accomplish tasks like resolving system, session, and application performance problems.
- "[Where to Start Using EdgeSight?](#)" This Wiki article provides an entry point with links to key EdgeSight concepts such as Group and Department design, information to help administrators understand how EdgeSight categorizes reports, and an introduction to performance monitoring.
- "EdgeSight Reporting Tasks for XenApp." This Wiki article provides an entry point for articles about how to use EdgeSight to improve session start times, farm health, and so on.

## Key Points for Transitioning from Resource Manager

Some key Resource Manager points to consider when planning the transition from Resource Manager to EdgeSight are:

- **Plan to Run "In Parallel" Initially.** If you are currently using Resource Manager, Citrix recommends running your Resource Manager systems in parallel to implementing EdgeSight. This will provide monitoring continuity until the transition to EdgeSight is complete.
- **Accessing Historical Summary Database Information.** Data cannot be migrated from Resource Manager to EdgeSight because of the differences in the database architectures. After the EdgeSight environment is tested and deployed, Citrix recommends disabling Resource Manager data collection and only using the summary database for historical reference.
- **Alerts.** Alerts and thresholds cannot be migrated from Resource Manager to EdgeSight. If you use Monitoring Profiles in Resource Manager, consider grouping alerts and metrics by department in EdgeSight.

Before migrating to EdgeSight, document the alerts and thresholds set in Resource Manager so you can figure out their equivalent in EdgeSight. The most common alerts in EdgeSight and their Resource Manager counterparts are listed in the "Alerting and Metrics Consideration" section of [EdgeSight 4.5 for Citrix XenApp Environments: Transitioning from Resource Manager](#), CTX116798.

Also, coordinate with your respective network monitoring teams if sending SMTP alerts or SNMP traps to other third-party monitoring systems. Use departments to apply specific alerts required for a group of servers.

## Key Points for EdgeSight Deployments

While reviewing this information, be sure to note some of the key points in managing and deploying EdgeSight:

- **Automated Agent Deployment.** To make installing and configuring easier, make sure that the agent software package contains all the required settings for an EdgeSight environment and use any software deployment tools (Installation Manager, SMS, etc) you have in your own environment.
- **Limit the Initial Agent Deployment.** Perform a test deployment on a limited number of XenApp servers to gauge the impact on your farm. Use this pilot to adjust initial EdgeSight configurations. It is easier to deploy and manage 25 EdgeSight agents than it is 250 EdgeSight agents (especially if it's required to execute a roll-back plan). Also, this approach reduces risk and overall customer impact in the event an issue arises.
- **Baseline Performance and Fine-Tuning.** Citrix suggests baselining your server performance and regularly revisiting alert and threshold settings.

## FAQs

1. *Can I use EdgeSight to monitor Presentation Server 4.5?*

No. If you have a mixed farm with Presentation Server 4.5 servers and XenApp 5.0 for Windows Server r2003 or Windows Server 2008, you must use Resource Manager to monitor the Presentation Server 4.5 servers and use EdgeSight to monitor the XenApp 5.0 servers.

While you can monitor Presentation Server 4.5 servers with EdgeSight, EdgeSight does not recognize these legacy servers and treats them as unidentified end-points.

2. *How do I find the Resource Manager report I'm used to using in EdgeSight?*

For a table of the EdgeSight equivalent of Resource Manager reports, see the "Reporting Considerations" section of the [EdgeSight 4.5 for Citrix XenApp Environments: Transitioning from Resource Manager](#), CTX116798.

3. *How do I migrate my Resource Manager database to EdgeSight?*

It is not possible to migrate data or the Resource Manager database to EdgeSight. Because of the differences in architecture between the two systems, the data and databases are incompatible.



# EdgeSight Versions

The techniques and features in this article are compatible with the following versions of EdgeSight:

- EdgeSight 5.3
- EdgeSight 5.2
- EdgeSight 5.1
- EdgeSight 5.0
- EdgeSight 4.5
- Resource Manager powered by EdgeSight 4.5

## See Also

[Where to Start Using EdgeSight?](#)

## References

The specific product version requirements are listed in [Improving Slow Session Start Times](#).

- [EdgeSight 4.5 for Citrix XenApp Environments: Transitioning from Resource Manager](#), CTX116798
- [Citrix EdgeSight Installation Guide](#)
- [Citrix EdgeSight Administrator's Guide](#)
- [Citrix EdgeSight User's Guide](#)

## Monitoring

---

This page last changed on Mar 31, 2010 by [normanw1](#).

- [Introduction to EdgeSight Monitoring](#)
- [Performance Monitoring](#)
- [Monitoring Farms](#)
- [Understanding EdgeSight Alerts](#)
- [Dashboard Monitoring](#)

## Introduction to EdgeSight Monitoring

---

This page last changed on Mar 31, 2010 by [normanw1](#).

This article discusses when you would want to use EdgeSight's Monitoring features.

### Table of Contents

- 1 [Overview](#)
- 2 [Farm Monitor](#)
- 3 [Alerts](#)
- 4 [Dashboard](#)
- 5 [Difference Between Monitoring and Reports](#)
- 6 [See Also](#)

## Overview

EdgeSight provides a wide range of tools and reports allowing you to access remote devices and display real-time data stored in an EdgeSight agent database. The tools on the Monitoring tab are designed to provide timely notification of alert conditions or of performance problems on critical machines. Use these pages to discover a problem before the end-user calls the help desk. Monitoring tools include:

- Farm Monitor
- Dashboard
- Alert Console and Alert List

Alerts also fall into the broad category of Monitoring features.

## Farm Monitor

The Farm Monitor helps you monitor alert conditions occurring on XenApp and XenDesktop systems within farms. The farm structure shown on the monitor is read directly from the farms. When an alert condition is detected by an EdgeSight Agent running on a device, an alert is generated and this condition appears on the Farm Monitor.

Tip: Configure your alerts wisely. If there are too many alerts configured or they fire too frequently there will be too much noise and the Farm Monitor will not have as much value as it would if the alerts are setup to fire for critical events.

## Alerts

EdgeSight provides numerous alerts, which can be extremely helpful for everyday management of your Citrix environment. Alerts are warnings that trigger when a certain event occurs on the devices EdgeSight is monitoring. In addition to being displayed in the EdgeSight console, EdgeSight can be configured to send alerts via email or SNMP trap.

Examples of alerts are:

- Application errors and faults
- XenApp and XenDesktop unavailability and errors
- Session performance problems
- System performance problems
- Windows event log messages
- Network slowdowns

## Dashboard

The Dashboard allows you to see real time information for specific devices. This allows you to quickly detect changes in performance and resource usage on critical machines in your environment or machines that have performance problems.

# Difference Between Monitoring and Reports

Because the EdgeSight Monitoring features provide real-time information, they are designed to provide quick insight into what is happening in your environment right now. In contrast the reports provide long term historical trending.

## See Also

- End-User Experience Monitoring (EUEM)
- [What is Happening in My Environment?](#)
- [Using EdgeSight Active Application Monitoring](#)
- [Using EdgeSight to Monitor XenApp Infrastructure Servers](#)

## Performance Monitoring

---

This page last changed on Mar 31, 2010 by [normanw1](#).

- [Experienced with Performance Monitoring?](#)
- [New to Performance Monitoring?](#)

## Experienced with Performance Monitoring?

This page last changed on Apr 28, 2010 by ronaldb.

If you are an administrator who is experienced with performance monitoring, and in particular, perfmon counters, you may want to begin using EdgeSight by mapping your existing knowledge of perfmon counters onto EdgeSight.

In addition to collecting some perfmon counters, EdgeSight also gathers data from a variety of sources including the Event Log, XenApp, Windows Management (WMI) on end-user workstations and Citrix servers. Consequently, perfmon counter alerts and reports are only a subset of the information EdgeSight provides.

The following table provides examples of where you can find perfmon counters in EdgeSight:

To...	Use...
baseline your environment using Perfmon counters	<ul style="list-style-type: none"><li>• Real-time Device Summary</li><li>• Real-time System Performance</li></ul>
see a wide range of Perfmon counters from the last three days (grouped in three hour blocks)	<ul style="list-style-type: none"><li>• Device Troubleshooter</li></ul>
set alerts based on a specific Perfmon counter	The <b>Custom Performance Counters</b> feature to add a perfmon counter. These will show up in the real-time reports. In the <b>Troubleshoot</b> tab, click <b>Real-Time Reports &gt; Custom Performance Counters &gt; Configuration</b> .
perform other reporting tasks using Perfmon counter	All of the Real-time reports in the <b>Browse</b> tab are based on Perfmon counters: <ul style="list-style-type: none"><li>• Real-time Device Summary</li><li>• Real-time Network Performance</li><li>• Real-time Presentation Server User Summary</li><li>• Real-time System Compare</li><li>• Real-time System Performance</li></ul>

The advantage to using EdgeSight to gather and report on these Perfmon counters is that unlike displaying these metrics in Perfmon, EdgeSight lets you display the information remotely, generate and print reports, and display the information from multiple servers simultaneously.

## References

- [Windows Perfmon: The Top Ten Counters](#). Written on April 2007 on Adminfoo.net. Accessed on July 24, 2009.
- "Establishing a Performance Baseline" a Microsoft TechNet article, accessed on April 20, 2009.
- <http://support.citrix.com/article/CTX031126>
- [Key Performance Metrics Exposed in EdgeSight for XenApp 5.0 and EdgeSight for Endpoints 5.0](#). Citrix Whitepaper.
- Forum post, <http://www.brianmadden.com/forums/t/26734.aspx>, accessed on April 16, 2009.

## New to Performance Monitoring?

---

This page last changed on Apr 28, 2010 by [ronaldb](#).

Because EdgeSight is a performance monitoring product, it assumes a certain amount of performance monitoring knowledge. Before using the product, it may be helpful to understand basic performance monitoring concepts such as:

- How to establish a performance baseline or benchmark
- How to use performance counters to determine system health and load
- The reasons organizations use metrics to evaluate network performance and how they can benefit you

Microsoft provides a good overview of performance monitoring in its TechNet article, [Overview of Performance Monitoring](#). While this information pertains to Windows Server 2000, the general principles still apply. A very easy introduction to using Windows Performance Counters is available in the article, [Windows Perfmon: The Top Ten Counters](#).

The following resources will help with establishing a performance baseline:

- "[Establishing a Performance Baseline](#)" a Microsoft TechNet article, accessed on April 20, 2009.
- <http://support.citrix.com/article/CTX031126>
- [Key Performance Metrics Exposed in EdgeSight for XenApp 5.0 and EdgeSight for Endpoints 5.0](#). Citrix Whitepaper.
- Forum post, <http://www.brianmadden.com/forums/t/26734.aspx>, accessed on April 16, 2009.

## Monitoring Farms

---

This page last changed on Nov 11, 2009 by [sarahv](#).

- [XenApp Farm Resiliency](#)



## XenApp Farm Resiliency

This page last changed on Dec 02, 2009 by [danag](#).

To prevent major outages and crises, it is important to become immediately aware of significant changes to data collectors, XML Brokers, and other servers vital to farm infrastructure.

This article defines farm resiliency, which is predicated on the concept of infrastructure servers, and an explanation of this concept. It provides a foundation for the following series of articles, which provide step-by-step instructions for ensuring farm resiliency:

- [Alerting on Critical Health Changes](#)
- [Determining When a Data Collection Election Occurs](#)
- [Farm Resiliency Using the Farm Monitor and Reports](#)
- [Using EdgeSight to Monitor XenApp Infrastructure Servers](#)

Table of Contents

- 1 [Overview](#)
  - 1.1 [Background Information](#)
- 2 [References](#)

## Overview

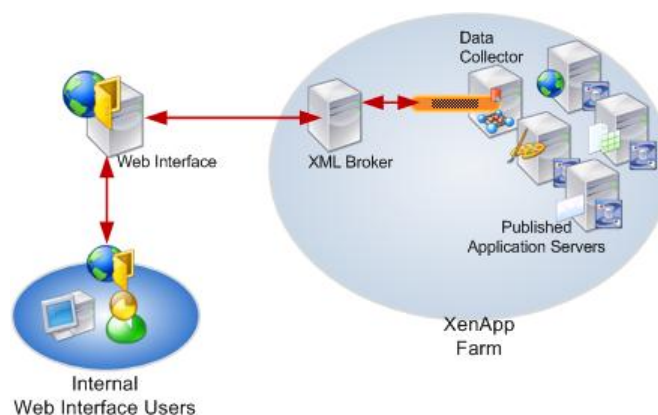
To ensure farm resiliency, Citrix recommends monitoring the following events:

1. Any server in your farm is not accepting user connections. This is an essential step in preventing "blackhole" conditions - especially in load-managed application groups.
2. A data collector election occurs.

Good farm management also requires knowing how busy your application servers are in actuality and when they exceed certain thresholds.

## Background Information

For large and medium-sized farms, Citrix recommends administrators dedicate a computer for infrastructure functions, such as the XML Broker and the data collector, and configure backup servers for the data collector.



- **XML Broker:** Used by the Web Interface to enumerate published applications from the XenApp farm. This server also communicates directly with a Zone Data Collector to determine the server to route a user to when an application is launched through the Web Interface.
- **Zone Data Collector** (or "data collector"): Maintains dynamic farm-wide data, including the list of online and offline servers, as well as the load level of each server. The Zone Data Collector is also responsible for communicating farm-wide configuration changes to all servers in its zone.

**Note:** Ideally, farm administrators should set the data-collector election preferences on the data collector machine to **Most Preferred** and its backups to be **Preferred**. (Since Citrix recommends that application servers not host data collectors, application servers should be set to **Default Preference** or **Not Preferred**.)

## References

- [XenApp Infrastructure Monitoring and Alerting](#), CTX118742
- [Improving Farm Performance and Resiliency with Hotfix Rollup Pack 3](#), CTX119922
- [Citrix XenApp 5.0 for Windows Server 2008 Administrator's Guide](#), CTX115519.

# Alerting on Critical Health Changes

---

This page last changed on Apr 27, 2010 by ronaldb.

This article provides suggestions for ways administrators can set alerts for critical health changes.

## Table of Contents

- 1 [Overview](#)
- - 1.1 [Requirements](#)
  - 1.2 [Setting Alerts for High Resource Utilization](#)
  - 1.3 [Setting Alerts to Prevent Load Balancing Black Holes](#)
    - - 1.3.1 [Configuring EdgeSight Alerts for Unreachable Servers](#)
      - - 1.3.1.1 [Part 1: To configure the ICA Listener test](#)
      - - 1.3.1.2 [Part 2: To configure EdgeSight to alert you if a server stops accepting connections](#)
  - 1.4 [Reporting for Custom Performance Monitoring Counters](#)
    - - 1.4.1 [Reporting and Analysis](#)
  - 1.5 [Determining the Number of Elections on Your Farm](#)
- 2 [Using the Farm Monitor to Display Recent Farm Health](#)
- 3 [Using Reports for Farm Health](#)
  - 3.1.1 [Other Useful Farm Health Alerts](#)
- 4 [References](#)

## Overview

*This article assumes that, in accordance with good farm design, there is one or more computers dedicated to infrastructure functions. For an explanation of infrastructure servers, see [Background Information](#).*

To ensure farm resiliency, Citrix recommends knowing immediately when:

1. Any server in your farm is not accepting user connections. This is an essential step in preventing "blackhole" conditions - especially in load-managed application groups.
2. A data collector election occurs.

Good farm management also requires knowing how busy your application servers are in actuality and when they exceed certain thresholds.

## Requirements

This article assumes administrators have the following configuration:

- XenApp 5.0 for Windows Server 2003, Hotfix Rollup Pack 3
- EdgeSight 5.0

While some techniques in this article might still be possible without HRP03, not all of them will be.

HRP03 contains critical farm resiliency enhancements. Citrix strongly recommends installing Hotfix Rollup Pack 3 (HRP03) for Presentation Server 4.5 and XenApp 5 for Windows Server 2003 on all applicable farm servers. Without HRP03, the black-hole conditions discussed in the sections that follow result in the entire zone or possibly even entire farm failing.

As of this authoring date, HRP03 farm resiliency features are not available for XenApp products running on Windows Server 2008.

## Setting Alerts for High Resource Utilization

Administrators can configure EdgeSight to set alerts when a resource utilization (CPU, thread counts, queue length, memory) for specific processes exceeds a specified value. In practice, this means that administrators can create alerts for critical services, such as the Citrix XML Service.

For example, in an organization with four XML Broker servers, a high CPU load on one XML Broker might cause intermittently slow application enumeration and launch performance. Without setting an alert, this scenario might be time consuming to isolate. By configuring an EdgeSight alert, the administrator can see the issue in the EdgeSight **Farm Monitor**. By associating an action with this alert, EdgeSight will notify the administrator about the high load before the peak logon period, which lets the administrator prevent the problem from impacting the user community.

This scenario and the procedure that follows are just meant as an example. Other examples of Application Performance alerts administrators might want to set include:

Problem	Service Display Name	Service Executable	Alert Rule Conditions
IMA service becomes unresponsive on some devices	Citrix Independent Management Architecture	ImaSrv.exe	EventLog = 'System' AND EventID = '3999' AND EventSource = 'IMAService'
Failure to authenticate externally (or internally depending on farm design)	Citrix Secure Gateway Proxy	CtxSGSvc.exe	TBD
Print Manager failure (Overloaded Citrix Print Manager Service)	Citrix Print Manager Service	cpsvc.exe	When the thread count exceeds the value you calculated this can indicate a problem.

### To create an alert on the XML Broker for overload conditions

1. Create the **Alert Rule** as follows:**Rule Category:** Application Alerts  
**Rule Type:** Application Performance**Rule Name:** \_XML Broker Overload

#### Alert Rule Conditions:

- **Process file name:** ctxmlss.exe
- **Process company name:** Citrix
- **CPU time (percent):** 85
- **Thread count:**
- **Thread queue length:**

**Note:** The environment must meet all the criteria you specify in the Alert Rule, including the sample ratio, before it will fire. The more parameters administrators enter, the more difficult it is for the alert to be triggered. Leave all other fields at their default settings.

2. Apply the alert to the department or farm in which the XML Broker resides. EdgeSight will monitor all servers in this department for the alert criteria.

3. Create an **Action** for this alert specifying "XML Broker Overloaded" as the subject.

**Note:** Instructions for creating alerts are available in the EdgeSight product documentation.

## Setting Alerts to Prevent Load Balancing Black Holes

To ensure farm health, you want to know immediately when an application server stops accepting ICA connections (that is, the ICA protocol stack fails). This is particularly true when the application server is being load balanced.

When one load-managed application server cannot accept connections, a state can result where users cannot connect to **any** instances of that application in the load-managed group. To prevent these load-balancing *black holes*, consider setting EdgeSight to alert you whenever an application server stops accepting user (ICA) connections.

#### Cause?

This unreachable state results because the Citrix Independent Management Architecture (IMA) service cannot detect when an application server stops accepting user connections. If the application server is in a load-balanced group, the IMA service perceives that the unreachable server is the least-loaded server and continues to direct user connections to it. This misperception results in the IMA service not directing connections to the other servers for that application: consequently, users cannot connect to *any* instances of the application.

## Configuring EdgeSight Alerts for Unreachable Servers

You can configure EdgeSight to alert you when an application server stops accepting ICA connections by using the following two-part process:

1. Configuring the XenApp Health Monitoring & Recovery feature to run the ICA Listener test.
2. Configuring EdgeSight to alert you when the ICA Listener test fails.

This procedure requires that you remove the unreachable server from load balancing.

### Part 1: To configure the ICA Listener test

1. In XenApp, configure the Health Monitoring & Recovery feature to run the **ICA Listener** test every 60 seconds on all application servers in the farm. This test determines if a XenApp server can accept connections. For instructions on configuring the Health Monitoring & Recovery feature, see the [Citrix XenApp 5.0 for Windows Server 2008 Administrator's Guide](#).
2. In the Health Monitoring & Recovery feature, as the recovery action, specify for XenApp to **Remove Server From Load Balance Tables**. This option instructs XenApp to remove a server not accepting user connections from its load-balanced server group. This prevents the "black-hole" condition.

### Part 2: To configure EdgeSight to alert you if a server stops accepting connections

**Note:** This procedure requires that you have Server Settings permissions in EdgeSight.

1. In EdgeSight, create two new alert rules with the following settings (based on EdgeSight 5.0):

#### Rule 1:

Event ID 1004 is the event log entry that the Health Monitoring & Recovery feature logs when it takes an unreachable server out of its load-balanced group.

- Rule Category: System Alerts
- Alert Type: Windows Event Log
- Alert Rule Conditions:
  - Event Log Name: Application
  - Event Type: Any
  - Event ID: 1004
  - Event Source: MetaFrameEvents

#### Rule 2:

Event ID 1005 is the event log entry that the Health Monitoring & Recovery feature logs when it fails to take an unreachable server out of its load-balanced group.

- **Rule Category:** System Alerts
- **Alert Type:** Windows Event Log
- **Alert Rule Conditions:**
  - **Event Log Name:** Application
  - **Event Type:** Any
  - **Event ID:** 1005
  - **Event Source:** MetaFrameEvents

2. Assign the alert rule to the Department containing all farms being monitored (PS Farms) or to a specific farm.

3. Configure an alert action to send you an email alert. You can also create an action that runs an executable (for example, opening the command-line interface for applications like Tivoli or HP OpenView).

**Tip:** Creating farm-specific alerts, for example, including the farm name in the alert name (such as "Farm0012 Unreachable Server"), can help you quickly identify the source of the problem. You can also configure alert actions that generate a notification email to one or more administrators.

## Reporting for Custom Performance Monitoring Counters

XenApp provides some Performance Monitoring counters that can be beneficial to monitor for farm health. Unfortunately, not all of these counters are currently available in EdgeSight. However, it is possible to add these counters and run a report on them. The limitation is that you can only run a report for custom counters on one device in your farm at a time. Because the data in this report is from the EdgeSight agent, it is possible to run reports on real-time information, which shows changes as they occur, rather than see historical data (typically three days old) from the database.

Creating reports for the Performance Monitoring counters listed in [XenApp Infrastructure Monitoring and Alerting](#), CTX118742 is a two-step process:

1. Add the Performance Monitoring counter to EdgeSight for the counters it does not monitor already.
2. Run a report (specifically, the **Custom Performance Counters > Chart**) on the data.

This process is explained in more detail in the article, [Generating Reports for a Custom Performance Monitoring Counter in EdgeSight](#).

## Reporting and Analysis

This section provides information about ways to proactively improve your farm performance by getting insight into past performance through historical reports and similar features.

## Determining the Number of Elections on Your Farm

When evaluating the overall health of your farm, you might want to determine how many times over the last few days election storms have occurred.

### To display trends for recent election storms

1. In EdgeSight, click the **Monitor** tab.
2. Click **Alert Console**.
3. Select one of the following:
  - **Department**.
  - **Group**. Select Data Collectors as the Group.
4. From the **Alert Name** list box, select **Zone Elections too Frequent**.
5. Select **By Device** as the Filter.
6. (Optional.) Change the Zoom interval to narrow or expand your date range, as desired.

**Tip:** You can also use the **Event Log Alerts** report filtered on the Data Collectors Group (grouped by Device) to display the number alerts over a longer period of time. Look for the alert **Zone Data Collector Election Triggered** in the report.

### To identify the data collectors affected by election storms and monitor elections in real time

1. In EdgeSight, click the **Monitor** tab.
2. Click **Farm Monitor**.
3. From the **Alert Name** list box, select **Zone Elections too Frequent**.
5. In the tree view, select the farm name and click **Go**.
7. In the **Device Information** pane, click the **System** tab.

8. In the Counter column, look (or search) for the Zone Elections Triggered Performance Monitoring counter. This counter increments each time a server triggers a data collector election.

## Using the Farm Monitor to Display Recent Farm Health

Use the Farm Monitor to browse through your farms and display real-time data for alerts received within the last 6 hours.

**Note:** This procedure requires that you have administrative privileges on the farm experiencing the alert condition.

### To display information for a recent alert

1. Browse the farm structure, or search for a specific farm. Farms with recent alerts are marked with an alert `!farm_mon_alert.jpg|width=32,height=32!` icon.
2. Click on the menu `!menubtn.jpg|width=32,height=32!` icon and select **Alert Detail** to display a description of the alert condition.
3. Click on an alert to retrieve system context around the time of the alert.
4. Select the applicable tab to display information on process, system, session, and n4etwork counters.

To display information for alerts received within the last three days, use the Alert Console.

## Using Reports for Farm Health

The following reports can also provide insight into farm health:

- **Device Summary.** Provides device performance data (CPU and memory usage, network delay, event log alerts, and application errors)
- **Environmental Usage.** Provides data on users, clients, sessions (start, end, and duration), published applications, and processes.  
(**Note:** You must enable uploading environmental usage data before you can run this report. See the EdgeSight online help for details. )
- **ICA Round Trip Time.** Provides session and network round trip time (RTT).
- **Network Delay for a User Group.** Session network delay, broken down by server, client, and network delay.
- **Port Network Delay.** Port network delay, broken down by server, client, and network delay.
- **Port Network Volume.** Port network volume (kilobytes sent and received).
- **Presentation Server Summary.** XenApp performance data (login time, active sessions, ICA session latency, and CPU and memory usage).
- **Presentation Server User Summary.** XenApp performance from a user perspective (for example, client traffic, login time, session latency, and recent sessions).

### Other Useful Farm Health Alerts

In environments plagued by frequent connection failures to the Terminal Server License Server, administrators can set alerts when this occurs.

By default, EdgeSight monitors for failure to connect to its environment's Terminal Services license server. (The **Terminal Server License Server Discovery Failure** alert is enabled by default.) However, administrators must associate this alert with an action for them to receive a real-time warning (for example, an email message).

## References

- [XenApp Infrastructure Monitoring and Alerting](#), CTX118742
- [Improving Farm Performance and Resiliency with Hotfix Rollup Pack 3](#), CTX119922

- QueryDC, CTX106317. This article includes information about the -t function Citrix added to the QueryDC tool.
- [Creating, Configuring, and Testing Health Monitoring](#), CTX112166.
- HMR Test Pack, CTX112805.
- [Case Study: Using EdgeSight 5.0 to Troubleshoot Application Enumeration](#), CTX120307.
- [Citrix XenApp 5.0 for Windows Server 2008 Administrator's Guide](#), CTX115519.



## Determining When a Data Collection Election Occurs

---

This page last changed on Nov 09, 2009 by [sarahv](#).

The XenApp data collector is a critical aspect of all farms. Regardless of whether the data collector is on a dedicated or shared server, when it performs poorly it will affect all user connections in that zone.

This article provides an overview of how to configure alerts for when a data collector election occurs and when there are excessive elections ("election storms").

### Table of Contents

- 1 [Overview](#)
  - 1.1 [Requirements](#)
- 2 [To create an alert when data-collector elections occur](#)
- 3 [Monitoring for Data Collector Election Storms](#)
  - 3.1 [Preventing Data Collector Election Black Holes](#)
- 4 [Applicable Versions](#)
- 5 [References](#)

## Overview

When communications fail between data collectors or between a server and its data collector, the process to choose a new data collector begins. This process is known as the *data-collector election*.

Citrix recommends that you be notified immediately when a data collector fails over to its backup data collector. This is because after failover the farm (or zone) only has one data collector. If that data collector fails, your entire farm will stop accepting user connections.

The easiest way to find out that an election occurred is to configure an alert in EdgeSight. Since the Access Management Console does not display elections, without EdgeSight, you must remember to run the QueryDC command or check the event logs on the data collector and its backup.

## Requirements

This article assumes administrators have the following configuration:

- XenApp 5.0 for Windows Server 2003, Hotfix Rollup Pack 3
- EdgeSight 5.0

While some techniques in this article might still be possible without HRP03, not all of them will be.

HRP03 contains critical farm resiliency enhancements. Citrix strongly recommends installing Hotfix Rollup Pack 3 (HRP03) for Presentation Server 4.5 and XenApp 5 for Windows Server 2003 on all applicable farm servers. Without HRP03, the black-hole conditions discussed in the sections that follow result in the entire zone or possibly even entire farm failing.

As of this authoring date, HRP03 farm resiliency features are not available for XenApp products running on Windows Server 2008.

## To create an alert when data-collector elections occur

1. In EdgeSight, create a new alert rule with the rule category **Presentation Server Error Alerts**.
2. Specify **Zone Data Collector Election Triggered** as the Alert Type.
3. Create an action that emails you when this alert occurs.

**Tip:** You can also create a System alert based on the Event ID 3999. If you do this, the alert displays the name of the zone, which server triggered the election, and the name of the server that is the new data collector. You may also want to create an action for this alert.

# Monitoring for Data Collector Election Storms

In larger farms, in extreme circumstances, network issues or high load can sometimes unnecessarily and repeatedly trigger data collector elections in rapid succession. These rapid elections are typically referred to as *\_election storms\_*. Election storms can result in downtime for end users since the data collectors must repeatedly rebuild dynamic data, which prevents them from load balancing incoming user requests.

## To configure an EdgeSight alert for excessive data collector elections

1. In **EdgeSight**, create a new alert rule with the rule category **Presentation Server Performance Alert**.
2. Specify **Zone Elections too Frequent** as the **Alert Type**.
3. Specify the number of elections that you want to occur before EdgeSight alerts you. In farms prone to frequent storms, you can specify either a higher number of election counts or lower polling interval and increase the **Re-alert** parameter (which is found in the **Advanced Parameters**) so that it alerts you less frequently once the storm begins.
4. Create an action that emails you when this alert occurs.  
**Note:** XenApp 5.0 for Windows Server 2003, Hotfix Rollup Pack 3 introduces features that help reduce election storms. Citrix strongly recommends upgrading to this hotfix if election storms are an issue in your farm. For more information, see [Improving Farm Performance and Resiliency with Hotfix Rollup Pack 3](#), CTX119922.

## Preventing Data Collector Election Black Holes

An election "black hole" condition can occur when a data collector only partially fails - that is, it cannot function as a data collector yet continues to win elections and causes an outage.

## To configure an EdgeSight alert when IMA on a data collector is unresponsive

1. In EdgeSight, create a new alert rule (and email action) with the following settings:
  - Rule Category: System Alerts
  - Alert Type: Windows Event Log
  - Alert Rule Conditions:
    - Event Log Name: System
    - Event Type: Any
    - Event ID: 4001
    - Event Source: MetaFrameEvents

## To configure an EdgeSight alert when IMA an offline data collector becomes available again

1. In EdgeSight, create a new alert rule (and email action) with the following settings:
  - Rule Category: System Alerts
  - Alert Type: Windows Event Log
  - Alert Rule Conditions:
    - Event Log Name: System
    - Event Type: Any
    - Event ID: 4002
    - Event Source: MetaFrameEvents

## Applicable Versions

This article applies to:

- EdgeSight 5.2
- EdgeSight 5.1
- EdgeSight 5.0

## References

- [XenApp Infrastructure Monitoring and Alerting](#), CTX118742
- [Improving Farm Performance and Resiliency with Hotfix Rollup Pack 3](#), CTX119922
- QueryDC, CTX106317. This article includes information about the -t function Citrix added to the QueryDC tool.
- [Creating, Configuring, and Testing Health Monitoring](#), CTX112166.
- HMR Test Pack, CTX112805.
- [Case Study: Using EdgeSight 5.0 to Troubleshoot Application Enumeration](#), CTX120307.
- [Citrix XenApp 5.0 for Windows Server 2008 Administrator's Guide](#), CTX115519.

## Farm Resiliency Using the Farm Monitor and Reports

---

This page last changed on Nov 09, 2009 by sarahv.

This article provides information about how to use EdgeSight's Farm Monitor feature to ensure farm health and resiliency. It also discusses generating reports for farm health and how to generate alerts.

Table of Contents



- 1 [Using the Farm Monitor to Display Recent Farm Health](#)
- 2 [Using Reports for Farm Health](#)
- ◦ 2.1 [Other Useful Farm Health Alerts](#)
- 3 [References](#)

## Using the Farm Monitor to Display Recent Farm Health

Use the Farm Monitor to browse through your farms and display real-time data for alerts received within the last 6 hours.

**Note:** This procedure requires that you have administrative privileges on the farm experiencing the alert condition.

### To display information for a recent alert

1. Browse the farm structure, or search for a specific farm. Farms with recent alerts are marked with an alert  icon.
2. Click on the menu  icon and select **Alert Detail** to display a description of the alert condition.
3. Click on an alert to retrieve system context around the time of the alert.
4. Select the applicable tab to display information on process, system, session, and network counters.

To display information for alerts received within the last three days, use the Alert Console.

## Using Reports for Farm Health

The following reports can also provide insight into farm health:

- **Device Summary.** Provides device performance data (CPU and memory usage, network delay, event log alerts, and application errors)
- **Environmental Usage.** Provides data on users, clients, sessions (start, end, and duration), published applications, and processes.  
(**Note:** You must enable uploading environmental usage data before you can run this report. See the EdgeSight online help for details. )
- **ICA Round Trip Time.** Provides session and network round trip time (RTT).
- **Network Delay for a User Group.** Session network delay, broken down by server, client, and network delay.
- **Port Network Delay.** Port network delay, broken down by server, client, and network delay.
- **Port Network Volume.** Port network volume (kilobytes sent and received).
- **Presentation Server Summary.** XenApp performance data (login time, active sessions, ICA session latency, and CPU and memory usage).
- **Presentation Server User Summary.** XenApp performance from a user perspective (for example, client traffic, login time, session latency, and recent sessions).

## Other Useful Farm Health Alerts

In environments plagued by frequent connection failures to the Terminal Server License Server, administrators can set alerts when this occurs.

By default, EdgeSight monitors for failure to connect to its environment's Terminal Services license server. (The **Terminal Server License Server Discovery Failure** alert is enabled by default.) However, administrators must associate this alert with an action for them to receive a real-time warning (for example, an email message).

## References

- [XenApp Infrastructure Monitoring and Alerting](#), CTX118742
- [Improving Farm Performance and Resiliency with Hotfix Rollup Pack 3](#), CTX119922
- QueryDC, CTX106317. This article includes information about the -t function Citrix added to the QueryDC tool.
- [Creating, Configuring, and Testing Health Monitoring](#), CTX112166.
- HMR Test Pack, CTX112805.
- [Case Study: Using EdgeSight 5.0 to Troubleshoot Application Enumeration](#), CTX120307.
- [Citrix XenApp 5.0 for Windows Server 2008 Administrator's Guide](#), CTX115519.

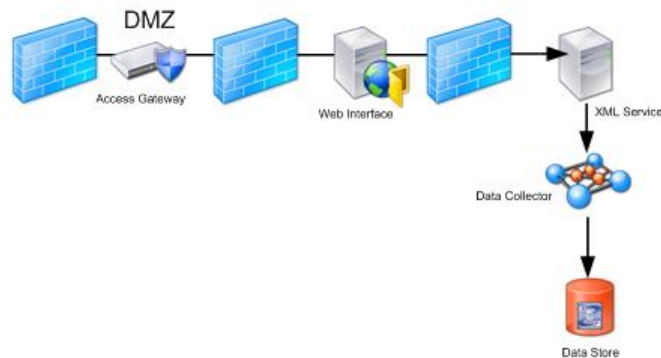
## Using EdgeSight to Monitor XenApp Infrastructure Servers

This page last changed on Apr 27, 2010 by ronaldb.

*This is a stub article and may be combined with another article or expanded.*

While many people think of EdgeSight as a tool for monitoring servers hosting published applications, you can also use EdgeSight to monitor your infrastructure servers.

This article uses the term infrastructure servers to refer to servers that provide XenApp server infrastructure, such as the data collector, data store, license server, and XML broker, that do not traditionally host published applications.



This diagram shows an example of the infrastructure servers on a farm.

## Monitoring for Data Collector Overload

To proactively monitor for data collector overload, set EdgeSight to send you alerts when the following performance counters reach TBD level on the computer hosting the data collector:

- ResolutionWorkItemQueueReadyCount
- WorkItemQueueReadyCount

## Infrastructure Servers and Capacity Planning

If you increase the number of application servers in your farm, often you will need to increase the number of infrastructure servers to align with this growth. For example, you might need to migrate from an infrastructure server hosting the Citrix License Server, the data collector and the XML Broker to a server hosting just the data collector and the XML Broker or a dedicated server for each function.

While farm size (small, medium, large) as determined by the number of servers can provide a general indication of how many infrastructure servers your environment requires, one of the most important factors to consider is the number of user connections. Because applications can scale differently from server to server (some servers might support 100 user connections, others might support only ten), looking solely at the number of servers might be misleading.

As the number of users connecting to your farm increases, use EdgeSight to monitor the Windows Performance Monitor counters listed in the table that follows. Checking these counters at the following times is critical:

- When the peak number of users is connecting simultaneously to the farm; this usually occurs in the morning.
- When the peak number of users is connected to the farm; this usually occurs during the day.

If the counters exceed the criteria listed in the table, break apart the infrastructure functions onto separate servers until the counter metric no longer exceeds that which is listed in the table.

Performance Monitor Counter Name	Criteria
CPU	> 85% - 90%

Memory	> 80%
ResolutionWorkItemQueueReadyCount	> 0 for extended periods of time
WorkItemQueueReadyCount	> 0 for extended periods of time
LastRecordedLicenseCheck-OutResponseTime	> 5000 ms

Typically, you need to evaluate the LastRecordedLicenseCheck-OutResponseTime counter only in large farms. For information about XenApp Performance Monitor counters and their functions, see the *Citrix XenApp Administrator's Guide*.

## Understanding EdgeSight Alerts

---

This page last changed on Nov 12, 2009 by [sarahv](#).

- [System Alerts](#)
- [Application Alerts](#)
- [Network Alerts](#)
- [Session Alerts](#)
- [XenApp Alerts](#)
- [XenDesktop Alerts](#)



## System Alerts

---

This page last changed on Nov 12, 2009 by [sarahv](#).

## Application Alerts

---

This page last changed on Nov 12, 2009 by [sarahv](#).

## Network Alerts

---

This page last changed on Nov 12, 2009 by [sarahv](#).

## Session Alerts

---

This page last changed on Nov 12, 2009 by [sarahv](#).

## XenApp Alerts

---

This page last changed on Nov 12, 2009 by [sarahv](#).

- [Using EdgeSight Active Application Monitoring](#)

## Using EdgeSight Active Application Monitoring

---

This page last changed on Jun 02, 2010 by [ronaldb](#).

*This is a stub article and may be combined with another article or expanded.*

EdgeSight Active Application Monitoring is an easy to install and configure automated performance testing tool that monitors the end user experience in Presentation Server and XenApp environments.

Table of Contents

- 1 [Overview](#)
- - 1.1 [Getting Started with Active Application Monitoring](#)
  - 1.2 [Differences Between EdgeSight for Load Test](#)

## Overview

Active Application Monitoring is a separate tool included with EdgeSight, Service Pack 2.0 and higher.

Active Application Monitoring lets you create scripts to replicate user actions for a specific application. You can use Active Application Monitoring to perform scalability testing for an application and also demonstrate SLA compliance.

The module has a separate installation program, which is found on the EdgeSight DVD. The installation instructions are included in the text of the installation wizard.

## Getting Started with Active Application Monitoring

To use the Active Application Monitoring tool to demonstrate SLA compliance, create a script to perform specific actions in an application and then run it against the corresponding application server in the production environment. In the script, you define the specific items you want to monitor as Monitoring Points.

When you run the script, you only specify for it to simulate one user so as not to create excess load on the server. The Active Application Monitor launcher can then capture metrics about how the application behaves on that application server. These metrics are uploaded to EdgeSight.

After the metrics are in EdgeSight, you can run one of the Application Response reports. These reports provide metrics for the monitoring point you specified in the script.

**Note:** The Active Application Monitoring online help is installed with the Active Application Monitoring tool. This help system provides instructions for configuring the module initially and creating scripts.

## Differences Between EdgeSight for Load Test

While Active Application Monitoring is designed to test application availability and responsiveness, EdgeSight for Load Testing performs load tests in a XenApp environment. EdgeSight for Load Testing records and replays scripts which simulate a virtual user's interaction with an application, generating the necessary information to simulate the activity of multiple users. This data helps XenApp administrators identify performance bottlenecks before applications are delivered to the production environment, and to establish application monitoring baselines based on transaction and system performance. Once created, scripts can be re-used for application regression testing of updates or for comparing performance of new hardware options or configurations.

## XenDesktop Alerts

---

This page last changed on Nov 12, 2009 by [sarahv](#).

## Dashboard Monitoring

---

This page last changed on Apr 27, 2010 by [ronaldb](#).

*This is a stub article and may be combined with another article or expanded.*



## Troubleshooting

---

This page last changed on Apr 27, 2010 by ronaldb.

- [Troubleshooting Using EdgeSight](#)

## Troubleshooting Using EdgeSight

---

This page last changed on Apr 27, 2010 by ronaldb.

Administrators can use EdgeSight real-time reports, historical reports, and troubleshooting features to perform troubleshooting in their environments. For articles about troubleshooting techniques, see:

- [Troubleshooting Devices](#)
- [Troubleshooting XenApp Application Servers](#)
- [Troubleshooting XenApp Application Issues](#)
- [Troubleshooting XenApp Infrastructure Servers](#)
- [Case Study, Troubleshooting Remote Applications](#)

Table of Contents

- 1 [Overview](#)
- 2 [Starting Points](#)
- 3 [Troubleshooting Tools](#)
  - 3.1 [Data in Real-time Troubleshooting Features](#)
  - 3.2 [Custom Counters](#)
- 4 [References](#)

## Overview

Troubleshooting is a form of systematic problem solving used to isolate the root cause of an issue so that steps can be taken to fix the issue and restore one or more systems to proper operation. In the context of this Wiki, troubleshooting techniques are applied to isolate problems with various components, services, or features in your XenApp environment, including XenApp servers, infrastructure servers (XML Broker, Data Collector, and Data Store), published applications, and printing services.

Identifying the root cause and resolving application issues is best done within a framework such as the scientific method:

1

1. Identify and understand the problem/question. Ask meaningful questions and state the problem or question in a way that it is conceivably possible to answer it. Gather relevant information to attempt to answer the question.
2. Formulate a hypothesis. Propose a solution or answer to the problem or question. State the hypothesis in a way that can be tested.
3. Test the hypothesis. Test the hypothesis before it is corroborated and given any real validity. There are two ways to do this: conduct an experiment and/or make further observations.
4. Collect and analyze the data. If the hypothesis fails the test, it must be rejected and either abandoned or modified. A modified hypothesis must be tested again. If the hypothesis passes further tests, it is considered to be a corroborated hypothesis, and it can now be published.
5. Make conclusions. The final step is to construct, support, or cast doubt on a theory. A scientific theory is a unifying and self-consistent explanation of fundamental natural processes or phenomena that is totally constructed of corroborated hypotheses.

You can use several different EdgeSight features, often the real-time features, to troubleshoot issues in XenApp environments. Because data in EdgeSight's real-time features is not averaged, this data shows resource utilization spikes, which is helpful when troubleshooting.

Depending on the scope of the problem you are troubleshooting, you may need to use multiple tools to accomplish the task. For an overview of the full range of troubleshooting options for Citrix products, see [Citrix Technical Support Brief Troubleshooting Guide](#), CTX106727.

## Starting Points

When beginning to troubleshoot issues, it is helpful to gather as much of the following information as possible:

1

- User ID
- The permissions and policies associated with the user account

- The user's activities before the issue occurred
- If the user saw anything unusual before the issue occurred
- Errors messages
- If the user can reproduce the issue
- If the application runs correctly when an administrator is logged into the user's console
- If the user has the same issue when an ICA connection is made to a desktop

## Troubleshooting Tools

EdgeSight provides two major tools for troubleshooting issues:

- **User Troubleshooter.** Lets you display detailed performance data for sessions across a farm for a specified user over the last three days.
- **Device Troubleshooter.** Lets you display detailed real-time performance data for a device. You can either search or browse for a device.

In addition to these generalized troubleshooting tools, EdgeSight also provides the following more specialized tools:

- **Device Trace Route.** Lets you execute a trace route from the selected device to a specified network host, allowing you to identify and locate routing problems.
- **Device Process List.** Lets you display detailed information about processes currently running on the selected device. This tool also lets you initiate a remote snapshot when you see the onset of a performance problem. This feature allows you to remotely analyze the current state of the system, identify a potential problem, and capture a full set of diagnostic data that can be shared internally with the application owner or externally with a third-party vendor to troubleshoot any potential problems within the application.

For usage instructions, see the *EdgeSight User Guide*.

## Data in Real-time Troubleshooting Features

EdgeSight's Troubleshooting tools (the **User Troubleshooter** and **Device Troubleshooter**), the Real-time Excel reports in the **Browse** tab, and the Custom Performance Monitor Chart generate charts and reports based on real-time data. There are several important things to know about using features that employ real-time data:

- This data is much finer grained (5 to 15 second samples) than the historical data on the EdgeSight Server.
- Real-time data is stored in the Agent Database for three days by default.
- Real-time data is raw data that it not correlated with data from other devices the way it is in the EdgeSight Server.
- Real-time reports can only provide data about one device at a time.
- Users must have administrative permissions on the device from which they wish to obtain real-time data.

## Custom Counters

If troubleshooting techniques require using performance monitoring counters not included in EdgeSight, you might be able to add them. For more information, see *Generating Reports for a Custom Performance Monitoring Counter* in EdgeSight.

## References

# Troubleshooting XenApp Application Servers

This page last changed on Apr 28, 2010 by ronaldb.

Regardless of what issue you are investigating, when you begin troubleshooting the application server, consider beginning by checking for alerts in the **Stability** tab on the Device Troubleshooter. The **Stability** tab displays alert data, including the type of alert, the system entity causing the alert condition, the user logged on to the device when the alert condition occurred, and the time at which the alert was generated on the client system.

## Table of Contents

- 1 [Session Problems](#)
- - 1.1 [Session Latency and Slow Performance in Sessions](#)
  - 1.2 [Sample Troubleshooting Process](#)

## Session Problems

### Session Latency and Slow Performance in Sessions

Slow session performance is one of the highest visibility issues you can have on your farm. Unfortunately, there are many different potential causes for session latency ranging from resource constrained application servers to poor network performance and excessive bandwidth consumption. If you suspect you have issues with session latency, see [Session Latency](#).

The XenApp startup process is complex and contains numerous stages. While there are some frequently occurring causes of slow session start times, such as autocreating excessive numbers of printers, profiles, there can be other causes including overloaded XML Brokers or Web Interface servers.

The best way to isolate the cause of slow session start times is to run the EdgeSight Session Startup Duration report and follow the process described in the article [Improving Slow Session Start Times](#).

This method adds a way to improve slow session times.

### Sample Troubleshooting Process

If a user or department complains about an issue, an administrator might begin the troubleshooting process as follows:

1. Determine if this is limited to a few users or if it is system wide:
  - a. Find out what users are complaining the session is slow. What do these users have in common? Are they in the same user group? Are they in the same department and likely to be using the same application?
2. Try to locate the device hosting the session. To do so, look at the session data for the users:
  - a. Open the **User Troubleshooter** and enter the name of one of the users (*DOMAIN\username*).
  - b. After displaying the users session, determine what device hosted the session with the issues.
3. Use the Device Troubleshooter to determine if the issue is specific to the application or occurs with all application on the server.
4. Use the Device Troubleshooter to determine if the issue is specific to the server hosting the application or if it occurs on all servers hosting that application.

Symptom	Feature	Where to Look?	Comments
Session Latency	<b>Troubleshoot</b> tab, <b>Device Troubleshooter</b>	<b>Session List</b> tab	Shows all processes running. Scroll to the right to <b>UserTime%</b> . If this metric is high for one session and not others, the issue could be specific to the session and not the device (for example,

			<p>the user's activity). Compare <b>UserTime %</b> to <b>ProcessorTime %</b> . <b>ProcessorTime %</b> is an average of all the processors on the server. If there are multiple applications on the server and the issue is specific to the application, consider moving the application to another server.</p>
<p>Session Latency/Slow Performance (possible resource issues)</p>	<p><b>Troubleshoot</b> tab, <b>User Troubleshooter</b></p>	<p><b>Session List</b> tab</p>	<p>Find the user name, figure out the process and device. If the issue is common to multiple user sessions on the same server, consider if upgrading the hardware would improve performance. If the application is not running well as a multi-user application (for example, its resource issues are caused by the application being designed for a single-user environment), consider installing the application in a XenDesktop environment or perhaps configure it to stream to desktop.</p>
<p>Slow logons or applications take a long time to save (possible network issues)</p>	<p><b>Troubleshoot</b> tab, <b>User Troubleshooter</b> OR <b>Troubleshoot</b> tab, <b>Device Troubleshooter</b></p>	<p><b>Session Summary</b> tab, then <b>System Network Summary</b> tab</p>	<p>In the <b>Session Summary</b> tab, check the <b>Network Round Trip Time</b> metric. In the <b>System Network Summary</b> tab, check bandwidth compression by comparing the <b>Session Line Output</b> and <b>Session Line Input</b> metrics (which, respectively, indicate data written back to the server and transferred from the server to the client) to the <b>Session Compression Input/Output</b> metrics. If compression is dramatically lower, it might indicate that administrators have not configured policies to control bandwidth</p>

			adequately. See next row in table. You can also look at <b>Avg Round Trip Time</b> and compare it to <b>Avg Delay</b> . ( <b>Avg Delay</b> indicates how long it takes for a server to process network requests.) If, when compared at the same time periods, <b>Avg Delay</b> is equal to or greater than <b>Avg Round Trip Time</b> then look at Avg Network Delay, <b>Avg Server Delay</b> , and Avg Network Delay. <b>Avg Server Delay</b> could indicate the server is overloaded - check to see if CPU utilization is around 100% - and cannot process requests, or it could indicate the Network Card (NIC) is overloaded. <b>Avg Client Delay</b> could indicate issues with the NIC on the client device or issues with the plugin (client) software itself.
Slow login times and applications take a long time to save (possible network issues)	<b>Troubleshoot</b> tab, <b>User Troubleshooter</b>	<b>Channel Detail</b> tab	Look to see which ICA channel is consuming the most bandwidth. Start to isolate the ICA channel on which you need to restrict bandwidth by looking at the <b>Printer Input / Output</b> , <b>SpeedScreen Input/ Output</b> metrics and then proceed to the other metrics. Reconfigure XenApp policies accordingly.
Slow session start times in some sessions and not others	<b>Troubleshoot</b> tab, <b>User Troubleshooter</b>	<b>Session Start Detail</b> tab	See the <a href="#">Improving Slow Session Start Times</a> article.
Slow application performance/session latency (possible application issues)	<b>Troubleshoot</b> tab, <b>User Troubleshooter</b>	<b>System Summary</b> tab, then <b>Process Detail</b> tab	In the System Summary tab, look to see if there is a resource at maximum capacity or if the <b>WorkingSet</b> (memory) is at its maximum. Sorting by <b>UserTime(%)</b> may

			be helpful. Look to see which process is consuming the most resources
Session hangs	<b>Troubleshoot</b> tab, <b>User Troubleshooter</b>	<b>Stability</b> tab	Look for application errors.

# Troubleshooting XenApp Application Issues

---

This page last changed on Nov 11, 2009 by [sarahv](#).

This article discusses ways to use EdgeSight to troubleshoot issues with applications published on XenApp.

## Table of Contents

- 1 [Overview](#)
- 2 [Application Testing and Deployment](#)
- 3 [Application Alerts](#)
- 4 [Monitoring Applications and Troubleshooting Application Issues](#)
- 5 [Applicable Versions](#)

## Overview

Users running applications through XenApp often call the help desk to report that their application has crashed, is slow, or that they received a cryptic error message. Sometimes these events occur several times before a user finally becomes frustrated and reports the problem.

Citrix administrators used to rely on users to report these issues, requiring the user to accurately describe the conditions when the error or crash occurred as well as the complete error message. In addition, administrators were often charged with trying to re-create this error or crash so they can forward the appropriate information to either a developer or a vendor.

The EdgeSight Agent running on a XenApp server monitors process availability and performance. For example, the agent creates a standard mini-dump file for any published application that crashes, whether the application was developed in-house or by a third party. These mini-dump files contain a complete set of information that an application developer can use to investigate the issue. Note that in some cases, the nature of the crash prevents system context data from being collected, but an application fault alert is still generated.) In the case of an application error, the complete error text is captured along with the exact time it occurred.

As a result, administrators no longer need users to report these issues or hope they can re-create an application issue in an environment where EdgeSight has been deployed.

In many organizations, there is often one person in charge of supporting an application. It is possible to identify a particular process and get a performance summary for a particular application.

One of the ways to minimize the impact of application issues is to proactively monitor application performance. EdgeSight provides historical reports that tell people "how application X performed last week." You can set up a subscription so the report is emailed to an application analyst or group of administrators on a regularly scheduled basis. In many cases, reports on application errors or high resource usage by an application can help you proactively identify a problem application before a crash occurs.

EdgeSight also provides real-time reports, monitors, and troubleshooters which allow you to display detailed information about an application- or session-related alert.

## Application Testing and Deployment

Many application issues can be avoided, or at least caught before they affect a production environment, by solid application testing and a careful deployment strategy. Use the Web to search for known application compatibility issues prior to deployment. Consider using the Microsoft Application Compatibility Toolkit to identify the root cause of application issues concerning INI files and registry settings. See the *Citrix XenApp Installation Guide* for best practice information on assessing applications for XenApp compatibility, evaluating application delivery methods, and locating applications on servers.



# Application Alerts

The unique alerting functionality of EdgeSight can notify administrators in real time when an application event has occurred, such as alert errors driven by exact error messages, high resource usage by an application, or a non-responsive process. These alerts can trigger email notifications, can be sent to third-party consoles that accept Simple Network Management Protocol (SNMP) traps, or as of EdgeSight for XenApp 5.2, can be sent to Microsoft® System Center Operations Manager.

## Monitoring Applications and Troubleshooting Application Issues

See the following topics for more information on proactively monitoring applications and troubleshooting applications when problems occur.

- [Application Performance Factors](#)
- [Monitoring Applications Proactively](#)
- [Application Issue Troubleshooting](#)
- [Real Time Troubleshooting of Application Issues](#)

## Applicable Versions

- EdgeSight 5.2
- EdgeSight 5.1
- EdgeSight 5.0

## Application Performance Factors

---

This page last changed on Apr 27, 2010 by [ronaldb](#).

Before troubleshooting applications, it is important to know what an application issue looks like and what can affect application performance. Application issues can show up as one or more of the following symptoms:

- The application fails to start or initialize
- That application does not behave correctly or normally
- The application and/or application server crashes
- Poor application and/or application server performance is observed
- Disconnected ICA sessions occur
- Slow ICA sessions are observed

There are many factors that impact application performance, including system resources, network bandwidth, and application compatibility issues. The following are some of the more common causes of poor application performance on a farm.

**Too many user connections or application requests:** Too many user connections to a particular application server or too many requests to the server from other applications can cause slow response times. Use the Process Usage report, filtered for the application and the server, to show the number of unique users connecting to the application. In the case of too many requests from other applications, the cause of the slowdown is often insufficient memory or CPU resources. Use the System CPU and the System Memory Usage reports to investigate these situations.

**Insufficient bandwidth:** Incorrect printing design, such as printing traffic that uses the network printing model that goes from the XenApp server across the WAN to the print server and then to the printer. If there are no XenApp policies set to limit printing bandwidth, other traffic on the WAN is compromised. Effectively, without setting either the XenApp Session Limits > Printer or Session Limits > Printer (%) policies, print jobs can consume as much WAN bandwidth as they want. This negatively impacts other traffic that crosses the WAN, including ICA traffic, and this has a severe impact on users. To determine if bandwidth is actually the issue, you may want to try running the application from another location. For example, if the problem is occurring when the application is run over the WAN, try running it over another WAN or over the LAN to see if there is a difference in performance.

To determine how much bandwidth your XenApp printing traffic is consuming, run the ICA Printer I/O report. If the application makes heavy use of audio or video, run the ICA Audio I/O and ICA Video I/O reports. You can also display peak and average overall bandwidth used by a session by running the Session Network Bandwidth Used report.

**Local latency:** Local latency is often due to slow processing of reads and writes by the database server. Areas to investigate include CPU and memory usage, on both the application server and the database server, as well as database size. Use the System CPU and the System Memory Usage reports to investigate these situations. It may also be helpful to verify that regular database maintenance has been taking place.

**Traffic bottlenecks:** Traffic bottlenecks can occur because one or more applications on a server has a high CPU usage. Run the Process CPU report, filtered by device, to see which processes are using the most CPU on the server. It may also be helpful to run the Process Thread Count report, filtered by process and device, to see the average thread count for the process.

**Slow request processing:** In some cases, applications that were not written with Terminal Services in mind may have problems running in a multi-user environment, resulting in slow request processing. Since these type of applications will perform poorly in both ICA and RDP sessions, try running the application in an RDP session and compare the performance.

For more ideas about using EdgeSight reports to detect application issues before they become critical, see [Monitoring Applications Proactively](#).

## Monitoring Applications Proactively

---

This page last changed on Nov 04, 2009 by [ronaldb](#).

The historical reports provided by EdgeSight allow you to identify process performance trends over time and, used in conjunction with your system baseline data, allow you to measure performance improvement or degradation.

## Monitoring Overall Performance with Historical Reports

The Process Performance Summary by Process report can help you proactively identify application issues before they become critical.

1. You can display this report or deliver it to subscribers on a regular basis, filtering the report by the Department or Group containing the XenApp servers you are interested in.
2. If the report shows abnormally high CPU or process memory usage, or a long network delay, you may want to investigate further. For example, if the process memory usage is significantly above the baseline value, click on that subreport to display the Process Memory Usage report.
3. You can drill down by expanding report rows to show process memory usage related to the specific device and user.

Once you have identified a problem application, you may want to find out if this is a one-time situation or an ongoing issue. For example, if you expand the timeframe of the report, use the Optional Parameters to select the specific application, and sort by date, you can quickly identify past spikes in memory usage.

## Monitoring Process Stability

Another way look at applications is by how stable they are, based on the number of errors, hangs, web errors, and faults encountered. In many cases, application faults (crashes) are preceded by an increased number of more application errors or hangs.

Use the Process Stability Summary by Process report to display which applications are experiencing the most issues. Click on any of the charts to display more details about a specific type of problem and drill down to show the device and user associated with the error.

The data in the process stability reports is based on conditions detected by the EdgeSight Agent installed on the XenApp Server. The agent determines a message box to be a notification of an application error if the message box contains an error icon or the text of the message box contains one or more of the following error keywords: error, unable, fail\*, unsuccessful, unexpected, bad, fault, invalid, illegal, denied, not valid, exception, or memory. EdgeSight software uses the Windows API (the `IsHangAppWindow` call) to determine if an application is not responding. An application is considered to be not responding if it is not waiting for input, is not in startup processing, and has not called the `PeekMessage` function within the internal timeout period of 5000 milliseconds (5 seconds).

## Monitoring Network Performance for a Process

Understanding the network metrics EdgeSight provides is a key concept and something that can quickly indicate where a problem might be.

For example, you run the Process Network Delay report, filtered for a critical process. The report shows a large amount of server delay. Server delay is the amount of network delay that is caused by waiting for the server or back end application to respond to our requests. For example, the spike might have been caused that day by a back-end server going down or an unusual number of users accessing the application.

By looking at this report, it is possible to tell that it is not a network problem because the network-only portion of the delay is well within normal values. If the network portion of the delay was high, it would be possible to deduce that the connection from the XenApp server to the application had some issues. For example, maybe the server and the streaming file share are in different data centers and there was latency over the connection.

You may want to correlate the network delay information with the network volume for the same process at the same time to see if the delay may be caused by large amounts of data being sent or received. Use the Process Network Volume report to display sent, received, and total network volume.

Some network problems can show up as application errors or faults, such as when an application fails to start properly, or fails to connect to a required component. Applications may fail to connect to a remote component causing it to terminate during the startup process or malfunction during run-time. Invalid hostnames, IP addresses, and/or port numbers may cause these issues. Applications may also fail to connect to remote components when firewalls and routers are incorrectly configured for the applications. Some applications require specific ports to be opened on the firewall. In some cases, the router may not have the information to correctly route a connection request to the application's remote component.

## Next Steps

Once you have identified an application issue, you'll need to troubleshoot it to determine the root cause. [Application Issue Troubleshooting](#) provides a framework for troubleshooting applications. When you start actively troubleshooting application issues, you'll want to look beyond the historical reports to the real-time data provided by the troubleshooters and real-time reports, as described in [Real Time Troubleshooting of Application Issues](#).

## Application Issue Troubleshooting

---

This page last changed on Nov 09, 2009 by ronaldb.

In troubleshooting application issues in XenApp environments, these general steps apply. The application issue and its system context must be evaluated. The behavior of the application and the associated environment must be analyzed to highlight the symptoms of the issue. Based on gathered information, multiple hypotheses can be formulated and test cases can be developed to validate that one or more of the hypotheses are correct. Once hypotheses are proven to be true, workarounds or solutions can be developed to resolve the issue. EdgeSight helps you understand the problem and isolate symptoms, gather system context data, and monitor application performance when testing hypotheses.

When applications are running in a Terminal Services environment, you need to know under what conditions the application will run and under what conditions it will fail. Here are some basic questions to ask concerning the application and your environment:

- Does the application run when the user is logged onto the server console? Rights issues can be uncovered by attempting to run the application from an administrator account and a user-class account.
- Does the application run when a user is logged on to an RDP desktop session? This can help isolate problems that only occur on ICA sessions.
- Does the application write information to the C drive? Poor network performance may affect applications which frequently attempt to write to the client's C drive. Failures may also occur if drive mapping is disabled.
- Can the application be executed from the command line or through a batch file?
- Can the application be run in a fixed window size or seamless window?

For more information about troubleshooting applications in a Terminal Services environment, see How to Effectively Troubleshoot Application Integration Issues at <http://support.citrix.com/article/CTX101709>.

One of the things you should know when you start troubleshooting an application is what recent changes have occurred on the XenApp server. Run the Asset Changes report filtered by the device. Have there been any changes in hardware or registry settings? Also, run the New Processes report for the device. Have any new applications been installed recently, especially new versions or hotfixes for the target application or similar applications?

If you are troubleshooting an application issue that occurred recently, you can get detailed data from real-time reports and troubleshooters as described in [Real Time Troubleshooting of Application Issues](#).

## Real Time Troubleshooting of Application Issues

This page last changed on Nov 04, 2009 by ronaldb.

If you are investigating a current or recent application issue, you can use the real-time monitoring capabilities of EdgeSight to troubleshoot the situation. The specific monitoring tool you use may depend on how you're notified of the issue and how you choose to investigate the cause.

Remote access to information stored in the the EdgeSight Agent database has some requirements that must be met:

- Downloaded controls may be required - You will be prompted to download controls when initially using monitoring or troubleshooting tools. Ensure that your browser settings will allow you to perform downloads.
- Administrative privileges - Because you are directly accessing the EdgeSight Agent database, administrative privileges are required on the device you are accessing.

To troubleshoot using...	Use...	Timeframe
Real-time alert context data	Monitor > Farm Monitor Note that no data is displayed in the monitor unless an alert has been triggered on the agent.	Up to 6 hours
User session data	Troubleshoot > User Troubleshooter	Up to 3 days
Device performance data	Troubleshoot > Device Troubleshooter	Up to 3 days

## Troubleshooting Using the Farm Monitor

The Farm Monitor displays not only alerts occurring on the farm, but the system context at the time the alert occurred and at the current time. This context data includes information about processes, system resourced and performance, session performance, and network performance.

Note that the tabs displayed in the Farm Monitor depend on the type of alert being displayed. For example, the Process tab is only displayed for a process alert (such as Application Error, Process Fault, or Thrashing Application). If the alert is triggered by system, generic XenApp or network condition, the Process tab is not displayed. If the alert is related to a specific XenApp session (such as Dominant Session or Disconnected Session), the Session tab is displayed.

You can quickly identify farms and XenApp machines which have encountered alert conditions by looking for the addition of the error symbol to the farm or server icon:



Clustering of alerts may indicate a system-wide problem. For example, if multiple applications on a server are encountering high CPU usage in a short space of time, looking at processor-related metrics would be a logical starting place.

When you click on a specific alert, data is retrieved from the EdgeSight Agent database. You can step through the tabs to display different sets of data and gain insight into the possible root cause of the problem:

- **Process:** This tab shows performance data for the process that is the source of the alert. Are there spikes in resource usage or network traffic prior to the alert being triggered? Are there spikes just after the alert? Did resource usage and network traffic levels return to normal?
- **Session:** This tab shows performance data for the session that is the source of the alert. Are there spikes in round trip time or bandwidth prior to the alert being triggered? Are there spikes just after the alert? Did round trip time or bandwidth levels return to normal? also, what resource usage was associated with the session?

- **System:** This tab shows performance data for the system hosting the application. Are there system-wide performance issues which could cause the application problem?
- **Process Summary:** This tab shows performance data for all applications running on the system. How does the performance of the target application compare to similar or related applications? Are other applications experiencing performance issues at the same time as the target application?
- **Session Summary:** This tab shows performance data for active sessions. Is the session associated with the problem application showing high resource usage? Is the session round trip time high? Was there a spike in input or output bandwidth at the time of the alert?
- **Network Summary:** This tab shows network performance data. Is there significant network delay which could contribute to the application issue? Is the delay on the server or on the client? Is the volume of network traffic unusually high at the time of the alert? Were there an increased number of network errors at the time of the alert?

Once you have identified an area of concern, you may want to display more fine-grained data. Click on the menu icon for the alert and select Alert Excel Sheet to display a report in Microsoft Excel. If the issue is an application hang, here are some possible indicators of the root cause. You may see the Disk queue length (Disk Q Len) spike at the time of the alert being triggered. This may indicate that the disk could be the cause of the contention. You may see the network throughput is low before the alert and then jumps after the alert. This may indicate that an initiated request was waiting on a backend server to respond. If this is the case, double click a data point in the Network chart to display the real-time network data to see which ports and hosts were being used at the time of the alert.

## Using the User and Device Troubleshooters

The process for investigating issues using the User and Device Troubleshooters is similar to the way you use the Farm Monitor. With the troubleshooters, you are able to access data for the last three days and data can be displayed at any time, not just when an alert condition has occurred. Which troubleshooter you use may depend on whether the application issue is associated with a specific user session (User Troubleshooter), or whether the issue is associated with a specific XenApp server (Device Troubleshooter). Also, don't ignore the possibility that a user-reported application issue may be the result of a problem on the user's device and not on the XenApp server. If the reported problem is not apparent when looking at the session or XenApp server data, use the Device Troubleshooter to look at the performance metrics for the user's system.

## Troubleshooting Using Snapshots

Another tool to use in investigating application issues is the snapshot. EdgeSight allows you to initiate a remote snapshot from the Device Process List when you see the onset of a performance problem. This feature allows you to remotely analyze the current state of the system, identify a potential problem, and capture a full set of diagnostic data that can be shared internally with the application owner or externally with a third-party vendor to troubleshoot any potential problems within the application. In most cases, you will generate a Normal snapshot. Keep in mind that selecting Full generates a full process dump, which is as large as the selected process. Full snapshots consume system resources and may result in a discernable impact on system performance.

## Troubleshooting Devices

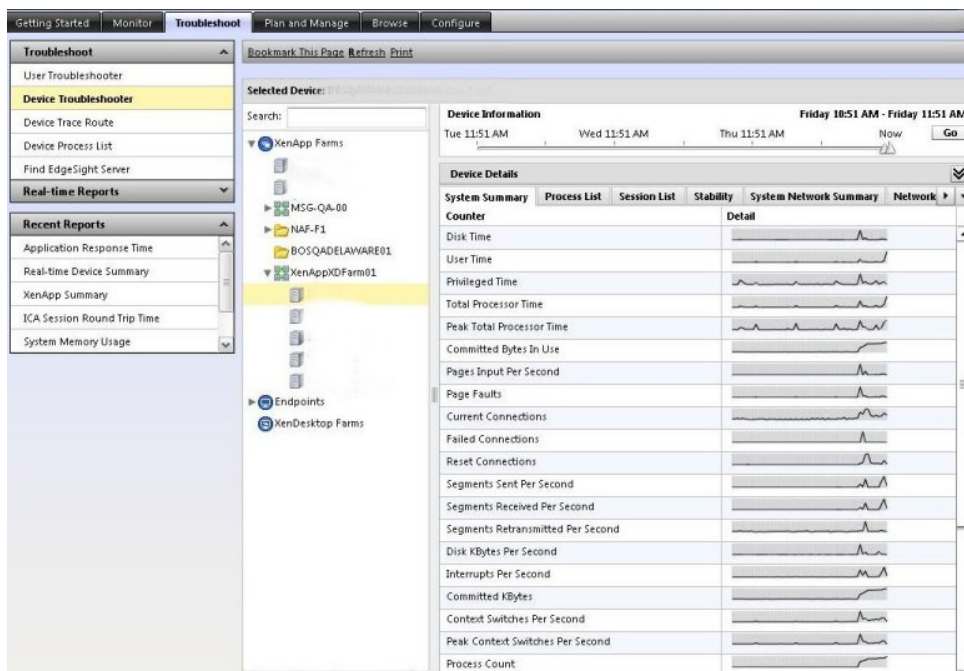
This page last changed on Nov 10, 2009 by ronaldb.

Even when you know what device is causing problems in your environment, it still might be difficult to pinpoint the problem with the device. This topic provides suggestions for ways to troubleshoot XenApp application and infrastructure servers.

### Sample Process: Troubleshooting Resource Utilization

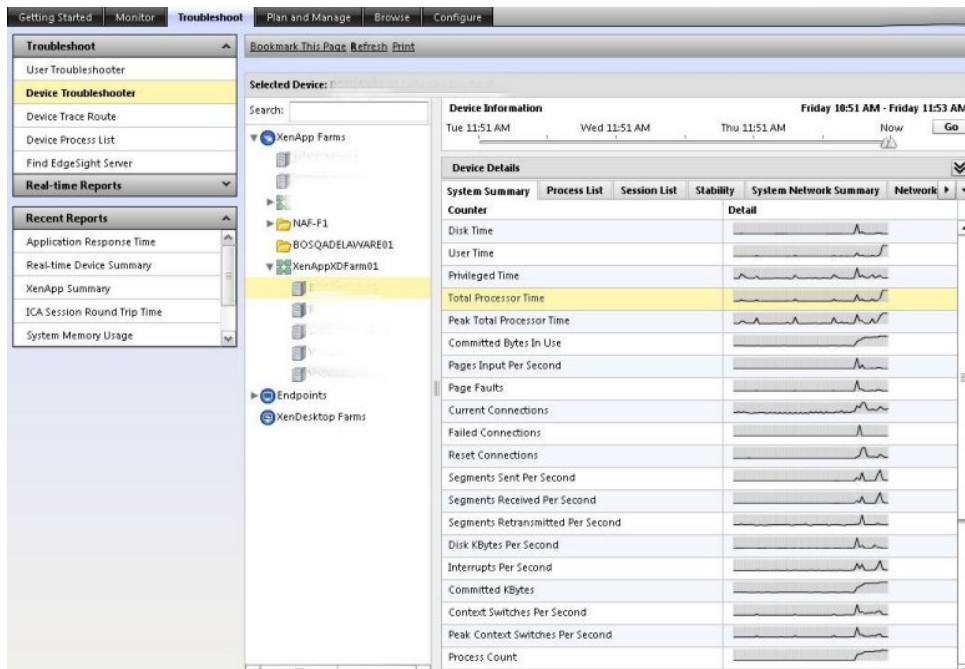
When troubleshooting using the EdgeSight Troubleshooters, many let you drill down into additional detail. For example, if you suspect that resource utilization is high on a particular device, you can do the following:

1. Select the device in the **Device Troubleshooter** and display data for the device.

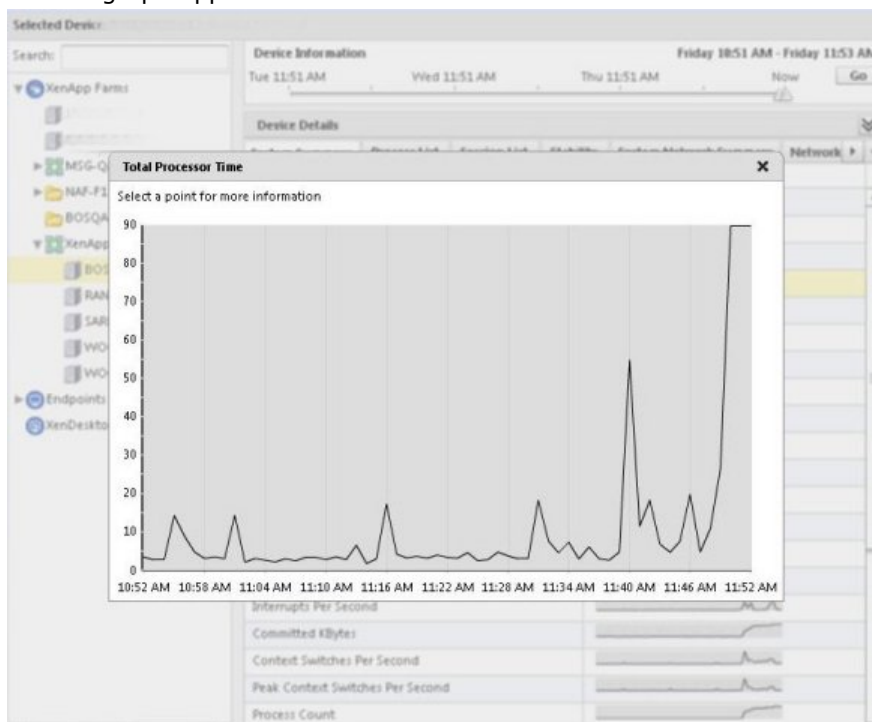


2. In the **Device Details** view, click the **System Summary** tab, scan the graphs for the counters, looking for the ones with the highest counts (typically represented by a straight line across the top of the graph). In this example, **Total Processor Time** is high.

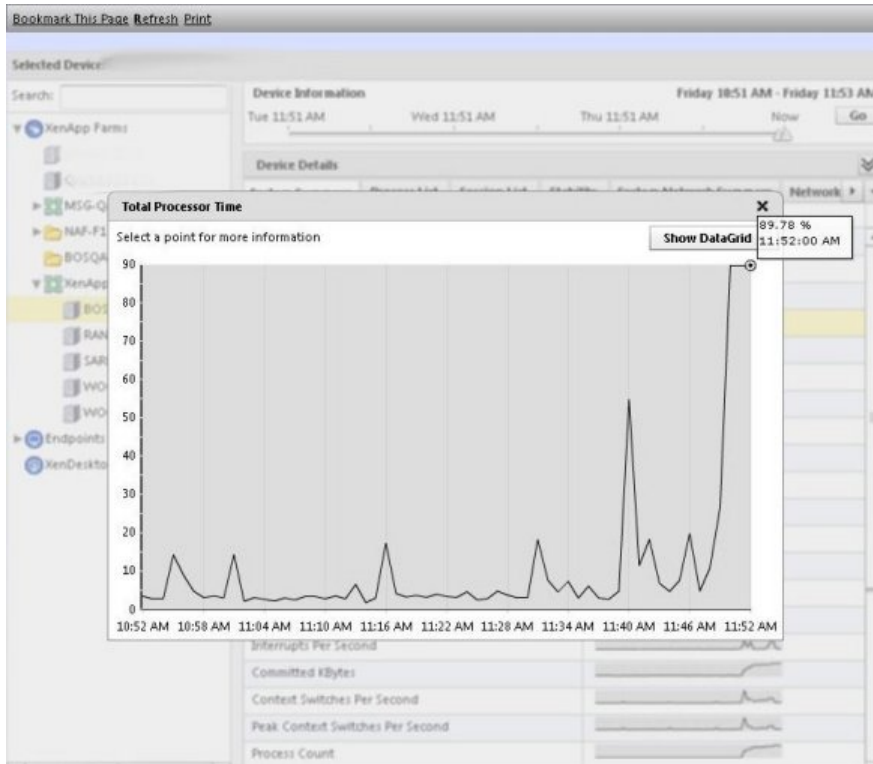




3. When you locate a counter with a high count, drill into that counter to see additional detail by clicking on the graph. A detailed graph appears for the counter.



4. In the graph, locate the data point you want to investigate. In this example, the administrator wants to investigate the peak utilization. The administrator mouses over the data point and clicks on the circle that appears to see more data.



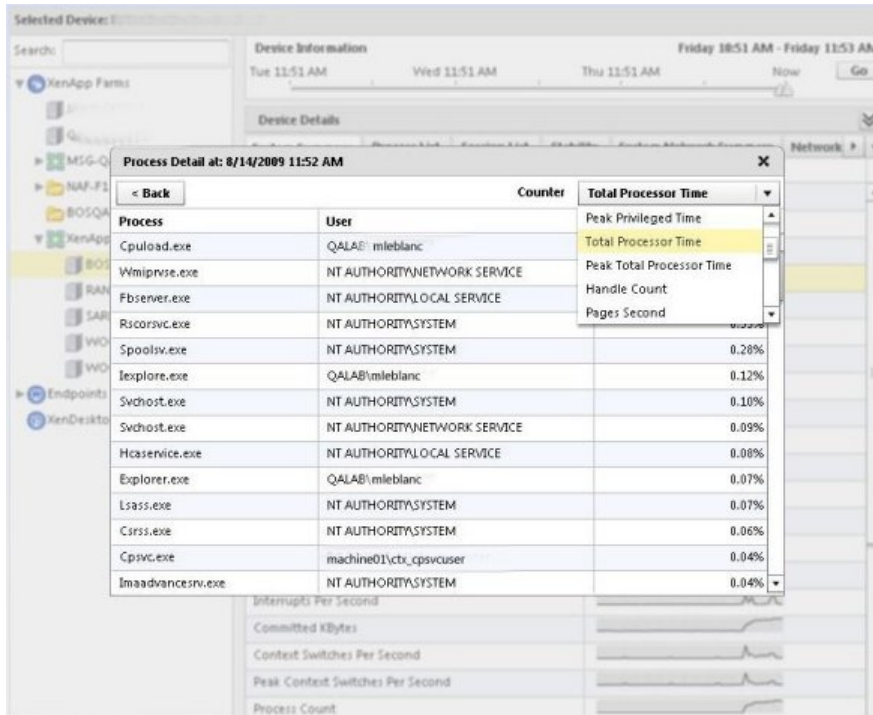
A dialog appears listing details for that data point.

5. In the **Detail** list that appears, look to see what process was running at that time that was using the most resources. In this example, the administrator looks to find out what application or process was using the most processor time.

The screenshot shows the 'Process Detail at: 8/14/2009 11:52 AM' dialog box. It contains a table with the following data:

Process	User	Counter	Total Processor Time (%)
CpuLoad.exe	QALAE\mleblanc	Total Processor Time	84.77%
Wmiipnse.exe	NT AUTHORITY\NETWORK SERVICE	Total Processor Time	0.62%
Fbserver.exe	NT AUTHORITY\LOCAL SERVICE	Total Processor Time	0.43%
Rscorsvc.exe	NT AUTHORITY\SYSTEM	Total Processor Time	0.35%
Spoolsv.exe	NT AUTHORITY\SYSTEM	Total Processor Time	0.28%
Iexplore.exe	QALAE\mleblanc	Total Processor Time	0.12%
Svchost.exe	NT AUTHORITY\SYSTEM	Total Processor Time	0.10%
Svchost.exe	NT AUTHORITY\NETWORK SERVICE	Total Processor Time	0.09%
Hcaservice.exe	NT AUTHORITY\LOCAL SERVICE	Total Processor Time	0.08%
Explorer.exe	QALAE\mleblanc	Total Processor Time	0.07%
Lsass.exe	NT AUTHORITY\SYSTEM	Total Processor Time	0.07%
Csrss.exe	NT AUTHORITY\SYSTEM	Total Processor Time	0.06%
Cpsvc.exe	machine01\ctb_cpvcuser	Total Processor Time	0.04%
Imadvancesrv.exe	NT AUTHORITY\SYSTEM	Total Processor Time	0.04%

**Tip** : Administrators can also change the counters that appear in this view by selecting them from the Counter list box.



## General Tips for Using Troubleshooters

- When using the **User Troubleshooter**, click on any counter in the **Session Summary**, **Channel Detail**, **System Summary**, and **Session Network Summary** tabs to display more detailed data. Data in the **Process Detail** tab can be sorted by clicking on a table column heading. Note that the specific tabs displayed in the troubleshooter may vary depending on the type of alert condition selected.
- You can also get more information about performance counters in the [Report Counters Glossary](#).

## References

- [Large-farm Optimizations in Hotfix Rollup Pack 3 for XenApp 5.0 for Windows Server 2003 and Presentation Server 4.5](#), CTX118818
- [XenApp Infrastructure Monitoring and Alerting](#), CTX118742
- [Citrix XenApp 5.0 Installation Guide](#), CTX116573
- [Top 10 XenApp Issues 2009](#) presented by Gerard Carragher in EMEA Support Readiness

## Troubleshooting XenApp Infrastructure Servers

This page last changed on Nov 11, 2009 by sarahv.

In some ways, monitoring the farm's infrastructure servers is arguably more important than monitoring individual application servers. An application server failure will only make one application unavailable. Issues on an infrastructure server could make the entire farm unavailable.

### Table of Contents

- 1 [Troubleshooting the XML Broker](#)
- 2 [Troubleshooting the Data Collector](#)
  - 2.1 [Election Storms](#)
  - 2.2 [Application Launch \(Enumeration\) Delays](#)
- 3 [Troubleshooting the Data Store](#)
  - 3.1 [Troubleshooting a SQL Server Data Store](#)
- 4 [Troubleshooting Service Packs, Hotfixes, and Other Changes to Servers](#)
- 5 [References](#)

## Troubleshooting the XML Broker

**Initial Symptoms :** If the XML Broker is overloaded, users will not be able to enumerate their applications. That is, when they logon to the Web Interface or the XenApp plugin (formerly known as Program Neighborhood Agent), it will take a long time for their applications set to appear. Also, it will take a long time for the application to start up. (This is because the XML server is taking a long time to find the appropriate server to let the user session to which to connect, even if the application server is healthy and running successfully.)

Metric	Device	Displayed Location	Comment
Application Resolutions/sec	XML Broker	Custom Performance Counters Chart	Compare this with the value you recorded for your baseline to see if the number of application resolutions/sec has slowed. If it has slowed, this may indicate you need to increase the computer power for the XML Broker, either by adding another XML Broker to the farm or
Number of busy XML threads	XML Broker	Custom Performance Counters Chart	If this counter exceeds 16 for 1 minute or longer *, it indicates XML threads are waiting to be processed . (The maximum number of requests that the XML service can process at any one time is 16. )
Resolution WorkItem Queue Ready Count	XML Broker	Custom Performance Counters Chart	If this counter is sustained above 0 for 1 minute *, it indicates there are an excessive number of work items (related to application launches)

			that are waiting for IMA to process
WorkItem Queue Ready Count	XML Broker	Custom Performance Counters Chart	If this counter is sustained above 0 for 1 minute *, it indicates there are an excessive number of work items (related to application launches) that are waiting for IMA to process

## Troubleshooting the Data Collector

### Election Storms

**Initial Symptom:** Excessive data collector election storms.

Metric	Device	Displayed Location	Comment
<b>Zone Elections Triggered</b>	Any application server that repeatedly wins data collector elections during election storms. Note: This metric can appear on any XenApp server, not just servers set to be backup data collectors.	Custom Performance Counters Chart	This counter should not increase by more than 2 in one hour. This counter helps determine if a specific server is triggering the election storms. This counter indicates the amount of times this server has called for an election. This counter is incremented regardless of whether or a not a new Zone Data Collector was elected. NOTE: This counter is added with Hotfix Rollup Pack 3 for Presentation Server 4.5.

### Application Launch (Enumeration) Delays

**Initial Symptoms:** If users find it slow to connect to their applications, check to see if the data collector is overloaded. Specifically, when users launch an application (that is, for example, click the link to the application in Web Interface), it will take a long time for the ICA file to download when launching the application or they may receive an error message stating the application cannot be launched. When a data collector is overloaded, it struggles to resolve the application and users will find it hard to connect to their applications.

Metric	Device	EdgeSight Displayed Location	Comment
<b>Resolution WorkItem Queue Ready Count</b>	Data Collectors and backup Data Collectors*	Custom Performance Counters Chart	Indicates the number of resolution work items that are ready

			to be executed. If this counter is <b>sustained above 0 for 1 minute, it indicates there are an excessive number</b> of work items (related to application launches) waiting for IMA to process.
<b>WorkItem Queue Ready Count</b>	Data Collectors and backup Data Collectors*	Custom Performance Counters Chart	Indicates the number of work items that are ready to be executed. If this counter is <b>sustained above 0 for 1 minute, it indicates there are an excessive number</b> of work items (not related to application launches) waiting for IMA to process.

\*Backup data collectors are any XenApp servers with election preferences set to **Most Preferred** or **Preferred**.

## Troubleshooting the Data Store

In environments that are having problems with data store performance, you can generate a report showing how frequently a server cannot reach the data store. To do so, you must add a custom Performance Monitoring counter (Data Store Connection Failure) found on XenApp servers to EdgeSight as a custom counter. To display this counter, you must generate it in a Custom Performance Monitoring Counters Chart specifying a XenApp server you suspect was disconnected from the data store as the device. This can be helpful in two circumstances:

1. You suspect a specific server is not connecting to the data store.
2. Many servers cannot connect to the data store (that is, the data store is offline) and you select one server to represent the total amount of time the data store was offline.

<b>Metric</b>	<b>Device</b>	<b>EdgeSight Displayed Location</b>	<b>Comment</b>
<b>Data Store Connection Failure</b>	Any XenApp server	Custom Performance Counters Chart	Check this metric to see how long the data store has been offline. This counter displays the number of minutes XenApp has been disconnected from the data store. Its value is zero under normal operating conditions.

## Troubleshooting a SQL Server Data Store

If the data store is running on SQL Server, administrators can also use SQL Server-specific Performance Monitor counters to evaluate data store health. To do so, install the EdgeSight agent for endpoints on the data store and configure EdgeSight to monitor the data store as an endpoint.

<b>Metric</b>	<b>Device</b>	<b>EdgeSight Displayed Location</b>	<b>Comment</b>
<b>Processor Queue Length</b> (Performance Object: System)	Data Store	Custom Performance Counters Chart	Indicates the number of threads waiting for the CPU to service them. If the number of threads is greater than 2, it could indicate a CPU bottleneck.
<b>Context Switches/ sec</b> (Performance Object: System)	Data Store	Custom Performance Counters Chart	Context switches happen when a higher priority thread preempts a process that is executing and the operating system must change from executing that thread to the other one. If there are over 10,000 context switches/ second, this could mean that either CPU, memory, or disk I/O are overloaded.
<b>Cache Hit Ratio &gt; Total</b> (Performance Object: SQLServer: Cache Hit Ratio)	Data Store	Custom Performance Counters Chart	Indicates the ratio between cache hits and lookups. This ratio should always be over 90%. If it is not, it indicates that the data store must do a full table scan whenever XenApp queries it. This can make it longer to start sessions (because they require querying policy and configuration data) and perform administrative tasks that require writing to the data store, such as configuring policies, changing farms, and so on. If the ratio is not over 90%, consider adding more memory to the database server.

## Troubleshooting Service Packs, Hotfixes, and Other Changes to Servers

Changes to server hardware and software often have unexpected results. Symptoms of potential issues with a service pack or upgrade could include spikes in or excessive resource utilization, unusual behavior with a related feature (for example, if you applied an unstable operating system security fix you might notice issues with issues authentication), spontaneous reboots, or session latency. However, during the

troubleshooting process, it can be difficult to pinpoint issues or even determine if changes were made to a server.

You can use the **Software Asset Changes** or the **Hardware Asset Changes** report, specifying the server as the **Device** in the **Optional Parameters**, to see if another administrator made changes to the software or hardware on the server you are trying to troubleshoot.

You may also want to look at the **New Processes** report, filtered for the specific device. Sometimes an application conflict can affect system performance, and if the onset of performance issues coincides with the use of a new application, this may provide an area for investigation.

If you suspect a hotfix or update may be the reason your server is performing badly, consider running the **Process Stability Summary by Process** report for reducing crashes and hangs on the upgraded servers as a group. You can either manually create a group of servers before you apply a hotfix or use Reporting Services to do so, as described in [How Group and Department Structure Impact Reporting](#). In fact, before applying a hotfix, administrators may, as a routine best practice, want to create groups for the hotfixed servers and then delete the groups once they are sure the hotfix is performing acceptably.

To determine what servers have hotfixes applied to them, use the Hotfix Management tool in the Access Management Console.

## References

- [Large-farm Optimizations in Hotfix Rollup Pack 3 for XenApp 5.0 for Windows Server 2003 and Presentation Server 4.5](#), CTX118818
- [XenApp Infrastructure Monitoring and Alerting](#), CTX118742
- [Citrix XenApp 5.0 Installation Guide](#), CTX116573
- Top 10 XenApp Issues 2009 presented by Gerard Carragher in EMEA Support Readiness <http://community.citrix.com/blogs/citrite/richcr/2009/07/10/Top+10+XenApp+Issues+2009+presented+by+Gerard+Carragher>



## Plan and Manage

---

This page last changed on Mar 31, 2010 by [normanw1](#).

- [What is Happening in My Environment?](#)
- [XenApp Server Health](#)
- [Generating EdgeSight Reports for Management](#)

## What is Happening in My Environment?

---

This page last changed on Nov 11, 2009 by [sarahv](#).

When you are monitoring your network on a day-to-day basis, you might have specific questions about how your Citrix environment is performing and if anything has changed. You also might want to know the amount of time users spend using instant messaging (or "chatting") and if they tried to access illicit Web sites. This article provides suggestions for using EdgeSight to find out what is happening in your environment.

The following topics provide answers to certain facets of these questions:

- [Finding Information about the Clients in Your Environment](#)
- [Detecting General Changes](#)
- [Using the Dashboard and Reports for an Environmental Overview](#)
- [What's Happening on My Network?](#)
- [What's Happening On My Servers?](#)
- [What Are Users Up To?](#)

## Finding Information about the Clients in Your Environment

This page last changed on Apr 28, 2010 by [ronaldb](#).

You may need to determine which versions of the ICA client are running in your XenApp environment. This can be important in some of the following situations:

- A new version of the ICA client has been release that fixes issues associated with an older version.
- Operating systems upgrades are planned which will require a specific version of ICA client.
- You are troubleshooting an issue which may be resolved by upgrading to a new version of the ICA client.

In EdgeSight 5.2, a new report (ICA Client Version) was added which displays the ICA clients used for the selected period of time.

ICA Client Version			
ICA Client Version for department "All", between 10/6/2009 and 11/10/2009			
Client Version			Count
10.00.52110			2
User	Client Name	Client Address	Device
LABladw	MW2K3	10.204.4.104	D0346-02
LABladw	MW2K3	10.204.4.104	DEVWARE-344
11.0.0.5357			2
11.1.1.20376			1
11.2.0.31560			4

As shown in the illustration, you can expand each distinct version of the ICA client to display usage by user account, client name (the name of the device running the ICA client), client IP address, and device (the name of the XenApp server to which the ICA client established a connection).

## Detecting General Changes

This page last changed on Apr 27, 2010 by ronaldb.

Sometimes it isn't always obvious if users have violated an organizational policy or other administrators have added applications. EdgeSight provides features that make it easier to monitor for these types of changes -- both in real time and historically.

Administrators can use EdgeSight to obtain several different types of information about application servers:

- Information about the sessions run on a server
- Changes to assets on the server (hardware, software, or otherwise)

### Alerts

To find out if...	Configure this alert...
a user attempts to connect a hard drive or USB drive	<b>System Alerts &gt; Plug and Play Hardware Change</b>
a user is running a new process on their machine	<b>Application Alerts &gt; New Process</b>

### Reports

To find out if...	Run this report...
another administrator has applied a hotfix or an upgrade to an application server	<b>Software Asset Changes</b> OR <b>New Processes</b> , which lists any new processes on device and the date the EdgeSight agent first detected them.
if a hotfix is working in an acceptable manner	<b>Process Stability Summary by Process</b> OR <b>Process Summary</b> , which summarizes the performance of a particular application. Specify the group of servers to which you applied the hotfix as the <b>Group</b> . OR <b>Process Faults</b>

## Using the Dashboard and Reports for an Environmental Overview

---

This page last changed on Nov 11, 2009 by sarahv.

There are two main ways EdgeSight provides for administrators to get an overview of their environments. They can:

- Use the EdgeSight Dashboard to see alerts
- Run the **Environmental Usage** report

Table of Contents

- 1 [Using the Dashboard to See Alerts](#)
- 2 [Reporting on the Environment](#)

## Using the Dashboard to See Alerts

When you are trying to determine at a high level what is happening with your devices, a good starting point is often the EdgeSight dashboard. The dashboard provides a visual snapshot of device performance against key performance indicators. Techniques for using the dashboard vary according to the type of server you are looking at:

- **Infrastructure Servers.** To ensure health for vital functions, such as the data collector, you may want to create custom configurations based on these groups (assuming, for example, you have a Data Collector group defined).
- **Application Servers.** Based on the scalability test results for each application, you might want to specify a threshold for the maximum number of sessions that you want running on that server. For example, if your load evaluators are configured to redirect user connections once the application server reaches 100 connections, you might want to become aware when the server approaches this number, before the loads are balanced.

If you define thresholds, they appear as alerts in the dashboard. Consequently, you might want to define specific thresholds for CPU utilization, memory usage, context switches, and other metrics that can negatively impact the user experience based on your scalability testing.

Like all thresholds, these need to be revisited and iterated over so they align with the actual experience in the environment. For example, do your users report they are experiencing latency when there is a green light for the metric? If so, tweak the threshold in the dashboard's configuration until the experience in your environment aligns with the lights on the dashboard.

## Reporting on the Environment

To get a high level overview of your environment, run the **Environmental Usage** report. This report displays data on users, clients/plugins, sessions (start, end, and duration), published applications, and processes.

To use this report, you must configure EdgeSight to collect and upload environmental usage data. To do so, see the EdgeSight online help for details.

## What's Happening on My Network?

---

This page last changed on Nov 11, 2009 by [sarahv](#).

While EdgeSight is not a network monitoring tool, it can provide some information about your network.

A great starting point for obtaining information about network performance are the Network Summary and the Network Summary by Site reports.

It provides information through alerts and reports, as follows:

To find out...	Do the following...
The amount of bandwidth consumed by sessions	Run the <b>Session Network Bandwidth Used</b> report
The amount of network delay in sessions	Run the <b>Session Network Delay</b> report
The amount of data sent over the network by sessions	Run the <b>Session Network Volume</b> report
The amount of network delay	Run these reports, as applicable: <ul style="list-style-type: none"><li>• <b>Site Network Delay</b></li><li>• <b>Transaction Network Delay</b></li><li>• <b>Port Network Delay</b></li></ul>
The amount of traffic a particular application sends across the network	Run the <b>Process Network Volume</b> report

You can also find out about critical changes to your network as they occur by configuring Network Alerts. EdgeSight provides the following network alerts in the Network Alert category:

- **Network Connection Performance Exceeded SLA.** This alert flags administrators if the connection performance metrics (such as round trip time and transaction delay) the administrator specifies exceed the limits he or she set.
- **Network Socket Error.**
- **Network Transaction Failure.**
- **Network Transaction Performance Exceeded SLA.** This alert flags administrators if the performance metrics for network transactions (such as round trip time, transaction response, and transaction delay) the administrator specifies exceed the limits he or she set.

## What's Happening On My Servers?

---

This page last changed on Nov 11, 2009 by [sarahv](#).

In large environments with multiple administrators, it can be hard to keep track of changes to servers. Reports that can help include:

- **Software Asset Changes.** Recent changes related to software on your farm servers. This report indicates how software on an application server changed, including removing items from startup properties, removing software, and installing software. You can see how EdgeSight categorizes software by looking in **Application Categories** in the **Configure** tab.
- **Hardware Asset Changes.** This report lists changes to hardware or peripherals on servers in the farm, including changes such as when a memory module is replaced or a printer is mapped to an application server. EdgeSight obtains this information from Windows Management Instrumentation (WMI).

Table of Contents

- 1 [Are Any Servers Down?](#)
- 2 [Do Any Servers in a Silo Have More Connections than Others?](#)
- 3 [Overall Stability](#)
- 4 [Assessing the Performance of Hotfixes](#)

### Are Any Servers Down?

If you want to find out if any servers are currently offline, run the ns:IMA Service State report. This report indicates whether or not the IMA Service is offline or running as well as when the service started and rebooted. You can run the report against specific groups of servers or an individual server.

### Do Any Servers in a Silo Have More Connections than Others?

For load balancing purposes, sometimes administrators want to know if one application is receiving more user traffic than others or if one server in an application silo is consistently getting a disproportionate number of user connections.

To determine if any application servers in a silo have more connections than other servers or silos, do the following:

1. Create groups for (a) all the applications in the farm and (b) all the silos in the farm (assuming these are not the same thing). This process is described in the article [How Group and Department Structure Impact Reporting.
2. Run the **Session Statistics** report on either the silo or application as the group. Group the report by **Hour**, then by Device.

### Overall Stability

Reports you can run to indicate the overall stability of your environment include:

- **Process Not Responding Alerts.** Provides information about applications that hung (did not respond), including the name of the application and the users affected.
- **Process Not Responding Alerts for a User Group.** Process not responding (application hang) conditions with alert details.
- **Session Auto-Reconnects.** The number of sessions automatically reconnected on a server. (Also provides number of times a user's session automatically reconnected.)

### Assessing the Performance of Hotfixes

After applying a hotfix or a service pack to a server, you can use Edgesight to make tracking the performance of the hotfix easier. To do so, do the following:

You can also find information about what hotfixes are installed on a server or an end user's computer by running the **Assets for a Device** report. The hotfixes are listed towards the bottom of the report.

## Updating Hardware and Software Inventories

---

This page last changed on Nov 11, 2009 by [sarahv](#).

EdgeSight provides the ability to monitor changes to hardware and software assets and inventory them, as follows:

- **Assets for a Device.** Lists the hardware components, such as BIOS, RAM, processor, and video card, as well as software components, such as the operating system, startup items, registry size, print drivers, and hotfixes for any device monitored including application servers and client devices.
- **Software Asset Changes.** Lists changes to software.
- **Hardware Asset Changes.** Lists changes to software.



## What Are Users Up To?

This page last changed on Apr 07, 2010 by ronaldb.

Keeping abreast of user activities and preventing them from performing unauthorized tasks can be challenging even in the best environments.

### Table of Contents

- 1 [Updating Application Lists](#)
- 2 [Issues with Clients](#)
- 3 [Information about Sessions](#)

Many of the tasks in this section require using the **Process Usage** report. This report displays a list of new applications detected on devices and the date they were first installed. Displays the active and running time for processes, plus the number of unique users.

The **Process Usage** report provides application categories that include executables for standard applications, common instant messengers, games, and spyware programs. Before running these reports, review the list of executables for the application and add executables as necessary. See [Updating Application Lists](#) for information about updating these categories.

To find out..	Run this report...
What Web sites are users visiting?	<b>Visited Sites.</b> Sites visited by site name and address, with the number of visits and date of last visit.
Applications are users running the most?	<b>Process Usage.</b> You can use this report to determine, for example, how much time a specific user is spending using a specific application (for example, the one they are supposed to run for their job).
How much time does a specific user spend running an application central to their job?	<b>Process Usage.</b> Set the <b>Category</b> to <b>Presentation Server Programs</b> , if the user's application is published, or one of the application groups. Group by <b>Date</b> , then <b>Hour</b> . In the <b>Optional Parameters</b> section, specify the application using the selector and the user name in the <b>User</b> box. The report distinguishes between the amount of time the user actually used the application amount of time it was running by providing metrics for <a href="#">Avg Active Time (sec)</a> and Avg Running Time, respectively. If you want to send this report to the user's supervisor, you can export it as a PDF or in Excel. You can use this report to determine, for example, how much time a specific user is spending using a specific application (for example, the one they are supposed to run for their job).
How much time do users spend "chatting"?	<b>Process Usage.</b> For the <b>Category</b> , select <b>Instant Messengers</b> .
What users are "chatting"?	<b>Process Usage.</b> For the <b>Category</b> , select <b>Instant Messengers</b> . Group by <b>User</b> and then <b>Hour</b> . While EdgeSight, by default, searches for many instant messengers, such as Windows Live Messenger, Trillian, and AIM, make sure that any instant messengers widely used in your organization are included in <b>Company Configuration &gt; Application Categories</b> .

Is a specific spyware or malware application running on user desktops or in sessions?	<b>Process Usage.</b> For the <b>Category</b> , select either <b>Spyware, Malware, or Trojan Horse</b> . Check to make sure the virus you want to detect is in the This report only detects viruses on devices running the EdgeSight agent, such as either a XenApp server or an end-user device. In addition, Citrix does not recommend running this report to detect the presence of all viruses or in place of an antivirus program.
Are users visiting any inappropriate Web sites?	If you want to see if users are viewing pornography or other materials that violate your organizations policies, If you blocked Web sites in your firewall or filtering software,
Are any users playing games during company work hours?	<b>Process Usage.</b> For the <b>Category</b> , select <b>Games</b> .

## Updating Application Lists

To update the lists of applications associated with the application categories included in the Process Usage report (for example, games, instant messengers, Trojan Horse Programs, and so on), do the following:

1. Go to **Company Configuration > Application Categories > Edit**. Select the Arrow button beside Malware and select **Copy**.
2. Rename the Category Name so that it reflects these are the malware programs you created. For example, ABC Company Malware.
3. Type the executable for the new threat (for example, Conficker.C) in the **Category Entries** section. |

## Issues with Clients

EdgeSight provides several ways to determine if there are problems with clients (plugins):

- Administrators can configure alerts for client communication failures, ICA file read failures, cache failures, disk space failures, upgrade failures, enumeration failures and so on. These failures are found in the **Presentation Server Error Alerts** category.
- Administrators can run the following reports:
  - **Environmental Usage.** Data on users, clients, sessions (start, end, and duration), published applications, and processes.
  - **Port Network Delay.** Port network delay, broken down by server, client, and network delay.
  - **Process Network Delay.** Process network delay, broken down by server, client, and network delay.

To determine...	Run this report...
The type of client (ICA, RDP, console) for sessions on a device	<b>Session Client Type</b>
The reasons for slow session start time	<b>Session Startup Duration Details</b>

EdgeSight also provides reports on sessions, including the **ICA Session Latency** report, **ICA Session Round Trip Time** report, and the **ICA Session Traffic** report.

If you suspect that an issue with a client might be an issue with Web Interface, application enumeration, or another part of the session start up process, run the **Session Startup Duration Details** report. Look for higher than normal metrics and begin troubleshooting in those places. For information about the meaning of these metrics, see [Session Startup Duration Details](#) and [Improving Slow Session Start Times](#).

## Information about Sessions

EdgeSight provides robust information about sessions, as follows:

To find out...	Do the following...
which servers host the most sessions	Run the <b>Session Count Comparison</b> report. This shows total sessions by application server broken down by active and inactive sessions.
how many sessions were created on a server each day	Run the <b>Sessions Created</b> report grouped by Device, then Date.
average resource usage	Run the <b>Session CPU</b> , <b>Session Memory</b> , and <b>Session Network Bandwidth Used</b> reports.
the highest number of sessions on a server each day	Run the Session Statistics report

## XenApp Server Health

---

This page last changed on Nov 09, 2009 by [sarahv](#).

You can use EdgeSight to uncover the causes of poor XenApp server performance.

In contrast with the term *farm health*, which refers to evaluating the health of the farm infrastructure and its application servers overall, the term *server health* refers to the health of individual servers themselves. For information about using EdgeSight to ensure farm health, see [XenApp Farm Resiliency](#).

When trying to improve the health of individual farm servers, administrators can either try to:

- Fix issues as they become apparent (reactively)
- Prevent issues in advance (proactively)

While the ideal strategy is for organizations perform enough proactive maintenance that emergency, reactive responses are rarely necessary, in reality most organizations use a combination of both approaches.

This article provides guidance about how to use EdgeSight for both scenarios: to fix existing issues and prevent issues.

For guidance about how to resolve server-health issues and strategies for ensuring servers remain healthy, see the following series of related articles:

- [Fixing Existing XenApp Server Issues](#)
- [Keeping Servers Healthy](#)
- [Troubleshooting Changes to XenApp Servers](#)
- [Uncovering Causes for Poor Server Performance](#)

## Fixing Existing XenApp Server Issues

---

This page last changed on Nov 09, 2009 by [sarahv](#).

This article provides information about fixing existing issues on XenApp servers and uncovering those issues using EdgeSight. This article recommends fixing simple issues before trying more advanced troubleshooting techniques.

Table of Contents

- 1 [Fixing Existing Issues](#)
  - 1.1 [Reducing Errors, Crashes, and Hangs](#)
    - 1.1.1 [Part 1: Finding the server with issues](#)
    - 1.1.2 [Part 2: Fixing Errors, Faults, and Hangs](#)
    - 1.1.3 [Part 3: Fixing Issues](#)
- 2 [Applicable Versions](#)

## Fixing Existing Issues

Before administrators can start proactively ensuring server health, they should try to fix as many issues as possible on each server. In many cases, depending on the source of the issue, one solution could help resolve problems on many servers.

### Reducing Errors, Crashes, and Hangs

Begin evaluating a server's health by trying to reduce the number of errors, crashes, and hangs on the server.

#### Part 1: Finding the server with issues

Perform one of the following procedures:

##### To find servers in your farm with issues

If you do not already know what server is having issues, a good way to uncover the servers with the highest numbers of issues is to run the **Process Stability Summary by Process** report. This report lists processes with the most stability issues (errors, faults, hangs, and transaction errors.)

##### To find the server users are complaining has issues

If a specific user group has been complaining of crashes or hangs, to identify the servers, run either **Process Faults for a User Group** or **Process Not Responding Alerts for a User Group** reports.

After determining what server(s) have the most issues, perform the following, as applicable, on each server:

#### Part 2: Fixing Errors, Faults, and Hangs

##### To find application crashes (process failing)

- Run the **Process Faults** report grouped by **Process**, then **Date**. In the **Optional Parameters** section, specify the problematic server as the **Device**.

##### To find application hangs (process not responding)

- Run the **Process Not Responding Alerts** report.

#### Part 3: Fixing Issues

Review the reports and fix the most crucial issues and most frequently occurring errors (in volume).

## Applicable Versions

- EdgeSight 5.2
- EdgeSight 5.1
- EdgeSight 5.0

## Keeping Servers Healthy

This page last changed on Apr 28, 2010 by ronaldb.

This article provides suggestions for ways to keep XenApp servers healthy using EdgeSight.

### Table of Contents

- 1 [Using Alerts to Keep Servers Healthy](#)
- ◦ 1.1 [Monitoring Application Response Performance](#)
- 2 [Monitoring the Health of Infrastructure Servers](#)
- ◦ 2.1 [Forms of Alerting](#)
  - 2.1.1 [Monitoring the XML Broker Test](#)
  - 2.1.2 [Monitoring the Data Store](#)
  - 2.1.3 [Monitoring the IMA Service](#)
  - 2.1.4 [Other Infrastructure Health Tasks](#)
- 3 [Applicable Versions](#)
- 4 [References](#)
- ◦ 4.1.1 [See Also](#)

## Using Alerts to Keep Servers Healthy

EdgeSight provides a variety of different alerts to help you keep your users productive and your servers healthy.

If you know that certain changes can cause servers to become unhealthy, you can set alerts to flag you of these changes:

To be alerted when...	configure the following alerts...
applications are not available	<b>Process Fault</b> and/or <b>Process Hung</b>
applications could become unavailable	<b>Thrashing Application</b>
application performance degrades significantly	<b>High Application Resource Usage</b> and/or <b>Application Performance</b>
a session is dominant	<b>Presentation Server Performance Alerts &gt; Dominant Session</b>
there are excessive disconnected sessions	<b>Presentation Server Performance Alerts &gt; Excess Disconnected Sessions</b>
session performance drops below a predefined level	<b>Presentation Server Performance Alerts &gt; PS Session Performance</b>
system performance drops below a predefined level	<b>Presentation Server Performance Alerts &gt; PS System Performance</b>

### **Alerts to Set on Mission Critical Servers**

When setting alerts, it is important to consider the volume of messages you might receive from a particular alert. Consequently, consider only setting these alerts on individual servers with mission-critical applications.

To be alerted when a...	configure the following alerts...
session is idle longer than a specified amount of time	<b>Presentation Server Performance Alerts &gt; Session Idle Too Long</b>

session is in a down state longer than a specified amount of time	<b>Presentation Server Performance Alerts &gt; Session in Down State</b>
session has a slow ICA connection	<b>Presentation Server Performance Alerts &gt; Slow ICA Connection</b> or <b>Slow ICA Connection for PS 4.5+</b>

Administrators can also add a custom perfmon counter for the Application Resolutions XenApp performance monitor counter and set an alert for when sessions exceed the level of their choice.

**Note:** Setting excessive amounts of alerts can affect EdgeSight performance. See the *Citrix EdgeSight Administrator's Guide* for details.

## Monitoring Application Response Performance

Administrators can configure the EdgeSight Active Application Monitoring tool to simulate the application performance a user would experience when they log in to a server. For information about this tool, see [Using EdgeSight Active Application Monitoring](#).

If administrators have created and implemented a test script using Active Application Monitoring, they can set alerts for either when a test fails (which could indicate, for example, users cannot connect) or when an application's response exceeds a predefined level (which would typically correspond with an SLA threshold).

To use either of these approaches, administrators should configure one of the following rules from the **Presentation Server Performance Alerts** category:

- **Application Response Failure.** Creates an alert when a script fails.
- **Application Response Time.** Creates an alert when the amount of time for a script to run exceeds the threshold you set.

## Monitoring the Health of Infrastructure Servers

XenApp infrastructure servers, such as the XML Broker (sometimes also called the XML Service or XML server), play a vital role in your farm's overall health. The XML Broker is the server that relays login information during application enumeration. When it is not functioning optimally, it may take longer for users to open applications.

You can also run a XenApp Health Monitoring and Recovery feature's Check XML Threads test to see if the XML Broker is running correctly. This test can show you if the XML Broker is accepting tickets. For instructions on configuring the Health Monitoring & Recovery feature, see the [Citrix XenApp 5.0 for Windows Server 2008 Administrator's Guide](#).

### Forms of Alerting

Here are some examples of alerts you can use to monitor the health of infrastructure servers.

#### Monitoring the XML Broker Test

**Note:** This procedure requires that you have Server Settings permissions in EdgeSight.

1. In EdgeSight, create a new alert rule with the following settings (based on EdgeSight 5.0):

- Rule Category: System Alerts
- Alert Type: Windows Event Log
- Alert Rule Conditions:
  - Event Log Name: System
  - Event Type: Any



- Event ID: 4001
- Event Source: MetaFrameEvents

## Monitoring the Data Store

You can monitor the data store as an EdgeSight end point and use EdgeSight to identify resource constraints.

**Warning:** Do not directly query or change information in the data store. Doing so could cause the data store to become corrupt. Only IMA-based tools or MFCOM utilities should be used to access the information in the data store. All information in the data store is in binary format. No meaningful queries can be run directly against the data store.

## Monitoring the IMA Service

By default, EdgeSight monitors for IMA service failures; the **IMA Service is Unresponsive** alert is enabled by default.

You can run the **IMA Service State** report to determine if the IMA service is currently running.

For historical analysis you can run the **IMA Service Availability** report to determine how much time the IMA service was unavailable.

## Other Infrastructure Health Tasks

You can also use Health Monitoring and Recovery to make sure that the data stored in the XenApp server's local host cache is not corrupted and that there are no duplicate entries by running the **Check Local Host Cache** test.

# Applicable Versions

- EdgeSight 5.2
- EdgeSight 5.1
- EdgeSight 5.0

# References

- [Citrix XenApp 5.0 for Windows Server 2008 Administrator's Guide](#), CTX115519.
- [Citrix Load Manager Administrator's Guide](#), CTX116426.

## See Also

- [How to Monitor Farm Health using MedEvac](#), CTX119899.

## Troubleshooting Changes to XenApp Servers

---

This page last changed on Nov 09, 2009 by [sarahv](#).

This article provides techniques for using EdgeSight to troubleshoot changes to XenApp servers, including how to detect issues with hotfixes.

Table of Contents

- 1 [Uncovering Changes to Servers](#)
- 2 [Assessing Service Packs](#)
- 3 [Applicable Versions](#)

## Uncovering Changes to Servers

Changes to server hardware and software often have unexpected results. However, during the troubleshooting process it can be difficult to determine if changes were made to a server.

You can use the **Software Asset Changes** or the **Hardware Asset Changes** report, specifying the server as the **Device** in the **Optional Parameters**, to see if another administrator made changes to the software or hardware on the server you are trying to troubleshoot.

You may also want to look at the **New Processes** report, filtered for the specific device. Sometimes an application conflict can affect system performance, and if the onset of performance issues coincide with the use of a new application, this may provide an area for investigation.

## Assessing Service Packs

If you suspect a hotfix or update may be the reason your server is performing badly, consider running the **Process Stability Summary by Process**, reports for reducing crashes and hangs on the upgraded servers as a group. You can either manually create a group of servers before you apply a hotfix or use Reporting Services to do so, as described in [How Group and Department Structure Impact Reporting](#).

## Applicable Versions

- EdgeSight 5.2
- EdgeSight 5.1
- EdgeSight 5.0

## Uncovering Causes for Poor Server Performance

---

This page last changed on Apr 27, 2010 by [ronaldb](#).

Traditionally, evaluating computer health is based on analysing key performance counters, such as ones for CPU utilization, network utilization, and memory usage. When evaluating system performance, it is helpful to know the following:

- Performance monitoring basics -- see [Where to Start Using EdgeSight?](#)
- A performance baseline for the system in question.

This article assumes that you already identified the system that has performance issues and provides a process for isolating issues.

When evaluating server health, running the **Device Summary** report - either on the server in question or a group of servers in your farm - can be a good starting point for investigating server performance.

Table of Contents

- 1 [Process](#)
  - 1.1 [1. Check CPU Utilization](#)
  - 1.2 [2. Check Network Utilization](#)
  - 1.3 [3. Check Memory Utilization](#)
  - 1.4 [Suggested Actions](#)
    - 1.4.1 [Excessive CPU Usage](#)
- 2 [Are Some Servers Down Frequently?](#)
- 3 [Applicable Versions](#)

## Process

When you have a server that appears to be performing suboptimally, before replacing the server or load balancing the server, generate the Device Summary report (filtered for the specific device) and use the following process to try to narrow down the cause:

### 1. Check CPU Utilization

**Is CPU utilization too high for this server?**

If the **Device CPU** chart in the **Device Summary** report shows an excessive percentage of time spent running with high utilization, try to narrow down the reasons, as follows:

1. Double-click on the **Device CPU** chart. This generates the **System CPU** report. Make sure that the System CPU report is filtering on the system with the performance issues.
2. In the System CPU report, scroll to the table at the bottom and fully expand the device. The table displays the following data for the device's CPU as a percentage:

- [Privileged Time \(%\)](#)
- [User Time \(%\)](#)

If the majority of the processor time is spent in **Privileged Time (%)**, this means that the server's operating system and its components, including kernel and drivers, as opposed to user applications, is using excessive amounts of processor time. This can occur because a driver or an application is poorly designed or tuned and inefficient.

When CPU utilization is continuously high, consider if you need to upgrade the CPU or add processors. Alternatively, a high CPU usage rate may indicate a poorly tuned or designed application. Optimizing the application can lower CPU utilization.

If the **Privileged Time (%)** counter is high while the **Physical Disk** counters are high, consider if a more efficient disk subsystem would be beneficial.

The **User Time (%)** counter displays the percentage of time that the processor spends executing user processes, such as published applications.

You can also look at CPU utilization in the **Device Troubleshooter**, which provides real-time data for one server. To do so, look at the **Total Processor Time** metric in the **System Summary** tab. If this metric is high for a sustained period (that is, a bar consistently across the top of a chart) be sure to look at the **Processor Queue Length** metric. If there are more than two threads waiting in the queue for a sustained period of time, then consider if more CPU resources are needed. (High CPU utilization (for example, 90%) is not necessarily an issue if that is the way in which the application typically runs and the utilization level is not causing bottlenecks. The true indicator of processor business is the queue length.)

If this doesn't provide a clear indication of the reason for poor server performance, try some of the following:

Determine if...	by running this report...	Comments
Is there a process using too much CPU?	<b>Process CPU</b> , grouped by Device	Look for the server with the poor performance in the list of devices. In the table at the bottom of the report, fully expand the device name so that you can see all the processes running on that device. Look in the <b>Total CPU %</b> column for any processes consuming excessive amounts of CPU time.
Are there too many users logged on?	<b>Session Counts</b> , grouped by Device, then Hour	Compare the average number of active sessions on the server during the time at which people reported problems. The number of users logged on to a server is only too many relative to the number typically logged on to that application server. XenApp does not have a specific preset number of users that can log on to application servers. The number of users a server can support is based on its resources as well as the application's scalability. To see how many sessions total were created on the server (instead of just those that are active), run the <b>Sessions Created</b> report grouped by Device, then Hour.

## 2. Check Network Utilization

**Is network utilization is high?**

Determine if...	by running this report...	Comments
Network utilization is high?	<b>Session Network Bandwidth Used</b> (peak and average input and output used)	Use these reports to see if XenApp sent a lot of data over the line or if it used a lot of

	by sessions) grouped by Device using the Optional Parameters or User. OR <b>Session Network Volume</b> , which shows quantity of KB sent and rec'd .	bandwidth for a small inefficient amount of data.	
--	------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------	--

### 3. Check Memory Utilization

#### Is too much memory in use?

Start by running the **Device Summary** report and looking at the **Device Memory** chart. If there appears to be too much **Device Memory** in use, try to isolate the cause:

Determine if...	by running this report...	Comments
There is a process using excessive memory (more than its share or more than it should)?	<b>Process Memory Usage</b> with the <b>Category</b> set to [All Processes], grouped by <b>Process</b> , then <b>Device</b>	Look for the processes consuming the most memory. To find memory leaks, see if the process's value for the <b>Virtual (KB)</b> column is higher than the Private (KB) value. Look for a either a steady increase or a sharp spike in virtual byte usage (Process Virtual Bytes). Excessive memory in use by a well-written application that returns memory when needed may not be negative and, consequently, may not indicate an application issue.
If so, is the memory fault (swapping) too high?	<b>Process Pages per Second</b> , grouped by <b>Device</b> and then <b>Server</b>	Scan the <b>Avg Pages Per Second</b> column to see if any processes have significantly higher values. This counter is the primary indicator of the kind of faults that cause system wide delays. <b>Tip:</b> To determine whether latency is within the session or is a hardware issue, run the <b>System Page Faults</b> report to see if there are page faults on all processes on the server.

### Suggested Actions

#### Excessive CPU Usage

If there is a process using too much CPU, then consider the following:

- **Is this the first time this occurred or is this historically consistent for the process (or application)?** If this is historically consistent you may want to reevaluate your scalability

assessment for this server and either add another server (load balancing) or upgrade the hardware for this application.

- **Have you enabled the CPU Rebalancer feature in XenApp?** Citrix has changed the recommendations for the CPU Rebalancer feature and this feature is frequently misunderstood. Citrix only recommends that you use the Citrix CPU Utilization Mgmt/CPU Rebalancer service if you enable Fair sharing of CPU on a multiprocessor system and fair sharing does not occur. Do not start the CPU rebalancer service simply because your server has multiple processors. If fair sharing is occurring, enabling the CPU Rebalancer service can impact server performance. For guidance about the CPU Rebalancer service, including information about how to determine if fair sharing is actually occurring, see the [Citrix XenApp Administrator's Guide](#).

To find out whether or not the CPU Utilization Management feature is enabled on a XenApp server, run the ns:CPU Utilization Management EdgeSight report. The table at the bottom of the page lists whether the CPU Utilization Management is enable or disabled on a per device basis.

- **Load Balanced Servers.** For Load Balanced servers, such as application silos, you can control swapping, CPU utilization, and memory usage by customizing the load evaluators that apply to that server. In XenApp 5.0, do this in the XenApp Advanced Configuration console (formerly known as the Presentation Server Console) and select the **Advanced** option when applying the load evaluator. For more information, see [Citrix Load Manager Administrator's Guide](#) and the "To assign a load evaluator to a server" topic in the [Citrix XenApp Administrator's Guide](#).

## Are Some Servers Down Frequently?

If you want to find out if any servers are offline, start by running the ns:IMA Service Availability report, as follows:

- Run an **IMA Service Availability** report on the entire farm or department.
- Assuming that you have created groups for your application servers, run a report on the individual load-managed application server groups (for example, the group of servers hosting your email client and then one on the group hosting your word-processing application).

In the report, look down the **Unplanned Down (%)** column to see if there are any servers that have a particularly high period of time offline.

If you discover that one or more servers has a high period of time offline, run the report on those servers' application groups. If other servers in the same application group have high amounts of unplanned time offline, this could indicate that the servers are overloaded or performing suboptimally.

You may want to compare the data in the times the server was offline (that is, the IMA service was unavailable) against the times that the IMA service itself was restarting. To see this, expand the device in the **IMA Service State** report. This shows the time the service started, when it rebooted, and how long it was running.

Other reports that may be helpful include the **Hardware Alerts** report, which shows disk failures, and the **Reboots** report, which shows unexpected device reboots.

## Applicable Versions

- EdgeSight 5.2
- EdgeSight 5.1
- EdgeSight 5.0

## Generating EdgeSight Reports for Management

---

This page last changed on Apr 29, 2010 by [normanw1](#).

Many organizations hold weekly staff meetings where IT administrators report on the status of their networks. At these meetings, managers and executives might ask administrators questions like:

- Do we need to budget to add more servers?
- Are users having productivity issues? Can they access their applications in a timely manner?
- How much is *n* costing us?

EdgeSight can generate high-level reports that respond to these questions effectively for non-technical audiences.

When providing information for management, you can supplement the information gathered from techniques in this article with ideas for information in the articles [XenApp Farm Resiliency](#), [XenApp Server Health](#), [What is Happening in My Environment?](#), and [Demonstrating SLA Compliance](#).

Table of Contents

- 1 [Different Reports for Different Audiences](#)
- 2 [IT Directors and Managers](#)
  - 2.1 [Suggested Reports for IT Status Meetings](#)
- 3 [Suggested Reports](#)
- 4 [Executives](#)
  - 4.1 [Recommendations](#)
- 5 [Versions](#)

## Different Reports for Different Audiences

While the interests of managers and executives at different organizations may vary, for simplicity, this article assumes the following:

- **IT Managers and Directors.** Managers of IT departments want administrators to list problems in the environment and potential solutions. Managers may be the quintessential "Don't tell me the problem; tell me the solution" audience. Since this audience might be more technical, they might ask difficult questions about the source or validity of metrics.
- **Executives.** Executives or "C levels" want high-level reports focusing on the financial impact of IT events and decisions. For the purposes of this article, we assume this audience is non-technical and wants fast, concise summaries.

## IT Directors and Managers

Many weekly IT department meetings begin with a discussion of the overall stability of the network, often with requests to quantify issues. Questions may include:

- What are the technical issues in the environment this week?
- How are we going to solve them?

Administrators also might be asked to quantify the productivity and financial impact of a new hotfix rollout pack or patch on their environment.

When preparing for the meeting, in some cases, administrators might want to drill into specific trends so they can answer tough questions. Likewise, if you aren't the person who will actually be planning the changes to fix issues, you can refer the network engineer to the detailed reports from to obtain additional details about issues.

## Suggested Reports for IT Status Meetings

- Overview
- Device Summary

- Network Summary
- [XenApp Summary](#)
- Process Summary
- User Summary for a User Group
- Farm authentication

Here's an example of a user gathering and presenting status information, starting off by using the Presentation Server summary.

Pat Brown has configured EdgeSight to generate the Presentation Server Summary report each Thursday at noon and send the report by email. Pat sets the time interval in the report to be for the most recent week. This gives Pat enough time to prepare for the department's weekly status meeting.

Pat typically begins preparing for the meeting by analysing the information in the Presentation Server Summary report. This report displays the Average ICA Session Latency chart and the Average CPU and Memory chart.

Pat notices that the average ICA session latency spikes on the Tuesday of that week. All the other days on the report average between 400 to 600 ms. However, on Tuesday the latency spiked to 1400 ms. To investigate, Pat double-clicks on the Average ICA Session Latency by Day chart. EdgeSight generates the ICA Session Latency report, which provides more detail for each day, and scrolls to Tuesday.

By expanding Tuesday, Pat notices that the first user listed, JackieN has an average session latency (Avg Latency) three times higher than the next highest user. By expanding the line item for JackieN, Pat can see the name of the client device that Jackie was connecting from and its IP address. Pat writes down this information.

While Pat has narrowed down the issue, Pat still doesn't know the reason this client was experiencing such bad latency.

However, by going back to the Presentation Server Summary report and looking at the Average CPU and Memory chart to see utilization, Pat notices that, in general, memory usage tends to be higher than CPU usage (35% vs. 5%). As a result, Pat double-clicks on the memory usage bar in the Average CPU and Memory chart and EdgeSight generates System Memory Usage chart.

After all of this investigation, Pat can report that one user, JackieN, was experiencing latency in the middle of the week. After looking into the issue, it turns out that Jackie was streaming a 2-hour video presentation on her computer.

## Suggested Reports

Whether you need to do a presentation to lobby for more equipment or show your boss a report at your weekly staff meeting, these reports may help when talking to management:

- User Summary for a Group
- Device Summary
- [Process Faults](#), Process Summary, Process Performance Summary by Process, Process Stability Summary by Process
- Network Summary by Site, Network Summary, Network Transaction Summary
- [XenApp Summary](#)
- [XenApp User Summary](#)

All of these reports present data in a "four-up" format (that is, four reports summarized on one page). These reports are designed to give you a high-level overview of what is happening in your Citrix environment.

## Executives

When preparing reports for executives, consider their goal in requesting information. Likewise, consider their time requirements and attention span when preparing the information - shorter documents are always better.

Executives may want to get answers to questions like:



- What is the average cost of a ticket per user?
- How much money is it costing me per user?
- How much money will a service outage cost the organization? They may want a projection of cost based on how many tickets you project the outage will generate.
- How many outages have there been in the past  $n$  number of days? How does this impact the business?

To obtain this information, you might want to combine EdgeSight information with other information that you've gathered in your environment, such as reports from your help desk ticket system and your outage calendar.

## Recommendations

An easy report to start with for showing to management is the User Summary for a Group report. This report provides a good overall view of Farm Health.

If you decide that you want to use this report to provide to managers or executives, think about how you will want to display the data in the report. Will it be the overall health for the entire farm or an application silo or the servers in one location or another? Create groups as necessary; see [How Group and Department Structure Impact Reporting](#).

## Versions

EdgeSight 5.3

EdgeSight 5.2

EdgeSight 5.1

EdgeSight 5.0

## Branch Office Performance

This page last changed on Apr 28, 2010 by ronaldb.

This article discusses using the **User Summary for a User Group** EdgeSight report to monitor branch offices.

Table of Contents

- 1 [Overview](#)
- 2 [How To Do This](#)
- 3 [Determining If An Issue Occurs At All Sites](#)
- 4 [Applicable Versions](#)

## Overview

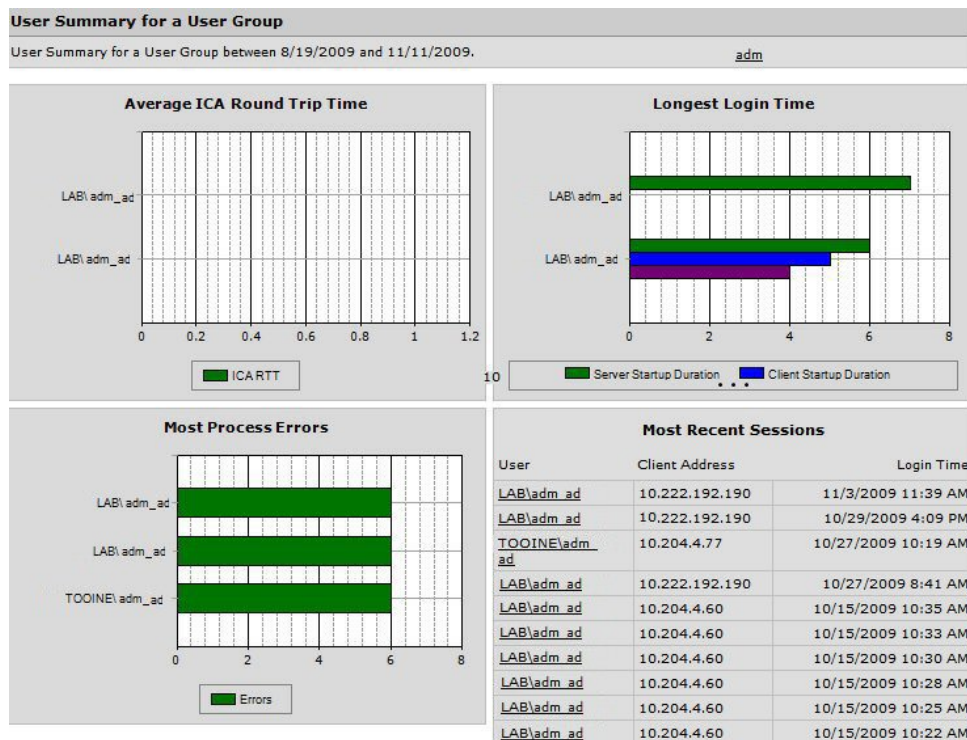
If your organization has remote offices or has remote users, you can use the [User Summary for a User Group](#) report to take a quick snapshot of your environment and see the performance for a particular set of users.

## How To Do This

1. In EdgeSight, create a group for each branch office you want to monitor. You can create user groups by IP address range, account name, or query. (This lets you contrast one branch's performance with that of another.)

Note: Creating Groups in EdgeSight is described in more detail in [How Group and Department Structure Impact Reporting](#) and in the [Citrix EdgeSight 5.2 Users's Guide](#).

2. Run the [User Summary for a User Group](#) report specifying the group you created for the branch office.



This screen capture displays example of the User Summary for a User Group report from EdgeSight 5.2.

## Determining If An Issue Occurs At All Sites

You can also use [User Summary for a User Group](#) report to determine if an issue is only occurring in one location or across all branches. Since the report does not display multiple groups simultaneously, you can take one of two approaches:

- Create a group that contains all users in all branch offices.  
OR
- Run separate reports for each branch office's EdgeSight group.

After you create the report, if you see an issue, such as a user who has a particularly long login time, you can click the bar beside that user name to run a report that provides additional detail for that user.

## Applicable Versions

- EdgeSight 5.2
- EdgeSight 5.1
- EdgeSight 5.0

## Demonstrating SLA Compliance

---

This page last changed on Oct 27, 2009 by [sarahv](#).

This article provides information about using either EdgeSight or the Active Application Monitoring module included with EdgeSight to demonstrate application availability for Service Level Monitoring (SLM) purposes.

### Table of Contents

- [1 Overview](#)
- [2 Preventing SLA Violations](#)
  - [2.1 Preventing Application Performance Violations](#)
    - [2.1.1 Alerts for Application Behavior](#)
    - [2.1.2 Alerts for Changes in Application Performance Metrics](#)
  - [2.2 Preventing Network Performance Violations](#)
- [3 Running Reports to Prove Performance](#)
  - [3.1 Getting Started with Active Application Monitoring](#)
    - [3.1.1 Demonstrating Compliance with Active Application Monitoring](#)
  - [3.2 Demonstrating Compliance with EdgeSight Reports](#)
  - [3.3 Suggested Reports](#)
  - [3.4 References](#)

## Overview

Many IT organizations have formal agreements, known as Service Level Agreement (SLA), stating that their IT services will meet a specific, predefined service level. For example, an organization may need to demonstrate the percentage of availability over a month for an application, server, or farm. Likewise, they may need to demonstrate how much time an application was unavailable.

EdgeSight provides reports, alerts, and tools to help administrators maintain and monitor for service level compliance. This monitoring activity is known as service level monitoring (SLM) or, sometimes, application performance monitoring.

Administrators can use EdgeSight to monitor the following aspects of service:

- Network delay and round trip time
- Application response times
- Application latency
- Application hangs and freezes
- Application availability

This article provides two methods of performing service level monitoring as well as instructions on creating alerts to help prevent violating agreed upon service levels.

## Preventing SLA Violations

Administrators can set EdgeSight alerts to help them prevent an environmental condition (network, application) that would violate their SLAs. For example, administrators can set an alert that would email them when the round trip time exceeds the maximum threshold value specified in their SLA.

This section provides an overview of preventing violations for:

- [Application performance](#)
- [Network performance](#)

## Preventing Application Performance Violations

There are two different approaches to configuring alerts for application performance:

- Creating alerts for changes in application behavior using Active Application Monitoring

- Creating alerts for changes in counters in EdgeSight

## Alerts for Application Behavior

If administrators have configured Active Application Monitoring monitoring, they can set alerts for either when a test fails (which could indicate, for example, users cannot connect) or when an application's response exceeds a predefined level (which would typically correspond with an SLA threshold).

To use either of these approaches, administrators should configure one of the following rules from the Presentation Server Performance Alerts category:

- **Application Response Failure.** Creates an alert when a script fails.
- **Application Response Time.** Creates an alert when the amount of time for a script to run exceeds the threshold you set.

## Alerts for Changes in Application Performance Metrics

EdgeSight provides the following alerts to help ensure application availability and performance. These alerts may also help prevent SLA violations. All of these alerts are found in the **Application Alerts** category:

To prevent violations because...	configure the following alerts...
applications are not available	<b>Process Fault</b> and/or <b>Process Hung</b>
applications could become unavailable	<b>Thrashing Application</b>
of application performance degradation	<b>High Application Resource Usage</b> and/or <b>Application Performance</b>

### A few tips...

- If administrators know that an application begins to fail when a metric reaches a specific level (for example, when the threads active in a process reach 950), they can set an **Application Performance** alert to email them when or before that number of threads is reached. For example, if an administrator has observed that the Citrix Print Manager Service starts to fail when the threads reach a certain number, they can set an alert to email them before this happens. For more information about using this alert for printing, see Using EdgeSight to Troubleshoot XenApp Printing.
- If administrators know that the performance of an application begins to critically degrade when a certain metric reaches a specific level (for example, when memory usage reaches 150,000 KB), they can set a **High Application Resource Usage** alert to email them when or before that amount of memory usage is reached.

## Preventing Network Performance Violations

EdgeSight provides the following alerts to help prevent network performance SLA violations. All of these alerts are found in the **Network Alerts** category:

To prevent violations due to...	create the following alert...
round-trip time or transaction delays	<b>Network Connection Performance Exceeded SLA</b>
network socket errors	<b>Network Socket Error</b>
network transaction failures	<b>Network Transaction Failure</b>

round trip time, transaction response, and transaction delay	<b>Network Transaction Performance Exceeded SLA</b>	
--------------------------------------------------------------	-----------------------------------------------------	--

## Running Reports to Prove Performance

There are two different potential approaches for monitoring application performance:

- Using Citrix EdgeSight Active Application Monitoring scripts (and the EdgeSight Application Response reports) to simulate a user actions for a specific application on an application server
- Running a series of EdgeSight reports on real data on your farm

To run the Application Response reports, administrators must install the Active Application Monitoring tool and create scripts for the application they want to monitor. The scripts are not difficult to create: administrators just click Record and move their mouse as a user would. However, you can also use standard EdgeSight reports to demonstrate compliance based on real traffic on your farm. The method you choose depends on what type of data you ultimately want to obtain.

### Getting Started with Active Application Monitoring

EdgeSight Active Application Monitoring is an automated performance testing tool that monitors the end user experience in Presentation Server and XenApp environments.

EdgeSight Active Application Monitoring is an EdgeSight module included with EdgeSight, Service Pack 2.0 and higher. The module has a separate installation program, which is found on the EdgeSight DVD. The installation instructions are included in the text of the installation wizard.

Active Application Monitoring lets you create scripts to replicate user actions for a specific application. You can use Active Application Monitoring to perform scalability testing for an application and also demonstrate SLA compliance.

To use the Active Application Monitoring tool to demonstrate SLA compliance, create a script to perform specific actions in an application and then run it against the corresponding application server in the production environment. In the script, you define the specific items you want to monitor as Monitoring Points.

When you run the script, you only specify for it to simulate one user so as not to create excess load on the server. The Active Application Monitor launcher can then capture metrics about how the application behaves on that application server. These metrics are uploaded to EdgeSight.

After the metrics are in EdgeSight, you can run one of the Application Response reports. These reports provide metrics for the monitoring point you specified in the script.

**Note:** The Active Application Monitoring online help is installed with the Active Application Monitoring tool. This help system provides instructions for configuring the module initially and creating scripts.

### Demonstrating Compliance with Active Application Monitoring

To use Active Application Monitoring to demonstrate compliance, do the following:

1. Determine what criteria you want to evaluate to demonstrate SLA compliance. In some companies application performance might be more important than network performance. For example, maybe management is concerned about previous complaints it takes too long for users to logon each morning.
2. Install the Active Application Monitoring module and configure it according to the directions in the Active Application Monitoring tool, create scripts that will test the aspects of performance you want to monitor.
3. In EdgeSight, create a **Group** for each application that you want to monitor, as described in [How Group and Department Structure Impact Reporting](#).
4. Run the **Application Response Time** report this shows the amount of time it takes for the activity you want to monitor.

**Note:** The Application Response reports require EdgeSight 5.0, Service Pack 2.

## Demonstrating Compliance with EdgeSight Reports

To use live farm data and EdgeSight to demonstrate compliance, do the following:

1. As per above, determine what criteria you want to evaluate to demonstrate SLA compliance.
2. In EdgeSight, create a **Group** for each application that you want to monitor, as described in [How Group and Department Structure Impact Reporting](#).
3. Run the following reports, as applicable:

If you want to demonstrate compliance for...	run...	
Application response time	N/A	
Session latency	ICA Session Latency ICA Session Round Trip Time for a User Group	
Session start times	Session Startup Duration Detail Session Login Time for a User Group Session Login Time	
Application availability, hangs, and freezes	Process Stability Summary by Process Process Not Responding Alerts Process Not Responding Alerts for a User Group	
Network round trip time, Network availability	Session Network Round Trip Time Process Network Delay Process Network Volume	

## Suggested Reports

This is a summary of reports mentioned in this article:

- **Application Response Failures.** This report shows the results from Active Application Response tests and displays monitoring point failure and success counts.
- **Application Response Time.** This report shows the results from Active Application Response tests and displays monitoring point durations.
- **Application Response Time for a Test.** Lets administrators run a report on how long it takes a test from Active Application Monitoring to run. This is useful for evaluating pilot farms and performing capacity planning.

## References

- [Service level agreement](#), *Wikipedia*, retrieved April 14, 2009.

## Track Usage

---

This page last changed on Apr 27, 2010 by [ronaldb](#).

The Track Usage tab and associated reports were added in Edgesight 5.3. These reports allow you to track the usage of Citrix licenses and published applications in your environment as well as monitor session durations.

- [Monitoring License Usage](#)
- [Exporting User and Device License Usage Data](#)
- [Monitoring Published Applications Usage](#)
- [Monitoring Session Duration](#)



## Monitoring License Usage

---

This page last changed on Sep 01, 2011 by [ronaldb1](#).

EdgeSight can monitor Citrix License Servers and display license usage information. An EdgeSight user with the role of EdgeSight Administrator or License Server Monitor Administrator must specify one or more Citrix License Servers to monitor before data is displayed. If you do not see a specific license server listed in the reports, this could be due to the following: monitoring has not been enabled for the license server or no configuration was added for the license server. Contact your EdgeSight Administrator to either enable or add the license server configuration.

Monitoring license usage can help you make decisions about when to purchase additional licenses, based on usage or license expiration dates. For example, you are asked to help forecast the potential need for new XenApp licenses. You may want to start by looking at a snapshot of current license usage and then identify license usage trends using the following reports:

- License Usage Summary—Displays the most recent license usage information.
- License Usage Trending—Displays historical license usage information.

With EdgeSight 5.4, you can monitor the user and device licenses used with XenDesktop deployments. You can also capture a snapshot of user and device licenses currently checked out, as described in [Exporting User and Device License Usage Data](#). Keep in mind that you may need to upgrade your license server to be able to monitor these types of licenses. See the System Requirements topic in eDocs for more information: <http://support.citrix.com/proddocs/topic/edgesight54/es-system-reqs-54.html>

## Exporting User and Device License Usage Data

---

This page last changed on Sep 01, 2011 by [ronaldb1](#).

The User/Device License List report provides user/device licensing information from a single license server as a CSV file.

### Table of Contents

- [1 Overview](#)
- [2 Interpreting the Data](#)
- [3 Applicable Versions](#)

## Overview

The exported CSV file provides a snapshot of the user/devices licenses which have been checked out.

## Interpreting the Data

The file is formatted as follows:

```
<license server>,<feature code>,<version>,User,<user name>
```

```
<license server>,<feature code>,<version>,Device,<device name>
```

For example, the following row:

```
licserver01,XDT_PLT_UD,2011.1202,User,jsmith
```

indicates that a user license for Citrix XenDesktop Platinum with a version of 2011.1202 has been checked out by user jsmith.

Because this report is a snapshot, the data has limited currency. The startup of new sessions or the reallocation of user/device licenses after the data for this report is retrieved can have a significant impact on the number and type of checked out licenses in a relatively short time.

## Applicable Versions

EdgeSight 5.4

## Monitoring Published Applications Usage

---

This page last changed on Apr 27, 2010 by [ronaldb](#).

When managing published applications, you may need to answer the following questions about application usage:

- What are the most frequently used published applications?
- Who is using specific published applications and for how long?
- Who are the most active users and what published applications are they using?

EdgeSight provides reports on the Track Usage tab which provide the information to answer these questions. These reports, plus additional detail reports, are also available from the Browse tab. For general published application usage monitoring, you can use the following summary reports:

- Summary for a Farm—Displays bar charts showing the published applications with the most launches and the most unique users, and trends for launches and users over time. The data is in relation to a department or group of machines.
- Summary for a User Group—Displays bar charts showing the published applications with the most launches and the most unique users, and trends for launches and users over time. The data is in relation to a group of users.

You can click on any subreport in these summary reports to drill down into detailed data.

## Monitoring Session Duration

---

This page last changed on Apr 28, 2010 by [ronaldb](#).

*This is a stub article and may be combined with another article or expanded.*

By monitoring the duration and frequency of sessions across a farm or a user group, you can determine how XenApp and XenDesktop resources are being used in your environment. The Session Duration for a Farm and the Session Duration for a User Group allow you to display which users or devices have the highest total session duration for a period of time.

## Reports (Browse)

---

This page last changed on Mar 31, 2010 by [normanw1](#).

- [Introduction to Reporting](#)
- [Guide to Interpreting Reports](#)
- [EdgeSight Report List](#)
- [EdgeSight Data](#)

## Introduction to Reporting

---

This page last changed on Apr 27, 2010 by [ronaldb](#).

This article provides an introduction to reports, including the key benefits to IT and other departments, the types included with EdgeSight, and key concepts to remember when using EdgeSight reports.

Table of Contents

- 1 [Overview](#)
- 2 [Types of Reports](#)
- 3 [Finding Reports](#)
- 4 [Understanding Data](#)

## Overview

One of EdgeSight's key benefits is that it lets you generate reports about your environment. Reports provide a way to aggregate, sort, and summarize complex data in a common form. EdgeSight reports, sometimes referred to as "historical reports," provide insight into past transactions in your environment.

Reports are a way to capture historical events and trends for analysis that can be beneficial for troubleshooting, planning, estimating expenses, and comparing past and present performance.

Reports can show you:

- Application usage
- Licensing
- Issues and problems in your environment
- How well your environment is performing
- Trends in your environment
- User activities
- Lists of hardware and software inventory
- Environmental performance

Many departments in an organization will find reports useful:

- Business managers will be interested in Application Usage and Licensing reports
- Finance and operations will benefit from software and hardware asset reports.
- IT will look at performance and stability reports

## Types of Reports

You may want to use reports when you want to examine trends over long time periods or across large numbers of devices. EdgeSight displays information in these general types of reports:

- Administrative - Oriented towards the business manager: licensing, usage and availability
- Summary - Displays high level information on devices, applications, XenApp and XenDesktop Farms
- TopN - What are the best (and worst) performing devices
- List - Assets, client version, applications run, sites visited
- Archive - Used for exporting data from the EdgeSight server database to another database, such as a data warehouse

## Finding Reports

You can browse, filter, or search for reports:

- All reports are available from the Browse tab.
- The report list can be refined by choosing the Time Frame, Data Type, Object Type or Report Type that you are looking for.

- You can find reports by using the Search box. This is useful when you do not know the report name, or even if a report exists, but you know the type of data you want in the report. Search looks at report names, descriptions, and labels.

Tip: As you work with EdgeSight, you may find that you use some reports frequently. Add these reports to your Favorite Reports page for easy access. Display the report and click on the Add to Favorite Reports link in the menu bar.

## Understanding Data

For reports to be effective, it is best to spend time carefully considering what information you want to retrieve, or what question you want answered.

Comparing the correct data is a critical element in all reports.

[EdgeSight Data](#)

## Guide to Interpreting Reports

---

This page last changed on Apr 29, 2010 by [normanw1](#).

This article is a guide to interpreting EdgeSight reports.

Table of Contents

- 1 [Best Reports as a Starting Point](#)
- 2 [How to use the reports](#)
- 3 [Using EdgeSight Departments and Groups](#)

## Best Reports as a Starting Point

When starting with EdgeSight the best historical reports to start with are the summary reports. These reports show you a high-level view of your environment and can be used as a starting point for identifying and resolving issues.

The report you select depends on how your organization practices farm management. For example, is the focus (a) *how the servers in the farm are performing* or (b) *what the farm's users are experiencing*?

Here are some common uses for these reports:

- **Device Summary**
  - See which devices are using the most CPU and memory, have the most errors or have the longest network delay.
- **Process Summary**
  - See which processes are using the most CPU and memory, have the most errors or have the longest network delay
- **XenApp Summary**
  - See which XenApp servers are using the most CPU and memory, have the most active sessions, have the longest login time, or have the longest latency
- **User Summary for a User Group**
  - Determine which users are experiencing the longest latency, longest login time and the most application errors
- **XenDesktop Summary**
  - See the overall login time, latency, CPU and memory, and number of session running in your XenDesktop farm.

## How to use the reports

At a high level, there are a few common techniques to interpreting EdgeSight reports:

- The summary reports display four different charts with different but related information. Drilling into each summary chart brings you to another report with more detailed information.
- If there is a specific piece of information that you are looking for, login time for example, use the browse page to narrow the report list to only login related reports and choose the appropriate report from the list.
- When using reports to track down an issue look for a data point that is significantly higher or lower than the rest of the data points. In other words, *what data stands out?* For example, if you are trying to track down the reason your average session logon times were high in the [Session Startup Duration Details](#) report, look to see if there are any users who had a longer than average logon time. If you see a user has a logon time that is double the length of the other users, try to determine the reason for the difference. This might mean running a report to determine what application the user was running (**Process Usage** grouped by **User** then **Process**) and keeping a calendar of network events handy to correlate this information with events on your network.
- All reports contain columns with specific metrics as their heading. To find the meaning of these metrics, see the [Report Counters Glossary](#).



# Using EdgeSight Departments and Groups

Citrix strongly recommends filtering by department or groups when running reports in order to make the reports more meaningful by constraining the report data to similar Farms, device types or organizational units. The Departments are assigned using the Active Directory structure you have defined or the Farm folder structure you have defined within XenApp or XenDesktop. EdgeSight provides out-of-the-box groups based on different platforms and system types, such as Windows 7, Windows 2008, Laptops, Desktops, XenApp Servers, or XenDesktop devices. EdgeSight also offers user groups such as XenApp Users or Anonymous Users. You may want to create custom groups to focus on a particular set of systems or users, as described in [How Group and Department Structure Impact Reporting](#).

The objects (servers, users, devices) that a report contains are controlled by how you design EdgeSight groups. For example, if you want the ability to compare all servers with the same hardware (same CPU, memory, and so on), or the users in a specific IP range, you must create a custom group for this purpose.

## EdgeSight Reporting Best Practices

---

This page last changed on Apr 15, 2009 by [sarahv](#).

The following series of articles present best practices for using EdgeSight reports:

- [How Group and Department Structure Impact Reporting](#)
- [Aggregating and Grouping Averages and Sums in EdgeSight Reports](#)

## Aggregating and Grouping Averages and Sums in EdgeSight Reports

---

This page last changed on Jul 17, 2009 by [ronaldb](#).

### Overview

You can use filtering to aggregate or group averages and sums in reports by department, group, user group, time period, process, device, user, site, and other data types.

Once a report is selected, use the Filter Bar at the top of the report to filter data. Filter data to isolate information based on particular classes of processes, devices, or users and to quickly identify problems or trends. Many reports containing data on user experience can be filtered by user groups, allowing you to monitor session performance for a group of users with specific characteristics.

Remember to click **Go** to apply filter parameters, or set Automatically Run Reports to **Yes** in your EdgeSight Server Console profile to dynamically regenerate reports when you change the filtering.

### Filtering Scenarios

Here are some scenarios where you can use filtering to expand, restrict, or change the precedence of the data shown to help you resolve performance and availability issues.

#### Looking at High Average Login Time

When you display the Presentation Server Summary report, you notice a sharp spike in average login time across your farm. You click on the login time chart to display the Session Login Time report. Your first concern is to find out if the high session login times are associated with a specific server. By selecting Device from the Group By menu, you can display the session login times for each server, with the server having the longest login times first.

Your next step may be to find out which users are experiencing high login times. By selecting User from the Group By menu and Device from the Then Group By menu, you can see which users are most affected. When you expand the user row in the report, you can see which servers they are using.

From here, you can use other reports to display information about the server, such as the System CPU report filtered by the specific device to see if CPU usage exceeds recommended levels, or about the user, such as the Presentation Server User Summary filtered by the specific user to display the user's overall experience.

Once you have resolved the issue at hand, you may want to investigate past instances of high session login times to see if they correspond to events or changes in your environment. When you display a report with the default parameters, it shows data for the previous week. By expanding the date range, you can identify past spikes in login time and see if the same server or user are involved.

## How Group and Department Structure Impact Reporting

---

This page last changed on Sep 22, 2009 by ronaldb.

Groups are a very important filter for many EdgeSight reports. They allow you to select a collection of specific devices for each report. This lets you run the desired report for only the devices with the characteristics you are studying.

When you install EdgeSight, there are a selection of out-of-the-box groups based on operating system (such as All Windows 2003 and All Windows 2008) or type of device (such as Citrix XenApp or Terminal Servers). When you create custom groups, consider how you would like information in reports to be grouped. You can create groups so that data can be displayed for the entire farm, for a silo of application servers or for any other group of servers.

Because the department structure for XenApp farms is determined by the farm and cannot be changed through the EdgeSight Server Console, the ability to create custom groups provides the flexibility to report on a selected set of machines regardless of department structure.

Table of Contents

- 1 [Groups: An Overview](#)
- ◦ 1.1 [Suggestions for Groups](#)
  - 1.1.1 [Create Groups for Load-Managed Groups of Applications](#)
  - 1.1.2 [Create a Group for Data Collectors](#)
  - 1.1.3 [Create a Group for the XML Broker\(s\)](#)
  - 1.1.4 [Creating Custom Groups](#)
    - 1.1.4.1 [Create Groups for End User Devices by Location](#)
    - 1.1.4.2 [Create Groups for Newly Upgraded or Hotfixed Servers](#)
- 2 [Suggestions for User Groups](#)
- ◦ 2.1 [Create User Groups for All Users by Farm](#)
- 3 [References](#)

## Groups: An Overview

A group can be defined using one or more of the following criteria:

- All of the devices in one or more departments
- A selected set of individual devices within a department or across departments
- A selected set of individual devices to be excluded from the group
- A set of individual devices selected using an SQL query run against the EdgeSight database

Group capabilities of EdgeSight allow you to create collections of users by selecting users by username, IP address or IP range, or by running a SQL query against the EdgeSight database. The users can be XenApp or endpoint users. Many reports containing data on user experience can be filtered by user groups, allowing you to monitor system performance for a group of users with specific characteristics.

## Suggestions for Groups

Creating a Group or managing the EdgeSight department structure effectively helps you filter reports to see what you care about. When determining group structure, think about how you like to look at information about your network. Will you want to look at the overall health for the entire farm, an application silo, or the servers in one location or another? Consider creating groups to segment the servers in this manner.

To get started, one guiding principle is to group similar servers together.

## Create Groups for Load-Managed Groups of Applications

Creating a group for each one of your sets of application servers (that is, each load-managed group) makes it easier to isolate user issues with specific applications and isolate causes of outages.

## Create a Group for Data Collectors

Creating a group for the servers designated as data collectors and backup data collectors on your farm makes it easier to run reports to learn about data collector elections and election storms.

## Create a Group for the XML Broker(s)

Even if you do not have a dedicated server for the XML Broker, creating a group that may only contain this server makes it faster to find and identify the server when you want to run reports.

## Creating Custom Groups

Creating your own custom groups is relatively easy and allows you almost limitless options for focusing your reports. By using SQL queries, you can create a group based on almost any characteristic a device or group of devices may have.

For more ideas about the device characteristic, or *assets*, that you can choose, see the **Assets for a Device** report, which provides insight view into your options.

You can create custom groups for specific:

- Machine names
- Machine serial numbers
- Models
- Processor speeds
- Memory

For more information about the SQL queries for the above, see [Examples of How to Create EdgeSight Custom Groups Using SQL Queries](#), CTX111032.

## Create Groups for End User Devices by Location

An easy way to create an EdgeSight group for a group of end-user devices is by using SQL queries. For example, you might want the ability to run reports on a specific geographical group of client devices, such as all the client devices on the west side of the second floor of your building.

### To create geographic-based device groups

1. Run one of the following SQL queries: By IPRange:

```
select instid
from instance
where ip_address like '192.168.%'
```

By IPRange using only the last octet (to select ip 1-99 only):

```
select instid
  from instance
 where dbo.udf_core_ip_to_int(ip_address)
        between dbo.udf_core_ip_to_int ('10.202.1.1') AND dbo.udf_core_ip_to_int ('10.202.1.99')
```

## Create Groups for Newly Upgraded or Hotfixed Servers

After applying Windows upgrades or Citrix hotfix rollup packs, you can create EdgeSight groups that combine devices of the same patch. This lets you monitor the performance of the upgraded servers - and makes it easier to determine if you need to roll them back.

### To create a group of servers with a specific Citrix Hotfix Rollup Pack

1. Run the following SQL query:

```
select instid
```

```
from instance
where instid not in (select i.instid
                    from instance i
                    join asset a on i.instid = a.instid
                    join asset_prop ap on a.apid = ap.apid
                    where ap.property = N'HotFixID'
                    and a.prop_value = N'KB888113')
```

### **To create a group of servers with a specific Windows Service Pack**

1. Run the following:By Service Pack Level:

```
select instid
from vw_es_archive_device_asset_detail
where property = 'ServicePackInEffect' and property_value = 'KB885836'
```

## **Suggestions for User Groups**

Groups of users can be selected by user name, IP address, or by running SQL queries.

### **Create User Groups for All Users by Farm**

You may want to generate reports for all users associated with a specific farm, such as the farm which is used to deliver application to the sales team. Since the departments associated with XenApp farms are determined by the farm, you can use a query that looks at the department table to match the specific farm.

```
select sessid
from vw_es_usergroup_ica_users u
join instance i on i.instid = u.instid
join dept d on d.deptid = i.deptid
where d.path = 'All\XenApp Farms\SalesFarm'
```

## **References**

- [Examples of How to Create EdgeSight Custom Groups Using SQL Queries](#), CTX111032.

## EdgeSight Report List

---

This page last changed on Oct 27, 2009 by [sarahv](#).

- [EdgeSight 5.4 Report List](#)
- [EdgeSight 5.3 Report List](#)
- [EdgeSight 5.2 Report List](#)
- [EdgeSight 5.0 and 5.1 Report List](#)
- [EdgeSight Report List by Task](#)

## EdgeSight 5.4 Report List

---

This page last changed on Aug 30, 2011 by ronaldb1.

For definitions of metrics, see [Report Counters Glossary](#).

**Important:** To find out what reports use a specific metric, in the EdgeSight Server Console, click the **Browse** tab and type the name of the metric in the **Search** box in the user interface (not the Find, CTRL + F, feature in the Web browser). You can also find reports by entering a report name or description in the **Search** box.

[A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

### A

#### **Alerts**

Number of alerts by type with alert details.

#### **Application Response Failures**

Active Application Response test and monitoring point failure and success counts.

#### **Application Response Time**

Active Application Response test and monitoring point durations.

#### **Application Response Time for a Test**

Active Application Response duration and status for a test.

#### **Asset Changes**

Changes to hardware and software device assets.

#### **Assets for a Device**

Hardware and software assets on a device.

### C

#### **CPU Utilization Management**

CPU Utilization Management status (enabled or disabled), plus average and peak CPU usage.

### D

#### **Device Archive**

Archive report.

#### **Device Summary**

Device performance data (CPU and memory usage, network delay, event log alerts, and application errors).

### E

#### **Environmental Usage**

Data on users, clients, sessions (start, end, and duration), published applications, and processes.

#### **Environmental Usage Archive**

Archive report for Environmental Usage data. Use this report to export Environmental Usage data from the EdgeSight database.

#### **Error Archive**

Archive report.

#### **Event Log Alerts**

Event log alerts with alert details.

#### **Event Log Alerts for a User Group**

Event log alerts with alert details.



## H

### **Hardware Alerts**

Hardware alerts (reboot, disk failure, and plug and play changes) with alert details.

### **Hardware Asset Changes**

Recent changes to hardware assets on devices.

### **HDX MediaStream I/O**

Speedscreen Multimedia input and output for HDX sessions.

### **HDX Plug-n-Play I/O**

USB and Smart Card input and output for HDX sessions.

## I

### **ICA Audio I/O**

Audio input and output bandwidth used during ICA sessions.

### **[ICA Client Version](#)**

The version of the client used during ICA sessions.

### **ICA Drive I/O**

Drive input and output bandwidth for file operations during ICA sessions.

### **ICA Printer IO**

Printer input and output bandwidth used during ICA sessions as well as the printer name and printer driver name. This report can be grouped by User, Device, Date, and Hour.

### **[ICA Session Compression](#)**

Displays the compression ratios used from server to client (ICA Session Compression Output (%)) and client to server (ICA Session Compression Input (%)).

### **ICA Session I/O**

Input and output line speed for ICA sessions.

### **[ICA Session Latency](#)**

Latency (peak and average) for ICA sessions. Only pertains to pre-4.5 Presentation Servers. Presentation Servers with EUEM data will not be reflected on this report.

### **ICA Session Latency for a User Group**

Latency (peak and average) for ICA sessions. Only pertains to pre-4.5 Presentation Servers. Presentation Servers with EUEM data will not be reflected on this report.

### **[ICA Session Round Trip Time](#)**

ICA session and network round trip time (RTT). Only pertains to EdgeSight Presentation Server Agents 4.5 and later, Presentation Server 4.5 and later (Enterprise or Platinum Editions), and ICA Client version 10 and later. Pre 4.5 Presentation Servers data will not be reflected on this report.

### **ICA Session Round Trip Time Archive**

Archive report.

### **ICA Session Round Trip Time for a User Group**

ICA session and network round trip time (RTT). Only pertains to EdgeSight Presentation Server Agents 4.5 and later, Presentation Server 4.5 and later (Enterprise or Platinum Editions), and ICA Client version 10 and later. Pre 4.5 Presentation Servers data will not be reflected on this report.

### **ICA Session Traffic**

Traffic (peak and average input and output) for ICA sessions.

### **ICA Session Traffic for a User Group**

Traffic (peak and average input and output) for ICA sessions.

### **ICA Video I/O**

Video frame and SpeedScreen input and output for ICA sessions.

### **[IMA Service Availability](#)**

Current IMA service availability status and the time since the last state change.

### **IMA Service State**

Current IMA service state and the time since the last state change.

## **L**

### **License Server Monitor Archive**

Archive report for License Server Monitor data. Use this report to export License Server Monitor data from the EdgeSight database.

## **N**

### **Network Connection Archive**

Archive report.

### **Network Summary**

Summary of network performance for a site (delay, volume, RTT, and transaction errors).

### **Network Summary by Site**

Summary of network performance (delay, RTT, Web errors, and transaction errors).

### **Network Transaction Archive**

Archive report.

### **Network Transaction Summary**

Summary of network performance for a transaction (delay, volume, RTT, and Web errors).

### **New Processes**

New processes detected on devices with the date first seen.

### **New Sites**

New sites detected on devices with the date first seen.

## **P**

### **Port Network Delay**

Port network delay, broken down by server, client, and network delay.

### **Port Network Round Trip Time**

Maximum and average round trip time (RTT) for ports.

### **Port Network Volume**

Port network volume (kilobytes sent and received).

### **Port Web Errors**

Web errors (transaction and Winsock) for a port.

### **Process CPU**

Process CPU usage (privileged time, user time, and total CPU).

### **Process Cumulative CPU**

Process Cumulative CPU usage time.

### **Process Errors**

Process errors with alert details.

### **Process Errors for a User Group**

Process errors with alert details.

### **Process Faults**

Process faults (crashes) with alert details.

### **Process Faults for a User Group**

Process faults (crashes) with alert details.

### **Process Memory Usage**

Memory (virtual, private, and working set) used by processes.

**Process Network Delay**

Process network delay, broken down by server, client, and network delay.

**Process Network Volume**

Process network volume (kilobytes sent and received).

**Process Not Responding Alerts**

Process not responding (application hang) conditions with alert details.

**Process Not Responding Alerts for a User Group**

Process not responding (application hang) conditions with alert details.

**Process Pages Per Second**

Average pages per second for processes.

**Process Performance Archive**

Archive report.

**Process Performance Summary by Process**

Process performance summary (high CPU or memory usage, long network delay or active time).

**Process Stability Summary by Process**

Processes with the most stability issues (errors, faults, hangs, and transaction errors.)

**Process Summary**

Summary of process performance (CPU and memory usage, network delay, and errors).

**Process Thread Count**

Average number of active threads for processes.

**Process Usage**

Active and running time for processes, plus the number of unique users.

**Process Usage Archive**

Archive report.

**Published Application Launch Archive !New**

Archive report for Published Application Launch data. Use this report to export Published Application Launch data from the EdgeSight database.

**Published Application Launch Count - Details !New**

The number of times a Published Application has been launched.

**Published Application Launch Count for a User Group - Details !New**

The number of times a Published Application has been launched for a user group.

**Published Application Launch Summary !New**

The number of times a Published Application has been launched (summary view).

**Published Application Launch Summary for a User Group !New**

The number of times a Published Application has been launched for a user group (summary view).

**Published Application Summary !New**

Published Applications with the most launches and the most users (top 5 and trend).

**Published Application Summary for a User Group !New**

Published Applications with the most launches and the most users for a user group (top 5 and trend).

**Published Application User Count - Details !New**

Most active users of Published Applications. The number of unique users per Published Application.

**Published Application User Count for a User Group - Details !New**

Most active users of Published Applications. The number of unique users per Published Application for a user group.

**Published Application User Summary !New**

The number of unique users per Published Application (summary view).

**Published Application User Summary for a User Group !New**

The number of unique users per Published Application for a user group (summary view).

**R**

**Real-time Alert List** (Excel)

Real-time detailed alert information.

**Real-time Device Summary** (Excel)

Real-time alert, network delay, processor usage, and memory usage summary information.

**Real-time Network Performance** (Excel)

Real-time detailed network volume, delay, round trip time, and error information.

**Real-time System Compare** (Excel)

Real-time performance counters from multiple devices for use in comparing system performance.

**Real-time System Performance** (Excel)

Real-time detailed system, network, and process performance information.

**Real-time XenApp Summary** (Excel)

Real-time performance counters from multiple XenApp servers for use in comparing system performance.

**Real-time XenApp User Summary** (Excel)

Real-time system, application, and session information for a XenApp user.

**Reboots**

Device reboots (expected and unexpected).

**S**

**Session Auto-Reconnects**

Session Auto-Reconnects.

**Session Client and Server Startup Duration**

Average Session client startup duration (CSD) and server startup duration (SSD). Displays login duration.

**Session Client Startup Duration**

Elapsed time for client startup (from request to ICA connection). Displays login duration.

**Session Client Startup Time Archive**

Archive report.

**Session Client Type**

Client type (ICA, RDP, or console) for sessions on a device.

**Session Counts**

Average active, inactive, and total session counts.

**Session CPU**

Average total CPU used by sessions.

**Session CPU for a User Group**

Average total CPU used by sessions.

**Session Duration !New**

Session duration summary and detail.

**Session Duration for a User Group !New**

Session duration summary and detail for a user group.

[Session Login Time](#)

Average login time for ICA sessions.

[Session Login Time for a User Group](#)

Average login time for ICA sessions.

**Session Memory**

Memory (virtual, private, and working set) used by sessions.

**Session Network Bandwidth Used**

Network bandwidth (peak and average input and output) used by sessions.

**Session Network Delay**

Session network delay, broken down by server, client, and network delay.

**Session Network Delay for a User Group**

Session network delay, broken down by server, client, and network delay.

**Session Network Round Trip Time**

Maximum and average round trip time (RTT) for sessions.

**Session Network Round Trip Time for a User Group**

Maximum and average round trip time (RTT) for sessions.

**Session Network Volume**

Session network volume (kilobytes sent and received).

**Session Network Volume for a User Group**

Session network volume (kilobytes sent and received).

**Session Page Faults**

Average number of page faults per second for sessions.

**Session Performance Archive**

Archive report for Session Performance data. Use this report to export Session Performance data from the EdgeSight database.

**Session Server Startup Duration**

Average time to startup a session on a Presentation Server.

**Session Server Startup Time Archive**

Archive report.

[Session Startup Duration Details](#)

Session client startup duration (CSD) and server startup duration (SSD). This contains the following server-side metrics: CASD, CONSD, COSD, PNCOSD, PLSD, LSEED, PCSID, DMSD, and SCSD. It also contains the following client-side metrics: CFDCD, BUCC, AECD, COCD, IFDCD, NRWD, TRWD, LPWD, SCCD, NRCD, and SLCD.

**Site Network Delay**

Site network delay, broken down by server, client, and network delay.

**Site Network Errors**

Network errors (transaction and Winsock) for a site.

**Site Network Errors for a User Group**

Network errors (transaction and Winsock) for a site.

**Site Network Round Trip Time**

Maximum and average round trip time (RTT) for sites.

**Site Network Volume**

Site network volume (kilobytes sent and received).

**Software Asset Changes**

Recent changes to software assets on devices.

[System CPU](#)

System CPU usage (privileged time, user time, and total CPU).

**System CPU Summary**

CPU percent usage summary for devices.

**System Disk Usage**

Disk usage shown as percent free disk space.

**System Disk Usage Archive**

Archive report.

**System Disk Usage Summary**

Summary of disk usage with disk capacity and percent free disk space.

**System Kernel for a Device**

System kernel activity (context switches, system calls, interrupts, and process count) for devices.

**System Memory for a User Group**

Memory (virtual, private, and working set) used by sessions.

**System Memory Summary**

Physical memory percent usage summary for devices.

**System Memory Usage**

Average percent memory used for devices.

**System Page Faults**

Average page faults per second for devices.

**System Performance Archive**

Archive report.

**T****Trace Event Archive**

Archive report.

**Transaction Network Delay**

Transaction network delay, broken down by server, client, and network delay.

**Transaction Network Round Trip Time**

Maximum and average round trip time (RTT) for transactions.

**Transaction Network Volume**

Network volume (KB) for transactions by host.

**Transaction Web Errors**

Web errors associated with a host and transaction.

**U****User Logon Counts**

Number of XenApp and XenDesktop users who have logged on.

**User Logon Details**

XenApp and XenDesktop user logons counts, times, and client information. This also displays the number of sessions created.

**User Logon Details for a User Group**

XenApp and XenDesktop user logons counts, times, and client information. This also displays the number of sessions created.

**User Summary for a User Group**

User experience by user group summary (ICA RTT, login time, process errors, and recent sessions).

**V****Visited Sites**

Sites visited by site name and address, with the number of visits and date of last visit.

x

### **[XenApp Server Utilization](#)**

Average CPU, average memory, and peak concurrent sessions for XenApp servers. This report contains information about the most heavily loaded servers. This report was added for the EdgeSight for XenApp 5.2 release.

### **[XenApp Summary](#)**

XenApp performance data (login time, active sessions, ICA session latency, and CPU and memory usage).

### **XenApp System Performance Archive**

Archive report for XenApp System Performance data. Use this report to export XenApp System Performance data from the EdgeSight database.

### **XenApp User Summary**

XenApp performance from a user perspective (ICA client traffic, login time, ICA session latency, and recent sessions).

### **XenDesktop Summary**

XenDesktop performance data (login time, active sessions, ICA session latency, and CPU and memory usage).

### **XenDesktop User Summary**

XenDesktop performance from a user perspective (ICA client traffic, login time, ICA session latency, and recent sessions).

## EdgeSight 5.3 Report List

---

This page last changed on Jul 09, 2010 by [chiuc](#).

For definitions of metrics, see [Report Counters Glossary](#).

**Important:** To find out what reports use a specific metric, in the EdgeSight Server Console, click the **Browse** tab and type the name of the metric in the **Search** box in the user interface (not the Find, CTRL + F, feature in the Web browser). You can also find reports by entering a report name or description in the **Search** box.

[A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

### A

#### **Alerts**

Number of alerts by type with alert details.

#### **Application Response Failures**

Active Application Response test and monitoring point failure and success counts.

#### **Application Response Time**

Active Application Response test and monitoring point durations.

#### **Application Response Time for a Test**

Active Application Response duration and status for a test.

#### **Asset Changes**

Changes to hardware and software device assets.

#### **Assets for a Device**

Hardware and software assets on a device.

### C

#### **CPU Utilization Management**

CPU Utilization Management status (enabled or disabled), plus average and peak CPU usage.

### D

#### **Device Archive**

Archive report.

#### **Device Summary**

Device performance data (CPU and memory usage, network delay, event log alerts, and application errors).

### E

#### **Environmental Usage**

Data on users, clients, sessions (start, end, and duration), published applications, and processes.

#### **Environmental Usage Archive**

Archive report for Environmental Usage data. Use this report to export Environmental Usage data from the EdgeSight database.

#### **Error Archive**

Archive report.

#### **Event Log Alerts**

Event log alerts with alert details.

#### **Event Log Alerts for a User Group**

Event log alerts with alert details.



## H

### **Hardware Alerts**

Hardware alerts (reboot, disk failure, and plug and play changes) with alert details.

### **Hardware Asset Changes**

Recent changes to hardware assets on devices.

### **HDX MediaStream I/O**

Speedscreen Multimedia input and output for HDX sessions.

### **HDX Plug-n-Play I/O**

USB and Smart Card input and output for HDX sessions.

## I

### **ICA Audio I/O**

Audio input and output bandwidth used during ICA sessions.

### **[ICA Client Version](#)**

The version of the client used during ICA sessions.

### **ICA Drive I/O**

Drive input and output bandwidth for file operations during ICA sessions.

### **ICA Printer IO**

Printer input and output bandwidth used during ICA sessions as well as the printer name and printer driver name. This report can be grouped by User, Device, Date, and Hour.

### **[ICA Session Compression](#)**

Displays the compression ratios used from server to client (ICA Session Compression Output (%)) and client to server (ICA Session Compression Input (%)).

### **ICA Session I/O**

Input and output line speed for ICA sessions.

### **[ICA Session Latency](#)**

Latency (peak and average) for ICA sessions. Only pertains to pre-4.5 Presentation Servers. Presentation Servers with EUEM data will not be reflected on this report.

### **ICA Session Latency for a User Group**

Latency (peak and average) for ICA sessions. Only pertains to pre-4.5 Presentation Servers. Presentation Servers with EUEM data will not be reflected on this report.

### **[ICA Session Round Trip Time](#)**

ICA session and network round trip time (RTT). Only pertains to EdgeSight Presentation Server Agents 4.5 and later, Presentation Server 4.5 and later (Enterprise or Platinum Editions), and ICA Client version 10 and later. Pre 4.5 Presentation Servers data will not be reflected on this report.

### **ICA Session Round Trip Time Archive**

Archive report.

### **ICA Session Round Trip Time for a User Group**

ICA session and network round trip time (RTT). Only pertains to EdgeSight Presentation Server Agents 4.5 and later, Presentation Server 4.5 and later (Enterprise or Platinum Editions), and ICA Client version 10 and later. Pre 4.5 Presentation Servers data will not be reflected on this report.

### **ICA Session Traffic**

Traffic (peak and average input and output) for ICA sessions.

### **ICA Session Traffic for a User Group**

Traffic (peak and average input and output) for ICA sessions.

### **ICA Video I/O**

Video frame and SpeedScreen input and output for ICA sessions.

### **[IMA Service Availability](#)**

Current IMA service availability status and the time since the last state change.

### **IMA Service State**

Current IMA service state and the time since the last state change.

## **L**

### **License Server Monitor Archive**

Archive report for License Server Monitor data. Use this report to export License Server Monitor data from the EdgeSight database.

## **N**

### **Network Connection Archive**

Archive report.

### **Network Summary**

Summary of network performance for a site (delay, volume, RTT, and transaction errors).

### **Network Summary by Site**

Summary of network performance (delay, RTT, Web errors, and transaction errors).

### **Network Transaction Archive**

Archive report.

### **Network Transaction Summary**

Summary of network performance for a transaction (delay, volume, RTT, and Web errors).

### **New Processes**

New processes detected on devices with the date first seen.

### **New Sites**

New sites detected on devices with the date first seen.

## **P**

### **Port Network Delay**

Port network delay, broken down by server, client, and network delay.

### **Port Network Round Trip Time**

Maximum and average round trip time (RTT) for ports.

### **Port Network Volume**

Port network volume (kilobytes sent and received).

### **Port Web Errors**

Web errors (transaction and Winsock) for a port.

### **Process CPU**

Process CPU usage (privileged time, user time, and total CPU).

### **Process Cumulative CPU**

Process Cumulative CPU usage time.

### **Process Errors**

Process errors with alert details.

### **Process Errors for a User Group**

Process errors with alert details.

### **Process Faults**

Process faults (crashes) with alert details.

### **Process Faults for a User Group**

Process faults (crashes) with alert details.

### **Process Memory Usage**

Memory (virtual, private, and working set) used by processes.

**Process Network Delay**

Process network delay, broken down by server, client, and network delay.

**Process Network Volume**

Process network volume (kilobytes sent and received).

**Process Not Responding Alerts**

Process not responding (application hang) conditions with alert details.

**Process Not Responding Alerts for a User Group**

Process not responding (application hang) conditions with alert details.

**Process Pages Per Second**

Average pages per second for processes.

**Process Performance Archive**

Archive report.

**Process Performance Summary by Process**

Process performance summary (high CPU or memory usage, long network delay or active time).

**Process Stability Summary by Process**

Processes with the most stability issues (errors, faults, hangs, and transaction errors.)

**Process Summary**

Summary of process performance (CPU and memory usage, network delay, and errors).

**Process Thread Count**

Average number of active threads for processes.

**Process Usage**

Active and running time for processes, plus the number of unique users.

**Process Usage Archive**

Archive report.

**Published Application Launch Archive !New**

Archive report for Published Application Launch data. Use this report to export Published Application Launch data from the EdgeSight database.

**Published Application Launch Count - Details !New**

The number of times a Published Application has been launched.

**Published Application Launch Count for a User Group - Details !New**

The number of times a Published Application has been launched for a user group.

**Published Application Launch Summary !New**

The number of times a Published Application has been launched (summary view).

**Published Application Launch Summary for a User Group !New**

The number of times a Published Application has been launched for a user group (summary view).

**Published Application Summary !New**

Published Applications with the most launches and the most users (top 5 and trend).

**Published Application Summary for a User Group !New**

Published Applications with the most launches and the most users for a user group (top 5 and trend).

**Published Application User Count - Details !New**

Most active users of Published Applications. The number of unique users per Published Application.

**Published Application User Count for a User Group - Details !New**

Most active users of Published Applications. The number of unique users per Published Application for a user group.

**Published Application User Summary !New**

The number of unique users per Published Application (summary view).

**Published Application User Summary for a User Group !New**

The number of unique users per Published Application for a user group (summary view).

**R**

**Real-time Alert List** (Excel)

Real-time detailed alert information.

**Real-time Device Summary** (Excel)

Real-time alert, network delay, processor usage, and memory usage summary information.

**Real-time Network Performance** (Excel)

Real-time detailed network volume, delay, round trip time, and error information.

**Real-time System Compare** (Excel)

Real-time performance counters from multiple devices for use in comparing system performance.

**Real-time System Performance** (Excel)

Real-time detailed system, network, and process performance information.

**Real-time XenApp Summary** (Excel)

Real-time performance counters from multiple XenApp servers for use in comparing system performance.

**Real-time XenApp User Summary** (Excel)

Real-time system, application, and session information for a XenApp user.

**Reboots**

Device reboots (expected and unexpected).

**S**

**Session Auto-Reconnects**

Session Auto-Reconnects.

**Session Client and Server Startup Duration**

Average Session client startup duration (CSD) and server startup duration (SSD). Displays login duration.

**Session Client Startup Duration**

Elapsed time for client startup (from request to ICA connection). Displays login duration.

**Session Client Startup Time Archive**

Archive report.

**Session Client Type**

Client type (ICA, RDP, or console) for sessions on a device.

**Session Counts**

Average active, inactive, and total session counts.

**Session CPU**

Average total CPU used by sessions.

**Session CPU for a User Group**

Average total CPU used by sessions.

**Session Duration !New**

Session duration summary and detail.

**Session Duration for a User Group !New**

Session duration summary and detail for a user group.

[Session Login Time](#)

Average login time for ICA sessions.

[Session Login Time for a User Group](#)

Average login time for ICA sessions.

**Session Memory**

Memory (virtual, private, and working set) used by sessions.

**Session Network Bandwidth Used**

Network bandwidth (peak and average input and output) used by sessions.

**Session Network Delay**

Session network delay, broken down by server, client, and network delay.

**Session Network Delay for a User Group**

Session network delay, broken down by server, client, and network delay.

**Session Network Round Trip Time**

Maximum and average round trip time (RTT) for sessions.

**Session Network Round Trip Time for a User Group**

Maximum and average round trip time (RTT) for sessions.

**Session Network Volume**

Session network volume (kilobytes sent and received).

**Session Network Volume for a User Group**

Session network volume (kilobytes sent and received).

**Session Page Faults**

Average number of page faults per second for sessions.

**Session Performance Archive**

Archive report for Session Performance data. Use this report to export Session Performance data from the EdgeSight database.

**Session Server Startup Duration**

Average time to startup a session on a Presentation Server.

**Session Server Startup Time Archive**

Archive report.

[Session Startup Duration Details](#)

Session client startup duration (CSD) and server startup duration (SSD). This contains the following server-side metrics: CASD, CONSD, COSD, PNCOSD, PLSD, LSEED, PCSID, DMSD, and SCSD. It also contains the following client-side metrics: CFDCD, BUCC, AECD, COCD, IFDCD, NRWD, TRWD, LPWD, SCCD, NRCD, and SLCD.

**Site Network Delay**

Site network delay, broken down by server, client, and network delay.

**Site Network Errors**

Network errors (transaction and Winsock) for a site.

**Site Network Errors for a User Group**

Network errors (transaction and Winsock) for a site.

**Site Network Round Trip Time**

Maximum and average round trip time (RTT) for sites.

**Site Network Volume**

Site network volume (kilobytes sent and received).

**Software Asset Changes**

Recent changes to software assets on devices.

[System CPU](#)

System CPU usage (privileged time, user time, and total CPU).

**System CPU Summary**

CPU percent usage summary for devices.

**System Disk Usage**

Disk usage shown as percent free disk space.

**System Disk Usage Archive**

Archive report.

**System Disk Usage Summary**

Summary of disk usage with disk capacity and percent free disk space.

**System Kernel for a Device**

System kernel activity (context switches, system calls, interrupts, and process count) for devices.

**System Memory for a User Group**

Memory (virtual, private, and working set) used by sessions.

**System Memory Summary**

Physical memory percent usage summary for devices.

**System Memory Usage**

Average percent memory used for devices.

**System Page Faults**

Average page faults per second for devices.

**System Performance Archive**

Archive report.

**T****Trace Event Archive**

Archive report.

**Transaction Network Delay**

Transaction network delay, broken down by server, client, and network delay.

**Transaction Network Round Trip Time**

Maximum and average round trip time (RTT) for transactions.

**Transaction Network Volume**

Network volume (KB) for transactions by host.

**Transaction Web Errors**

Web errors associated with a host and transaction.

**U****User Logon Counts**

Number of XenApp and XenDesktop users who have logged on.

**User Logon Details**

XenApp and XenDesktop user logons counts, times, and client information. This also displays the number of sessions created.

**User Logon Details for a User Group**

XenApp and XenDesktop user logons counts, times, and client information. This also displays the number of sessions created.

**User Summary for a User Group**

User experience by user group summary (ICA RTT, login time, process errors, and recent sessions).

**V****Visited Sites**

Sites visited by site name and address, with the number of visits and date of last visit.

x

### **XenApp Server Utilization**

Average CPU, average memory, and peak concurrent sessions for XenApp servers. This report contains information about the most heavily loaded servers. This report was added for the EdgeSight for XenApp 5.2 release.

### **XenApp Summary**

XenApp performance data (login time, active sessions, ICA session latency, and CPU and memory usage).

### **XenApp System Performance Archive**

Archive report for XenApp System Performance data. Use this report to export XenApp System Performance data from the EdgeSight database.

### **XenApp User Summary**

XenApp performance from a user perspective (ICA client traffic, login time, ICA session latency, and recent sessions).

### **XenDesktop Summary**

XenDesktop performance data (login time, active sessions, ICA session latency, and CPU and memory usage).

### **XenDesktop User Summary**

XenDesktop performance from a user perspective (ICA client traffic, login time, ICA session latency, and recent sessions).

## **Comments**

---

Hi, anyone know how to find Published report tag New! on this page ?

Edgdesight was update on 5.4.6.3

Thanks for ur help.

Posted by [laurent.boursin](#) at Dec 28, 2011.

---

## Report Sample, ICA Client Version

This page last changed on Jul 12, 2010 by [chiuc](#).

Report view from ES web console

\*note- the jpg was altered/edited to present limited amount of data

\*note- xsCC7ep2 is using DHCP, hence it is legitimately showing two different client (IP) address.

Department or Group: All  Root Only  
Start: 2010-04-01 End: 2010-07-09 Go

Optional Parameters

1 of 1 100% Select a format Export

### ICA Client Version

ICA Client Version for department "All", between 4/1/2010 and 7/9/2010

Client Version				Cour
12.0.0.6410				
NAVI\lt9	XSCC7EP2	192.62.81.123	XSCCF6A	
NAVI\lt9	XSCC7EP2	192.62.81.124	XSCCF6A	
NAVI\lt9	XSCC7EP2	192.62.81.124	XSCCF6Z	
Unknown				
User	Client Name	Client Address	Device	
NAVI\lt9	XSCC7EP2	192.62.81.123	XSCCF6A	
NAVI\lt9	XSCC7EP2	192.62.81.124	XSCCF6A	

Generated 7/9/2010 | EdgeSight 5.3 | © Citrix Systems, Inc. | Server xscc3dc Page 1

Exported view (data is from a ES web server, a different source than the previous picture)



**ICA Client Version**

ICA Client Version for department "All", between 6/1/2010 and 6/20/2010

Client Version	Count
<code>{engineno}</code>	4
10.00.52110	2,427
10.00.730	2
10.100.55836	450
10.150.58643	150
10.200.2650	1,172
10.217.9051	3
10.6.115659	1
11.0.0.5357	300,770
11.0.019.5357	13
11.0.140395	10
11.0.150.5357	361
11.1.0.19460	17
11.1.1.20376	17
11.100.158406	12
11.2.0.31560	13,418
12.0.0.6410	275
8.00.24737	192
8.100.29670	121
8.12.90062	1
9.00.32649	442
9.100.36280	34
9.150.39151	492
9.200.44376	117
9.230.50211	789
9.237.53063	282
Unknown	576

## Prerequisites

XenApp agents must be in Advanced mode.

Desktop VDA agents.

## Overview

A list of ICA client versions used by sessions between the specified period.

The client identified itself (via the oVersion field) to EdgeSight, via EUEM. The data is a string (as presented in the first column of the report).

## Data Element Listing

**Client Version.** The string is composed of "major.minor.fix.build" for versions 11 and 12. Unknown is a mixed combination of unknown clients (typically mac or unix) and clients from various type of "abnormal"

sessions. The client can be drilled into to display the following information- user, client name, client address, and device.\*

- User- the domain user that started the session.
- Client Name- the name of the client that started the session.
- Client Address- the IP of the client name.
- Device- the XenApp server hosting the session.

**Count.** The number of sessions invoked, during the specified period, by the version of client.

## Further Details

### unknown

As you can see from the first picture (report taken from a lab environment)- xsCC7ep2 is using version 12.0.0.6410 to access a XenApp session. However, there are *two unknown client counts attributed to the same lab environment. This can be caused in different ways- for example, a session terminated too quickly to provide the oVersion field to EUEM. Basically if EdgeSight is unable to obtain the client version information (oVersion is blank or EUEM never received the data)- then it is "unknown."*

Mac client of version 11.2.xx.yy (before July 2010) will be counted as unknown. A future change to the mac client will contain an identifier in the oVersion field for EdgeSight.

### **#{engineno}**

This is the string shown for Blackberry devices. It is expected that this string will be different in the future.

### **TBD**

a wiki page on client version mapping would be useful.

## Report Sample, User Logon Counts

---

This page last changed on Jun 22, 2011 by [chiuc](#).

Here is what this report looks like.

[xa\\_vda\\_user\\_logon\\_count.mhtml](#)

## EdgeSight 5.2 Report List

---

This page last changed on Apr 29, 2010 by [ronaldb](#).

For definitions of metrics, see [Report Counters Glossary](#).

**Important:** To find out what reports use a specific metric, in the EdgeSight Server Console, click the **Browse** tab and type the name of the metric in the **Search** box in the user interface (not the Find, CTRL + F, feature in the Web browser). You can also find reports by entering a report name or description in the **Search** box.

[A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

### A

#### **Alerts**

Number of alerts by type with alert details.

#### **Application Response Failures**

Active Application Response test and monitoring point failure and success counts.

#### **Application Response Time**

Active Application Response test and monitoring point durations.

#### **Application Response Time for a Test**

Active Application Response duration and status for a test.

#### **Asset Changes**

Changes to hardware and software device assets.

#### **Assets for a Device**

Hardware and software assets on a device.

### C

#### **[CPU Utilization Management](#)**

CPU Utilization Management status (enabled or disabled), plus average and peak CPU usage.

### D

#### **Device Archive**

Archive report.

#### **Device Summary**

Device performance data (CPU and memory usage, network delay, event log alerts, and application errors).

### E

#### **[Environmental Usage](#)**

Data on users, clients, sessions (start, end, and duration), published applications, and processes.

#### **Environmental Usage Archive**

Archive report for Environmental Usage data. Use this report to export Environmental Usage data from the EdgeSight database.

#### **Error Archive**

Archive report.

#### **Event Log Alerts**

Event log alerts with alert details.

#### **Event Log Alerts for a User Group**

Event log alerts with alert details.

### H

#### **Hardware Alerts**

Hardware alerts (reboot, disk failure, and plug and play changes) with alert details.

### **Hardware Asset Changes**

Recent changes to hardware assets on devices.

### **HDX MediaStream I/O**

Speedscreen Multimedia input and output for HDX sessions.

### **HDX Plug-n-Play I/O**

USB and Smart Card input and output for HDX sessions.

**I**

### **ICA Audio I/O**

Audio input and output bandwidth used during ICA sessions.

### **ICA Client Version**

The version of the client used during ICA sessions.

### **ICA Drive I/O**

Drive input and output bandwidth for file operations during ICA sessions.

### **ICA Printer IO**

Printer input and output bandwidth used during ICA sessions as well as the printer name and printer driver name. This report can be grouped by User, Device, Date, and Hour.

### [ICA Session Compression](#)

Displays the compression ratios used from server to client (ICA Session Compression Output (%)) and client to server (ICA Session Compression Input (%)).

### **ICA Session I/O**

Input and output line speed for ICA sessions.

### [ICA Session Latency](#)

Latency (peak and average) for ICA sessions. Only pertains to pre-4.5 Presentation Servers. Presentation Servers with EUEM data will not be reflected on this report.

### **ICA Session Latency for a User Group**

Latency (peak and average) for ICA sessions. Only pertains to pre-4.5 Presentation Servers. Presentation Servers with EUEM data will not be reflected on this report.

### [ICA Session Round Trip Time](#)

ICA session and network round trip time (RTT). Only pertains to EdgeSight Presentation Server Agents 4.5 and later, Presentation Server 4.5 and later (Enterprise or Platinum Editions), and ICA Client version 10 and later. Pre 4.5 Presentation Servers data will not be reflected on this report.

### **ICA Session Round Trip Time Archive**

Archive report.

### **ICA Session Round Trip Time for a User Group**

ICA session and network round trip time (RTT). Only pertains to EdgeSight Presentation Server Agents 4.5 and later, Presentation Server 4.5 and later (Enterprise or Platinum Editions), and ICA Client version 10 and later. Pre 4.5 Presentation Servers data will not be reflected on this report.

### **ICA Session Traffic**

Traffic (peak and average input and output) for ICA sessions.

### **ICA Session Traffic for a User Group**

Traffic (peak and average input and output) for ICA sessions.

### **ICA Video I/O**

Video frame and SpeedScreen input and output for ICA sessions.

### [IMA Service Availability](#)

Current IMA service availability status and the time since the last state change.

### **IMA Service State**

Current IMA service state and the time since the last state change.

## **N**

### **Network Connection Archive**

Archive report.

### **Network Summary**

Summary of network performance for a site (delay, volume, RTT, and transaction errors).

### **Network Summary by Site**

Summary of network performance (delay, RTT, Web errors, and transaction errors).

### **Network Transaction Archive**

Archive report.

### **Network Transaction Summary**

Summary of network performance for a transaction (delay, volume, RTT, and Web errors).

### **New Processes**

New processes detected on devices with the date first seen.

### **New Sites**

New sites detected on devices with the date first seen.

## **P**

### **Port Network Delay**

Port network delay, broken down by server, client, and network delay.

### **Port Network Round Trip Time**

Maximum and average round trip time (RTT) for ports.

### **Port Network Volume**

Port network volume (kilobytes sent and received).

### **Port Web Errors**

Web errors (transaction and Winsock) for a port.

### **Process CPU**

Process CPU usage (privileged time, user time, and total CPU).

### **Process Cumulative CPU**

Process Cumulative CPU usage time.

### **Process Errors**

Process errors with alert details.

### **Process Errors for a User Group**

Process errors with alert details.

### **Process Faults**

Process faults (crashes) with alert details.

### **Process Faults for a User Group**

Process faults (crashes) with alert details.

### **Process Memory Usage**

Memory (virtual, private, and working set) used by processes.

### **Process Network Delay**

Process network delay, broken down by server, client, and network delay.

### **Process Network Volume**

Process network volume (kilobytes sent and received).

### **Process Not Responding Alerts**

Process not responding (application hang) conditions with alert details.

**Process Not Responding Alerts for a User Group**

Process not responding (application hang) conditions with alert details.

**Process Pages Per Second**

Average pages per second for processes.

**Process Performance Archive**

Archive report.

**Process Performance Summary by Process**

Process performance summary (high CPU or memory usage, long network delay or active time).

**Process Stability Summary by Process**

Processes with the most stability issues (errors, faults, hangs, and transaction errors.)

**Process Summary**

Summary of process performance (CPU and memory usage, network delay, and errors).

**Process Thread Count**

Average number of active threads for processes.

**Process Usage**

Active and running time for processes, plus the number of unique users.

**Process Usage Archive**

Archive report.

**R**

[ns:EXCEL] Real-time Alert List

Real-time detailed alert information.

[ns:EXCEL] Real-time Device Summary

Real-time alert, network delay, processor usage, and memory usage summary information.

[ns:EXCEL] Real-time Network Performance

Real-time detailed network volume, delay, round trip time, and error information.

[ns:EXCEL] Real-time System Compare

Real-time performance counters from multiple devices for use in comparing system performance.

[ns:EXCEL] Real-time System Performance

Real-time detailed system, network, and process performance information.

[ns:EXCEL] Real-time XenApp Summary

Real-time performance counters from multiple XenApp servers for use in comparing system performance.

[ns:EXCEL] Real-time XenApp User Summary

Real-time system, application, and session information for a XenApp user.

**Reboots**

Device reboots (expected and unexpected).

**S**

**Session Auto-Reconnects**

Session Auto-Reconnects.

**Session Client and Server Startup Duration**

Average Session client startup duration (CSD) and server startup duration (SSD). Displays login duration.

**Session Client Startup Duration**

Elapsed time for client startup (from request to ICA connection). Displays login duration.

**Session Client Startup Time Archive**

Archive report.

### **Session Client Type**

Client type (ICA, RDP, or console) for sessions on a device.

### **Session Counts**

Average active, inactive, and total session counts.

### **Session CPU**

Average total CPU used by sessions.

### **Session CPU for a User Group**

Average total CPU used by sessions.

### [Session Login Time](#)

Average login time for ICA sessions.

### [Session Login Time for a User Group](#)

Average login time for ICA sessions.

### **Session Memory**

Memory (virtual, private, and working set) used by sessions.

### **Session Network Bandwidth Used**

Network bandwidth (peak and average input and output) used by sessions.

### **Session Network Delay**

Session network delay, broken down by server, client, and network delay.

### **Session Network Delay for a User Group**

Session network delay, broken down by server, client, and network delay.

### **Session Network Round Trip Time**

Maximum and average round trip time (RTT) for sessions.

### **Session Network Round Trip Time for a User Group**

Maximum and average round trip time (RTT) for sessions.

### **Session Network Volume**

Session network volume (kilobytes sent and received).

### **Session Network Volume for a User Group**

Session network volume (kilobytes sent and received).

### **Session Page Faults**

Average number of page faults per second for sessions.

### **Session Performance Archive**

Archive report for Session Performance data. Use this report to export Session Performance data from the EdgeSight database.

### **Session Server Startup Duration**

Average time to startup a session on a Presentation Server.

### **Session Server Startup Time Archive**

Archive report.

### [Session Startup Duration Details](#)

Session client startup duration (CSD) and server startup duration (SSD). This contains the following server-side metrics: CASD, CONSD, COSD, PNCOSD, PLSD, LSEED, PCSID, DMSD, and SCSD. It also contains the following client-side metrics: CFDCD, BUCC, AECD, COCD, IFDCD, NRWD, TRWD, LPWD, SCCD, NRCD, and SLCD.

### **Site Network Delay**

Site network delay, broken down by server, client, and network delay.

### **Site Network Errors**

Network errors (transaction and Winsock) for a site.



**Site Network Errors for a User Group**

Network errors (transaction and Winsock) for a site.

**Site Network Round Trip Time**

Maximum and average round trip time (RTT) for sites.

**Site Network Volume**

Site network volume (kilobytes sent and received).

**Software Asset Changes**

Recent changes to software assets on devices.

**[System CPU](#)**

System CPU usage (privileged time, user time, and total CPU).

**System CPU Summary**

CPU percent usage summary for devices.

**System Disk Usage**

Disk usage shown as percent free disk space.

**System Disk Usage Archive**

Archive report.

**System Disk Usage Summary**

Summary of disk usage with disk capacity and percent free disk space.

**System Kernel for a Device**

System kernel activity (context switches, system calls, interrupts, and process count) for devices.

**System Memory for a User Group**

Memory (virtual, private, and working set) used by sessions.

**System Memory Summary**

Physical memory percent usage summary for devices.

**[System Memory Usage](#)**

Average percent memory used for devices.

**System Page Faults**

Average page faults per second for devices.

**System Performance Archive**

Archive report.

**T****Trace Event Archive**

Archive report.

**Transaction Network Delay**

Transaction network delay, broken down by server, client, and network delay.

**Transaction Network Round Trip Time**

Maximum and average round trip time (RTT) for transactions.

**Transaction Network Volume**

Network volume (KB) for transactions by host.

**Transaction Web Errors**

Web errors associated with a host and transaction.

**U****User Logon Counts**

Number of XenApp and XenDesktop users who have logged on.

**User Logon Details**

XenApp and XenDesktop user logons counts, times, and client information. This also displays the number of sessions created.

**User Logon Details for a User Group**

XenApp and XenDesktop user logons counts, times, and client information. This also displays the number of sessions created.

**User Summary for a User Group**

User experience by user group summary (ICA RTT, login time, process errors, and recent sessions).

**v**

**Visited Sites**

Sites visited by site name and address, with the number of visits and date of last visit.

**x**

**[XenApp Server Utilization](#)**

Average CPU, average memory, and peak concurrent sessions for XenApp servers. This report contains information about the most heavily loaded servers. This report was added for the EdgeSight for XenApp 5.2 release.

**[XenApp Summary](#)**

XenApp performance data (login time, active sessions, ICA session latency, and CPU and memory usage).

**XenApp System Performance Archive**

Archive report for XenApp System Performance data. Use this report to export XenApp System Performance data from the EdgeSight database.

**XenApp User Summary**

XenApp performance from a user perspective (ICA client traffic, login time, ICA session latency, and recent sessions).

**XenDesktop Summary**

XenDesktop performance data (login time, active sessions, ICA session latency, and CPU and memory usage).

**XenDesktop User Summary**

XenDesktop performance from a user perspective (ICA client traffic, login time, ICA session latency, and recent sessions).

## Environmental Usage

This page last changed on Feb 07, 2012 by [chiuc](#).

The **Environmental Usage** report provides data on users, clients, sessions (start, end, and duration), published applications, and processes.

The first level of data shows: User, Device, Client Address, Client Name, Session Started, Session Ended, Session Duration.

Expanding the **User** (+ symbol) column will show details of: Process, Published Application, Process Started, Process Ended, Elapsed.

Table of Contents

- 1 [Prerequisites](#)
- 2 [Overview](#)
- 3 [Counters](#)
- 4 [Interpreting the Data](#)
- 5 [Applicable Versions](#)

User	Device	Client Address	Client Name	Session Started	Session Ended	Session Duration
LAB/TL TEST1	ESLT02A	10.204.4.127	BOSW01	4/8/2009 4:25:56 PM	4/8/2009 4:26:30 PM	0:00:34
LAB/TL TEST1	ESLT02A	10.204.4.127	BOSW01	4/8/2009 4:25:56 PM	4/8/2009 4:26:30 PM	0:00:34
LAB/TL TEST1	ESLT02A	10.204.4.127	BOSW01	4/8/2009 4:27:05 PM	4/8/2009 4:27:13 PM	0:00:08
LAB/TL TEST1	ESLT02A	10.204.4.127	BOSW01	4/8/2009 4:27:05 PM	4/8/2009 4:27:13 PM	0:00:08
LAB/TL TEST1	ESLT02A	10.204.4.127	BOSW01	4/8/2009 4:28:18 PM	4/8/2009 4:28:24 PM	0:00:06
LAB/TL TEST1	ESLT02A	10.204.4.127	BOSW01	4/8/2009 4:28:18 PM	4/8/2009 4:29:21 PM	0:01:03
LAB/TL TEST1	ESLT02A	10.204.4.127	BOSW01	4/8/2009 4:31:17 PM		
LAB/TL TEST1	ESLT02A	10.204.4.127	BOSW01	4/8/2009 4:31:22 PM	4/8/2009 4:31:54 PM	0:00:32
LAB/TL TEST1	ESLT02A	10.204.4.127	BOSW01	4/8/2009 4:37:38 PM		
LAB/TL TEST1	ESLT02A	10.204.4.127	BOSW01	4/8/2009 4:37:38 PM	4/8/2009 4:37:36 PM	
LAB/TL TEST1	ESLT02A	10.204.4.127	BOSW01	4/8/2009 4:37:51 PM		
LAB/TL TEST1	ESLT02A	10.204.4.127	BOSW01	4/8/2009 4:43:16 PM		

## Prerequisites

Environmental Usage must be enabled on the Data Maintenance/Upload Configuration page on the EdgeSight Server.

Even though this report is available in the agent's basic mode (in particular users of XenApp Enterprise editions without additional EdgeSight CCU licenses), the published application names, and other (unspecified) columns may not be populated. The agent in basic mode does not collect certain data.

Sessions generated from Active Application Monitoring (AAM) utilizes a synthetic client, which also does not provide all the data for this report (under all agent modes).

# Overview

For EdgeSight versions 5.0 through 5.2, this is the only report that displays published applications data. EdgeSight 5.3 includes new published applications reports which provide information on launches and unique users.

Note that there is an archive version of this report which can be stored and retrieved for long-term analysis of usage patterns.

## Counters

- Client Address
- Client Name
- Session Started
- Session Ended
- Session Duration

## Interpreting the Data

### Applicable Versions

EdgeSight 5.4  
EdgeSight 5.3  
EdgeSight 5.2  
EdgeSight 5.1  
EdgeSight 5.0

## ICA Printer IO

---

This page last changed on Feb 09, 2010 by [sarahv](#).

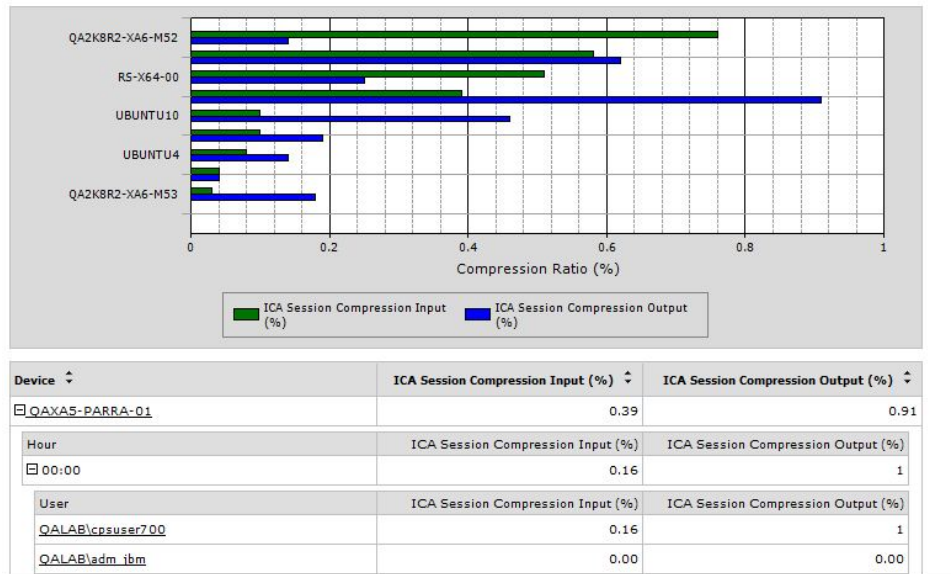
## ICA Session Compression

This page last changed on Sep 02, 2011 by ronaldb1.

This report displays the amount (as a percentage) that traffic from the server to client (ICA Session Compression Output (%)) and client to server (ICA Session Compression Input (%)) is compressed.

Table of Contents

- 1 [Overview](#)
- 2 [Counters](#)
- 3 [Applicable Versions](#)



## Overview

## Counters

- ICA Session Compression Input(%)
- ICA Session Compression Output(%)

## Applicable Versions

EdgeSight 5.4  
EdgeSight 5.3  
EdgeSight 5.2  
EdgeSight 5.1  
EdgeSight 5.0

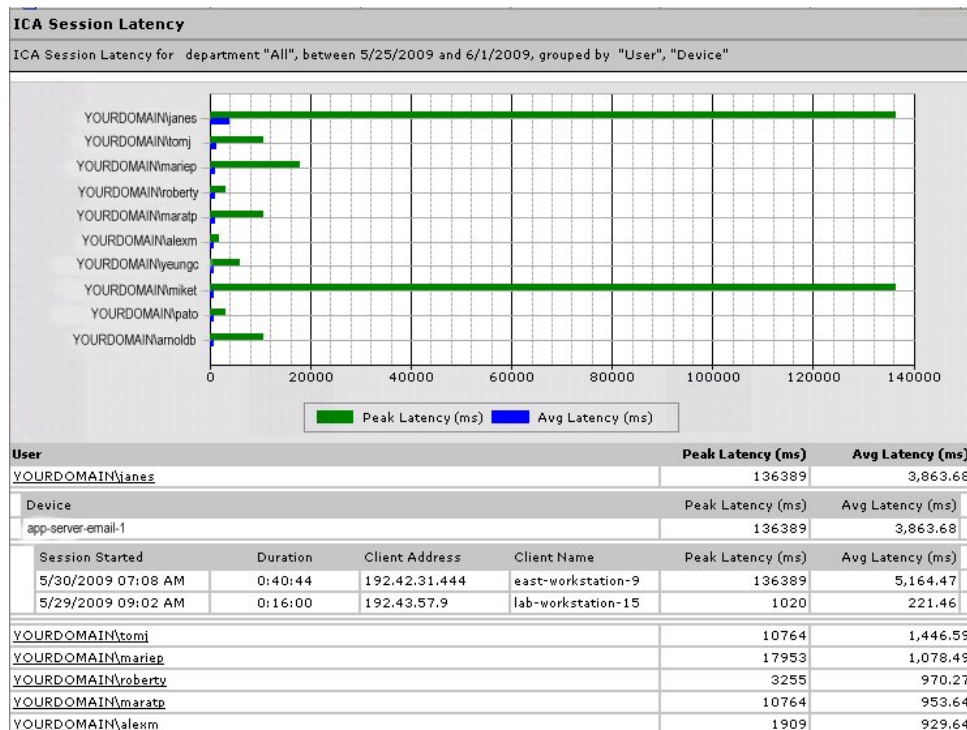
## ICA Session Latency

This page last changed on Sep 02, 2011 by ronaldb1.

The ICA Session Latency report provides insight into the amount of session latency users might be experiencing. This report can be grouped by users or devices, as described in the sections that follow.

### Table of Contents

- 1 [Prerequisites](#)
- 2 [Overview](#)
- 3 [Counters](#)
- 4 [Interpreting the Data](#)
- 5 [Suggested Resolutions](#)
  - 5.1 [Causes of Latency](#)
  - 5.2 [Suggested Resolutions](#)
- 6 [Applicable Versions](#)
- 7 [References](#)
- 8 [See Also](#)



## Prerequisites

Collection of the metrics in this report requires a **minimum** of the following component versions:

- EdgeSight 4.5 Agent running on the XenApp server
- Citrix Presentation Server 4.0 or 4.5, Advanced or Standard Edition

## Overview

You can use this report to isolate any application servers experiencing latency. If users complain a specific application is slow, run this report with the name of the application servers' group specified as the Group and group the report by **Device, User**.

Some experts recommend aiming to keep latency for a user session under 150 kbit and note that a Citrix user session requires approximately 20kbits.

**Note:** ICA session latency only pertains to Presentation Server 4.0 or 4.5 (Standard and Advanced Editions only).

## Counters

- [Peak Latency \(ms\)](#)
- [Avg Latency \(ms\)](#)

## Interpreting the Data

*The following provides a suggested process for interpreting the data and isolating the cause of the latency.*

To begin interpreting this report

1. Look for any outlying data points for users or devices. For example, if the report is grouped primarily by users, any users with double the session latency, such as "JaneS" and "MikeT" in the screen capture above. In this screen capture, the Peak Latency for "JaneS" is over ten times the Peak Latency of other users. In this report, the summary value for Peak Latency is the highest value reached ever; it is not an average of the Peak Latency for all sessions. However, the summary value for the Average Latency is an average of the average latency reported for each session.
2. Expand the outlying data point for more detail.
3. Compare the Peak Latency with the Avg Latency. *Is the user experiencing latency all the time or only at certain times?*
4. Compare the individual sessions to each other. *Is there one session that has more latency than the others? If so, where any events or upgrades occurring on the network? What about that application server's group? Was that server overloaded?* To investigate server and farm health, see
5. (Optional.) If there was one server with more latency than the others, rerun the ICA Session Latency report grouped by Device, then User. Specify the name of the application server where the user experienced latency in the optional parameters.
6. (Optional.) Consider rerunning this report grouped by **Hour** if you are trying to correlate the latency against network events, such as outages or upgrades.

After reviewing this data, run the following reports determine if the latency is prominent on a particular virtual channel.

Start by running one of the ICA I/O reports (ICA Audio I/O, ICA Video I/O) for the most likely candidate. The application server where the latency occurred might indicate where to start. For example, if the server hosts a Web browser, consider starting with the ICA Video I/O or the ICA Audio I/O report. If the server hosts a graphics application or Word processing application, consider starting with the ICA Printer I/O.

When you run these reports, group the report first by device and specify the application server's name as an Optional Parameter.

When you determine the channel on which the latency is occurring, run the ICA Session Compression report to see how effectively the XenApp is compressing session data. If ICA Session Compression Output (%) is significantly less than the ICA Session Compression Input (%), then TBD - xxx.

You can also use the ICA Session Monitoring and Control (SMC) portion of the [Citrix Server Software Development Kit \(SDK\)](#) to test the impact of restricting bandwidth on specific channels.

[1](#)

## Suggested Resolutions

This section alludes to potential causes of latency and points to resources for resolution.



## Causes of Latency

There are a variety of reasons for latency in sessions, including:

- Incorrect application scalability or excessive numbers of users connecting to the application server -- see
  - Outage of another server in a load managed group
- Network bandwidth issues
  - Excessive bandwidth devoted to printing - see
- Incorrect or suboptimal network design: the data store should be on the same subnet as most of the XenApp servers to minimize network traffic, file servers should be peer nodes in the same subnet as the farm servers. Also, consider teaming network cards in servers that initiate and maintain sessions, such as the Web Interface.

## Suggested Resolutions

- Consider whether you can disable features that consume a lot of bandwidth, such as audio and multimedia.
- Session latency can also be improved by enabling features such as the SpeedScreen Acceleration features, Heavyweight Compression, SpeedScreen Latency Reduction, ICA Display, and ICA Browser. See the *Citrix XenApp Administrator's Guide*. Using mandatory profiles can help reduce latency.

In some cases, low bandwidth leads to session timeouts. You can mitigate this issue by ensuring the Session Reliability, Auto Client Reconnect, and ICA Keep Alive features are enabled.

## Applicable Versions

EdgeSight 5.4  
EdgeSight 5.3  
EdgeSight 5.2  
EdgeSight 5.1  
EdgeSight 5.0

## References

## See Also

- Citrix Knowledge Center Support Forum post, "[ICA session latency](#)." Accessed on June 1, 2009.

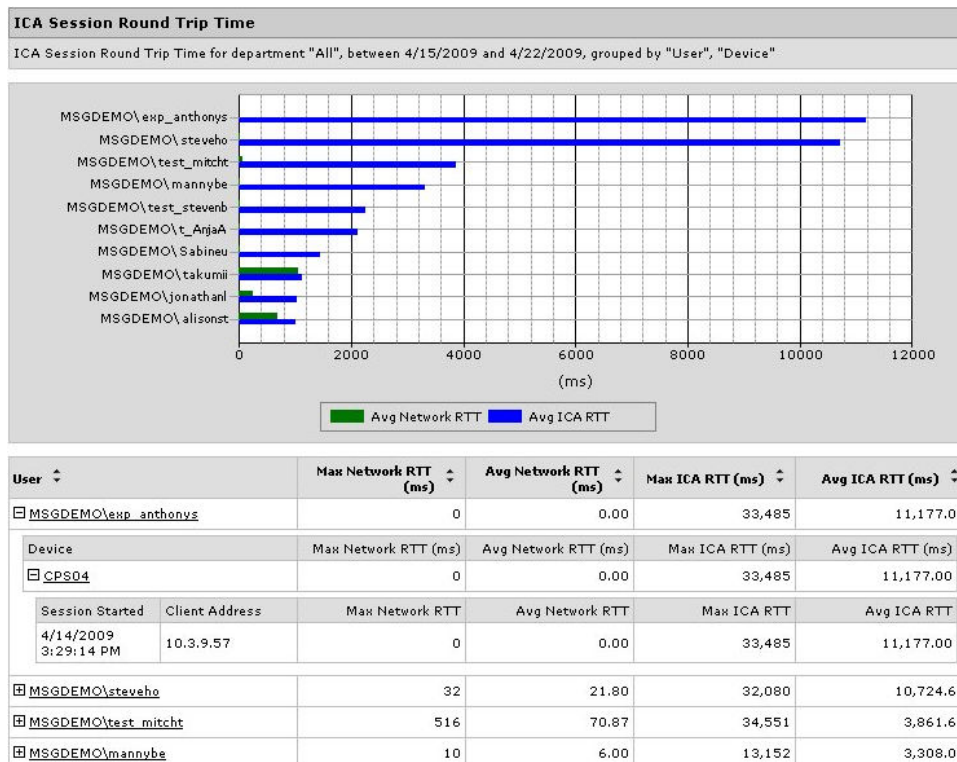
## ICA Session Round Trip Time

This page last changed on Sep 02, 2011 by [ronaldb1](#).

The ICA Session Round Trip Time report displays the amount of time it takes for a command in a user's session to reach the server and then for the server's response to reach the client device.

### Table of Contents

- [1 Prerequisites](#)
- [2 Overview](#)
- [3 Counters](#)
- [4 Interpreting the Data](#)
- [5 Applicable Versions](#)



## Prerequisites

Collection of the metrics in this report requires a **minimum** of the following component versions:

- EdgeSight 4.5 Agent running on the XenApp server
- Citrix Presentation Server 4.5, Enterprise or Platinum Edition
- XenApp Plugin (also known as the Citrix Presentation Server Client), version 10 or higher

## Overview

This report displays the ICA Session Round Trip Time for a specific user or group of users. You can specify for this report to display the Top 20, 50, 100 or All round trip times.

When using this report to troubleshoot session latency, you may want to correlate the round trip time (RTT) data with CPU usage data for the same time. This can help pinpoint server issues. If a single user is experiencing high RTT, this may indicate that the problem is with the client. If multiple users are affected, it is more likely a server issue.

**Note:** ICA session and network round trip time only pertain to EdgeSight Presentation Server Agents 4.5 and later, Presentation Server 4.5 and later (Enterprise or Platinum Editions), and Citrix XenApp plug-ins

with the ICA engine (client version 10 and later). Data from servers running versions of XenApp released before Presentation Server 4.5 does not appear on this report.

## Counters

- Avg Network RTT (ms)
- Avg ICA RTT (ms)

## Interpreting the Data

See the following article for an explanation of EUEM metrics: <http://support.citrix.com/article/CTX114495>

## Applicable Versions

- EdgeSight 5.4
- EdgeSight 5.3
- EdgeSight 5.2
- EdgeSight 5.1
- EdgeSight 5.0

## Process Faults

---


This page last changed on Apr 29, 2010 by [danag](#).

This **Process Faults** report lets the administrator select a particular process (or software application) and view each crash that has occurred over a specified time frame.

Table of Contents

- 1 [Overview](#)
- 2 [Counters](#)
- 3 [Interpreting the Data](#)
- 4 [See Also](#)

## Overview

The data is grouped by day by default. Expanding any of the dates where there are crashes will display the details surrounding the event. Clicking on the info button  will open a dialogue box where the crash files collected can be downloaded.

## Counters

- [Average Memory Usage](#)
- [Average CPU](#)
- [Average Network Delay](#)
- Errors, Hangs, Faults

## Interpreting the Data

For example, it is possible to generate this report on specific applications published on your XenApp farm, such as Microsoft Word, or categories of applications, such as "Graphics Programs."

This is a summary report comprising four sub-reports:

- Average Memory Usage by Day (in KB)
- Average CPU by Day
- Average Network Delay by Day
- Errors, Hangs, Faults by Day

Clicking on one of the reports lets you display that report in additional detail. For example, clicking on the Average Network Delay by Day report displays an expanded version of the report (that is, the [Process Network Delay](#)), which includes a list of processes using network resources.

A common misconception is that Citrix EdgeSight defines an application as hung only if the user is actively utilizing it in the foreground and it appears to hang. However, EdgeSight defines an application as hung even if the user is not using it at the time. More specifically, alerts are generated for applications running in the background when the hang occurs.

A classic example of this is when Microsoft Outlook seems to hang when attempting to sync email over a slow network. Even though windows messages are not being sent to the Graphical User Interface and "not responding" appears in the window title bar, the application is still working behind the scenes. Most users have Microsoft Outlook running in the background while using other applications during this synchronizing stage. Citrix EdgeSight records Microsoft Outlook as hanging even though the user is not using it.

As a best practice, look at the Windows Task Manager while the application hang occurs. If Task Manager indicates the process is "not responding", then an alert should be generated, otherwise a deeper investigation may be required.

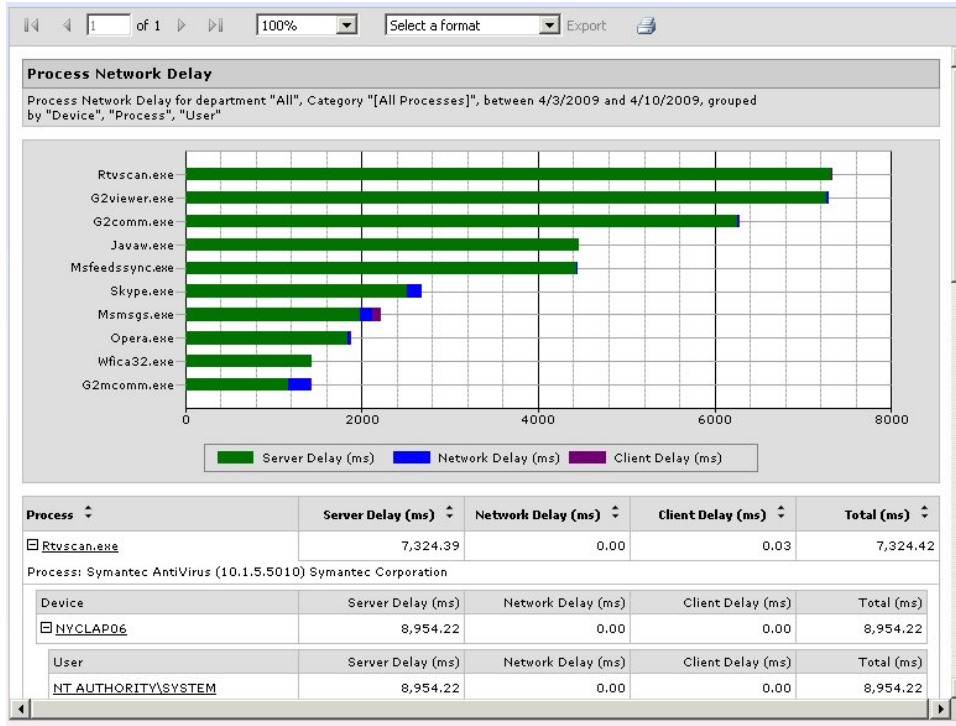
## See Also

- [Citrix EdgeSight Process Hung Alert Explanation](#)

## Process Network Delay

This page last changed on Apr 10, 2009 by sarahv.

The **Process Network Delay** report displays a list of processes using network resources, such as G2viewer.exe which is the GoToMyPC Viewer. Expanding the process name displays the device running the process and the user. It also shows Server Delay, Network Delay, and Client Delay in milliseconds (ms) as well as these delays totalled.



From EdgeSight 5.0, SP2

## How to Find It?

In the EdgeSight 5.0 Console, click the **Browse** tab. Click **Process Network Delay**.

In the EdgeSight 4.5 Console, under **Processes > Stability > Faults**.

## What Does this Measure?

## Metrics and Counters Used

- Server Delay
- Network Delay
- Client Delay

## Source of Data

## Interpreting the Data

## **Additional Information**

## **Customer Use Cases and Examples**

## **Additional References**

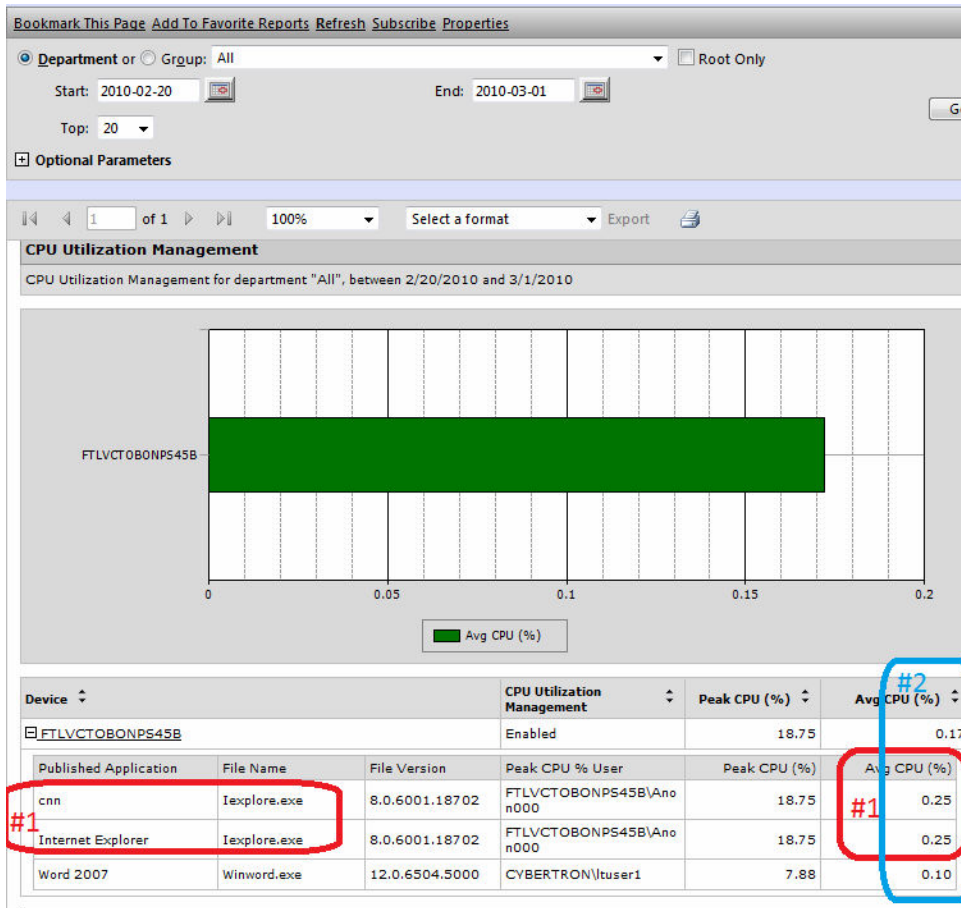
- [Citrix EdgeSight Process Hung Alert Explanation](#)

# Report Sample, CPU Utilization Management

This page last changed on Apr 30, 2010 by danag.

## Table of Contents

- 1 [Prerequisites](#)
- 2 [Overview](#)
- 3 [Data Element Listing](#)



## Prerequisites

Within XenApp - enable CPU Utilization Manager for the specific server (from the Access Management Console).

## Overview

- **#1**: The same filename (reported in a server) is repeated with different published application names.  
The data collected only once, when the same user invoked the same application!  
The resulting table is very confusing when you have this situation. As shown, "iExplorer.exe" has a peak CPU of 18.75% and average of 0.10% by the same user "Anon000." The second line information of iExplorer is redundant and is not counted separately for average (%). Iexplorer.exe is typically the program that caused redundant lines of information to appear- as the XA administrator can published 2 links (e.g. cnn.com and youtube.com), or a desktop (which appears as the iExplorer.exe program).



- **#2** : Because the architecture have only collected two average points (the sample screenshot is showing 3 lines, but only 2 lines of data will be used)- the average is calculated as  $(0.25+0.10)/2 = 0.175$ " which is represented as "0.17" in the sample screenshot.

## Data Element Listing

**Device.** The device name. All data in this report is aggregated and averaged for the device.

**CPU Utilization Management.** The values are "Enabled" or "Disabled." If the XenApp administrator allows the device to be managed by CPU Utilization Management, then it is shown as "Enabled." Regardless of this flag, the data for Peak and Average is collected and reported on.

**Peak CPU (%).** Peak CPU percentage used by a program on the device. The peak CPU% is read on every polling point (15 seconds on XenApp; 5 seconds on EndPoints). If you have CPU spikes that only last <10 seconds randomly, there is a chance that such (or some) spike is never noticed by EdgeSight.NOTE- this value is not the Peak CPU of the machine!! It is the peak CPU used by one published application.

**Average CPU (%).** The average CPU % of the program being monitored. EdgeSight reporting data is stored as an hourly aggregate on the EdgeSight database. The average CPU tends to be lower than expected due to the fact that the data is the hourly aggregate.

**Published Application.** The name of the published application (as defined in XenApp AMC).

**File Name.** The name of the program being executed for the published application.

**File Version.** The file version of the program.

**Peak CPU % User.** The username of the person using the application.

## Report Sample, IMA Service Availability

This page last changed on Sep 02, 2011 by ronaldb1.

This report shows IMA Service availability status and the time since the last state change.

### Table of Contents

- 1 [Prerequisites](#)
- 2 [Overview](#)
- 3 [Interpreting the Data](#)
- 4 [Applicable Versions](#)

Bookmark This Page Add To Favorite Reports Refresh Subscribe Properties

Department or Group: All  Root Only

Start: 2010-04-23 End: 2010-04-30 Go

Optional Parameters

1 of 1 100% Select a format Export

### IMA Service Availability

IMA Service Availability for department "All", between 4/23/2010 and 4/30/2010

Device	Service Up (%)	Planned Down (%)	Unplanned Down (%)	State Unknown (%)
D0332EN-XA46-01	0	0	0	100
D0364EN-XA45-01	0	0	0	100
D0364EN-XA45-02	0	0	0	100
D0364EN-XA45-03	0	0	0	100
D08R2-PARRA-DD1	91.22	0	0	8.78
Folder	Service Up Time	Planned Down Time	Unplanned Down Time	State Unknown Time
AllXenApp Farms\Parra6401Ent	7 Days, 7:13:34			16:46:26
D08R2-PARRA-DD2	0	0	0	100
D08R2-PARRA-DD3	0	0	0	100
DEV-DELAWARE-31	90.76	0	0	9.24
Folder	Service Up Time	Planned Down Time	Unplanned Down Time	State Unknown Time
AllXenApp Farms\BosDelawareFarm	7 Days, 6:21:24			17:38:36
DEV-DELAWARE-32	0	0	0	100

Generated 4/30/2010 | EdgeSight 5.3 | © Citrix Systems, Inc. | Server bosdev0808-1 Page 1 of 1

## Prerequisites

- XenApp 4.5 or higher.
- EdgeSight 5.0 or higher. This data is collected under all modes (both Advanced and Basic).

## Overview

## Interpreting the Data

The data columns "Service Up Time," "Planned Down Time," and "Unplanned Down Time" are self explanatory.

The data column "State Unknown Time" is driven by the last upload time of the Server. It is basically ("End:" data - last upload time). The last upload time is not reflected on this report, which makes the "State Unknown Time" somewhat perplexing and mysterious. When you see 100% for the time period, it basically means that the particular server have not uploaded data for the entire date range.

Using the picture from above-

\* it is an 8 day report (4/23 - 4/30 inclusive).

\* the report was executed sometime on 4/30. To avoid seeing unknown time, do not include today's date in the report.

\* D08R2-PARRA-DD1 last uploaded at 4/30 7:13:34, therefore 16:24:46 hours is unaccounted for due to the end date time being 4/30 11:59:59 (or 4/31 00:00:00).

\* DEV-DELAWARE-31 falls into a similar pattern with last uploaded at 4/30 6:21:24.

\* all other servers have not uploaded data (or its data on the database is deleted) during this time period. Given that these are test servers it is likely that they are just shutdown for the past 8 days.

## **Applicable Versions**

EdgeSight 5.4

EdgeSight 5.3

EdgeSight 5.2

EdgeSight 5.1

EdgeSight 5.0

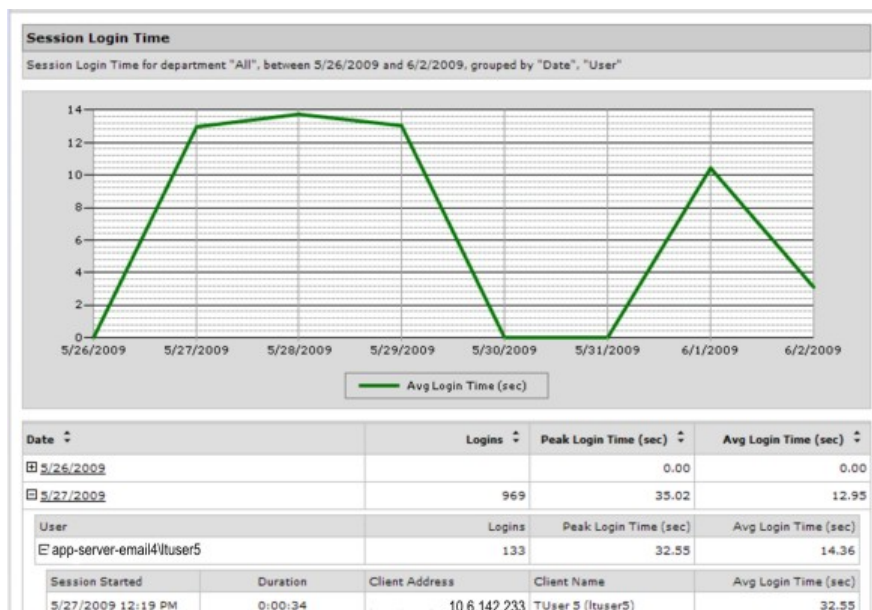
## Session Login Time

This page last changed on Sep 02, 2011 by ronaldb1.

The **Session Login Time** report displays the average login time for user sessions. You can run this report on either application servers, dates, or user names.

Table of Contents

- 1 [Prerequisites](#)
- 2 [Overview](#)
- 3 [Counters](#)
- 4 [Interpreting the Data](#)
- 5 [Applicable Versions](#)



## Prerequisites

Collection of the metrics in this report requires a **minimum** of the following component versions:

- EdgeSight 4.5 Agent running on the XenApp server
- Citrix Presentation Server 4.0 or 4.5, Advanced or Standard Edition

## Overview

This report displays the number of logins, the peak login time and the average login time for ICA-based sessions. It also displays session start times, duration, the number of logins, and client names.

This report has three primary output formats, based on the groupings you select, which each serve different purposes:

- **Grouped by User.** Lets you evaluate how long it is taking for your users to login to sessions, either on specific devices or specific dates.
- **Grouped by Device.** Indicates if specific application servers are prone to longer login times.
- **Grouped by Date.** Lets you see overall trends in your environment. For example, does it take longer for people to login to specific application servers now that we have applied the latest service pack?

You can use this report to help determine how long it takes for a user to authenticate to the application server. If you are trying to determine the reasons for slow session start times, you can this report to provide insight into the amount of time of overall session start time devoted to authentication.

**Note:** Session Login Time only pertains to Presentation Server 4.0 or 4.5 (Standard and Advanced Editions only).

## Counters

- User
- Logins
- Peak Login Time (sec)
- Avg Login Time (sec)

## Interpreting the Data

Depending on the grouping options chosen, the axis vary. In the screen capture in this article, the Y axis represents seconds with the maximum number of the average login time being the highest value on the axis. Consequently, this report lets you see trends in login times over a series of days.

## Applicable Versions

- EdgeSight 5.4
- EdgeSight 5.3
- EdgeSight 5.2
- EdgeSight 5.1
- EdgeSight 5.0

### Comments

---

It would be nice if we could create an alert based on this. Howto do this ?

Posted by at Nov 23, 2011.

---

Has anyone seen why the session login time is constantly 0? There are no errors in pulling up the report, yet it doesn't seem to collect the data properly. How can I fix this?

Posted by at Jan 24, 2012.

---

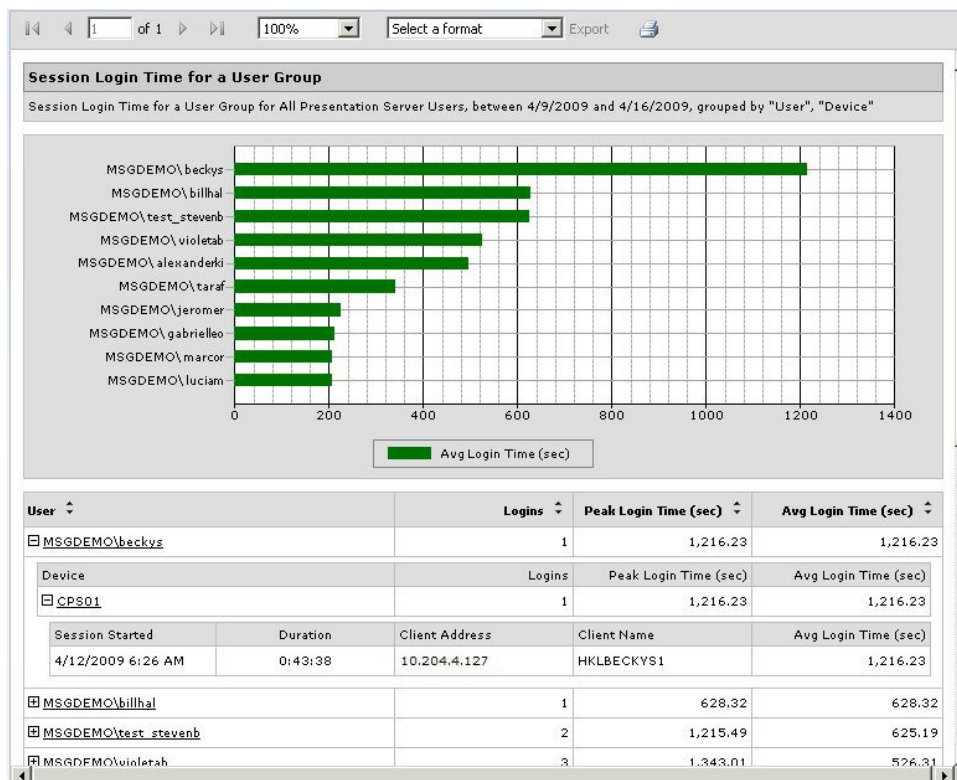
## Session Login Time for a User Group

This page last changed on Sep 02, 2011 by ronaldb1.

The Session Login Time for a User Group report displays the amount of time, in seconds, that it takes users to log onto a session. The report can be grouped by users, devices, days or hours.

Table of Contents

- [1 Prerequisites](#)
- [2 Overview](#)
- [3 Counters](#)
- [4 Interpreting the Data](#)
- [5 Applicable Versions](#)



## Prerequisites

Collection of the metrics in this report requires a **minimum** of the following component versions:

- EdgeSight 4.5 Agent running on the XenApp server
- Citrix Presentation Server 4.0 or 4.5, Advanced or Standard Edition

## Overview

**Note:** The Session Login Time report only pertains to Presentation Server 4.0 or 4.5 (Standard and Advanced Editions only).

## Counters

- Logins
- Peak Login Time (sec)
- Avg Login Time (sec)

# Interpreting the Data

## Applicable Versions

EdgeSight 5.4  
EdgeSight 5.3  
EdgeSight 5.2  
EdgeSight 5.1  
EdgeSight 5.0

## Session Startup Duration Details

This page last changed on Sep 02, 2011 by ronaldb1.

The **Session Startup Duration Details** report can provide you with information to help you troubleshoot long session start times sessions. The report provides metrics for how long the server and client take to perform their startup tasks.

This article provides an overview of how to interpret this report. It is designed to be used in conjunction with the article, [Improving Slow Session Start Times](#).

### Table of Contents

- 1 [Overview](#)
  - 1.1 [Report Metrics](#)
    - 1.1.1.1 [Average Summary Metrics](#)
    - 1.1.1.2 [Server Startup Metrics](#)
    - 1.1.2 [Client Startup Metrics](#)
      - 1.1.2.1 [Suggested Process and Guidance for Interpreting the Report](#)
  - 1.2 [Suggested Process](#)
- 2 [Interpreting this Report](#)
- 3 [Applicable Versions](#)
- 4 [References](#)

Session Startup Duration Detail											
Session Startup Duration Detail for department "All", between 5/22/2009 and 5/29/2009											
Device	User	Session Started	Client Address	Client Name	Avg CSD	Avg SSD					
xa-msword-1	YOURDOMAIN\jims	5/22/2009 4:01:41 PM	172.16.254.2	Jim S (jims)		149,253					
<b>Server Startup Details</b>											
Start Time	End Time	CASD	CONSD	COSD	PNCOSD	PLSD	LSESD	PCSD	DMSD	SCSD	
5/22/2009 4:01:10 PM	5/22/2009 4:02:15 PM	32		7234		22140	6203	92158	484	19938	
<b>Client Startup Details</b>											
Published App.	CFDCD	BUCC	AECD	COCD	IFDCD	NRWD	TRWD	LPWD	SCCD	NRCD	SLCD
xa-msword-1	YOURDOMAIN\jims	5/22/2009 4:02:32 PM	172.16.254.3	Jim S (jims)		7,406					
<b>Server Startup Details</b>											
Start Time	End Time	CASD	CONSD	COSD	PNCOSD	PLSD	LSESD	PCSD	DMSD	SCSD	
5/22/2009 4:02:30 PM	5/22/2009 4:02:38 PM	16		578		656	4344		31	1734	
<b>Client Startup Details</b>											
Published App.	CFDCD	BUCC	AECD	COCD	IFDCD	NRWD	TRWD	LPWD	SCCD	NRCD	SLCD
xa-msexcel-2	YOURDOMAIN\beckyl	5/22/2009 4:04:50 PM	172.16.254.31	Rebecca Long (beckyl)		4,625					
xa-msexcel-3	YOURDOMAIN\beckyl	5/22/2009 4:05:56 PM	172.16.254.42	Rebecca Long (beckyl)		6,531					

A screen capture of the Session Startup Duration Details report from EdgeSight 5.0, SP2.

## Overview

How satisfied users are with their Citrix environment is often directly tied to how long it takes for sessions to start. However, investigating long session start times can be complex since XenApp performs many different tasks while sessions start.

To isolate the cause of long session start-times, you can use the Session Startup Duration Details report that is described in this article.

This report provides metrics for both the client and server startup durations.

## Report Metrics

This section provides detail about the meaning of the metrics in this report. The detail is based on the information in the whitepaper, [Improving visibility to the user login experience with Citrix EdgeSight](#).



However, the tables below contain additional information and suggested actions for remedying issues. In other words, the tables below are worth reading even if you are familiar with the article.

### Average Summary Metrics

These metrics summarize the server and client side of the startup transaction.

Metric Abbreviation	Meaning	Actions
<a href="#">Session Start-up Server Duration (SSD)</a>	This is the high-level server-side connection start-up metric that encompasses the time XenApp takes to perform the entire start-up operation. When an application starts in a shared session, this metric is normally much smaller than when starting a new session, which involves potentially high-cost tasks such as profile loading and login script execution.	When this metric is high, it indicates that there is a server-side issue increasing session start times.
Client Start-up Duration (CSD)	When this metric is high, it indicates a client-side issue that is causing long start times.	Review subsequent metrics in this table to determine the probable root cause of the issue.

### Server Startup Metrics

These metrics measure data on the server-side of the startup transaction.

Metric Abbreviation	Meaning	Actions
<a href="#">Credentials Authentication Server Duration (CASD)</a>	The time the application server spends authenticating the user's credentials against the authentication provider, which may be Kerberos, Active Directory, or an <b>Security Support Provider Interface (SSPI)</b> .	
<a href="#">Credentials Obtention Network Server Duration (CONSD)</a>	The time spent by the server performing network operations to obtain credentials for the user.	This only applies to a Security Support Provider Interface login (a form of pass-through authentication where the client device is a member of the same domain as the server and Kerberos tickets are passed in place of manually entered credentials).
<a href="#">Credentials Obtention Server Duration (COSD)</a>	The time taken for the server to obtain the user credentials. Because this metric may be artificially inflated if a user fails to provide credentials in a timely manner, it is not included in the Session Start-up Server Duration (SSD).	This time is only likely to be a significant if manual login is being used and the server-side credentials dialog is displayed (or if a legal notice is displayed before login commences).

<a href="#">Program Neighborhood Credentials Obtention Server Duration (PNCOSD)</a>	<p>The time needed for the server to cause the Program Neighborhood instance running on the client to obtain the user credentials.</p>	<p>Like the COSD metric, this metric is not included in the Session Startup Server Duration (SSD) because it may be artificially inflated if a user does not enter credentials efficiently.</p>
<a href="#">Profile Load Server Duration (PLSD)</a>	<p>The time required for the server to load the user's profile.</p>	<p>If this metric is high, consider your Terminal Services profile configuration. Citrix Consulting has found that when customers have logon times greater than 20 seconds, in most cases, this can be attributed to poor profile and policy design. Roaming profile size and location contribute to slow session starts. When a user logs onto a session where Terminal Services roaming profiles and home folders are enabled, the roaming profile contents and access to that folder are mapped during logon, which takes additional resources. In some cases, this can consume significant amounts of the CPU usage. Consider using the Terminal Services home folders with redirected personal folders to mitigate this problem. In general, consider using <a href="#">Citrix Profile management</a> to manage user profiles in Citrix environments. This tool also provides logging capabilities to help isolate profile issues. For Terminal Server profiles best practices, see the whitepaper, <a href="#">Citrix User Profile Manager, User Profile Best Practices for XenApp 5</a> (CTX120285), <a href="#">Top 10 Items Found by Citrix Consulting on Assessments</a>. If you are using Citrix profile management and have slow logon times, check to see if your antivirus software is blocking the Citrix profile management tool. This is described further in the <a href="#">"Profile Streaming and Enterprise Antivirus Product"</a> topic in Citrix eDocs.</p>
<a href="#">Login Script Execution Server Duration (LSESD)</a>	<p>The time the server needs to run the user's login scripts.</p>	<p>Consider if you can streamline this user or group's login scripts. Consider if you can optimize any application compatibility scripts or use environment variables instead.</p>

<a href="#">Printer Creation Server Duration (PCSD)</a>	The time required for the server to synchronously map the user's client printers. If the configuration is set such that printer creation is performed asynchronously, no value is recorded for PCSD as it does not impact completion of the session start-up.	Excessive time spent mapping printers is often the result of the printer autcreation policy settings. The number of printers added locally on the users' client devices and your printing configuration can directly affect your session start times. When a session starts, XenApp has to create every locally mapped printer on the client device. Consider reconfiguring your printing policies to reduce the number of printers that get created - especially if users have a lot of local printers. To do this, in Presentation Server 4.5 and XenApp 5.0, edit the Printer Autcreation policy.
<a href="#">Drive Mapping Server Duration (DMSD)</a>	The time needed for the server to map the user's client drives, devices and ports.	Make sure that, when possible, your base policies include settings to disable unused virtual channels, such as audio or COM port mapping, to optimize the ICA protocol and improve overall session performance.
<a href="#">Session Creation Server Duration (SCSD)</a>	The time the server spends creating the session. This should not be confused with the overall SSD.	The session start times issue occurs between the when client connection is established and authentication begins.

## Client Startup Metrics

This table provides a list of the Client Startup metrics that appear in this report. If you do not have a client configured that meets the minimum prerequisites for gathering EUEM data, this row will appear blank. Likewise, if you are using EdgeSight for Load Test (ESLT) to simulate user transactions, the client row will be blank. While ESLT can simulate client behavior, it isn't an actual ICA-based client. As a result, while ESLT can create transactions that reveal server startup times, it cannot generate data for client startup times.

For detailed information about which metrics are gathered for which clients, see the appendices in [Improving visibility to the user login experience with Citrix EdgeSight](#).

Metric Abbreviation	Meaning	Suggested Actions
<a href="#">Application Enumeration Client Duration (AECD)</a>	Application enumeration is one of the issues slowing down session start times.	Consider if the cause is an overloaded XML Broker or Web Interface server.
<a href="#">BUCC (Backup URL Client Count)</a>	If this metric has a value higher than 1, it indicates the Web Interface server is unavailable and the XenApp Plugin (formerly known as Program Neighborhood Agent)	<ul style="list-style-type: none"> <li>• <b>A value of 2</b> means that the main Web Interface server was unavailable, but the XenApp Plugin managed to launch the application successfully</li> </ul>

	<p>is attempting to connect to back-up Web Interface servers to launch the application.</p>	<p>using the first back-up server that it tried.</p> <ul style="list-style-type: none"> <li>• <b>A value higher than 2</b> means that multiple Web Interface servers are unavailable. Reasons Web Interface servers might be unavailable include (in order of likelihood):</li> <li>• <b>Network issues</b> between the client and the server. So the administrator should make sure that the Web Interface server is on the network and accessible to the clients.</li> <li>• <b>An overloaded Web Interface server</b> that is not responding (or has crashed for another reason). Try to log on to the server and check the Windows Performance Monitor/Task Manager to see how much memory is in use and so on. Also, review the Event Logs to see if Windows logged any serious errors.</li> </ul>
<a href="#">Configuration File Download Client Duration (CFDCD)</a>	<p>The time it takes to get the configuration file from the XML server.</p>	
<a href="#">Credentials Obtention Client Duration (COCD)</a>	<p>The time it takes to obtain user credentials. This is a good metric to subtract from other client-side metrics.</p> <p><b>Note:</b> COCD is only measured when the credentials are entered manually by the user. Because this metric may be artificially inflated if a user fails to provide credentials in a timely manner, it is subtracted from the Startup Client Duration (SCD). This consideration is especially important if the metric is to be used for threshold alerting.</p>	<p>Subtract this metric from other client-side metrics.</p>
<a href="#">ICA File Download Duration (IFDCD)</a>	<p>The time it takes for the plugin (client) to download the ICA file from the server. The overall process is:</p> <ol style="list-style-type: none"> <li>1. The user clicks on application icon.</li> <li>2. The user's browser requests the Web Interface launch page.</li> <li>3. The Web Interface launch page receives the request and starts to process the launch, communicating</li> </ol>	<p>If IFDCD is slow (but LPWD is normal), the server-side processing of the launch was successful, but there were communication issues between the client device and the Web server. Often, this results from network trouble between the two machines, so investigate potential network issues first.</p>

	<p>with XenApp server and potentially other components such as Secure Ticket Authority (STA).</p> <ol style="list-style-type: none"> <li>4. The Web Interface generates ICA file data.</li> <li>5. The Web Interface sends the ICA file data back to the user's browser.</li> <li>6. The browser passes ICA file data to the plugin (client). IFDCD metrics represents the time it takes for the complete process (step 1 to 6). Metric stops counting time when the client receives the ICA file data.</li> </ol> <p>LPWD, which is mentioned below, is the Web server portion of the process (that is, steps 3 and 4).</p>	
<p><a href="#">Launch Page Web Server Duration (LPWD)</a></p>	<p>Review the information for IFDCD. The LPWD metric is only used when Web Interface is the application launch mechanism. If LPWD is slow, there is a bottleneck on the Web Interface server.</p>	<p>Possible causes include:</p> <ul style="list-style-type: none"> <li>• <b>High load on the Web Interface server.</b> Try to identify the cause of the slow down by checking the Internet Information Services (IIS) logs and monitoring tools, Task Manager, Performance Monitor and so on.</li> <li>• <b>Web Interface is having issues communicating with the other components, such as the XenApp server.</b> Check to see if the network connection between Web Interface and XenApp is slow or some XenApp servers are down or overloaded. If the Web server seems okay, consider reviewing the XenApp farm for problems.</li> </ul>
<p>Name Resolution Client Duration (NRCD)</p>	<p>This metric is collected when a client device directly queries the XML Broker to retrieve published application information stored in IMA (for example, when using Program Neighborhood or a Custom ICA Connection). NRCD is only gathered for new sessions since session sharing occurs during startup if a session already exists.</p>	<p>When this metric is high, it indicates the XML Broker is taking a lot of time to resolve the name of a published application to an IP address. Possible causes include a problem on the client, issues with the XML Broker, such as the XML Broker being overloaded, a problem with the network link between the two, or a problem in IMA. Begin by evaluating traffic on the network and the XML Broker.</p>

<a href="#">Name Resolution Web Server Duration (NRWD)</a>	<p>When this metric is high, there could be an issue with the Web Interface server or the XenApp plugin site (formerly known as the Neighborhood Agent site), the XML Service, the network link between the two, or a problem in IMA.</p> <p>Like NRCD, this metric indicates how long it takes the XML service to resolve the name of a published application to a XenApp IP address. However, this metric is collected when a Web Interface site is performing this process on behalf of a launch request it has received from either the XenApp plugin (previously known as Program Neighborhood Agent) or from a user clicking a Web Interface page icon. This metric applies to all sessions launched through the Web Interface or the XenApp plugin (formerly, the Program Neighborhood Agent).</p>	
<p>Session Look-up Client Duration (SLCD)</p>	<p>This metric represents the time it takes to query every session to host the requested published application. The check is performed on the client to determine whether an existing session can handle the application launch request. The method used depends on whether the session is new or shared.</p>	
<p>Ticket Response Web Server Duration (TRWD)</p>	<p>This metric is collected when Program Neighborhood Agent or Web Interface is the application launch mechanism. This metric indicates the time it takes to get a ticket (if required) from the STA server or XML service.</p>	<p>When this metric is high, it can indicate that the Secure Ticket Authority (STA) server or the XML Broker are overloaded.</p>
<p>Session Creation Client Duration (SCCD)</p>	<p>This metric represents the time it takes to create a new session, from the moment wfica32.exe is launched to when the connection is established.</p>	

### Suggested Process and Guidance for Interpreting the Report

You can use this report in any of the following situations:

- After a user complains about how long it takes for his or her session to load
- Before rolling out an initial farm deployment
- After upgrading your farm or making significant changes

## Suggested Process

1. Run the Suggested Startup Duration Detail report on the entire farm or a specific group of application servers, depending on what you are trying to troubleshoot.
2. If you are trying to troubleshoot startup times for a specific user, specify his or her user name in the Optional Parameters.

## Interpreting this Report

By default, as illustrated in the screen capture above, this report groups information by device and user name. In the contracted view, the report displays the total average amount of time it takes in milliseconds for the session to start - see the Average Server Startup Duration (Avg SSD) metric time. Note that this is an average of all sessions listed beneath that user device when that line in the report is expanded.

### Suggested Process:

1. Expand the device so details for the device are visible.
2. Using the screen capture at the top of this article as an example, reading from left to right you can see the values for the following:  
| **Column Name** | **Metric** |

CASD	Credentials Authentication Server Duration. The time (ms) spent on the server authenticating the user credentials.
COSD	Credentials Obtention Server Duration. The time (ms) taken for the server to obtain the user credentials. This is only likely to be a significant amount of time if manual login is being used and the server-side credentials dialog is displayed (or if a legal notice is displayed before login commences).
PLSD	Profile Load Server Duration. The time (ms) spent on the server loading the users' profile.
DMSD	Drive Mapping Server Duration. The time (ms) spent on the server mapping the users' client drives, devices, and ports.
LSESD	Login Script Execution Server Duration. The time (ms) spent on the server running the users' login script(s).
SCSD	Session Creation Server Duration. The time (ms) spent on the server creating the session. The duration starts when the ICA client connection has been opened and ends when authentication begins. This should not be confused with the overall Session Startup Server duration.

In this report, for the first user, Jim S, it takes over 2 minutes for the session to start - as indicated by the Avg SSD metric in the far left column. The longest server-side tasks are for autocreating printers (PCSD), loading the profile (PLSD), and session creation (SCSD).

To try to reduce the session start time, the administrator's best option would be to begin by investigating the reason it is taking so long for XenApp to create printers for the session. One place to start would be by finding out how many printers are mapped locally on the client device and calculating the resultant policy for that user when he or she connects from that device. If the user has a lot of local printers,

consider editing the **Printer Autocreation** policy (in XenApp 5.0 and earlier) to limit the printers that are created.

After that, the administrator might want to investigate the profile configuration for this user. For more information, see [User Profile Best Practices for XenApp 5 , CTX120285](#).

In this case, the amount of time dedicated to login scripts is negligible relative to the printer autocreation and the profile loading, so the administrator might choose not to investigate the scripts.

## Applicable Versions

EdgeSight 5.4  
EdgeSight 5.3  
EdgeSight 5.2  
EdgeSight 5.1  
EdgeSight 5.0

## References

- [Improving Slow Session Start Times](#). *EdgeSight Wiki*, accessed on October 1, 2009.
- [User Profile Best Practices for XenApp 5](#), CTX120285. Citrix Systems.
- [Improving visibility to the user login experience with Citrix EdgeSight](#). Citrix Systems, 2007.

## Comments

---

[from Chiu Chan 2010-05-11]How do the timing add up, and related to each other?

Q1- Session Start (total) = Client + Server; or are client start up and session start up independent of each other.

Q2- Are the individual sums of client start add up to 100%. I believe the answer is it is not- we should document which values are subsets of something.

Posted by [chiuc](#) at May 11, 2010.

---

Thanks for your comment!

Q1 - The client and server startup metric values do not add up to a total session start time. They are independent.

Q2 - Whether we're talking server or client, the individual sums do not add up to 100%. There can be overlaps and latencies during the session startup process that prevent this. As a side note, different individual metrics may or may not have values displayed based on the session launch mechanism.

Posted by [ronaldb](#) at May 11, 2010.

---

We are using EdgeSight 5.4 Standard Edition. Should this report be available to us and if so where can we get it from?

cheers.

Posted by [jmucis1](#) at Mar 13, 2012.

---

Andrew,

This report, and the collection of the data, is only available with EdgeSight Advanced. It can be purchased separately and is also bundled with XenApp Platinum.

Thanks,



norm

Posted by [normanw1](#) at Mar 13, 2012.

---

Andrew,

Back to Chans Question

Is there any way to calculate Total logon time per user per session using the information from this report?  
If not, what would be the best way to go about calculating Total logon time per user per session using data from ES?

Posted by [e\\_fromme](#) at Mar 20, 2012.

---

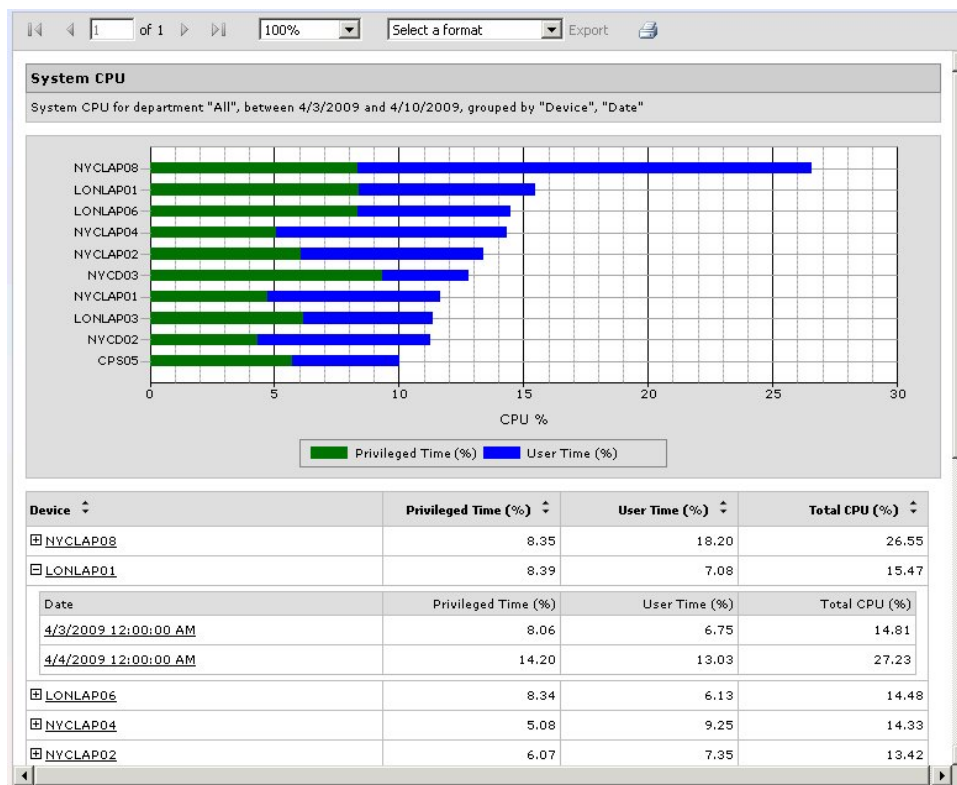
## System CPU

This page last changed on Sep 02, 2011 by ronaldb1.

The **System CPU** report provides CPU usage (privileged time, user time, and total CPU) on specific systems.

Table of Contents

- 1 [Prerequisites](#)
- 2 [Overview](#)
- 3 [Interpreting the Data](#)
- 4 [Counters](#)
- 5 [Applicable Versions](#)



## Prerequisites

This report shows system CPU for all device types.

## Overview

## Interpreting the Data

## Counters

- Privileged Time (%)
- User Time (%)
- Total CPU (%)

# Applicable Versions

- EdgeSight 5.4
- EdgeSight 5.3
- EdgeSight 5.2
- EdgeSight 5.1
- EdgeSight 5.0

## Comments

---

please explain what privileged time and user time means

Posted by [ronaldb](#) at Jan 12, 2011.

---

Privileged Time is the percentage of elapsed time that the processor spent executing code in privileged mode. Windows system services often run in privileged mode to gain access to system-private data. Such data is protected from access by threads executing in user mode. Calls to the system can be explicit or implicit, such as page faults or interrupts. Windows uses process boundaries for subsystem protection in addition to user and privileged modes.

User Time is the percentage of elapsed time the processor spent executing code in user mode. User mode is a restricted processing mode designed for applications, environment subsystems, and integral subsystems. The operating system switches application threads to privileged mode to access operating system services.

These counters display the average time in either privileged or user mode as a percentage of the sample time.

In general, the amount of time spent in privileged mode depends on the system, especially on the disk controller and drivers. More efficient disk controllers and drivers use less privileged time, allowing the system more time for user applications. More time for user apps means better overall throughput.

Posted by [ronaldb](#) at Jan 12, 2011.

---

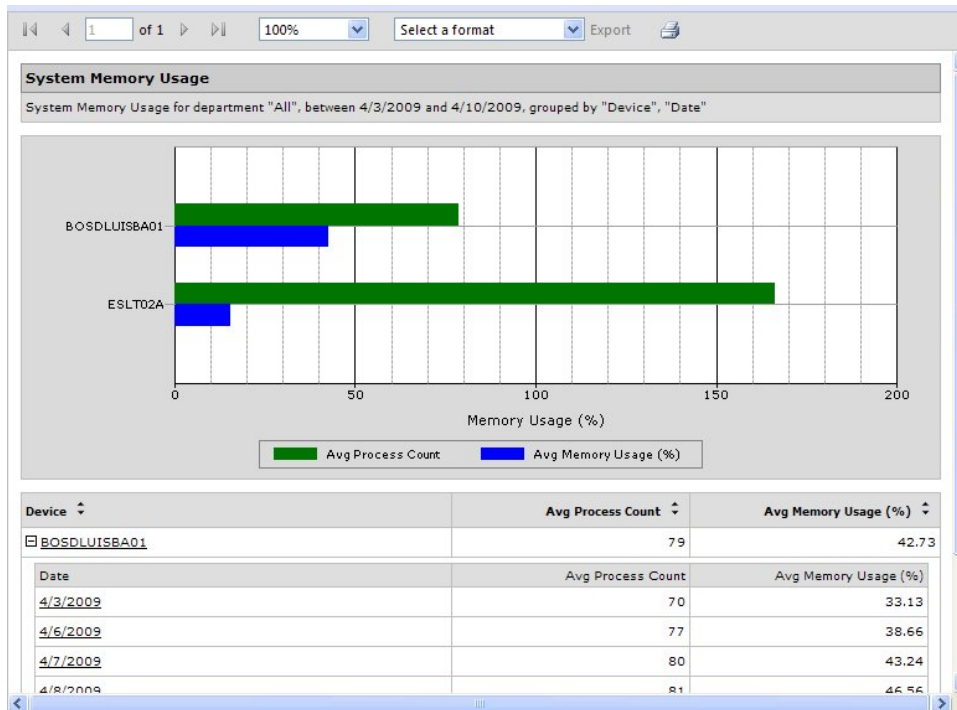
## System Memory Usage

This page last changed on Sep 02, 2011 by ronaldb1.

The System Memory Usage report provides the average percent memory used for devices.

Table of Contents

- 1 [Overview](#)
- 2 [Counters](#)
- 3 [Interpreting the Data](#)
- 4 [Applicable Versions](#)



## Overview

## Counters

- Avg Process Count
- Avg Memory Usage(%)

## Interpreting the Data

## Applicable Versions

EdgeSight 5.4  
EdgeSight 5.3  
EdgeSight 5.2  
EdgeSight 5.1  
EdgeSight 5.0

## User Login Details for a User Group

---

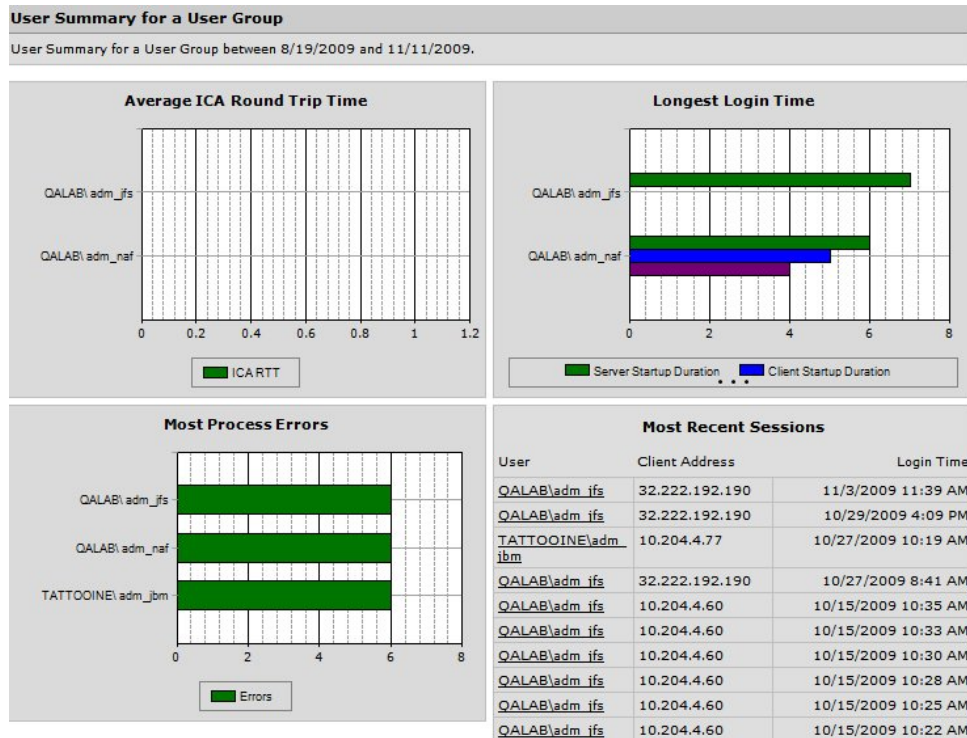
This page last changed on Nov 12, 2009 by [ronaldb](#).

This report displays XenApp and XenDesktop user logons counts, times, and client information. This report also displays the number of sessions created.

## User Summary for a User Group

This page last changed on Nov 11, 2009 by sarahv.

This report displays a summary of four aspects of the performance for a group of users: ICA round trip time, login time, process errors, and a list of the most recent sessions.



This screen capture displays an example of the **User Summary for a User Group** report from EdgeSight 5.2.

Table of Contents

- 1 [Charts](#)
- 2 [Counters](#)
- 3 [Applicable Versions](#)

## Charts

- Average ICA Round Trip Time
- Longest Login Time
- Most Process Errors
- Most Recent Sessions

## Counters

- ICA RTT
- Server Startup Duration
- Client Startup Duration
- Errors

## Applicable Versions

- EdgeSight 5.2
- EdgeSight 5.1
- EdgeSight 5.0

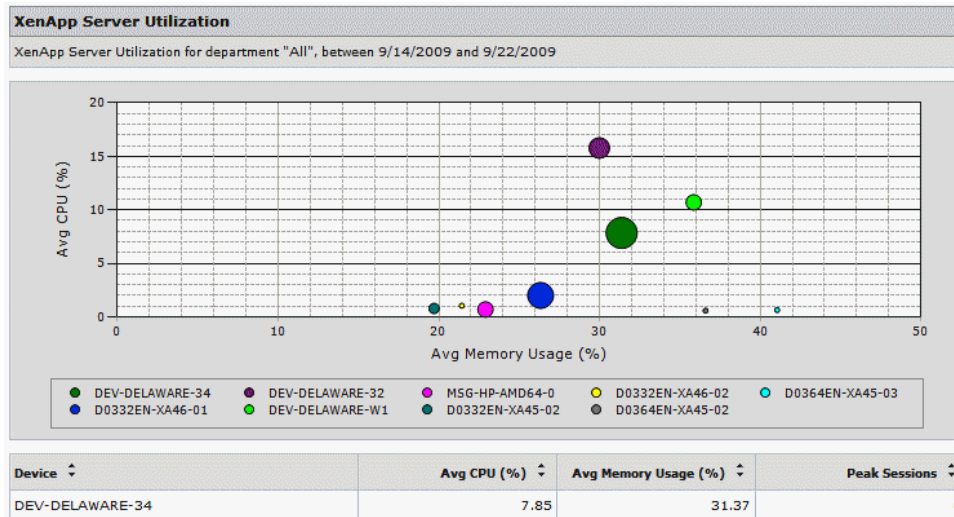
## XenApp Server Utilization

This page last changed on Sep 02, 2011 by ronaldb1.

This report shows how heavily XenApp Servers in your environment are loaded, based on average percent CPU used, average percent memory used, and the peak number of concurrent sessions.

Table of Contents

- 1 [Overview](#)
- 2 [Counters](#)
- 3 [Interpreting the Data](#)
- 4 [Applicable Versions](#)



## Overview

Each server is displayed as a bubble. The position of the bubble shows the average percent CPU and memory used for the time period. The size of the bubble indicates the peak number of concurrent sessions.

## Counters

- Average Percent CPU
- Average Percent Memory Used
- Peak Number of Concurrent Sessions

## Interpreting the Data

In a healthy farm environment, you should see a natural progression of bubble size and position from the lower left to the upper right portion of the chart, indicating an expected increase in resource usages for servers with more concurrent sessions.

Look for servers which fall outside this expected range.

- A server which is displayed as a small bubble in the lower right corner of the chart may be using memory out of proportion to the low number of concurrent sessions.
- A server which is displayed as a small bubble in the upper left corner of the chart may be using CPU out of proportion to the low number of concurrent sessions.
- A server which is displayed as a small bubble in the upper right corner of the chart may be using CPU and memory out of proportion to the low number of concurrent sessions.

Once you have identified a suspect server, you can use the Device Troubleshooter to investigate overall performance and especially resource usage for the server. You can also use the Farm Monitor to see if any alerts have been generated against the server.

## **Applicable Versions**

EdgeSight 5.4  
EdgeSight 5.3  
EdgeSight 5.2



## XenApp Summary

---

This page last changed on Sep 02, 2011 by ronaldb1.

This report gives the administrator a fast high-level picture of farm health for any group of XenApp servers.

### Table of Contents

- 1 [Overview](#)
- - 1.1 [Reports Average Login Time by Day](#)
  - 1.2 [Active Sessions by Day](#)
  - 1.3 [Average ICA Session Latency by Day](#)
  - 1.4 [Average CPU and Memory by Day](#)
- 2 [Counters](#)
- 3 [Interpreting the Data](#)
- 4 [Tips](#)
- - 4.1 [Group and Department Structure](#)
- 5 [Applicable Versions](#)
- 6 [See Also](#)

## Overview

This report contains four sub-reports:

- [Average Login Time by Day](#)
- [Active Sessions by Day](#)
- [Average ICA Session Latency by Day](#)
- [Average CPU and Memory by Day](#)

## Reports Average Login Time by Day

The **Average Login Time by Day** report displays the average length of time (seconds) it takes for users to login to farm servers. The report displays a trend line over a period of time, so you can see if login times are increasing or decreasing during the time period specified. This may be helpful if you recently made changes to your environment. It should be noted that trend line for the Login Time in this report reflects overall farm traffic: on days when there are no sessions, login time can appear artificially low. Clicking on the trend line in this report displays the [Session Login Time](#) report.

To determine the reasons for slow session login times, see [Session Startup Duration Details](#).

### Metrics Displayed

- Login Time

## Active Sessions by Day

The **Active Sessions by Day** report displays two trendlines:

- The average number of active sessions each day on farm servers.
- The peak number of actives sessions each day on farm servers.

The report displays trends over a period of time, so you can see if the number of sessions are increasing or decreasing. Clicking on either the Avg Active Sessions (blue) or the Peak Sessions (green) trend line displays the Session Statistics report.

### Metrics Displayed

- Peak Sessions
- Avg Active Sessions

## Average ICA Session Latency by Day

The **Average CPU and Memory by Day** report is a bar chart that displays the amounts of latency for clients and servers that support the End User Monitoring metrics (ICA RTT) and ones that do not (ICA Latency). When the Presentation Server Summary report is run on a specific group of application servers, this subreport can indicate if specific servers are experiencing latency. Clicking on the trend line in this report displays the [Session Login Time](#) report.

### Metrics Displayed

- ICA Latency
- ICA RTT

## Average CPU and Memory by Day

The **Active Sessions by Day** report displays a bar chart for the average CPU and memory usage in a group of servers (or the group you choose to run the XenApp Summary report on). If memory usage appears higher may be helpful if you recently made changes to your environment. Clicking on the trend line in this report displays the [ICA Session Round Trip Time](#) report, which can help determine if network latency is causing session latency (or if the latency is the product of something in the farm environment).

### Metrics Displayed

- Avg CPU (%)
- Avg Memory Usage (%)

## Counters

- [Login Time](#)
- Peak Sessions
- [Avg Active Sessions](#)
- ICA Latency
- ICA RTT
- [Average CPU \(%\)](#)
- [Average Memory Usage \(%\)](#)

## Interpreting the Data

You can click on the charts in the summary reports and drill down to see the specific server data regarding that metric. For example, if there is a spike in Logon time, you can drill down to see where there may have been an issue. You can see if it was it just one server that day or all servers, one user or all users.

## Tips

- Double-click on the chart for more detail and to uncover issues.
- Set up a subscription to email out this report in PDF format before the weekly staff meeting. This saves people from having to log on to the EdgeSight Console at the last minute.

## Group and Department Structure

Consider making custom groups so that you can select groupings of servers that provide meaningful information when you generate this report. For example, you might want to run this report on a specific group of application servers about which users were complaining.

For information about the effect of Group and Department Structure on reporting, see and the *EdgeSight Administrator's Guide*.

# Applicable Versions

EdgeSight 5.4  
EdgeSight 5.3  
EdgeSight 5.2  
EdgeSight 5.1  
EdgeSight 5.0

## See Also

- [Session Startup Duration Details](#)

## Comments

---

I would like some clarification, but the Average Sessions By Day Peak Sessions reports the actual peak for the department/group being reported on and not an average of the all the peaks for all department/group being reported on. If you have one server get larger number of session for whatever reason, then this line will spike up. I've observed this in EdgeSight 5.3.

Thanks,

Alain Assaf

Wag the Real

Posted by [alaincitrix1](#) at Jun 29, 2011.

---

Yes, the peak is an absolute number, not an average. The intention of the summary reports is to offer a quick view of the environment - in this case, a higher than normal peak value may warrant further investigation. Clicking on the report brings up the Session Count report which can be grouped by Device then Date to isolate which server experienced the peak session count.

Posted by [ronaldb1](#) at Jul 05, 2011.

---

## XenApp User Summary

---

This page last changed on Apr 29, 2010 by [danag](#).

## EdgeSight 5.0 and 5.1 Report List

---

This page last changed on May 03, 2010 by [williamry1](#).

For definitions of metrics, see [Report Counters Glossary](#).

**Important:** To find out what reports use a specific metric, in EdgeSight 5.0, click the **Browse** tab and type the name of the metric in the **Search** box in the user interface (not the Find (CTRL + F) feature in the Web browser). You can also find reports by entering a report name or description in the **Search** box.

[A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

### A

#### **Alert Archive**

Archive report.

#### **Alerts**

Number of alerts by type with alert details.

#### **Application Response Failures**

Active Application Response test and monitoring point failure and success counts.

#### **Application Response Time**

Active Application Response test and monitoring point durations.

#### **Application Response Time for a Test**

Active Application Response duration and status for a test.

#### **Asset Changes**

Changes to hardware and software device assets.

#### **Assets for a Device**

Hardware and software assets on a device.

### C

#### **CPU Utilization Management**

CPU Utilization Management status (enabled or disabled), plus average and peak CPU usage.

### D

#### **Device Archive**

Archive report.

#### **Device Summary**

Device performance data (CPU and memory usage, network delay, event log alerts, and application errors).

### E

#### **Environmental Usage**

Data on users, clients, sessions (start, end, and duration), published applications, and processes.

#### **Event Log Alerts**

Event log alerts with alert details.

#### **Event Log Alerts for a User Group**

Event log alerts with alert details.

### H

#### **Hardware Alerts**

Hardware alerts (reboot, disk failure, and plug and play changes) with alert details.

#### **Hardware Asset Changes**

Recent changes to hardware assets on devices.

## I

### **ICA Audio I/O**

Audio input and output bandwidth used during ICA sessions.

### **ICA Drive I/O**

Drive input and output bandwidth for file operations during ICA sessions.

### **ICA Printer I/O**

Printer input and output bandwidth used during ICA sessions.

### **ICA Session Compression**

Input and output compression ratio for ICA sessions.

### **ICA Session I/O**

Input and output line speed for ICA sessions.

### [ICA Session Latency](#)

Latency (peak and average) for ICA sessions. Only pertains to pre-4.5 Presentation Servers. Presentation Servers with EUEM data will not be reflected on this report.

### **ICA Session Latency for a User Group**

Latency (peak and average) for ICA sessions. Only pertains to pre-4.5 Presentation Servers. Presentation Servers with EUEM data will not be reflected on this report.

### [ICA Session Round Trip Time](#)

ICA session and network round trip time (RTT). Only pertains to EdgeSight Presentation Server Agents 4.5 and later, Presentation Server 4.5 and later (Enterprise or Platinum Editions), and ICA Client version 10 and later. Pre 4.5 Presentation Servers data will not be reflected on this report.

### **ICA Session Round Trip Time Archive**

Archive report.

### **ICA Session Round Trip Time for a User Group**

ICA session and network round trip time (RTT). Only pertains to EdgeSight Presentation Server Agents 4.5 and later, Presentation Server 4.5 and later (Enterprise or Platinum Editions), and ICA Client version 10 and later. Pre 4.5 Presentation Servers data will not be reflected on this report.

### **ICA Session Traffic**

Traffic (peak and average input and output) for ICA sessions.

### **ICA Session Traffic for a User Group**

Traffic (peak and average input and output) for ICA sessions.

### **ICA Video I/O**

Video frame and SpeedScreen input and output for ICA sessions.

### **IMA Service Availability**

Current IMA service availability status and the time since the last state change.

### **IMA Service State**

Current IMA service state and the time since the last state change.

## N

### **Network Connection Archive**

Archive report.

### **Network Summary**

Summary of network performance for a site (delay, volume, RTT, and transaction errors).

### **Network Summary by Site**

Summary of network performance (delay, RTT, Web errors, and transaction errors).

### **Network Transaction Archive**

Archive report.

## **Network Transaction Summary**

Summary of network performance for a transaction (delay, volume, RTT, and Web errors).

## **New Processes**

New processes detected on devices with the date first seen.

## **New Sites**

New sites detected on devices with the date first seen.

**P**

## **Port Network Delay**

Port network delay, broken down by server, client, and network delay.

## **Port Network Round Trip Time**

Maximum and average round trip time (RTT) for ports.

## **Port Network Volume**

Port network volume (kilobytes sent and received).

## **Port Web Errors**

Web errors (transaction and Winsock) for a port.

## **Presentation Server Environmental Usage Archive**

Archive report.

## **Presentation Server Session Performance Archive**

Archive report.

## [Presentation Server Summary](#)

Presentation Server performance data (login time, active sessions, ICA session latency, and CPU and memory usage).

## **Presentation Server System Performance Archive**

Archive report.

## [Presentation Server User Summary](#)

Presentation Server performance from a user perspective (ICA client traffic, login time, ICA session latency, and recent sessions).

## **Process CPU**

Process CPU usage (privileged time, user time, and total CPU).

## **Process Cumulative CPU**

Process Cumulative CPU usage time.

## **Process Errors**

Process errors with alert details.

## **Process Errors for a User Group**

Process errors with alert details.

## [Process Faults](#)

Process faults (crashes) with alert details.

## **Process Faults for a User Group**

Process faults (crashes) with alert details.

## **Process Memory Usage**

Memory (virtual, private, and working set) used by processes.

Delay

delay, broken down by server, client, and network delay.

Volume

volume (kilobytes sent and received).

## **Process Not Responding Alerts**

Process not responding (application hang) conditions with alert details.

**Process Not Responding Alerts for a User Group**

Process not responding (application hang) conditions with alert details.

**Process Pages Per Second**

Average pages per second for processes.

**Process Performance Archive**

Archive report.

**Process Performance Summary by Process**

Process performance summary (high CPU or memory usage, long network delay or active time).

**Process Stability Summary by Process**

Processes with the most stability issues (errors, faults, hangs, and transaction errors.)

**Process Summary**

Summary of process performance (CPU and memory usage, network delay, and errors).

**Process Thread Count**

Average number of active threads for processes.

**Process Usage**

Active and running time for processes, plus the number of unique users.

**Process Usage Archive**

Archive report.

**R**

[ns:EXCEL] Real-time Alert List

Real-time detailed alert information.

[ns:EXCEL] Real-time Device Summary

Real-time alert, network delay, processor usage, and memory usage summary information.

[ns:EXCEL] Real-time Network Performance

Real-time detailed network volume, delay, round trip time, and error information.

[ns:EXCEL] Real-time Presentation Server Summary

Real-time performance counters from multiple Presentation Servers for use in comparing system performance.

[ns:EXCEL] Real-time Presentation Server User Summary

Real-time system, application, and session information for a Presentation Server user.

[ns:EXCEL] Real-time System Compare

Real-time performance counters from multiple devices for use in comparing system performance.

[ns:EXCEL] Real-time System Performance

Real-time detailed system, network, and process performance information.

**Reboots**

Device reboots (expected and unexpected).

**S**

**Session Auto-Reconnects**

Session Auto-Reconnects.

**Session Client Startup Time Archive**

Archive report.

**Session Client Type**

Client type (ICA, RDP, or console) for sessions on a device.



**Session Count Comparison**

Average active, inactive, and total session counts for Presentation Servers.

**Session CPU**

Average total CPU used by sessions.

**Session CPU for a User Group**

Average total CPU used by sessions.

[Session Login Time](#)

Average login time for ICA sessions.

[Session Login Time for a User Group](#)

Average login time for ICA sessions.

**Session Memory**

Memory (virtual, private, and working set) used by sessions.

**Session Network Bandwidth Used**

Network bandwidth (peak and average input and output) used by sessions.

**Session Network Delay**

Session network delay, broken down by server, client, and network delay.

**Session Network Delay for a User Group**

Session network delay, broken down by server, client, and network delay.

**Session Network Round Trip Time**

Maximum and average round trip time (RTT) for sessions.

**Session Network Round Trip Time for a User Group**

Maximum and average round trip time (RTT) for sessions.

**Session Network Volume**

Session network volume (kilobytes sent and received).

**Session Network Volume for a User Group**

Session network volume (kilobytes sent and received).

**Session Page Faults**

Average number of page faults per second for sessions.

**Session Server Startup Duration**

Average time to startup a session on a Presentation Server.

**Session Server Startup Time Archive**

Archive report.

[Session Startup Duration Details](#)

Session client startup duration (CSD) and server startup duration (SSD). This contains the following server-side metrics: CASD, CONSD, COSD, PNCOSD, PLSD, LSEED, PCSID, DMSD, and SCSD. It also contains the following client-side metrics: CFDCD, BUCC, AECD, COCD, IFDCD, NRWD, TRWD, LPWD, SCCD, NRCD, and SLCD.

**Session Statistics**

Session activity statistics (peak concurrent, and average active and inactive sessions).

**Sessions Created**

Number of sessions created on a Presentation Server.

[Sessions Created for a User Group](#)

Number of sessions created on a Presentation Server.

**Site Network Delay**

Site network delay, broken down by server, client, and network delay.

**Site Network Errors**

Network errors (transaction and Winsock) for a site.

**Site Network Errors for a User Group**

Network errors (transaction and Winsock) for a site.

**Site Network Round Trip Time**

Maximum and average round trip time (RTT) for sites.

**Site Network Volume**

Site network volume (kilobytes sent and received).

**Software Asset Changes**

Recent changes to software assets on devices.

**[System CPU](#)**

System CPU usage (privileged time, user time, and total CPU).

**System CPU Summary**

CPU percent usage summary for devices.

**System Disk Usage**

Disk usage shown as percent free disk space.

**System Disk Usage Archive**

Archive report.

**System Disk Usage Summary**

Summary of disk usage with disk capacity and percent free disk space.

**System Kernel for a Device**

System kernel activity (context switches, system calls, interrupts, and process count) for devices.

**System Memory for a User Group**

Memory (virtual, private, and working set) used by sessions.

**System Memory Summary**

Physical memory percent usage summary for devices.

**[System Memory Usage](#)**

Average percent memory used for devices.

**System Page Faults**

Average page faults per second for devices.

**System Performance Archive**

Archive report.

**T****Trace Event Archive**

Archive report.

**Transaction Network Delay**

Transaction network delay, broken down by server, client, and network delay.

**Transaction Network Round Trip Time**

Maximum and average round trip time (RTT) for transactions.

**Transaction Network Volume**

Network volume (KB) for transactions by host.

**Transaction Web Errors**

Web errors associated with a host and transaction.

**U****User Summary for a User Group**

User experience by user group summary (ICA RTT, login time, process errors, and recent sessions).

**v**

**Visited Sites**

Sites visited by site name and address, with the number of visits and date of last visit.

**x**

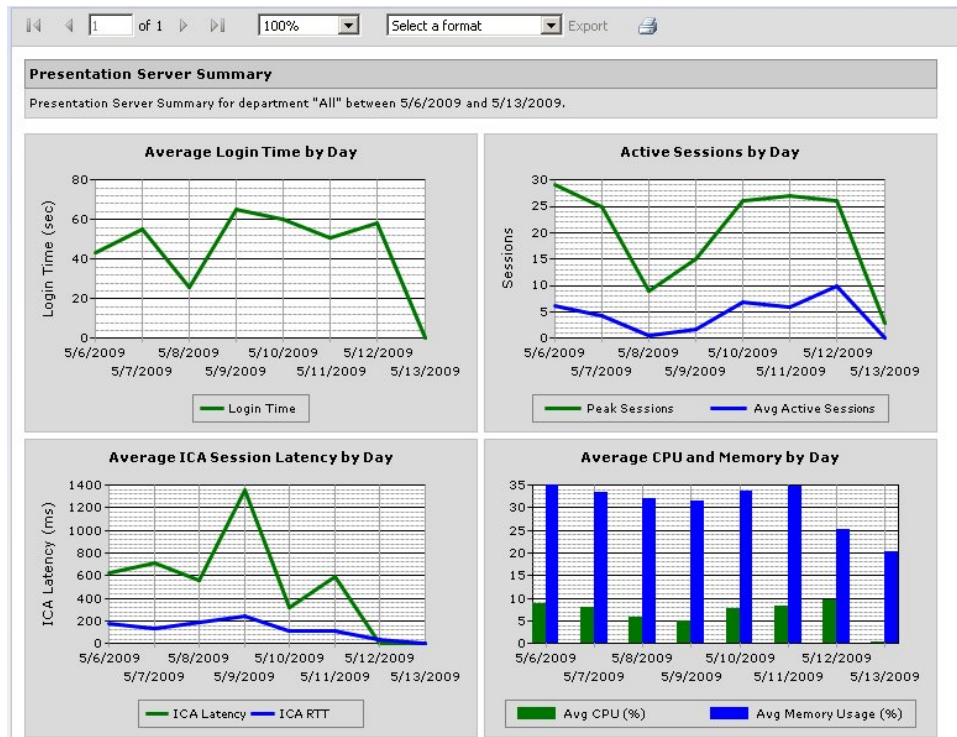
**XenApp Server Utilization**

Average CPU, average memory, and peak concurrent sessions for XenApp servers. This report contains information about the most heavily loaded servers. This report was added for the EdgeSight for XenApp 5.2 release.

## Presentation Server Summary

This page last changed on May 03, 2010 by [williamry1](#).

This report gives the administrator a fast high-level picture of farm health for any group of XenApp servers.



From EdgeSight 5.0, SP2

## How to Find It?

In the EdgeSight 5.x Console, click the **Plan and Manage** tab. Click **Presentation Server Summary**. In the EdgeSight 4.5 Console, under **Devices** > **Presentation Server Summary**.

## Sub-Reports

This report contains four sub-reports:

- [Average Login Time by Day](#)
- [Active Sessions by Day](#)
- [Average ICA Session Latency by Day](#)
- [Average CPU and Memory by Day](#)

## Reports Average Login Time by Day

The **Average Login Time by Day** report displays the average length of time (seconds) it takes for users to login to farm servers. The report displays a trend line over a period of time, so you can see if login times are increasing or decreasing during the time period specified. This may be helpful if you recently made changes to your environment. It should be noted that trend line for the Login Time in this report reflects overall farm traffic: on days when there are no sessions, login time can appear artificially low. Clicking on the trend line in this report displays the [Session Login Time](#) report.

To determine the reasons for slow session login times, see [Session Startup Duration Details](#).

## Metrics Displayed

- Login Time

## Active Sessions by Day

The **Active Sessions by Day** report displays two trendlines:

- The average number of active sessions each day on farm servers.
- The peak number of active sessions each day on farm servers.

The report displays trends over a period of time, so you can see if the number of sessions are increasing or decreasing. Clicking on either the Avg Active Sessions (blue) or the Peak Sessions (green) trend line displays the Session Statistics report.

### Metrics Displayed

- Peak Sessions
- Avg Active Sessions

## Average ICA Session Latency by Day

The **Average CPU and Memory by Day** report is a bar chart that displays the amounts of latency for clients and servers that support the End User Monitoring metrics (ICA RTT) and ones that do not (ICA Latency). When the Presentation Server Summary report is run on a specific group of application servers, this subreport can indicate if specific servers are experiencing latency. Clicking on the trend line in this report displays the [Session Login Time](#) report.

### Metrics Displayed

- ICA Latency
- ICA RTT

## Average CPU and Memory by Day

The **Active Sessions by Day** report displays a bar chart for the average CPU and memory usage in a group of servers (or the group you choose to run the Presentation Server Summary report on). If memory usage appears higher may be helpful if you recently made changes to your environment. Clicking on the trend line in this report displays the [ICA Session Round Trip Time](#) report, which can help determine if network latency is causing session latency (or if the latency is the product of something in the farm environment).

### Metrics Displayed

- Avg CPU (%)
- Avg Memory Usage (%)

## Parameters

- Departments or Group

### Optional Parameters

- Device

## Metrics and Counters Used

- [Login Time](#)
- Peak Sessions
- [Avg Active Sessions](#)
- ICA Latency
- ICA RTT
- [Average CPU \(%\)](#)

- [Average Memory Usage \(%\)](#)

## Interpreting the Data

You can click on the charts in the summary reports and drill down to see the specific server data regarding that metric. For example, if there is a spike in Logon time, you can drill down to see where there may have been an issue. You can see if it was it just one server that day or all servers, one user or all users.

## Group and Department Structure

Consider making custom groups so that you can select groupings of servers that provide meaningful information when you generate this report. For example, you might want to run this report on a specific group of application servers about which users were complaining.

For information about the effect of Group and Department Structure on reporting, see and the [EdgeSight Administrator's Guide](#).

## Tips

- Double-click on the chart for more detail and to uncover issues.
- Set up a subscription to email out this report in PDF format before the weekly staff meeting. This saves people from having to log on to the EdgeSight Console at the last minute.

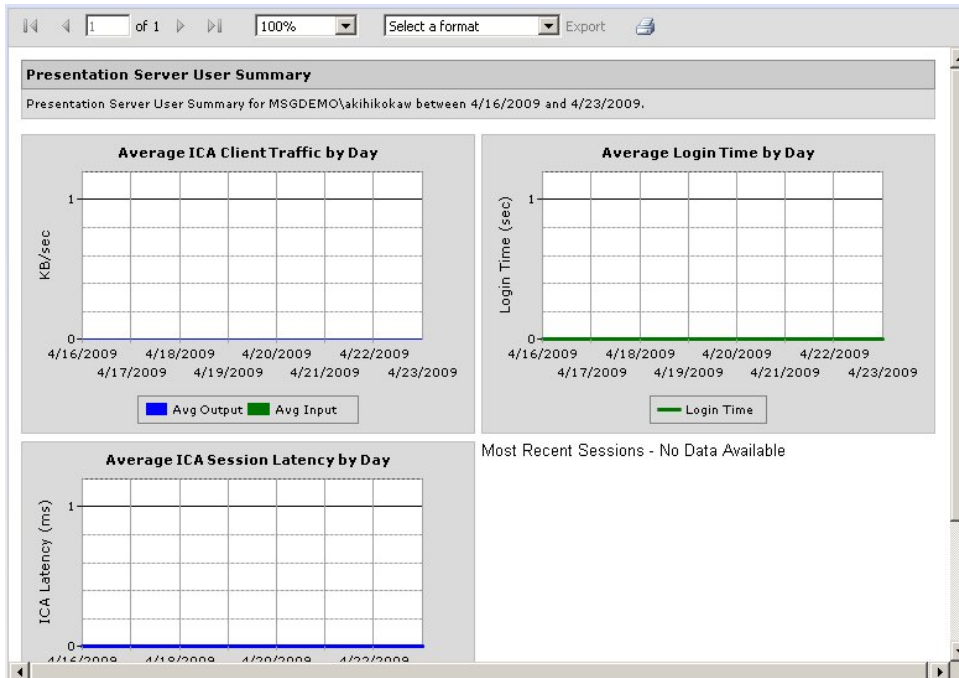
## See Also

- [Session Startup Duration Details](#)  
\*

## Presentation Server User Summary

This page last changed on Apr 23, 2009 by sarahv.

The **Presentation Server User Summary** report provides four subreports summarizing XenApp performance from a user perspective (client traffic, login time, session latency, and recent sessions).



## Overview

The **Presentation Server User Summary** report is a summary report that provides four sub-reports of session performance data for a specific user or a group of users.

Like all other summary reports, it is possible to drill into each subreport by double-clicking on it to obtain more detail (that is, run a report specifically on that item).

## Reports

- ns:Average ICA Client Traffic by Day
- ns:Average Login Time by Day
- ns:Average ICA Session Latency by Day
- ns:Most Recent Sessions

## Sessions Created for a User Group

---

This page last changed on Apr 15, 2009 by [sarahv](#).

This report logs the number of sessions created on a XenApp server.

It also tracks user logons, including user login times and the actual time spent logged into a published application.

TBD



## EdgeSight Report List by Task

---

This page last changed on May 03, 2010 by [williamry1](#).

This topic provides a list of EdgeSight reports grouped by task.

Table of Contents

- 1 [Session](#)
- 2 [Alerts](#)
- 3 [Performance](#)
- 4 [Performance Monitoring Counters](#)
- 5 [Environmental](#)

## Session

- [Sessions Created for a User Group](#)
- [Session Login Time for a User Group](#)
- [Session Startup Duration Details](#)
- [Session Startup Duration Details](#)
- [ICA Session Latency](#)

## Alerts

- Alerts

## Performance

- [XenApp Server Utilization](#)
- [System CPU](#)
- [System Memory Usage](#)

## Performance Monitoring Counters

The following Microsoft Excel-based reports display perfmon counter information based on real-time data:

- (EXCEL) Real-time Alert List
- (EXCEL) Real-time Device Summary
- (EXCEL) Real-time Network Performance
- (EXCEL) Real-time Presentation Server Summary
- (EXCEL) Real-time Presentation Server User Summary
- (EXCEL) Real-time System Compare
- (EXCEL) Real-time System Performance

## Environmental

- [Environmental Usage](#)
- [Presentation Server Summary](#)

## EdgeSight Data

---

This page last changed on Apr 30, 2010 by [normanw1](#).

This section of the EdgeSight Reporting Wiki provides articles about how to understand EdgeSight data.

- [End User Experience Monitoring Overview](#)
- [Understanding EdgeSight Data](#)
- [How EdgeSight Calculates ICA Traffic Numbers](#)
- [End User Experience Monitoring Data](#)
- [ICA Channel Data](#)
- [Network](#)
- [What Constitutes a Session for EdgeSight?](#)
- [Adding a Custom Performance Monitoring Counter](#)
- [Support for Citrix Performance Monitoring Counters](#)
- [Report Counters Glossary](#)

## End User Experience Monitoring Overview

This page last changed on Apr 29, 2010 by ronaldb.

EdgeSight collects End User Experience Monitoring (EUEM) metrics from XenApp (Presentation Server 4.5 and greater) and XenDesktop 4.0 and for use in the real-time monitoring features and reports.

Table of Contents

- 1 [Overview](#)
- 2 [Requirements](#)
- 3 [References](#)

## Overview

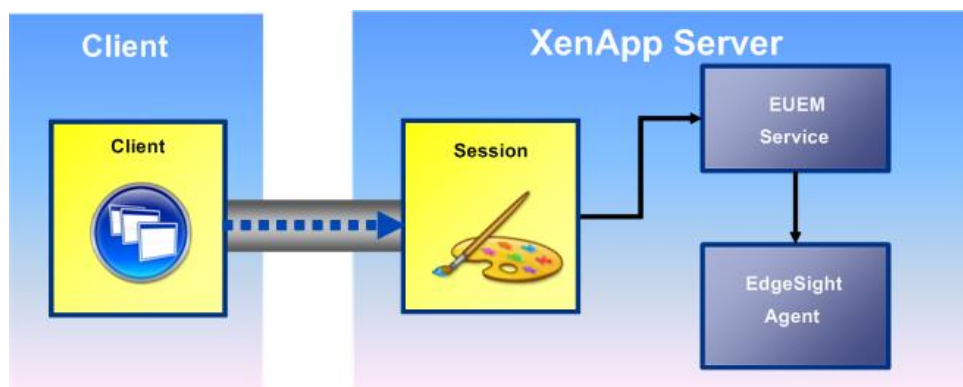
EdgeSight captures both client-side and server-side metrics through the EUEM Service (SemsService.exe).

Some examples of EUEM data include:

- Session logon sequence
- Session performance
- ICA channel
- Publisher Application usage

A few points about EUEM:

- Occasionally EUEM is referred to as Session Experience Monitoring Service (SEMS). However, the term SEMS is no longer in use.
- The EUEM Service is installed on Presentation Server 4.5 by the EdgeSight agent installer (EdgeSight Agent 4.5 and higher).
- The EUEM Service is included in XenApp and XenDesktop
- ICA (client/plug-in) metrics are sent to EdgeSight server using the EUEM virtual channel. The metrics are sent to the EUEM service which is hosted on XenApp or the XenDesktop VDA.
- Web Interface and Program Neighborhood Agent services record transaction execution times.
- The EdgeSight agent subscribes to the EUEM service to retrieve EUEM data.



*Client and server metrics sent to End User Experience Monitoring service,(SemsService.exe), stored in the memory channel*

## Requirements

- ICA client 10.x and higher
- XenApp/Presentation Server 4.5 and higher
- XenDesktop 4.0 and higher
- EdgeSight 4.5 (agent and server) and higher

# References

- [End User Experience Monitoring Data](#)
- [End User Experience Monitoring Statistics Explained](#)

## Understanding EdgeSight Data

---

This page last changed on Apr 28, 2010 by [normanw1](#).

This article provides an overview of the types of data EdgeSight gathers. Specifically, it answers the question, "What Does the EdgeSight Agent Monitor?"

Table of Contents

- 1 [EdgeSight Agent Data Collection](#)
  - 1.1 [Event-driven data](#)
  - 1.2 [Polled data](#)
  - 1.3 [Scheduled data](#)
- 2 [How Data Is Used in Reports](#)
- 3 [Major Categories of Data](#)
- 4 [References](#)

## EdgeSight Agent Data Collection

The EdgeSight Agent monitors the following types of data:

### Event-driven data

- Process starts/stops, errors and faults
- User logon
- WinSock connection
- HTTP web transactions
- Session connects/disconnects
- ICA session data

### Polled data

- System reboots
- NT event log
- Performance metrics for processes and system

### Scheduled data

- Drive space calculation
- Asset history
- Detailed logon and session metrics, virtual channel statistics

## How Data Is Used in Reports

A few key points about how EdgeSight data appears in reports:

- EdgeSight groups its reports by the entity to monitor:
  - Device
  - Network
  - Processes
  - User
- Then by the type of data to display:
  - Performance
  - Stability
- EdgeSight reports use data from the EdgeSight agent and EdgeSight server databases.
- EdgeSight consolidates data into one-hour slices for its non-realtime reports.
- Real-time reports display data directly from an EdgeSight agent database.

# Major Categories of Data

- [End User Experience Monitoring Overview](#)
- [Network Data](#)
- [Support for Citrix Performance Monitoring Counters](#)

The data EdgeSight collects varies according to the agent installed on the device and the version of the device being monitored. For example, if a Basic agent is installed on a XenApp or Presentation Server system, session-level performance metrics are not collected. See the [Citrix EdgeSight Administrator's Guide](#) for information on data availability by agent and device type and version.

A few points to remember:

- By default, EdgeSight polls for performance counters from the operating system
- XenApp 5.0 agents do not collect Citrix IMA and other counters by default, only ICA Latency counters
- The XenApp 5.0 agent with EUEM does not collect ICA latency counters, instead, EUEM gets that data from the SMC driver and EdgeSight retrieves it through that service.
- Polling periods vary by EdgeSight Agent type:
  - 5/5/60 minutes for endpoints
  - 15/5/60 minutes for XenApp
- Custom counters are configurable and can be added for third-party products or non-core system counters

## References

- [Citrix EdgeSight Administrator's Guide](#)

## How EdgeSight Calculates ICA Traffic Numbers

---

This page last changed on Apr 28, 2010 by [josephfo](#).

*This article is a placeholder and will be expanded or combined with another.*

## End User Experience Monitoring Data

This page last changed on Apr 29, 2010 by [ronaldb](#).

This article describes the metrics for the End User Experience Monitoring service (EUEM). It was originally based on CTX114495.

**Note:** All time measurements are in milliseconds unless otherwise noted.

## Session Performance Metrics

Metric	Description
AVG_NETWORK_LATENCY	Network latency is the detected network latency between the Presentation Server Client device and the server running Presentation Server. Unlike the ICA round trip metric, the network round trip is largely independent of processing time on the client or server.
AVG_ROUND_TRIP_TIME	The ICA round trip time. The average time interval measured at the client between the first step (user action) and the last step (graphical response is displayed).
INPUT_BANDWIDTH_USED	The actual bandwidth consumed on the network (Presentation Server Client to Presentation Server) in bits per second. This measurement is taken at the server end of the connection by counting the actual bytes that flow to and from the server running Presentation Server for each user's session. It measures traffic on the wire (after optimization and compression has taken place). The network bandwidth used is averaged across the ICA round trip check period (by default, the Presentation Server Client initiates an ICA round trip check every 15 seconds).
OUTPUT_BANDWIDTH_USED	The actual bandwidth consumed on the network (Presentation Server to Presentation Server Client) in bits per second. This measurement is taken at the server end of the connection, counting the actual bytes that flow both to and from the server running Presentation Server for each user's session. It measures traffic on the wire (after optimization and compression has taken place). The network bandwidth used is averaged across the ICA round trip check period.

## Session Performance Data (ICA round trip)

**Note:** Metrics on the duration of a portion of the handling of a graphical frame during the measurement of ICA roundtrip time (EUEM trigger, frame cut, frame send, first draw, and Winstation Driver trigger) are included in this report. A frame is the unit of graphical transfer from the server to the client. Note that depending on the trigger for the graphical frame, not all of these metrics will be present for each ICA round trip.

Metric	Description
--------	-------------



SESSION_START	The time that the session was started.
SESSION_ID	Session identifier.
CLIENT_NAME	Name of the client associated with the session.
CLIENT_ADDRESS	Address of the client associated with the session.
CLIENT_VERSION	Version of the client associated with the session.
DOMAIN_NAME	Name of the domain to which the user belongs.
ACCOUNT_NAME	The user account name.
PROTOCOL_TYPE	The type of protocol used for the session.
WD_TRIGGER_ROUND_TRIP	The time from the start of the frame until frame handling is complete. This metric is collected when the trigger for the frame is a timeout in the Winstation Driver.
EUEM_TRIGGER_ROUND_TRIP	The time from the start of the frame until frame handling is complete. This metric is collected when an ICA round trip measurement occurs.
ICA_NETWORK_LATENCY	The detected network latency between the Presentation Server Client device and the server running Presentation Server.
FIRST_DRAW_ROUND_TRIP	The time from the start of the frame until frame handling is complete. This metric is collected when the frame trigger is the receipt of a graphical operation from an application.
ICA_INPUT_BANDWIDTH_USED	The actual bandwidth consumed on the network (Presentation Server Client to Presentation Server) in bits per second.
INPUT_BANDWIDTH_AVAILABLE	The bandwidth available on the network (Presentation Server Client to Presentation Server) in bits per second.
ICA_ROUND_TRIP	The time interval measured at the client between the first step (user action) and the last step (graphical response displayed). This metric can be thought of as a measurement of the screen lag that a user experiences while interacting with an application hosted in a session on a server running Presentation Server.
FRAME_CUT_ROUND_TRIP	The time from the start of the frame until the point at which the frame is complete.
FRAME_SEND_ROUND_TRIP	The time from the start of the frame until the completion of sending frame data to the client.
ICA_OUTPUT_BANDWIDTH_USED	The actual bandwidth consumed on the network (Presentation Server to Presentation Server Client) in bits per second.
OUTPUT_BANDWIDTH_AVAILABLE	The bandwidth available on the network (Presentation Server to Presentation Server)

	Client) in bits per second. A value of 0 indicates that no data was available.
SYSTEMTIME	The time when the data was collected, as recorded on the system running the EdgeSight Agent.

## Session Client Startup Data

Metric	Description
LOGON_TIME	The time that the user logged on to start the session.
APP_NAME	The name of the published application.
LAUNCH_TYPE	The type of session launch. The values are: 0---Unknown 1---Obsolete (This could be a captured ICA file being used through file-type association.) 2---Web Interface 3---Program Neighborhood 4---Program Neighborhood Agent 5---Web portal (Advanced Access Control or MetaFrame Secure Access Manager)
LAUNCH_TYPE_ID	Launch type identifier (0-5), indicating a type of session launch as shown above under LAUNCH_TYPE.
SESSION_ID	The session identifier.
SESSION_SHARED_FLAG	A flag indicating whether a pre-existing session is being shared for this application launch.
SCCD - STARTUP_CLIENT	This is the high-level client connection startup metric. It starts as close as possible to the time of the request (mouse click) and ends when the ICA connection between the client device and server running Presentation Server has been established. In the case of a shared session, this duration will normally be much smaller, as many of the setup costs associated with the creation of a new connection to the server are not incurred.
CFDCD - CONFIG_FILE_DOWNLOAD_CLIENT	The time it takes to get the configuration file from the XML server.
BUCC - BACKUP_URL_CLIENT_COUNT	The number of backup URL retries before success. Note that this is the only start-up metric that is a count of attempts, rather than a duration.
AECD - APPLICATION_ENUM_CLIENT	The time it takes to get the list of applications.
COCD - CREDENTIALS_OBTENTION_CLIENT	The time it takes to get the user credentials. Note that COCD is only measured when credentials are entered manually by the user.
IFDCD - ICA_FILE_DOWNLOAD_CLIENT	The time it takes the client to download the ICA file from the Web server for Program Neighborhood Agent or Web Interface.

NRWD - NAME_RESOLUTION_WEB_SERVER	The time it takes the XML Service to resolve the name of a published app to a presentation server address. This metric is collected when the application is launched through the Program Neighborhood Agent or Web Interface.
RECONNECT_ENUM_CLIENT	The time it takes a client to get a list of reconnections.
RECONNECT_ENUM_WEB_SERVER	The time it takes the Web Interface to get the list of reconnections from the XML Service.
TRWD - TICKET_RESPONSE_WEB_SERVER	The time it takes to get a ticket (if required) from the STA server or XML Service. This metric is collected when the application is launched via the Program Neighborhood Agent or Web Interface.
LPWD - LAUNCH_PAGE_WEB_SERVER	The time it takes to process the launch page (launch.aspx) on the Web Interface server.
SCD - SESSION_CREATION_CLIENT	New session creation time, from the moment wfica32.exe is launched to when the connection is established.
NRCD - NAME_RESOLUTION_CLIENT	The time it takes the XML Service to resolve the name of a published application to an IP address. This metric is only collected for new sessions, and only if the ICA file does not specify a connection to a Presentation Server with the IP address already provided.
SLCD - SESSION_LOOKUP_CLIENT	The time it takes to query every ICA session to host the requested published application. The check is performed in the client to determine whether the application launch request can be handled by an existing session. A different method is used depending on whether the sessions are new or shared.

## Session Server Startup Data

Metric	Description
LOGON_TIME	The time that the user logged on to start the session.
SESSION_ID	The session identifier.
SESSION_CREATION_STARTED	The time that session creation started.
SESSION_CREATION_ENDED	The time that session creation was completed.
SSSD - SESSION_STARTUP_SERVER	This is the high-level server connection startup metric. This includes the time spent on the Presentation Server performing the entire startup operation. In the event of an application starting in a shared session, this metric is expected to be much smaller, as starting a completely new session involves potentially high-cost tasks, such as profile loading and logon script execution.

CASD - CREDENTIALS_AUTH_SERVER	The time spent on the server authenticating the user credentials.
CONSD - CREDENTIALS_OBT_NETWORK_SVR	The time spent by the server performing network operations to obtain credentials for the user. This only applies to a Security Support Provider Interface (SSPI) logon (a form of pass-through authentication where the client device is a member of the same domain as the server and Kerberos tickets are passed in place of manually entered credentials).
COSD - CREDENTIALS_OBT_SERVER	This is also called COSD. It is the time taken for the server to obtain the user credentials. This is only likely to be a significant amount of time if a manual logon is used and the server-side credentials dialog is displayed (or if a legal notice is displayed before the logon commences).
PNCOSD - PNC_CREDENTIALS_OBT_SERVER	The time taken for the server to cause the Program Neighborhood instance running on the client (Program Neighborhood Classic) to obtain the user credentials. This credentials dialog is displayed and managed by the client side, but the duration is measured on the server.
DMSD - DEVICE_MAPPING_SERVER	The time spent on the server mapping the user's client drives, devices, and ports.
LSESD - LOGIN_SCRIPT_EXEC_SERVER	The time spent on the server running the user's logon script(s).
PCSD - PRINTER_CREATION_SERVER	The time spent on the server synchronously mapping the user's client printers. If the configuration is set such that this printer creation is performed asynchronously, no value is recorded; it does not affect the completion of the session startup.
PLSD - PROFILE_LOAD_SERVER	The time spent on the server loading the user's profile.
SCSD - SESSION_CREATION_SERVER	The time spent on the server creating the session. The duration starts when the Presentation Server Client connection is opened and ends when authentication begins. This should not be confused with the overall Session Startup Server duration.

## Examples of Using EUEM Data

Some examples of common user problems you can use EdgeSight to monitor include:

- [Improving Slow Session Start Times](#)
- [Session Latency](#)

## Improving Slow Session Start Times

This page last changed on Feb 17, 2010 by sarahv.

One of XenApp users' most frequent complaints is slow session start times.

By running the [Session Startup Duration Details](#) report, administrators can use techniques described in this article to isolate the causes for slow session start times.

This article is meant to be used in conjunction with the article about the [Session Startup Duration Details](#) report.

Table of Contents

- 1 [Overview](#)
- ◦ 1.1 [XenApp Session Startup Process](#)
- 2 [Isolating the Causes of Slow Start Times](#)
- ◦ 2.1 [Requirements](#)
- ◦ 2.2 [Preparation](#)
- ◦ 2.3 [Suggested Process](#)
  - - 2.3.1 [Interpreting the Data and Finding Solutions](#)
    - 2.3.1.1 [Frequent Causes of Slow Session Start Times](#)
    - 2.3.1.2 [Alternate Causes](#)
- ◦ 2.4 [References](#)

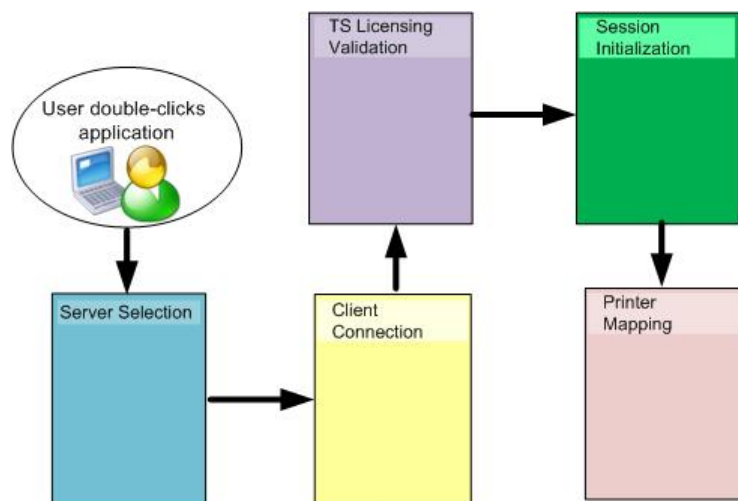
## Overview

Frequent causes of slow session start-times include XenApp authentication process, mapping client drives, mapping client printers, executing logon scripts, and executing user Group Policy Objects. To summarize, factors on the client side and the XenApp server side can contribute to slow session start times.

Administrators can use the [Session Startup Duration Details](#) report to isolate the slow session start times. This report utilizes a collection of metrics known as End User Experience Monitoring. These metrics are also included in some other historical reports, real-time reports, and underlie some alerts and troubleshooters. However, they are not gathered unless specific versions of EdgeSight, XenApp, and the Online plug-in are installed -- see [Requirements](#).

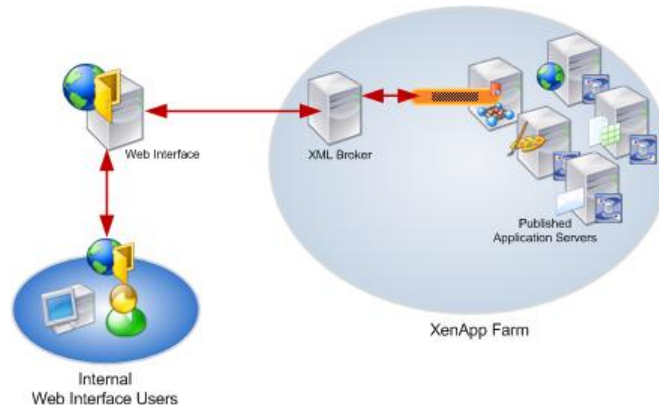
## XenApp Session Startup Process

Before determining the causes of slow session start times, it is important to understand the session startup process.



*A high-level overview of the five distinct phases of the startup process, depicted graphically.*  
At an extremely high level, session startup involves five distinct phases, each with multiple sub-activities:

1. **Server Selection.** This phase begins when a user double-clicks on an application icon (or clicks on a link in Web Interface). During this phase Web Interface communicates with the XML Broker, which in turn communicates with the data collector, to determine which server should host the user's session.



*This illustration shows a very high level depiction of one aspect of the server selection process. (1) The user connects to the Web Interface through the XenApp plugin or a Web browser; (2) the Web Interface contacts the XML Broker to determine which applications are available for this user; (3) the XML Broker queries the IMA service for this information and returns the results to the Web Interface; (4) the Web Interface displays the available applications to the user either through a Web page or by placing shortcuts directly on the user's computer.*

2. **Client Connection.** The client performs DNS lookup to find XenApp server, contacts XenApp server over the port specified in the ICA file, negotiates encryption levels with server, and determines what capabilities the client supports (drive mapping, audio, and so on).

3. **Microsoft Terminal Server Licensing Validation.** Verifies there is a valid license for the client and transmits the license certificate to the client.

4. **Session Initialization,** including profile loading. Authenticates to the network, queries client for virtual channels, determines if there is a valid Citrix license for the session, and determines if user has a Terminal Services profile and/or creates new profile.

5. **Printer mapping.** Citrix Print Manager service checks XenApp policies to see if any printing policies apply and then creates printer objects based on these policies.

## Isolating the Causes of Slow Start Times

This section provides an overview of the reason for slow session start times and techniques for isolating the causes of slow session start times. This process is based on using the [Session Startup Duration Details](#) report to gather data.

### Requirements

To use any reports that employ End User Experience Monitoring statistics, such as the [Session Startup Duration Details](#) report, the servers you want to monitor must meet the following minimum requirements:

- EdgeSight 4.5 agent running in Advanced mode on the XenApp server
- Presentation Server 4.5, Enterprise or Platinum edition
- XenApp plugin, version 10 or later

### Preparation

If you are trying to determine the cause of a specific user's slow session start times, obtain the following information from the user before you begin:

- The user's user ID, including their domain
- The approximate time of the session
- The name of the application the user was trying to open when the problem occurred
- The name of the end-point device (that is, for example, the name of the user's workstation)
- A description of the problem

## Suggested Process

1. Run the [Session Startup Duration Details](#) report specifying your farm or a group of application servers known to have slow session start times as the **Group**.
2. In the report output, review the data against the values in the Client Startup Metrics and Server Startup Metrics tables in the [Session Startup Duration Details](#) article.

## Interpreting the Data and Finding Solutions

Use the tables in the [Session Startup Duration Details](#) article to assess the values for each metric.

Sometimes, however, it isn't always obvious that a value for a startup metric is high. For example, a value of 2 and higher for BUCC (Backup URL Client Count) is considered high. **Note:** Not all startup metrics appear in all client-server configurations, depending on the client and server launch mechanisms. For specifics, see the appendices in [Improving visibility to the user login experience with Citrix EdgeSight](#). In addition, if you use EdgeSight for Load Test to generate data, the client row of the Session Startup Duration Details report will be blank.

The top level client and server startup metrics (CSD and SSD) do not represent the sum of the detail metrics. For example, some detail metrics such as COCD (Credentials Obtention Client Duration) and COSD (Credentials Obtention Server Duration) are excluded from the top level metrics due to their tendency to artificially inflate the totals by including user response time. In the **Session Startup Duration Details** report, CSD and SSD are displayed as average values because of the possibility that more than one Server or Client Startup per session can exist when a session is disconnected or when a user starts another session from a different client.

### Frequent Causes of Slow Session Start Times

While every environment is different, some causes of slow session start times occur across many different environments. While you are reviewing the metrics in the table below, look carefully at the following metrics:

- **LS**ESD. LOGIN\_SCRIPT\_EXEC\_SERVER.
- **PC**SD. PRINTER\_CREATION\_SERVER.
- **PL**SD. PROFILE\_LOAD\_SERVER.
- **SC**SD. SESSION\_CREATION\_SERVER.

However, rather than focusing exclusively on these metrics, it is better to systematically review each metric in order.

**Important:** Tables with guidance about interpreting each metric are included in the article, [Session Startup Duration Details](#). That article is designed to be used with this article to help diagnose the cause of specific problems and provides information about how to resolve the issues.

### Alternate Causes

If, after reviewing these metrics, the cause of slow sessions is not apparent, consider if any of these factors are affecting session start times:

- **Policy design.** Consider reevaluating your policy design. According to a Citrix Consulting study, the tenth most common problem they see in customer environments is suboptimal policy design. Whenever possible, set policies to optimize the ICA protocol and improve overall session performance (for example, by disabling unused virtual channels, such as audio or COM port mapping). Ideally, these settings should be included in a baseline XenApp policy, which is a policy that applies to all servers or users and has many common settings and optimizations. Bandwidth restrictions and common printing configurations are also ideal candidates for inclusion in a baseline Citrix policy. For an example of a good baseline policy, see [Top 10 Items Found by Citrix Consulting on Assessments](#) and [How Policies Impact Presentation Server Environments](#).
- **Network activities occurring independently of sessions.** Standard operations affecting start times include logging on to Active Directory, querying Lightweight Directory Access Protocol (LDAP) directory servers, loading user profiles, executing logon scripts, mapping network drives, and writing

environment variables to the registry. Also, connection speed and programs in the Startup items within the session, such as virus scanners, can affect start times.

- **Whether the data collector has sufficient resources to make load balancing decisions efficiently.** If your environment has grown, make sure that you have reevaluated the system hosting the XML Broker. You might need to give the XML Broker its own dedicated server. In environments with collocated infrastructure servers, Citrix suggests hosting the Citrix XML Broker on the data collector to avoid delays. For concrete guidelines (using Performance Monitor counters) for evaluating infrastructure server sizing, including the XML Broker, and general information about the XML broker, see the [Citrix XenApp 5.0 Installation Guide](#).
- **License Server Location.** For WANs with multiple zones, where the Terminal Services license server is in relation to the zone.
- **General latency.** While high client network latency (for example, ICA performing startup queries) can lengthen session start time, often XenApp and network configuration (profiles, printers, GPOs, scripts, antivirus) are the culprits. In addition, if the application server has a lot of activity, such as logins, too many sessions, an application using excessive CPU utilization, or a lot of page faults and so on, then session start times are going to be slow. For more information, see [ICA Session Latency](#).

## References

- [Improving visibility to the user login experience with Citrix EdgeSight](#), Citrix whitepaper.
- [End User Experience Monitoring Statistics Explained](#), CTX114495
- Functionality for the ICA Session Latency Reports Explained, CTX114291 <http://kb.citrite.net/article/ctx114291>
- [Citrix XenApp 5.0 Installation Guide](#)
- [Top 10 Items Found by Citrix Consulting on Assessments](#)
- [How Policies Impact Presentation Server Environments](#)
- [The excruciating detail of the Citrix logon process: A huge wall chart](#) by Brian Madden on brianmadden.com, accessed on June 5, 2009.



## Session Latency

---

This page last changed on Apr 29, 2010 by [ronaldb](#).

Users perceive latency in sessions when there is a delay between the time at which they press a key and they receive feedback. There are multiple reasons for session latency on the client side (for example, client network latency, client network congestion) and on the server side (for example, overloaded application servers, database servers, and network backbones).

This article provides an overview of these factors and resources for obtaining more detailed information.

### Table of Contents

- 1 [Overview](#)
- 2 [Isolating Causes for Session Latency](#)
  - 2.1 [Starting with User Complaints about Latency](#)
  - 2.2 [Overall Poor Network Performance](#)
    - - 2.2.1 [XenApp Printing Consuming Excessive Bandwidth](#)
  - 2.3 [Application Scalability and Server Performance](#)
- 3 [EUEM Session Data Replaces Deprecated Session Latency Data](#)
- 4 [References](#)

## Overview

When users first report performance problems with an application, it can be due to a number of reasons. It could be a rogue process running with the CPU, heavy paging or writing to disk, or it could be a graphic intensive application causing ICA Latency. It could also be a slow link or bad network connection.

## Isolating Causes for Session Latency

### Starting with User Complaints about Latency

If a user is complaining about latency, begin by determining if the latency is a product of the session or on the server hosting the session.

### Page Faults

If there are page faults, determine if the latency is a product of the session or on the server hosting the session.

1. Run the **System Page Faults** report, grouped by **Process**. If you see page faults consistently on all processes, then the problem is on the server hardware.  
-OR-
2. Run the **Session Page Faults** report grouped by **Device**.
3. If it is not a server-side problem, run the **Session Page Faults** report grouped by **Process** to look for trends in sessions experiencing page faults for the same application as the one the user was running.

### Overall Poor Network Performance

Because all session transactions occur across the network as the XenApp plugin (client) communicates with the server, reduced network bandwidth can affect session response times. In EdgeSight 5.x, go to the Browse tab and search for ICA to display ICA-related reports. Reports for ICA traffic, ICA latency and ICA round trips will help to determine if the problem is related to ICA network traffic.

### XenApp Printing Consuming Excessive Bandwidth

Poor XenApp printing configurations can consume excessive amounts of network bandwidth. In particular, configuring print jobs to take the network printing pathway in WAN environments should be avoided.

To determine if your sessions are experiencing latency due to printing bandwidth consumption, run the ICA Printer I/O report. This report lists printer input and output in bps as well as the client device name, printer name and driver name.

#### **Application Scalability and Server Performance**

When application servers are overloaded, users may experience poor session performance. They may report it takes them a long time to logon or their sessions are not responsive to commands. To determine if servers are overloaded, you need to examine not only the performance of the individual server but also the scalability of the application that server is hosting. To better understand server performance factors, see [XenApp Server Health](#).

## **EUEM Session Data Replaces Deprecated Session Latency Data**

The session experience monitoring data replaces the previously collected session latency data. If the prerequisites listed in [End User Experience Monitoring Overview} are present, the following reports will not contain data:

- Highest ICA Session Latency for a Group by Device
- Highest ICA Session Latency for a Group by User
- ICA Session Latency for a Group by Day
- ICA Session Latency for a Group by Hour
- ICA Session Latency for a Device by Day
- ICA Session Latency for a Device by Hour
- ICA Session Latency for a User by Day
- ICA Session Latency for a User by Hour

## **References**

- [Use Cases for EdgeSight 4.5 - Monitoring and Managing the Environment with EdgeSight](#), CTX115727, accessed on April 15, 2009.
- Madden, Brian. [Understanding Citrix's SpeedScreen Latency Reduction](#). Accessed on April 15, 2009

## ICA Channel Data

---

This page last changed on Apr 29, 2010 by [normanw1](#).

EdgeSight collects a full set of metrics for the ICA channels. These include:

- Audio and Video
- Printer
- Drive
- COM port
- Session Compression
- Session Line Speed
- Clipboard
- SpeedScreen
- USB (XenDesktop only)
- Smartcard (XenDesktop only)

Custom ICA channels are not monitored.

## What Does this Mean?

With this capability users will be able to, for example, monitor printing delays in the XenApp farm as well as certain visibility into potential file transfer issues and performance across the XenApp farm.

You can use this metrics to help determine whether whether printing, file transfers or audio, or video could be causing user experience issues. Run the ICA Traffic reports to see this information.

EdgeSight uses these metrics its historical and real-time reports.

## What Tasks Can I Perform with this Data?

You can use this data to perform the following tasks:

- Monitoring the End-User Experience
- Troubleshooting the End-User Experience
- Capacity Planning

## Reports Using this Data

- ICA Audio I/O
- ICA Drive I/O
- ICA Printer I/O
- ICA Session Compression
- ICA Session I/O
- ICA Session Traffic
- ICA Video I/O
- HDX MediaStream I/O (XenDesktop only)
- HDX Plug-n-Play I/O (XenDesktop only)

## Network

---

This page last changed on Apr 30, 2010 by [normanw1](#).

- [Why EdgeSight Network Data Differs from Network Monitoring Tools](#)
- [Network Data](#)

## Why EdgeSight Network Data Differs from Network Monitoring Tools

---

This page last changed on Apr 29, 2010 by [normanw1](#).

EdgeSight users who are running multiple network monitoring tools in their environments may notice EdgeSight has different values for data that is captured by network monitoring tools.

The reason the data differs is because of the way in which EdgeSight captures, records, and calculates metrics.

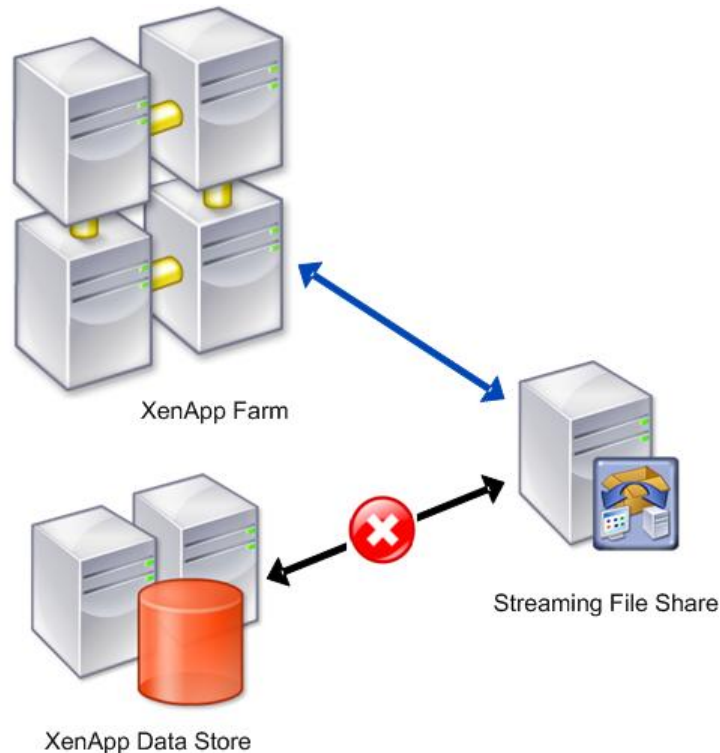
EdgeSight measures all network data from within the monitored application and not on the network itself. Consequently, EdgeSight always displays different measurement values than the value calculated by a network sniffer or a tap.

## Network Data

This page last changed on Apr 29, 2010 by [normanw1](#).

Citrix EdgeSight collects network performance statistics by directly hooking at the socket layer and measuring round trip, delay and volume information. The Winsock send and receive traffic between the monitored device (XenApp, XenDesktop VDA, or endpoint) and the server to which it is connecting is collected passively.

Network statistics are captured at a transaction level where transaction is defined by a site, transaction, request, and type. Citrix EdgeSight Agents passively measure the delay and round trip time at the HTTP component level such as javascript, text, and html get requests, for a host/page request from a device.



## Network Data

- Client, Network, and Server delay
- Response
- Data volume (sent and received)
- Winsock errors
- HTTP errors
- Transaction name, type, protocol
- Request type
- Duration
- Site
- Virtual host
- Port

## Factors Affecting Network Data Collection

Depending on your environment and the applications being monitored network data can be affected by:

## Socket Lifetime

Network applications can have short-lived or long-lived TCP sockets. Long-lived sockets are often used when repeated calls to a site are expected, the protocol requires a long-lived socket, or large amounts of data are to be transferred.

For short-lived sockets, EdgeSight records all network metrics when the socket is closed. For long-lived sockets, EdgeSight polls socket performance every 5 seconds, with the timer based on socket transitions resulting from data transfers.

## Data Grooming

The EdgeSight agent automatically tunes data collection based on the volume of data seen and the agent configuration settings for data retention. For EdgeSight for XenApp agents, the data retention period is three days. The number of network sockets created depends on application usage, application architecture, and the number of users accessing an application. During periods of extremely high usage, collection data for all sockets may not be feasible. To balance data collection with the impact on monitored systems, if the number of unique data collection points during the agent data retention period exceeds 360,000, network operations occurring after the limit has been reached are not recorded. Network data collection resumes when the number of collection points falls below the threshold. Data collection points include short-lived socket connections and poll intervals on long-lived socket connections.

## Proxies

The EdgeSight agent monitors application experience with the network resources accessed by the application. Proxies, firewalls, and NAT devices are considered part of the network, unless the application is configured to use a proxy. In this case, the agent considers the proxy as the site for all network traffic.

# Reports using this data

Network reports can be found by choosing the "Network" Object Type from the leftside navigation pane on the Browse page.

- Network Summary
- Network Summary by Site
- Network Transaction Summary
- New Sites
- Port Network Delay
- Port Network Round Trip Time
- Port Network volume
- Port Web Errors
- Process Network Delay
- Process Network Volume
- Site Network Delay
- Site Network Volume
- Site Network Errors
- Site Network Round Trip Time
- Site Network Volume
- Transaction Network Delay
- Transaction Network Round Trip Time
- Transaction Network Volume
- Transaction Web Errors
- Visited Sites

## What Constitutes a Session for EdgeSight?

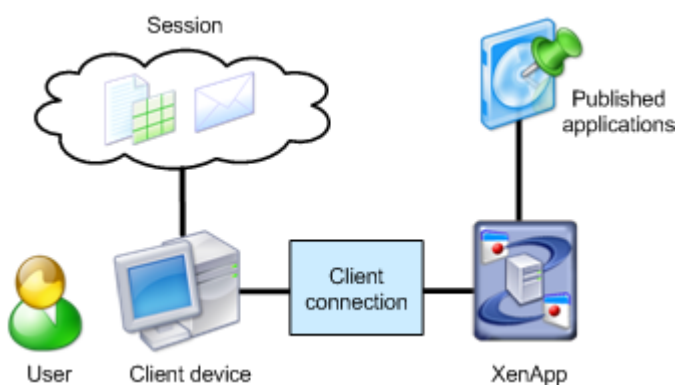
This page last changed on Apr 28, 2010 by [josephfo](#).

EdgeSight considers a session to start when a user opens a published application. (The session does not start when a user initially creates the client connection by, for example, starting the Web Interface.) The session is the instance of the user's interaction with the application on the server.

This article provides details about what EdgeSight considers to be a XenApp session.

## Background: XenApp and Sessions

In a XenApp environment, when a user logs on to the farm, the client device links to the server through a connection and establishes a session. This connection is known as the *client connection*. Users access published resources through the client connection in what is known as a *session*. When a user initially connects to the farm and starts a published application, the server opens the application in a session.



*Users access published applications in sessions after the client device establishes a connection with the server.*

## Passthrough Client Authentication

When a user connects to applications published on different servers, passthrough client authentication enables XenApp to automatically pass a user's credentials from the initial server to the server hosting the next application. This prevents the user from having to re-authenticate when opening applications on different servers.

<image>

If session sharing is not enabled, EdgeSight counts each session created as a by-product of passthrough authentication as a separate session. However, if session sharing is enabled EdgeSight counts by-product sessions as one session but tracks separate session information for them.

The Citrix End User Experience Monitoring service runs on individual XenApp computers. As a result, the service sees each "hop" in the passthrough authentication chain as a separate and unique instance of a connection, session and application. (The outer "hop" of the pass-through chain only lists an application that was the ICA Client instance.)

If you are using EdgeSight with third-party products, the Citrix End User Experience Monitoring service records extra information associated with pass-through client connections to passthrough chain.

## What EdgeSight Considers a Session

### When Does EdgeSight Consider a Session to Have Started?

With the exception of some session reconnection scenarios such as the use of smooth roaming or an auto-reconnect, EdgeSight considers every time a user starts an application or desktop to be a new



session. The EdgeSight startup metrics (xxx, xxx) capture the time taken to perform various activities that occur when a session, connection or application begins.

At first glance, the start-up time for a XenApp user appears simple: the time it takes to get from the initial mouse-click from a user on an icon to the point at which the user's application is ready for input from the end user.

In reality, this process is more complex. As we have already seen, Connection, Session, and Application are independent entities.

<move to metric section:> Each metric abbreviation ends with either the combination CD, WD or SD (except BUCC which is a special case). This indicates where the metric has been gathered. CD indicates a duration on the client device. WD indicates a duration measured on a Web Server (where Web Interface or PN Agent are in use). SD indicates a duration measured on the presentation server.

All start-up metric durations are provided in milliseconds.

EdgeSight calculates session start times differently depending on whether it gathered the metric from the server or the client.

## Session Start on the Server

To start a new session on a server, the user must be authenticated. Once authenticated, the session must perform any client device mapping tasks (printers or drives), load the user's profile, execute logon scripts, and then start the user's application (for a published desktop this is explorer.exe). If a session already exists and a new application is being started through session sharing (see section 3.2), then only the application start stage occurs.

The server start-up metrics cover all of the stages that occur to create a new session and application, or launch a new application within an existing session. It should be noted that the metric set does not draw a distinction between the two cases - the relevant metrics will have values depending on the actions executed.

Each task within the session start-up process is individually instrumented for duration, and these metrics are passed to the End User Experience Monitoring Service. An overall Server Start-up metric is provided, as well as drill-down detail into each individual task.

The high level Session and Application Startup Metric is the SSSD: Session Startup Server Duration. This includes the time spent on the presentation server performing the entire start-up operation. In the event of an Application starting in a shared session, this metric is expected to be much smaller, as starting a completely new session involves potentially high cost tasks such as profile loading and login script execution.

## Application Launches During Server Startup

EdgeSight records each application launch separately from the session startup. This is because each session can host multiple launched applications, and indeed it is possible for these application launches to overlap, where the launch of a subsequent application can start before the launch of the preceding application is complete. Each application launch consists of one or more processes starting, with earlier processes potentially spawning later processes as part of their launch activity. The end of the launch of each individual process is the point at which that process becomes 'Input Idle', which means that it is idle waiting for user input.

The complete Application Launch Server Duration (ALSD) is the time from the end of the session startup to the point when the application is ready for user interaction, which is deemed to be when the last process spawned as part of the application launch has reached the 'Input Idle' state. The launch timing can be visualized as follows:

<image>

## Incomplete Start-Ups

Sessions might not finish starting for a number of reasons - network interruptions, failure to authenticate, failure to license, or a manual abort from the end user. In these cases, the Citrix End User Experience Monitoring service may provide partial metrics that it has managed to gather before the abort occurs. In the case of a re-connection to an existing session, the Citrix End User Experience Monitoring service automatically re-associating the new start-up metrics with the original session.

## **Session Termination Events**

Session Disconnection Termination Events are generated when a session being monitored ends. The only information associated with these events is the identity of the session that is terminating and the timestamp of when the event occurred.

## Adding a Custom Performance Monitoring Counter

---

This page last changed on Apr 29, 2010 by ronaldb.

EdgeSight supports adding performance monitoring counters that it does not collect by default and creating a report for a custom counter. This lets you run reports on XenApp counters not currently included in EdgeSight and other counters you might find valuable. This article explains how to add the counters, provides a few sample use cases for the counters, and how to create a chart for a custom counter.

### Table of Contents

- 1 [Overview](#)
- 2 [Adding a Custom Performance Monitoring Counter](#)
- 3 [Generating Reports for Custom Counters](#)
- 4 [Suggestions for Performance Monitoring Counters to Add](#)
- 5 [References](#)

## Overview

While EdgeSight collects many performance monitoring counters, it does not collect all of them by default. This is partially done to keep the size of the database from growing excessively, but in some cases this is also the result of XenApp and EdgeSight releasing at different times. Adding some custom perfmon counters for important infrastructure functions can greatly improve your farm management. Important perfmon counters include ones for the XML Broker and the data collector. However, when you are adding perfmon counters for these servers, be aware of the following:

- EdgeSight is not "XML-Broker" aware. That is, while you can see the server running the XML Service and communicating with the Web Interface just like you'd see any other server on the farm, EdgeSight doesn't apply specific labels to call out this server role. This also applies to the data collector and any backup data collectors.
- Specialty perfmon counters, such as **Application Resolutions/sec** or **Filtered Application Enumerations/sec**, will only appear in the EdgeSight user interface when you specify the device on which they are collected. For example, if the XML Broker is the only server on which Application Resolutions/sec is visible, you will only see Application Resolutions/sec in EdgeSight when you select your farm's XML Broker as the device. For more information about which perfmon counters appear on which XenApp server roles, see the **Server(s)** column in [XenApp Infrastructure Monitoring and Alerting, CTX118742](#).
- The only report that displays custom perfmon counters is the Chart report in the **Troubleshoot** tab ( **Real-time Reports > Custom Performance Counters > Chart** ). The reports found in the **Browse** tab do not display these any perfmon counters that you added.

Generating a report based on a custom perfmon counter is a two-part process:

1. You must add the custom counter
2. You must run the report

For more information, see *Custom Counter Configuration* and *Real Time Device Reports* in the EdgeSight online help.

## Adding a Custom Performance Monitoring Counter

1. In EdgeSight, click the **Troubleshoot** tab.
2. Click **Real-time Reports > Custom Performance Counters > Configuration**.
3. In the **Custom Performance Counters** section, specify the device on which you can find the performance monitoring counter you want to add. <do you need to do this for every server with the counter on the farm or is once enough?>

**Note** : To add a custom counter, you must have administrator privileges on the XenApp server from which you want to add the custom perfmon counter.

**Note** : EdgeSight uses the credentials from the computer on which you are running the EdgeSight console whenever you use a feature that requires real-time data from a XenApp server. Consequently, if you are logged on to the computer on which you are running the EdgeSight console with different credentials (not the admin credentials), then you must either (a) log on to a computer with the XenApp server credentials and run EdgeSight or (b) configure your browser to prompt you whenever it requires credentials. For example, in Internet Explorer 7. x , you would select the **Prompt for user name and password** option in the **Security Settings** dialog for both the **Internet** and **Local intranet** zones.

After the Status displays the word " **Ready** " then the **Settings** , **Add New Counter** , and **Configured Counters** sections appear.

1. In the **Add New Counter** section, from the **Object** list box, select the name of the performance counter object. For example, Citrix MetaFrame Presentation Server.
2. From the **Counter** list box, select the counter you want to add. For example, **Maximum number of XML threads** .

**Note** : Only counters available on this server appear in the list box. See [CTX118742](#) for information about the counters that are available on what types of servers.

1. Click **Add Counter** . The newly added counter appears in the **Configured Counters** section.

## Generating Reports for Custom Counters

As described previously in this article, the only report that lets you generate reports for custom counters is the Chart report for Custom Performance Counters.

1. In EdgeSight, click the **Troubleshoot** tab.
2. Click **Real-time Reports > Custom Performance Counters > Chart** .
3. In the **Custom Performance Counters** section, specify the device for which you want to run the report. You can only run reports for one server at a time.

**Note:** Security settings in Internet Explorer and Excel 2007 can cause real-time reports to appear as blank. See [Data in Remote Reports are Not Populating Correctly Using Excel 2007](#), CTX112965. You may also need to go into the **Trust Center** in Excel 2007 and select the following options: **Enable all macros (not recommended, potentially dangerous code can run)** and **Trust access to the VBA project object model**.

## Suggestions for Performance Monitoring Counters to Add

Proactively monitoring specific indicators (or perfmon counters) can help alert administrators of problem conditions before they impact users and help quickly isolate causes. All counters are Citrix MetaFrame Presentation Server objects.

Counter to Add	Purpose	Baseline or Threshold	What Device
<b>Application Resolution Time (ms)</b>	Measures the time required to determine the Least-Loaded Server during an application launch	A baseline would need to be established in your environment to account for increases during peak logon times before accurate thresholds can be defined	All XML Brokers
<b>Data Store Connection Failure</b>	The number of minutes that the server running Presentation Server has	Threshold should take into account events such as reboots and scheduled maintenance	All XenApp servers

	been disconnected from the data store		
<b>Number of busy XML threads</b>	The number of XML requests that are currently being processed. The maximum number of requests that the XML service can process at any one time is 16.	Any count over 16 sustained for 1 minute or longer is potentially problematic	All XML Brokers
<b>WorkItem Queue Ready Count</b>	The number of work items that are ready and waiting to be processed by IMA	If this counter is sustained above 0 for a minute there may be a problem	All XML Brokers <ul style="list-style-type: none"> <li>• Most Preferred and Preferred Data Collectors (that is, XenApp servers with election preferences set to Most Preferred or set to Preferred)</li> </ul>
<b>Resolution WorkItem Queue Ready Count</b>	The number of work items (related to application launches) that are waiting to be processed by IMA	If this counter is sustained above 0 for a minute there may be a problem	All XML Brokers, Most Preferred and Preferred Data Collectors
<b>Zone Elections Won</b>	Amount of times this server has won an election	If this counter increases by 2 in 1 hour there may be a problem	Most Preferred and Preferred Data Collectors
<b>Zone Elections Triggered</b>	Amount of times this server has called for an election. This counter is incremented regardless of whether or a not a new Zone Data Collector was elected. <b>NOTE:</b> This counter is added with Hotfix Rollup Pack 3 for Presentation Server 4.5 .	If this counter increases by 2 in 1 hour there may be a problem	All XenApp servers

## References

[Data in Remote Reports are Not Populating Correctly Using Excel 2007](#)

## Support for Citrix Performance Monitoring Counters

---

This page last changed on Apr 29, 2010 by [ronaldb](#).

This article provides an overview of EdgeSight support for Citrix performance monitoring (perfmon) counters.

### Overview

EdgeSight monitors Windows and Citrix-specific performance monitoring counters (often referred to as "perfmon counters"). However, not all performance monitoring counters are in EdgeSight by default.

You can add perfmon counters to EdgeSight and display them on a per device basis in the Realtime (historical) reports. This is explained in [Adding a Custom Performance Monitoring Counter](#).

### XenApp Performance Monitoring Counters

XenApp counters are divided into major categories, known as *performance objects*, these include:

- Citrix CPU Utilization Mgmt User
- Citrix IMA Networking
- Citrix Licensing
- Citrix MetaFrame Presentation Server
- ICA Session
- Secure Ticket Authority

EdgeSight can monitor all of the major categories of XenApp performance monitoring counters; however, the counters may need to be added to EdgeSight. The individual counters for each category above are listed in the *Citrix XenApp Administrator's Guide*. You can also view these counters through the Windows Performance monitor.

EdgeSight monitors most ICA performance monitoring counters that are installed with XenApp. XenApp has performance monitoring counters for:

- Bandwidth and compression for ICA sessions and XenApp servers
- Bandwidth for individual virtual channels within a ICA session
- Latency for ICA sessions

### References

## Report Counters Glossary

---

This page last changed on Apr 28, 2010 by [ronaldb](#).

This glossary provides definitions of the counters and other data fields shown in EdgeSight reports. Some fields, such as Name, are self-explanatory and are not included in this glossary. For the definition of the metrics included in archive reports, see the tables in Accessible Citrix SQL Views and Accessible EdgeSight SQL Views as listed in Archive Reports.

In some cases, the XenApp server, plug-in (ICA client), and EdgeSight Agent versions running on a monitored device affect which counters are collected. See Session Experience Monitoring Metrics in the Working with Reports topic for more information. End user experience monitoring (EUEM) metrics collected by the session experience monitoring service are indicated by a label of "EUEM" at the end of the metric description.

Use the letters below to go directly to a section of the glossary. Note that terms are listed as they are shown in report headers. In some cases symbols (as in % User Time) or abbreviations (as in Avg CPU) are used due to space considerations.

**Important:** To find out what reports use a specific metric, in EdgeSight 5.0, click the **Browse** tab and type the name of the metric in the **Search** box in the user interface (not the Find (CTRL + F) feature in the Web browser). You can also find reports by entering a report name or description in the **Search** box.

[A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

## Historical Report Counters and Data Fields

### A

#### Active Time

Active time is the actual amount of time that the user has the application as the active window on their desktop. The active window is the window that has focus on the desktop. Citrix EdgeSight Agents track application usage to calculate how long an application is actively used and how long it is run, and to collect usage counts for license tracking.

#### Address

The IPv4 or IPv6 address for a site.

#### AECD

Application Enumeration Client Duration. The time (ms) it takes to get the list of applications. (EUEM)

#### Alert Count

The number of alerts received by the EdgeSight Server during the specified time frame.

#### Alert Name

The specific name of the alert rule associated with the condition.

#### Alert Type

The type of alert condition, such as reboot, process fault, or system performance. The same type of alert can be triggered based on different rules, depending on the specific condition triggering the alert. For example, an alert with a type of system performance can be triggered based on a system slowdown, system low resources, or system thrashing alert rule.

## **Alerts**

The number of alerts of a specific type received by the EdgeSight Server for a specified time period.

## **Alerts Today**

The number of alerts received by the server for the current day.

## **Asset**

Hardware and software asset report data is derived from Windows Management Instrumentation (WMI). For more information on WMI classes, see the WMI Reference at:

<http://msdn.microsoft.com/en-us/library/aa394572.aspx>

## **Asset Changes**

The number of changes to device hardware and software assets during a specified time period.

## **Audio Input (bps)**

The bandwidth, measured in bps, used when playing sound in an ICA session.

## **Audio Output (bps)**

The bandwidth, measured in bps, used for playing sound in an ICA session.

## **Average Active**

The average number of active sessions during a specified time period.

## **Average Inactive**

The average number of inactive sessions during a specified time period.

## **Average Sessions/Device**

The average number of sessions (active and inactive) for a device over a specified time period.

## **Avg Active Time**

The average active time for an application. See Active Time.

## **Avg Alerts/hour**

The average number of alerts per hour for the selected time period.

## **Avg Client Startup Duration (ms) or Avg CSD**

The average time elapsed from the time of the request (mouse click) to the time when the ICA connection between the client device and Presentation Server has been established. In the case of a shared session, this duration will normally be much smaller, as many of the setup costs associated with the creation of a new connection to the server are not incurred.

## **Avg CPU or Avg CPU (%)**

The average percent CPU usage over the specified time period. See CPU(%) for information on calculating CPU usage on multiprocessor machines.



## **Avg Delay (ms)**

See [Network Delay \(ms\)](#).

## **Avg Free Mem (%)**

The average percentage of free memory on a device or group of devices for a specified time period.

## **Avg ICA RTT (ms)**

The average ICA round trip time over the specified time period. The ICA round trip is the time interval measured at the client between the first step (user action) and the last step (graphical response is displayed), as calculated by the session experience monitoring service. The ICA round trip metric can be best thought of as a measurement of the "screen lag" that a user experiences while interacting with an application hosted in a session on a Presentation Server.

## **Avg Input (KB/sec)**

A measure of ICA client traffic from an ICA Client to a Presentation Server.

## **Avg Input Bandwidth Used (Kbps)**

The average input bandwidth used over the specified time period, expressed as kilobits per second. Input bandwidth used is the actual bandwidth consumed on the network (ICA Client to Presentation Server). (EUEM)

## **Avg Latency (ms)**

The average ICA session latency in milliseconds. ICA session latency is based on the last recorded latency measured for the session (Latency - Last Recorded). The samples recorded by the agent are consolidated to one hour intervals in the data uploaded to the server.

## **Avg Login Time (sec)**

Login time is the time between the start of a session and the end of the last process created as part of the login operation for that session.

## **Avg Memory Usage (%)**

The average percentage of total memory used over the specified time period. See Memory Usage %.

## **Avg MP Duration (ms)**

The average time, in milliseconds, taken to execute a monitoring point. Monitoring points are created using EdgeSight Active Application Monitoring, and can be a single instruction or a folder containing multiple instructions that measure application availability or response time.

## **Avg Network RTT (ms)**

The average network round trip time (RTT) is based on network latency. Network latency is the detected network latency between the ICA client device and the Citrix Presentation Server. Unlike the ICA round trip metric, the network round trip is largely independent of processing time on the client or server.

## **Avg Output (KB/sec)**

A measure of ICA client traffic from a Presentation Server to an ICA Client.

## **Avg Output Bandwidth Used (Kbps)**

The average output bandwidth used over the specified time period, expressed as kilobits per second. Output bandwidth used is the actual bandwidth consumed on the network (Presentation Server to ICA Client). (EUEM)

## **Avg Page Faults/sec**

The average number of page faults per second for In capturing page faults, both hard and soft page faults are counted (with hard page faults, data must be read from disk; with soft page faults, data is found in physical memory but must be rearranged). Page faults can occur if the virtual memory system becomes unstable due to a shortage of physical memory (RAM) or a shortage of free disk space.

## **Avg Pages Per Second**

The average pages per second read from or written to disk over the specified time period. See Pages per Second.

## **Avg Process Count**

The average number of processes running on a device for a specified time period.

## **Avg RTT (ms)**

The average round trip time. Round trip time (RTT) is a measure of network response. Citrix EdgeSight Agents measures the round-trip time passively during a network connection creation. Whenever a TCP/IP socket connection is made, the agent records the RTT for that socket connection to the server. RTT can sometimes be measured to be zero.

## **Avg Running Time**

The average running time for an application over the specified time period. See Running Time.

## **Avg Server Startup Duration (ms) or Avg SSD**

The average time spent on the Presentation Server performing the entire start-up operation. In the event of an application starting in a shared session, this metric is expected to be much smaller, as starting a completely new session involves potentially high cost tasks such as profile loading and login script execution.

## **Avg Test Duration (ms)**

The average time, in milliseconds, taken to execute a test. Tests are created using EdgeSight Active Application Monitoring and can include one or more scripts that measure application availability or response time.

## **Avg Thread Count**

The average thread count over the specified time period. See Thread Count.

## **Avg Total Active Sessions**

The average number of total active sessions for a group of devices over a specified time period.

## **Avg Total Inactive Sessions**

The average number of total inactive sessions for a group of devices over a specified time period.

## **Avg Total Sessions**

The average number of total sessions for a group of devices over a specified time period.

[Back to top](#)

**B**

## **BUCC**

Backup URL Client Count. The number of backup URL retries before success. Note that this is the only client start-up metric that is a count of attempts, rather than a duration. (EUEM)

**C**

## **Capacity (GB)**

The total disk capacity in gigabytes (GB) for a device. This is used in calculating the percentage of free disk space.

## **CASD**

Credentials Authentication Server Duration. The time (ms) spent on the server authenticating the user credentials. (EUEM)

## **Category**

A classification for applications or processes based on their type or function, such as email programs or spyware programs.

## **CFDCD**

Configuration File Download Client Duration. The time (ms) it takes to get the configuration file from the XML server. (EUEM)

## **Client Address**

The IP address of a device connecting to a Presentation Server.

## **Client Delay (ms)**

To calculate client delay (ClientPercent), we first calculate the amount of time between successive reads of data coming from the server. This is the amount of time taken by the client to read and process the buffers that make up a server response.

## **Client Name**

The name of a device connecting to a Presentation Server.

## **Client Time**

In alert reports, the time that an alert condition occurred on the device running an EdgeSight Agent (not to be confused with a client device connecting to a Presentation Server). If the device where the alert condition occurred and the server are in different time zones, the time is converted to the time zone of the server.

## **Client Type**

The type of client connecting to a Presentation Server, such as ICA Win32 or RDP.

## Client Version

The version of the executable file for a client connecting to a Presentation Server. This data may not be displayed for all client types. For example, a version is displayed for ICA Win32 clients, but not for RDP clients.

## COCD

Credentials Obtention Client Duration. The time (ms) it takes to get the user credentials. Note that COCD is only measured when credentials are entered manually by the user. (EUEM)

## Connections

The number of connections made to a Presentation Server by a type of client for the specified time period.

## CONSD

Credentials Obtention Network Server Duration. The time (ms) spent by the server performing network operations to obtain credentials for the user. This only applies to an SSPI login (a form of pass-through authentication where the client device is a member of the same domain as the server and Kerberos tickets are passed in place of manually entered credentials). (EUEM)

## Console

The number of sessions using the console connection.

## Context Switches / sec

Context Switches/sec is the combined rate at which all processors on the computer are switched from one thread to another. Context switches occur when a running thread voluntarily relinquishes the processor, is preempted by a higher priority ready thread, or switches between user-mode and privileged (kernel) mode to use an Executive or subsystem service. It is the sum of Thread Context Switches/sec for all threads running on all processors in the computer and is measured in numbers of switches. There are context switch counters on the System and Thread objects. This counter displays the difference between the values observed in the last two samples, divided by the duration of the sample interval.

## COSD

Credentials Obtention Server Duration. The time (ms) taken for the server to obtain the user credentials. This is only likely to be a significant amount of time if manual login is being used and the server-side credentials dialog is displayed (or if a legal notice is displayed before login commences). (EUEM)

## CPU (%)

The average percent CPU usage over the specified time period. If a machine has more than one processor, the counter value for each processor is totaled, and the resulting value is divided by the number of processors. A separate value is not attributed to a specific processor. The same calculation method is used for hyperthreaded processors. For example, if a machine has dual, hyperthreaded processors, the total metric is divided by four.

## CPU Time

The cumulative CPU usage time over the specified time period.

## **CPU Utilization Management**

Indicates whether the CPU Utilization Management feature is enabled or disabled. This is a feature of Presentation Server 4.0 designed to give each user a fair share of the CPU by modifying the normal job priority scheduling in the operating system. CPU time will be allocated fairly across all users on the server. It normalizes the CPU usage of each user by smoothing out the normal CPU peaks that most applications have. It will limit very CPU-intensive applications to a fair-share of the CPU, so that one user does not inadvertently have an inappropriate adverse affect on the other users. This enables administrators to easily calculate how many users can fit on a machine at once and hence how many machines must be purchased.

## **Current Service State**

The current state of the IMA service: Machine Boot, Service Started, Service Stopped, Service Stopped Unexpectedly, Machine Shutdown, Machine Shutdown Unexpectedly, or Unknown state.

[Back to top](#)

**D**

## **Date**

The date on which the associated data was collected. Note that dates and times in historical reports are expressed relative to the time zone of the EdgeSight server.

## **Device**

A system hosting an EdgeSight agent. This can be a Presentation Server or an endpoint system.

## **DMSD**

Drive Mapping Server Duration. The time (ms) spent on the server mapping the users' client drives, devices, and ports. (EUEM)

## **Drive Input (bps)**

The bandwidth, measured in bps, used when performing file operations between the client and server drives during an ICA session.

## **Drive Output (bps)**

The bandwidth, measured in bps, used when performing file operations between the client and server drives during an ICA session.

## **Duration - session**

The total elapsed time for a session.

## **Duration (ms)**

In the Application Response Time for a Test report, the total elapsed time to execute an EdgeSight Active Application Monitoring test.

[Back to top](#)

## E

### End Time

The time that a user's Presentation Server session was terminated.

### Errors - process

The number of errors detected for a process. This can be reported relative to a process, a device, or a user. EdgeSight determines a message box to be a notification of a process error if the message box contains an error icon or the text of the message box contains one or more of the following error keywords: error, unable, fail\*, unsuccessful, unexpected, bad, fault, invalid, illegal, denied, not valid, exception, or memory. Process errors fall into the following categories:

- File---Problems such as an invalid file or folder name, or a media error.
- Login & Authorization---Problems such as a logon failure due to an invalid username or password.
- Security---Problems such as a failure to access files or services due to not having been granted the required permissions or not having been assigned the required role.
- Printer---Problems such as a failure to access a printer or queue a file for printing.
- Data---Problems such as a failure to read or write data due to syntax, connectivity, or resource issues.
- Database---Problems such as an error when selecting, inserting, or updating data due to syntax or database connectivity issues.
- Connecting & Downloading---Problems such as the loss of a network connection or a download failure due to resource or network constraints.
- Uncategorized---Problems that can not be categorized based on keywords contained in the error message.

### Errors - Web

The number of Web errors detected. Web errors include both transaction errors and Winsock errors.

### Event ID

An event number used to identify the specific event.

### Event Type

The classification of the event by the operating system, such as Error, Warning, information, Success Audit, or Failure Audit.

[Back to top](#)

## F

### Faults

The number of faults (crashes) detected for a process. This can be reported relative to a process, a device, or a user. You can view crash reports and dump files (Crash Details, XML Report, Mini Dump, or Crash CAB), if available. When displaying process faults in a report, click the information icon to display fault report details. Note that in some cases, crash conditions prevent the collection of data.

### Filename

The name of the executable file for a process.

### First Seen - process or site

The date on which the process or site was first detected by an EdgeSight Agent. To avoid over reporting new processes, there is a lag time of several days after EdgeSight Server and Agents are installed before

processes are reported as new. This allows baseline data to be established for applications already installed on managed systems. This ensures that the information displayed reflects applications that are truly new to your enterprise.

### **Free Space (GB)**

The amount of free space on a disk in gigabytes.

[Back to top](#)

### **H**

### **Highest Memory Usage (%)**

The highest percentage of memory used on a device during the specified time period.

### **Host**

A system hosting a Web site. In some cases, host and site are used interchangeably.

[Back to top](#)

### **I**

### **ICA (Independent Computing Architecture)**

The architecture that Presentation Server uses to separate an application's logic from its user interface. With ICA, only the keystrokes, mouse clicks, and screen updates pass between the client and server on the network, while 100% of the application's logic executes on the server.

### **ICA Session Compression Input (%)**

The compression ratio used from client to server for a session.

### **ICA Session Compression Output (%)**

The compression ratio used from server to client for a session.

### **ICA Session Line Input (bps)**

The line speed, measured in bps, used from client to server for a session.

### **ICA Session Line Output (bps)**

The line speed, measured in bps, used from server to client for a session.

### **IFDCD**

ICA File Download Duration. The time (ms) it takes the client to download the ICA file from the web server for Program Neighborhood Agent or Web Interface. (EUEM)

### **IMA (Independent Management Architecture)**

A server-to-server infrastructure that provides robust, secure, and scalable tools for managing any size server farm. Among other features, IMA enables centralized platform-independent management, an ODBC-compliant data store, and management products that plug into a management console.

## **Interrupts/sec**

Interrupts per second is the average rate, in incidents per second, at which the processor received and serviced hardware interrupts. It does not include deferred procedure calls (DPCs), which are counted separately. This value is an indirect indicator of the activity of devices that generate interrupts, such as the system clock, the mouse, disk drivers, data communication lines, network interface cards, and other peripheral devices. These devices normally interrupt the processor when they have completed a task or require attention. Normal thread execution is suspended. The system clock typically interrupts the processor every 10 milliseconds, creating a background of interrupt activity. This counter displays the difference between the values observed in the last two samples, divided by the duration of the sample interval.

[Back to top](#)

**L**

## **Last Alert**

The date and time that the most recent alert was received by the server.

## **Last Change**

The date and time that the last asset change (addition, property change, or removal) occurred on a device.

## **Last Visited - sites**

The date and time that a Web site was last accessed by a user.

## **Launcher**

The name of the EdgeSight Active Application Monitoring launcher from which tests were run.

## **Login Time (sec) {LoginTime}**

Login time is the time between the start of a session and the end of the last process created as part of the login operation for that session. The login time metric is computed on the Presentation Server machine where the agent is running.

## **Logins**

The number of separate Presentation Server logins by a user over a specified time period.

## **LPWD**

Launch Page Web Server Duration. The time (ms) it takes to process the launch page (launch.aspx) on the Web Interface server. (EUEM)

## **LSESD**

Login Script Execution Server Duration. The time (ms) spent on the server running the users' login script(s). (EUEM)

[Back to top](#)



## M

### **Manufacturer**

The company which made a hardware asset which was the source of an alert condition. This is analogous to vendor for software assets.

### **Max Queue Length**

The maximum thread queue length for the specified time period. Thread queue length indicates how long a particular thread is waiting for instructions to be performed. A high thread queue length may be caused by an underpowered machine.

### **Max ICA RTT (ms)**

The greatest single ICA round trip time during the specified time period. The ICA round trip is the time interval measured at the client between the first step (user action) and the last step (graphical response is displayed), as calculated by the session experience monitoring service. The ICA round trip metric can be best thought of as a measurement of the "screen lag" that a user experiences while interacting with an application hosted in a session on a Presentation Server. (EUEM)

### **Max MP Duration (ms)**

The maximum time, in milliseconds, taken to execute a monitoring point. Monitoring points are created using EdgeSight Active Application Monitoring, and can be a single instruction or a folder containing multiple instructions that measure application availability or response time.

### **Max Network RTT (ms)**

The maximum network round trip time (RTT) is based on network latency. Network latency is the detected network latency between the ICA client device and the Citrix Presentation Server. Unlike the ICA round trip metric, the Network round trip is largely independent of processing time on the client or server. (EUEM)

### **Max Queue Length**

The greatest number of threads in the queue during the specified time period. Thread queue length indicates how long a particular thread is waiting for instructions to be performed. A high thread queue length may be caused by an underpowered machine.

### **Max RTT (ms)**

The maximum round trip time in milliseconds. Round trip time (RTT) is a measure of network response. Citrix EdgeSight Agents measures the round-trip time passively during a network connection creation. Whenever a TCP/IP socket connection is made, the agent records the RTT for that socket connection to the server. RTT can sometimes be measured to be zero.

### **Max Test Duration (ms)**

The maximum time, in milliseconds, taken to execute a test. Tests are created using EdgeSight Active Application Monitoring and can include one or more scripts that measure application availability or response time.

### **Memory Usage (%)**

% Committed Bytes, which is the ratio of Memory Committed Bytes to the Memory Commit Limit. Committed memory is the physical memory in use for which space has been reserved in the paging file should it need to be written to disk. The commit limit is determined by the size of

the paging file. If the paging file is enlarged, the commit limit increases, and the ratio is reduced. This counter displays the current percentage value only; it is not an average.

The percent of committed bytes is used as the metric for monitoring memory usage because it most accurately reflects the system-wide memory consumption on the machine.

As memory usage increases, so does the % Committed Bytes value. If a static memory consumption value, like Committed Bytes, was used, it would not be possible to determine the memory load on the machine as well as the total available memory. % Committed Bytes takes both used and available memory into account.

The metric is also valuable for device comparison purposes. A percentage is normalized from one machine to the next but a static memory consumption value is not. For example:

Machine A

-----

Committed Bytes: 746MB  
Commit Limit: 2461MB  
% Committed Bytes: 30.3%

Machine B

-----

Committed Bytes: 587MB  
Commit Limit: 843MB  
% Committed Bytes: 69.6%

It is possible to tell from % Committed Bytes alone that Machine B has a high memory load and Machine A does not. However, by looking at Committed Bytes, it is only possible to tell is that Machine A is using more memory than Machine B. There is no insight into the load on the machine.

### **Min MP Duration (ms)**

The minimum time, in milliseconds, taken to execute a monitoring point. Monitoring points are created using EdgeSight Active Application Monitoring, and can be a single instruction or a folder containing multiple instructions that measure application availability or response time.

### **Min Test Duration (ms)**

The minimum time, in milliseconds, taken to execute a test. Tests are created using EdgeSight Active Application Monitoring and can include one or more scripts that measure application availability or response time.

### **Monitoring Point**

An instruction or group of instructions within an EdgeSight Active Application Monitoring script which is used to measure application availability or response time.

### **MP's Failed**

The number of monitoring points which failed during the time period selected. Monitoring points are created using EdgeSight Active Application Monitoring, and can be a single instruction or a folder containing multiple instructions that measure application availability or response time.

### **MP's Passed**

The number of monitoring points which passed during the time period selected. Monitoring points are created using EdgeSight Active Application Monitoring, and can be a single instruction or a folder containing multiple instructions that measure application availability or response time.

[Back to top](#)

## N

### Network Delay (ms)

Network delay is the network round-trip time plus the time it takes the server to respond to the transaction request. Network delay is measured passively on the client by monitoring the sends and receives between a client and a server.

On the initial connection of a socket, the round-trip time (RTT) to the first level server for that connection is recorded. Then, on a sampled basis (or when the socket is closed), the number of round trips (NumRoundTrips) is estimated based on the amount of sent and received data for the socket. The delay for the current transaction (TransDelay) is also recorded. A transaction is defined as a request followed by a response. The delay is detected at the Winsock level.

In order to maintain the efficiency of the Citrix EdgeSight Agent, network delay is ignored when very small network payloads occur. This is consistent with the goal of providing an accurate assessment of end-user network performance.

### NRCD

Name Resolution Client Duration. The time (ms) it takes the XML service to resolve the name of a published application to an IP Address. This metric is only collected for new sessions, and only if the ICA file does not specify a connection to a Presentation Server with the IP address already provided. (EUEM)

### NRWD

Name Resolution Web Server Duration. The time (ms) it takes the XML service to resolve the name of a published application to a presentation server address. This metric is collected when the application is launched via the Program Neighborhood Agent or Web Interface. (EUEM)

[Back to top](#)

## P

### Pages per Second

Pages per second. Pages/sec is the rate at which pages are read from or written to disk to resolve hard page faults. This counter is a primary indicator of the kinds of faults that cause system-wide delays. It is the sum of Memory

Pages Input/sec and Memory

Pages Output/sec. It is counted in numbers of pages, so it can be compared to other counts of pages, such as Memory

Page Faults/sec, without conversion. It includes pages retrieved to satisfy faults in the file system cache (usually requested by applications) non-cached mapped memory files.

### PCSD

Printer Creation Server Duration. The time (ms) spent on the server synchronously mapping the users' client printers. If the configuration is set such that this printer creation is performed asynchronously, then no value is recorded as it does not affect the completion of the session startup. (EUEM)

### Peak Concurrent or Peak Concurrent Sessions

The most sessions (active and inactive) at any given time during the specified time period.

### Peak CPU (%)

The highest percentage of CPU used by a device during the specified time period.  
See CPU(%).

### **Peak CPU % User**

The user associated with the session accounting for the peak CPU usage, as displayed in Peak CPU (%).

### **Peak Input (KB/sec)**

A measure of ICA client traffic from an ICA Client to a Presentation Server.

### **Peak Input Bandwidth Used (Kbps)**

The greatest single input bandwidth used data sample, expressed as kilobits per second. Input bandwidth used is the actual bandwidth consumed on the network (ICA Client to Presentation Server). This metric is calculated by the session experience monitoring service.

### **Peak Latency (ms)**

The highest measured ICA session latency in milliseconds for a time period. ICA session latency is based on the last recorded latency measured for the session (Latency - Last Recorded). The samples recorded by the agent are consolidated to one hour intervals in the data uploaded to the server.

### **Peak Login Time (sec)**

The highest recorded login time for a selected time period. Login time is the time between the start of a session and the end of the last process created as part of the login operation for that session. The login time metric is computed on the Presentation Server machine where the agent is running.

### **Peak Output (KB/sec)**

A measure of ICA client traffic from the Presentation Server to an ICA Client.

### **Peak Output Bandwidth Used (Kbps)**

The greatest single output bandwidth used data sample, expressed as kilobits per second. Output bandwidth used is the actual bandwidth consumed on the network (Presentation Server to ICA Client).

### **Percent Free**

The percentage of total space on a disk which is free.

### **Percent Memory**

The percentage of available memory used on a device over a specified time period.

### **Percent of All Connections**

The percentage of all connections made to a Presentation Server that were made by a specific client type over the specified time period.

### **Physical Memory (MB)**

The amount of physical memory (in megabytes) installed on a device.

### **PLSD**

Profile Load Server Duration. The time (ms) spent on the server loading the users' profile. (EUEM)

## **PNCOSD**

Program Neighborhood Credentials Obtention Server Duration. The time (ms) taken for the server to cause the Program Neighborhood instance running on the client (PN Classic) to obtain the user credentials. This credentials dialog is displayed and managed by the client side, but the duration is measured on the server. (EUEM)

## **Port**

The port, identified by port number, for a Web site.

## **PPS**

See Pages per second.

## **Printer Input (bps)**

The bandwidth, measured in bps, used when printing to a client printer through a client that has print spooler support enabled.

## **Printer Output (bps)**

The bandwidth, measured in bps, used when printing to a client printer through a client that has print spooler support enabled.

## **Private Kbytes (or Private KB)**

The current size, in bytes, of memory that this process has allocated (Process Private Bytes). Private bytes cannot be shared with other processes.

## **Privileged Time %**

Privileged Time % is the percentage of elapsed time that the process threads spent executing code in privileged mode. Windows system services often runs in privileged mode to gain access to system-private data. Such data is protected from access by threads executing in user mode. Calls to the system can be explicit or implicit, such as page faults or interrupts. Windows uses process boundaries for subsystem protection in addition user and privileged modes.

## **Proc Count**

In CPU reports, the number of processors on a device.

## **Process**

The name of the specific process being reported on.

## **Process Count**

The number of processes run on the device over the specified time period.

## **Process Ended**

The date and time that a process within a session ended.

## **Process Faults**

The number of process faults encountered during the specified time period. See Faults.

## Processor Speed

In CPU reports, a range of processor speeds (expressed in gigahertz), such as 1 GHz to 2Ghz. In detail areas, processor speed is shown in megahertz (MHz) for individual devices.

## Process Started

The date and time that a process within a session started.

## Property

In asset reports, the WMI property associated with an asset change. See Asset for more information.

## Published Application

The name under which an application is published on a Presentation Server. If this field is blank, this indicates that the application is not a published application.

[Back to top](#)

## R

### RDP

The number of sessions using RDP (Remote Desktop Protocol). RDP is an input/output presentation protocol from Microsoft that controls keyboard, mouse, and screen formatting between clients and servers in a thin client environment.

### Reboots

The number of system reboots detected during the specified time period, including both expected and unexpected reboots. An expected or user-initiated reboot is one occurring under software control as a result of a user action. For example, a user initiated reboot occurs when applying a service pack requiring a reboot, or shutting down the system from the shutdown menu or the task manager. An unknown or unexpected reboot is defined as one that did not occur under software control. For example, pressing the reset button, unplugging the computer, or turning off power are all examples of unexpected reboots. Unexpected reboots may indicate an end user response to system problems.

### RECD

Reconnect Enumeration Client Duration. The time (ms) it takes a client to get a list of reconnections. (EUEM)

### Received (KB) - volume

Network volume is the total number of kilobytes received from a server as measured passively from the clients.

### Request

The part of a web transaction that specifies the type of content exchanged, such as text/html.

### REWD

Reconnect Enumeration Web Server Duration. The time (ms) it takes the Web Interface to get the list of reconnections from the XML service. (EUEM)

## Running Time

Running time is the actual amount of time that a program is running in memory, regardless of whether the user is using the application. Citrix EdgeSight Agents track application usage to calculate how long an application is actively used and how long it is run, and to collect usage counts for license tracking.

[Back to top](#)

**s**

## SCSD

Session Creation Server Duration. The time (ms) spent on the server creating the session. The duration starts when the ICA client connection has been opened and ends when authentication begins. This should not be confused with the overall Session Startup Server duration. (EUEM)

## Sent (KB) - volume

Network volume is the total number of kilobytes sent from a server as measured passively from the clients.

## Server Delay (ms)

Server delay (ServerPercent) is derived from Network and Client Delay. The server delay value represents the delay beyond the first level server, which could contain multiple tiers of delay.

## Server Time

The time that an event occurred or was received by the server. The time is displayed relative to the time zone of the server. Note that clients (devices running the EdgeSight Agent) and the associated server may be in different time zones.

## Session Duration

The total elapsed time that a session was active.

## Session Ended

The date and time that a Presentation Server session was ended.

## Session Started

The date and time that a Presentation Server session was started.

## Sessions

The number of Presentation Server sessions started over a specified time period.

## Sessions Created

The total number of Presentation Server sessions created during a specified time period.

## Site

A Web site, identified by an IP address or host name.

## Source

The system entity causing the alert condition, such as an application, process, web site, or system service.

## SpeedScreen Input (bps)

The bandwidth, measured in bps, used from client to server for data channel traffic.

## SpeedScreen Output (bps)

The bandwidth, measured in bps, used from server to client for data channel traffic.

## SSSD

Session Startup Server Duration. This is the high level server connection startup metric. This includes the time (ms) spent on the Presentation Server performing the entire start-up operation. In the event of an application starting in a shared session, this metric is expected to be much smaller, as starting a completely new session involves potentially high cost tasks such as profile loading and login script execution. (EUEM)

## Started or Start Time

The time that a user's Presentation Server session was started.

## Status

In the Application Response Time for a Test report, the pass/fail status of an EdgeSight Active Application Monitoring test.

## System Calls/sec

System Calls/sec is the combined rate of calls to operating system service routines by all processes running on the computer. These routines perform all of the basic scheduling and synchronization of activities on the computer, and provide access to non-graphic devices, memory management, and name space management. This counter displays the difference between the values observed in the last two samples, divided by the duration of the sample interval.

[Back to top](#)

## T

## Test

The name of an EdgeSight Active Application Monitoring test.

## Test Start Time

The time that an EdgeSight Active Application Monitoring test was started. A test can include one or more scripts.

## Tests Failed

The number of tests which failed during the time period selected. Tests are created using EdgeSight Active Application Monitoring and can include one or more scripts.



## Tests Passed

The number of tests which passed during the time period selected. Tests are created using EdgeSight Active Application Monitoring and can include one or more scripts.

## Thread Count

The number of threads currently active in a process (Process Thread Count).

## Total CPU (%)

The percentage of total CPU time used by a session or process over the specified time period. See CPU (%).

## Total Delay (ms)

The total network delay over a specified time period. See Network Delay (ms).

## Total KB - volume

See Volume (KB)

## Total Sessions

The total number of sessions (active and inactive) during the specified time period.

## Total Volume (KB)

See Volume (KB).

## Transaction

A network transaction, defined by a site, transaction, request, and type. Citrix EdgeSight Agents passively measure the delay and round trip time at the HTTP component level, such as javascript, text, and html get requests, for a host/page request from a device.

## Type

In asset reports, the type of asset change that occurred, such as added, changed, or removed.

In web transaction reports, the type of action being performed, such as GET or POST.

Back to top

## u

## Unique Users

The number of unique users (defined by domain and user name) of a process.

## User

An individual logged on to a monitored device and identified by a domain and username.

## User Time %

User Time% is the percentage of elapsed time the processor spends in the user mode. User mode is a restricted processing mode designed for applications, environment subsystems, and integral subsystems

(privileged mode is designed for operating system components and allows direct access to hardware and all memory). The operating system switches application threads to privileged mode to access operating system services. This counter displays the average busy time as a percentage of the sample time.

[Back to top](#)

**v**

### **Version**

The version number of a process or application.

### **Video Frame Input (bps)**

The bandwidth from client to server traffic on a virtual channel. Measured in bps.

### **Video Frame Output (bps)**

The bandwidth from server to client traffic on a virtual channel. Measured in bps.

### **Virtual Kbytes (or Virtual KB)**

The current size, in kilobytes, of the virtual address space used by the selected process (Process Virtual Bytes). This metric is useful for diagnosing memory leaks, which can cause either a steady increase or a sharp spike in virtual byte usage.

### **Volume (KB)**

Network volume is the total number of kilobytes sent and received from a server as measured passively from the clients.

**w**

### **Web Errors**

Web errors include both transaction errors and Winsock errors.

### **Working Set (KB)**

The shared and private kilobytes allocated to a process (Process Working Set). The working set represents the actual amount of physical memory used by a process.

[Back to top](#)

## Configuring EdgeSight for Your Environment

---

This page last changed on Apr 29, 2010 by [ronaldb](#).

After EdgeSight is installed, the person doing the installation uses the Post-Installation Wizard to explicitly specify critical operating parameters for EdgeSight Server:

- an initial (or root) company
- a Superuser account that can access all companies on a server and can create new users
- email settings used to send server notifications
- a port used to communicate with the license server.

In addition to these setting, there are many default settings which enable EdgeSight to be fully operational as quickly as possible. See the *Citrix EdgeSight Administrator's Guide* for more information about configuring EdgeSight.

- [Configuring Alerts](#)
- [Data Maintenance](#)

## Configuring Alerts

---

This page last changed on Apr 27, 2010 by [ronaldb](#).

*This is a stub article and may be combined with another article or expanded.*

## Data Maintenance

---

This page last changed on Apr 29, 2010 by ronaldb.

### Overview

Data maintenance starts with proactive planning and preparation around database storage requirements and maintenance procedures. These are essential to ensuring the right set of data can be retrieved quickly and efficiently. Influencing factors around database sizing and grooming include:

- What data do I need to keep (current and archive)?
- How long is historical data retained?
- What applications will I be monitoring/measuring?
- How many endpoints and/or servers are monitored/measured?
- How long do I want to keep alerts and network performance statistics? • Are there regulatory or other factors driving data retention requirements?

As each environment is unique in its size, complexity and monitoring methodology, performing a proof of concept with EdgeSight for XenApp helps establish a baseline database size based on a company's defined requirements. Evaluating these results, in conjunction with the number of monitored nodes, monitoring requirements, and planned/unplanned growth will assist in determining the appropriate amount of space required by the EdgeSight database. Depending on the number of end-user systems, applications, and network activity, databases can grow quickly without proper management. In addition to standard database maintenance guidelines for Microsoft SQL Server, EdgeSight addresses growing databases with database grooming features and data archiving techniques:

- Grooming is the process of removing older data from a database at regular intervals to make room for new data. Grooming is critical for maintaining efficient database operation. An effective grooming schedule controls database size and helps ensure acceptable performance while retaining sufficient data for business operations. Additional information on database grooming in EdgeSight is available in the *Citrix EdgeSight Administrator's Guide* and <http://support.citrix.com/article/ctx111021> on how to properly configure and manage this feature.
- Archiving is housing data required for long-term use, such as trend analysis, compliance documentation, and capacity planning. Data should be warehoused in preference to relaxing the grooming configuration. Archiving ensures that required data is available for long-term reporting without compromising the performance of Citrix EdgeSight in day-to-day operations. Additional information on data warehousing and archiving concepts with EdgeSight 4.5 can be found in the *Citrix EdgeSight User's Guide*.

### Configuring Data Uploading

You can select what types of performance and availability data you want to upload to the server (**Server Configuration > Data Maintenance > Upload Configuration**). This allows you to optimize EdgeSight Server performance by limiting data uploads to reflect the data you actually use.

The uploading of XenApp Environmental Usage data is disabled by default, and should only be enabled if you plan to use the Environmental Usage report, which displays this data. Depending on the number of sessions for the group or device, the data used to generate these reports can significantly increase the size of your EdgeSight database. In many cases, you may want to enable data collection for a period of time as required and then disable data collection when no longer needed. In the past, one of the reasons for using this report was that it contained some Published Applications data. As of EdgeSight 5.3, there are a number of new reports which track the usage of Published Applications.

## Custom Reports

---

This page last changed on Apr 29, 2010 by [ronaldb](#).

From time to time, EdgeSight engineers or EdgeSight users develop custom reports. This page is a place to share new reports with the EdgeSight community. Reports are stored and delivered as RDL (Report Definition Language) files. Note that these custom reports have not gone through the same quality assurance process as have the standard EdgeSight reports.

To upload a custom report, click on the link for the report and save the RDL file. Then open the EdgeSight Server Console and navigate to **Configure > My Settings > Custom Reports**. Click **Upload a Report** and follow the instructions provided in online help.

## Available Custom Reports

- [Citrix Service Provider - License Usage Reports](#)
- [Citrix Service Provider - Resource Usage per User Reports](#)
- [Citrix Service Provider - Server Utilization Report](#)
- [Citrix Service Provider - SLA Compliance Reports](#)
- [License Server Usage Trends - Custom Report](#)
- [Unique User Logon Counts - Custom Report](#)

## Comments

---

Hi there.

Is it possible to include custom reports for Edgesight for Netscaler? I noticed that these reports are for Edgesight for Xenapp / Presentation Servers.

Thanks.

Posted by [fquijano](#) at Oct 03, 2011.

---

Hello

I am looking for a report how shows the maximum of CCU Users for a department and a certain period (month).

The XenApp performance report has a subreport which does what I want. Is there anyone who can tell me how to schedule just that sub-report

Report Name="**subreport\_ctrx\_active\_sessions\_byday\_line**">

Regards

Reinhard

Posted by [rtravni42](#) at Apr 13, 2012.

---

## Citrix Service Provider - License Usage Reports

This page last changed on May 20, 2011 by ronaldb1.

Report Name	Report Description
<a href="#">CSPLicenseDeptOnly.rdl</a>	List of unique active users, by department, that have accessed a published application or desktop with a count
<a href="#">CSPLicenseUserGroupOnly.rdl</a>	List of unique active users, by group, that have accessed a published application or desktop with a count

### Table of Contents

- [1 Overview](#)
  - [1.1 Usage Notes](#)

Bookmark This Page Add To Favorite Reports Refresh Subscribe Properties

Department or Group: All XenApp Farms\IC6624  Root Only

Start: 2011-05-12 End: 2011-05-19

Go

1 of 1 Page Width Find | Next

**Citrix Service Provider - License Usage**

List of unique active users that have accessed a published application or desktop

Period	Unique Users Logged on
Total Unique Users	25
Month	Unique Users Logged on
May 2011	25
User	
IC6624A\Anon000	
IC6624A\Anon001	
IC6624A\Anon002	

Bookmark This Page Add To Favorite Reports Refresh Subscribe Properties

User Group: All XenApp Users Edit user groups

Start: 2011-05-12 End: 2011-05-19

Go

1 of 1 Page Width Find | Next

**Citrix Service Provider - License Usage**

List of unique active users that have accessed a published application or desktop

Period	Unique Users Logged on
Total Unique Users	26
Month	Unique Users Logged on
May 2011	26
User	
IC6624A\Anon000	
IC6624A\Anon001	
IC6624A\Anon002	

## Overview

On a monthly basis, a Citrix Service Provider (CSP) is required to provide to Citrix a spreadsheet that lists out the tenants as well as the number of unique users from each tenant that accessed XenApp last month. These custom reports can be used by a CSP to compile this data.

## Usage Notes

1. Two reports are provided, one in which users are filtered by department and one in which they are filtered by user group. Select the report to use based on your reporting requirements.



## Citrix Service Provider - Resource Usage per User Reports

This page last changed on May 20, 2011 by ronaldb1.

Report Name	Report Description
<a href="#">ResourceUsageByUserGroup.rdl</a>	Resource (CPU, memory, network) usage data per user filtered by user group
<a href="#">ResourceUsageByUserDept.rdl</a>	Resource (CPU, memory, network) usage data per user filtered by department

### Table of Contents

- 1 [Overview](#)
- ◦ 1.1 [Usage Notes](#)

User	Virtual (KB)	Avg Total CPU %	Avg Input Bandwidth (bytes)	Avg Output Bandwidth (bytes)	Peak Input Bandwidth (bytes)	Peak Output Bandwidth (bytes)
IC6624A\Anon000	557,631	4.72	1,514	3,416	4,296	9,224
IC6624A\Anon001	568,136	2.59	849	1,678	3,024	6,248
IC6624A\Anon002	534,562	5.01	256	712	432	1,216

## Overview

On a monthly basis, a Citrix Service Provider (CSP) is required to provide a report that shows the resource consumption (CPU, memory, network) per XenApp user. These custom reports can be used by a CSP to compile this data.

## Usage Notes

1. Two reports are provided, one in which users are filtered by department and one in which they are filtered by user group. Select the report to use based on your reporting requirements.

# Citrix Service Provider - Server Utilization Report

This page last changed on May 20, 2011 by ronaldb1.

Report Name	Report Description
<a href="#">CSPXAServerUtilization.rdl</a>	Resource (CPU, memory) usage and session data for a XenApp server

## Table of Contents

- 1 [Overview](#)

Device	Avg CPU (%)	Avg Memory Usage (%)	Avg Sessions	Peak Sessions
IC6624A	4.69	43.87	2	15
IC6624C	3.09	32.19	2	6
IC6624D	2.65	40.05	2	4

## Overview

On a monthly basis, a Citrix Service Provider generates and reviews a report that shows the resource consumption (CPU, memory) and session activity per XenApp server. This report can aid in capacity planning.

# Citrix Service Provider - SLA Compliance Reports

This page last changed on May 20, 2011 by ronaldb1.

Report Name	Report Description
<a href="#">SLAbyDept.rdl</a>	List of unique active users, by department, that have accessed a published application or desktop with a count
<a href="#">SLAbyUserGroup.rdl</a>	List of unique active users, by group, that have accessed a published application or desktop with a count

## Table of Contents

- [1 Overview](#)
- [1.1 Usage Notes](#)

The screenshots show the Citrix Service Provider - SLA Compliance report interface. The top screenshot displays the report for 'Department: All' with a table of user metrics. The bottom screenshot displays the report for 'User Group: All XenApp Users' with the same table of user metrics.

User	Session Count	Peak HDX Latency	Average HDX Latency	Peak Login Time	Average Login Time
<a href="#">IC6624A\Anon000</a>	7	5	2.00		
<a href="#">IC6624A\Anon001</a>	7	3	1.00		
<a href="#">IC6624A\Anon002</a>	2	8	2.00		
<a href="#">IC6624A\Anon003</a>	1		0.00		

## Overview

A Citrix Service Provider (CSP) may want to provide a report to a tenant that proves that the service-level agreements (SLA) are being met. These custom report can be used by a CSP to provide this data to a tenant.

## Usage Notes

1. Two reports are provided, one in which users are filtered by department and one in which they are filtered by user group. Select the report to use based on your reporting requirements.

## License Server Usage Trends - Custom Report

This page last changed on Apr 30, 2010 by ronaldb.

Report Name	Report Description
<a href="#">custom_license_usage_trend.rdl</a>	Sample report

### Table of Contents

- 1 [Prerequisites](#)
- 2 [Overview](#)
- ◦ 2.1 [Usage Notes](#)

Product Code	4/23/2010	4/24/2010	4/25/2010	4/26/2010	4/27/2010	4/28/2010	4/29/2010	4/30/2010
Access Gateway CAG_AAC_CCU	0 / 10000	0 / 10000	0 / 10000	0 / 10000	0 / 10000	0 / 10000	0 / 10000	0 / 10000
Access Gateway CAG_SSLVPN_CCU	2 / 10000	2 / 10000	2 / 10000	5 / 10000	5 / 10000	1 / 10000	1 / 10000	0 / 10000
Application Streaming CAS_ENT_CCU	0 / 1000	0 / 1000	0 / 1000	0 / 1000	0 / 1000	0 / 1000	0 / 1000	0 / 1000
EasyCall CCG_STD_CCU	0 / 1000	0 / 1000	0 / 1000	0 / 1000	0 / 1000	0 / 1000	0 / 1000	0 / 1000
EasyCall CCGW_STD_CCU	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1	0 / 1
StorageLink CEHV_ENT_CCS	0 / 5000	0 / 5000	0 / 5000	0 / 5000	0 / 5000	0 / 5000	0 / 5000	0 / 5000
StorageLink CEHV_PLT_CCS	0 / 5000	0 / 5000	0 / 5000	0 / 5000	0 / 5000	0 / 5000	0 / 5000	0 / 5000
StorageLink CEHVP_PLT_CCS	0 / 1000	0 / 1000	0 / 1000	0 / 1000	0 / 1000	0 / 1000	0 / 1000	0 / 1000
EdgeSight CESEP_ENT_CCU	76 / 5500	76 / 5500	75 / 5500	77 / 5500	78 / 5500	77 / 5500	78 / 5500	77 / 5500
EdgeSight CESLT_STD_SCCU	0 / 5000	0 / 5000	0 / 5000	0 / 5000	0 / 5000	60 / 5000	60 / 5000	0 / 5000
EdgeSight CESLT_STD_SSERVER	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2

## Prerequisites

You must configure one or more Citrix License Servers for polling in order to have data appear on this report.

## Overview

This report shows maximum license utilization and total available licenses per day (or month) and per license product code. Each cell in the grid displays 2 numbers separated by a slash, e.g. "76 / 5500". The first number is the maximum license usage and the second number is the total available number of licenses.

## Usage Notes

1. Currently, the report cannot be filtered by license server or by license product code. Those capabilities are provided by the Citrix licensing reports found on the **Track Usage** tab.
2. The EdgeSight License Server Monitor data is some of the only data collected by EdgeSight that is NOT specific to a Department or Usergroup. By definition, all report filters provide the option to filter

by Department or Usergroup, but in the case of this report, selecting a Department or Usergroup will have no effect on the data displayed.

3. Each license product code is grouped by the Citrix product name (e.g. Access Gateway, EasyCall, EdgeSight, XenApp, etc.) There can be multiple license product codes per Citrix product. In a few cases for newer product codes, EdgeSight cannot determine the Citrix product for a particular license product code; in those cases, the license product code is listed twice.

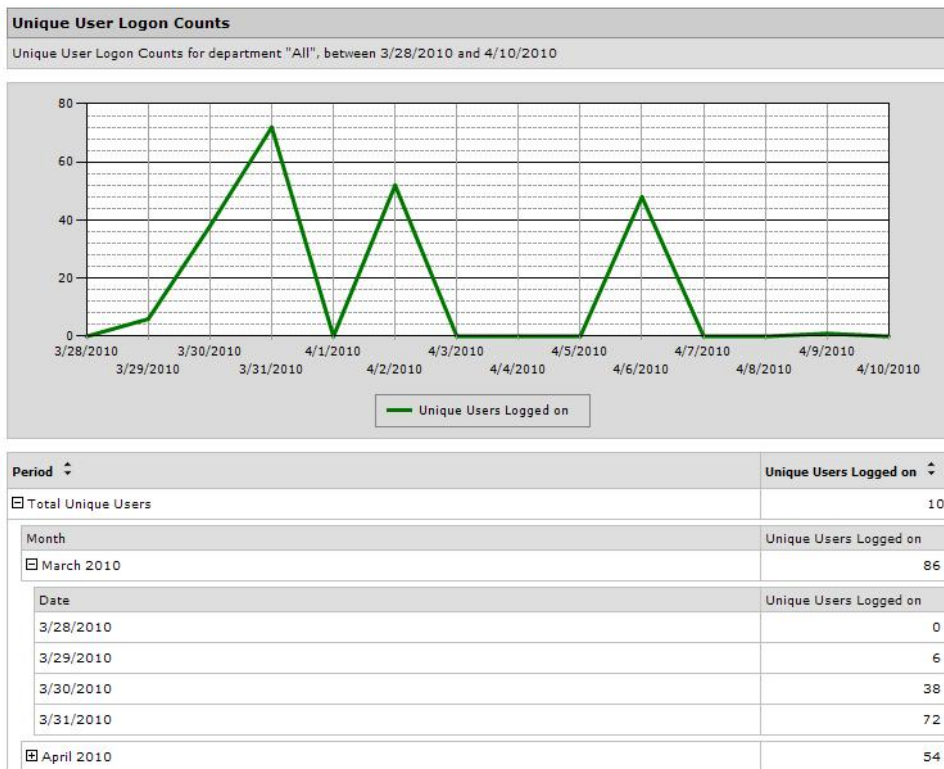
## Unique User Logon Counts - Custom Report

This page last changed on May 20, 2011 by ronaldb1.

Report Name	Report Description
<a href="#">custom_unique_user_logon_counts.rdl</a>	The number of unique users who have logged in

### Table of Contents

- [1 Prerequisites](#)
- [2 Overview](#)
- [3 Usage Notes](#)



## Prerequisites

EdgeSight 5.2 and above for XenApp or Virtual Desktops.

## Overview

This report displays the number of unique users who have logged in.

## Usage Notes

Use this report to determine the number of users who logged on during a time period. This report will not display the number of user who are concurrently logged in.

### Comments

More Custom reports please ... or even better, a guide showing how to take a SQL query and make a custom report out of it!

Posted by at Aug 10, 2010.

---

This report is great although it would be even better if it also reported who the unique users were. Is there any way that this can be added to the report?

Posted by at Nov 01, 2010.

---

EdgeSight 5.3 when importing the above report an Error saving file. An error occurred while parsing EntityName. Line 923, position 11063. Can you help with this ? Many Thanks

Posted by at Jun 02, 2011.

---

Are you using EdgeSight 5.3? We can try the import here. Also, we'll take a look at the syntax of the line in question. Thanks!

Posted by [ronaldb1](#) at Jun 02, 2011.

---

I have saved the report and imported it to an EdgeSight 5/3 server successfully. Could you detail the steps you used? Thanks.

Posted by [ronaldb1](#) at Jun 02, 2011.

---

Hi Ronald, can you please give the step by step process of saving this file and importing into EdgeSight 5.3 Many thanks

Posted by at Jun 22, 2011.

---

Sure thing! Here's what I do:

1. Right click on the file name and select Save Target As... from the context menu.
2. Save the file, making sure the extension is RDL.
3. Open the EdgeSight Console and click on the Configure tab.
4. Go to My Settings > Custom Report and click on Upload Report. The Upload Custom Report page is displayed.
5. Browse to the saved RDL file, supply a name (required) and click Upload. The report will be listed on the Custom Reports page and on the Browse tab.

The browser initially tried to treat the file as XML rather than RDL - I reapplied the Content Type to the attachment and that seemed to force the browser to recognize it as RDL.

Posted by [ronaldb1](#) at Jun 22, 2011.

---

Thanks Ronald that works a treat!! Also is there a simalar report that can be produced to show the same information as this report but for session counts and not unique users? I want to keep your format and layout, Many Thanks for your help.

Posted by at Jun 23, 2011.

---

It looks like the closest thing would be the standard Session Counts report (average active, inactive, and total session counts.) It goes down to an hourly granularity. For XenApp and XenDesktop, since the department structure mirrors the farm structure, you can filter by department to show sessions for the whole farm down to specific servers.

Posted by [ronaldb1](#) at Jun 23, 2011.

---

Hi Ronald, I have used the standard report but it does not give me a total month figure like your report does, I can see it has the same structure but not the total total it only shows daily totals

Can you help ?

Many Thanks

Posted by at Jun 23, 2011.

---

I was able to import the custom report and run it, but what do I enter for all of the parameters? LocaleCode, XA\_VDA\_Device, ParamLabels, CompID, etc...

Posted by at Nov 14, 2011.

---

Report runs well for me on ES 5.4. I too would like to know which tables/views this data is coming from. I want to ensure that my grooming configuration does not drop this data off prematurely.

Thanks,

Chris Woosley

Posted by [chriswoosley](#) at Jan 11, 2012.

---



## EdgeSight for Load Testing

---

This page last changed on Apr 27, 2010 by [ronaldb](#).

*This is a stub article and may be combined with another article or expanded.*

Table of Contents

- 1 [Overview](#)
- 2 [Releases](#)
- ◦ 2.1 [EdgeSight for Load Testing 3.5](#)

## Overview

This article provides a brief overview of EdgeSight for Load Testing. EdgeSight for Load Testing is an automated load and performance testing solution for Citrix XenApp and Presentation Server environments. The product extends the application performance visibility that Citrix EdgeSight for XenApp provides by introducing pre-production application performance tools. EdgeSight for Load Testing components include a controller and launchers.

The Controller is used to record and create virtual user scripts and define tests. When the test is ready for playback, the Controller instructs the Launchers to run the test with a certain number of virtual users for a certain period of time. The Launchers receive the commands from the Controller and generate virtual user ICA sessions on the target XenApp or Presentation Servers. The number of Launchers required will vary based on the target virtual user load.

The Launchers then report session information back to the Controller for run-time and post run-time analysis. This load generating software solution enables administrators to predict how systems will cope with high levels of user load. By simulating hundreds of virtual users and monitoring the responsiveness of the system under test, it allows the administrator to determine how the current configuration and hardware infrastructure will support anticipated demand.

## Releases

<description of release>

### EdgeSight for Load Testing 3.5

<summary>

This video discusses the new features in EdgeSight for Load Testing 3.5.

## Case Studies

---

This page last changed on Oct 27, 2009 by sarahv.

- [Case Study, Managing Application Rollout](#)
- [Case Study, Application Performance Solution](#)
- [Case Study, Troubleshooting Remote Applications](#)

## Case Study, Managing Application Rollout

---

This page last changed on Oct 27, 2009 by sarahv.

This article provides a case study of how EdgeSight can help manage application deployment.

Table of Contents

- 1 [Background](#)
- 2 [Application Rollout Scenario](#)
- 3 [Displaying Current and Prior Resource Usage](#)
- 4 [Displaying Prior and Current Alerts](#)

## Background

During deployment of new applications, a project manager needs to progress carefully. It is never advisable to simply deploy the application to all desktops without proper testing. It should be a phased approach that includes testing, pilot deployment, partial production deployment and then full deployment. Throughout each phase, the systems should be monitored for stability and performance, ensuring that the eventual full deployment does not have a negative impact on either user productivity or on the corporate network.

Traditionally, monitoring performance and stability during pilot phases has been a manual process of communicating with pilot users who report on any perceived issues. In responding to these issues, the project manager may have someone visit the desk and run monitoring tools on that specific system. This process does not provide optimal data and can leave the picture incomplete.

EdgeSight provides the capability of evaluating performance and stability across a group of machines over a given period of time. The following scenario demonstrates how EdgeSight can be used to analyze a specific set of machines that are the pilot for a new application. Performance and stability can be evaluated before, during, and after the deployment of the application, allowing you to make an informed decision about the impact on the environment.

## Application Rollout Scenario

John is the project manager for the deployment of a new Line of Business (LOB) application. In a laboratory situation, he tested the application on corporate Windows Vista machines and has seen that the application behaves well with other corporate applications. It is now time to deploy the application to a group of 50 pilot users who constitute a representative sample of the company's job functions. The goal is to ensure that the application does not adversely affect system performance or stability during the course of a regular work day. John plan is to perform the following tasks:

- From a central location, monitor the CPU and memory of the pilot machines after deployment of the new application
  - Compare this performance to what it was before the deployment
- From a central location, monitor the stability of the pilot machines after the deployment of the new application
  - Compare this stability to what it was before the deployment

\*Gather specific error messages or other data related to instability in order to solve the issues.

- EdgeSight collects all the data that John is planning to use in his evaluation. The historical performance and stability metrics are already there for his pilot machines and EdgeSight will continue to gather this data throughout the duration of the pilot. John now needs to organize the data and generate the right reports to meet his needs.

Start by creating a custom group that contains all of the machines in the pilot. This can be done by either creating a query based group that automatically places any machine with the LOB application installed into the group, or by manually adding the machine names to the group. See the Groups topic in online help or see the *Citrix EdgeSight Administrator's Guide* for more information on creating custom groups of devices.

**Note** You will require the Manage Public Device Groups permission in order to create a new group or edit an existing group. Using the System Memory Summary report, show average memory usage for the group before the deployment of the application and then again to show average memory usage for the time period after deployment.

- Using the System CPU Summary report, show average CPU usage for the group before the deployment of the application and then again to show average CPU usage for the time period after deployment.
- Using the Alerts report, show alerts generated from the group during a time period before deployment and then again for the time period after deployment.

## Displaying Current and Prior Resource Usage

Once the custom group has been created, the next step is to display the average CPU and memory usage for the group before and after the deployment. To do so, run the [System CPU](#) and the [System Memory Usage](#) reports against the pilot group. A few key points:

- In the report, select a date range that starts and ends before deployment of the new application.
- Group the report data by Date and display the top 50 devices.

The results categorize machines by their capacity: processor speed or physical memory, depending on the report.

## Displaying Prior and Current Alerts

In order to gauge the stability of the application, you can display alerts generated by the group before and after deployment. Run an Alerts report against the pilot group. A few key points:

- In the report, select a date range that starts and ends before deployment of the new application.
- Group the report data by Date and display the top 50 devices. The results show the alert count for each machine in the group for the given date.
- Expand the date to display alert counts by device.  
You can expand the device to view actual alert messages and times.

## Case Study, Application Performance Solution

This page last changed on Nov 12, 2009 by sarahv.

This article provides a case study that provides an example of how to use EdgeSight to determine application performance.

### Table of Contents

- 1 [Overview](#)
- 2 [Scenario](#)
- 3 [Suggested Process](#)
  - 3.1 [Analysis](#)
    - 3.1.1 [Alternate Suggested Reports](#)
- 4 [Other Considerations](#)
- 5 [References](#)

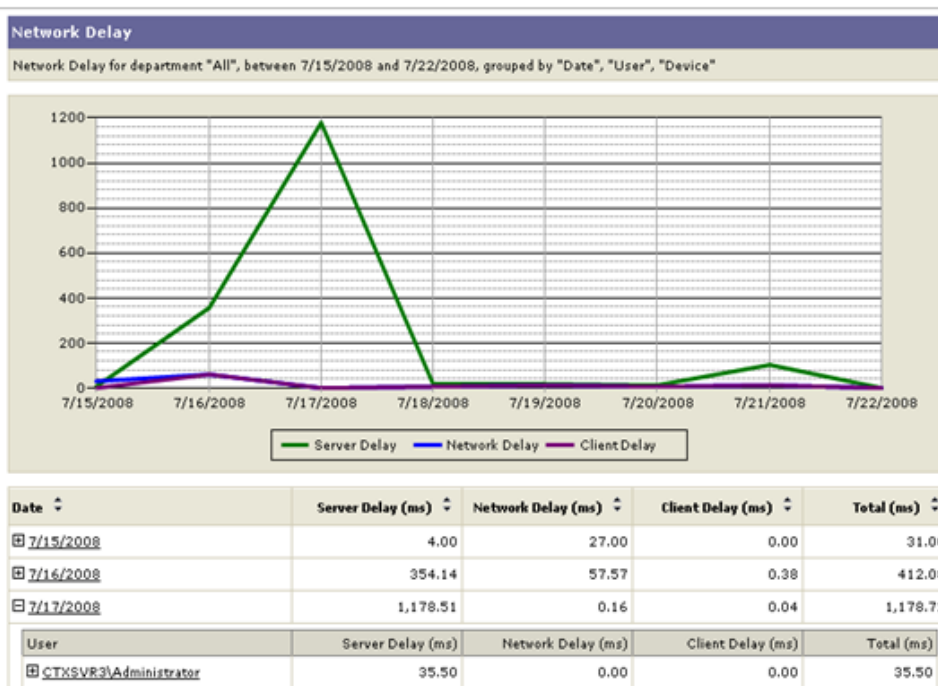
## Overview

The goal of this scenario is to:

- Determine the overall application performance with the Process Performance Summary by Process report
- Identify any processes with issues by drilling into the Process Summary

Key points:

- Drill into problem areas for more data
- Understand difference of Server Delay vs. Network Delay



## Scenario

Users running applications through XenApp often call the help desk to report that their application has either crashed or that they received a cryptic error message. Sometimes this occurs several times before a user finally becomes frustrated and reports the problem. Citrix administrators currently rely on users to report these issues, requiring the user to accurately describe the conditions when the crash occurred as

well as the complete error message. In addition, administrators are often charged with trying to re-create this error or crash so they can forward the appropriate information to either a developer or a vendor. Because the EdgeSight Agent is always running on XenApp servers, it creates a standard mini-dump file for any published application that crashes, whether the application was developed in-house or by a third party. These mini-dump files contain a complete set of information that an application developer can use to investigate the issue. For an application error, the complete error text is captured along with the exact time it occurred. As a result, administrators no longer need users to report these issues or hope they can re-create an application issue in an environment where EdgeSight has been deployed. In many organizations, there is often one person in charge or supporting an application. It is possible to identify a particular process and get a performance summary for a particular application. EdgeSight provides reports that tell people "how is application X performing last week." It is also possible to set up a subscription so the report is emailed to an application analyst or group of administrators on a weekly or bi-weekly basis.

## Suggested Process

To get an overall view of application performance, you can use the Process Performance Summary by Process to get a quick look at which applications are consuming the most resources in the farm. If you see a spike on specific day, then drill down to see if this is a one-time occurrence or if it is indicative of a problem.

## Analysis

Understanding the network metrics EdgeSight provides is a key concept and something that can quickly indicate where a problem might be. In the screenshot above we see a large amount of server delay. Server delay is the amount of network delay that is caused by waiting for the server or back end application to respond to our requests. For example, the spike might have been caused that day by a back-end server going down or an unusual number of users accessing the application. By looking at this report, it is possible to tell that it is not a network problem because the network portion of the delay is really small. If there was a large value here, it would be possible to deduce that the connection from the XenApp server to the application had some issues. For example, maybe the server and the streaming file share are in different data centers and there was latency over the connection.

[1](#)

## Alternate Suggested Reports

- [Process Faults](#) (for a process, by day)
- Process Errors (by day)
- Most Process Faults for a Group by Process
- Most Process Errors for a Group by Process

## Other Considerations

The unique alerting functionality of EdgeSight can be used to notify administrators in real time when an event described above has occurred, such as alert errors driven by exact error messages. These alerts can trigger email notifications or be sent to third-party consoles that accept Simple Network Management Protocol (SNMP) traps.

## References

## Case Study, Troubleshooting Remote Applications

---

This page last changed on Nov 12, 2009 by sarahv.

A health-care provider in Alaska asked Citrix Consulting to determine why a particular Web application had slow performance. This is the process consulting used to troubleshoot the problem.

A team of two consultants arrived on site: one specializing in XenApp and one specializing in EdgeSight. Their project objectives were as follows:

- Install and Configure EdgeSight
- Leverage EdgeSight to assist in determining the root cause of issues
- Investigate unsatisfactory performance of ProvPort application

The EdgeSight consultant started his investigation by running the **Presentation Server Summary** report on the host server to see a high-level overview of the system, including the process count, processor usage, percentage of committed bytes in use, and average the number of active sessions. The application issue did not appear to be stemming from poor server health. The report did not reveal any factors that would cause the server to be in poor health.

The consultant then ran the **Transaction Delay** report on the server. But this proved to be another dead-end. Overall, there was nothing that stood out in terms of network delays, client delays, or server delays. The consultant also ran the **Web Errors by Transaction per Day** report. While this revealed some 404 errors, it did not have enough to cause significant performance delays. To confirm this, he ran the **Non 404 Web Transaction Errors** report, which also revealed some errors but nothing significant.

The consultant began to suspect that the issue might be specific to the users. To confirm his suspicions, the consultant ran the **User Summary for a User Group** report. He looked at the report to see which users had the highest session latency (for example, over 3000 ms of latency). The consultant looked for two things:

- (1) To see if the users whose sessions had the high latency always had high latency
- (2) What users were not affected (that is, what do the users with the high latency have in common?). Do these users have session latency that is consistently low (for example, 150 to 200 ms)?

According to the consultant, some of the key questions he asks himself when isolating a problem are, *Does the issue always happen or is it just a one time event? What do the users having the problem have in common? How are these users different from other users (for example, location, usage time, level of activity, or tasks/features used)?* Consequently, when he looked at the session-latency report, he asked himself what these users shared.

It turned out that these users were accessing the application from remote areas of Alaska that only had high-speed satellite Internet service. As a result, there was little the consultant could do to improve performance other than make sure the XenApp policy that applied to the user's connection was set to WAN optimization and optimized for the best performance over slow connections.

## EdgeSight Support

---

This page last changed on Oct 27, 2009 by sarahv.

- [Release History](#)
- [Top EdgeSight Knowledge Center Articles](#)



## Release History

---

This page last changed on Mar 31, 2010 by [normanw1](#).

- [Citrix EdgeSight 5.2 and Citrix EdgeSight for Load Testing 3.6](#)
- [Citrix EdgeSight 5.3 and EdgeSight for Load Testing 3.6.1](#)
- [Citrix EdgeSight 5.4](#)

## Citrix EdgeSight 5.2 and Citrix EdgeSight for Load Testing 3.6

---

This page last changed on Mar 23, 2010 by [normanw1](#).

The EdgeSight team is pleased to announce the release to web of Citrix EdgeSight 5.2 and Citrix EdgeSight for Load Testing 3.6.

Key updates include:

### **EdgeSight 5.2 (for XenApp, Endpoints, and Virtual Desktops):**

- Key integration with XenDesktop - Enables Farm-wide monitoring and troubleshooting of virtual and physical desktops
- Support for the latest Citrix Receiver - Service Monitoring plug-in
- Microsoft Systems Center Operation Manager (MS SCOM) Support - EdgeSight ships with a .mp (management pack) connector
- New summary reports - XenApp & XenDesktop
- Additional Operating System support - Windows 7
- Citrix Service monitoring introduction

### **EdgeSight for Load Testing 3.6:**

- Service-based architecture - Easier to manage and does not require logged-in users for running the launchers
- Enhanced application security - When replaying scripts, allows for a basic level of authentication

### **Introduced in EdgeSight for Load Testing 3.5**

- Intelligent Load Control - Ability to sense script execution & delays, and adjust accordingly
- Xen Counters - Exposure of performance issues when XenApp is running on XenServer

EdgeSight for XenApp, Endpoints and Virtual Desktops AND EdgeSight for Load Testing are available in the following languages:

- English, German, French, Japanese, and Spanish

The English version of EdgeSight is now supported for use with the following Windows OS language variants:

- Simplified and Traditional Chinese, Korean, and Russian

### **Release to Web (RTW)**

The products are **now available for customers and partners to download from [www.MyCitrix.com](https://www.citrix.com/English/ss/downloads/results.asp?productID=25119)**. <https://www.citrix.com/English/ss/downloads/results.asp?productID=25119>

## Citrix EdgeSight 5.3 and EdgeSight for Load Testing 3.6.1

---

This page last changed on Apr 27, 2010 by ronaldb.

# What's New in EdgeSight 5.3

This release includes the following new features:

- Monitoring of Citrix License Servers and reporting on license usage by product group or individual products. The license servers to be monitored are specified at **Configure > License Monitor Configuration > License Servers**. License usage reports are available on the **Track Usage** tab.
- Monitoring of Published Applications and reporting on application launches and unique users. Published application reports are available on the **Track Usage** tab and the **Browse** tab.
- Monitoring of session duration by farm or user group. Session duration reports are available on the **Track Usage** tab and the **Browse** tab.
- EdgeSight Agent support for XenApp 6.

### New Reports and SQL Views

The following reports were added for this release:

- License Server Monitor Archive (XenApp)
- Published Application Launch Archive (XenApp)
- Published Application Launch Count - Details (XenApp)
- Published Application Launch Count for a User Group - Details (XenApp)
- Published Application Launch Summary (XenApp)
- Published Application Launch Summary for a User Group (XenApp)
- Published Application Summary (XenApp)
- Published Application Summary for a User Group (XenApp)
- Published Application User Count - Details (XenApp)
- Published Application User Count for a User Group - Details (XenApp)
- Published Application User Summary (XenApp)
- Published Application User Summary for a User Group (XenApp)
- Session Duration (XenApp and XenDesktop)
- Session Duration for a User Group (XenApp and XenDesktop)
- XenApp Server Utilization (XenApp)

# What's New in EdgeSight for Load Testing 3.6.1

The user interface has been translated into Simplified Chinese

### Release to Web (RTW)

Release date: 11-March-2010

The products are available for customers and partners to download from [www.MyCitrix.com](http://www.MyCitrix.com): <https://www.citrix.com/English/ss/downloads/results.asp?productID=25119>

Follow-on release date: 19-April-2010

The initial release of the EdgeSight 5.3 media contained a new EdgeSight Agent, EdgeSight for XenApp 6 Agent x64 5.3 (64-bit), as well as the previous 5.2 SP1 releases of the EdgeSight for XenApp, EdgeSight for Endpoints, and EdgeSight for Virtual Desktops agents. Additional EdgeSight 5.3 agents (EdgeSight for XenApp, EdgeSight for Endpoints, and EdgeSight for Virtual Desktops) are available for download from the Citrix Downloads page.

## Citrix EdgeSight 5.4

---

This page last changed on Sep 02, 2011 by [ronaldb1](#).

This release of the product includes the following new features:

- EdgeSight Agent support for XenApp 6.5 for Windows 2008 R2. The EdgeSight for XenApp 6.x Agent x64 5.4 is supported on both XenApp 6.0 and XenApp 6.5 for Windows 2008 R2 systems.
- Support for SQL Server Reporting Services 2008 R2.
- Reporting on user/device license usage in the license trend and usage reports available on the Track Usage tab.
- The ability to export a list of user/device licenses currently checked out from a selected license server. The User/Device License Lists available on the Track Usage tab.
- The addition of advanced EdgeSight Agent properties used to throttle the number and frequency of event log message alerts for each log type (Application, Security, and System).

**Important:** Note that EdgeSight Server 5.3 requires SQL Server 2005 or SQL Server 2008. If you are upgrading EdgeSight Server from a release prior to EdgeSight 5.2 using SQL Server 2000, you will also need to upgrade your SQL Server installation.

**Note:** If you are upgrading EdgeSight Server from a release prior to EdgeSight 5.2, note that support for the EdgeSight Virtual Desktop Agent is not enabled by default. To enable support after upgrading, open the EdgeSight Server Console and go to Configure > Server Configuration > Settings and set EdgeSight for XenDesktop Support to On.

## New and Revised Reports and SQL Views

The User/Device License List is the only new report included in this release. There are no new SQL views, but the `vw_Ism_archive_license_statistics` (License Server Monitor Archive) SQL view was revised to remove unused fields and add fields related to user/device license data. The following fields were removed: `license_type`, `grace_period`, `component_list`, `subscription_advantage`, `overdraft_protection`, `days_to_expire`, and `perm_license_count`. The following fields were added: `total_user_count` and `total_device_count`. Use of the revised SQL view requires EdgeSight Server 5.4 and Citrix License Server 11.9.

## EdgeSight Agents Supported for Upload to EdgeSight Server

Only the following agent types and versions are supported for upload to EdgeSight Server:

- EdgeSight for Endpoints 5.2 or higher
- EdgeSight for Virtual Desktops 5.2 or higher
- EdgeSight for XenApp 5.2 or higher
- EdgeSight for XenApp 6 Agent x64 5.3 (64-bit) running on XenApp 6.0 systems.
- EdgeSight for XenApp 6.x Agent x64 5.4 (64-bit) running on either XenApp 6.0 or XenApp 6.5 for Windows 2008 R2 systems.

## Top EdgeSight Knowledge Center Articles

---

This page last changed on Apr 30, 2010 by [normanw1](#).

The EdgeSight escalation engineers would like to highlight the following articles that may be of interest:

- [\*Improving Visibility to the User Login Experience with Citrix EdgeSight\*](#)
- [\*Required Antivirus Software Configuration for the EdgeSight Server\*](#)
- [\*Some Session Experience Monitoring Service Reports Do Not Contain Data for ICA Client 10.0 for Macintosh\*](#)
- [\*Case Study: Using EdgeSight 5.0 to Troubleshoot Application Enumeration\*](#)
- [\*EdgeSight SQL File Groups Explained\*](#)

## Using the EdgeSight Wiki

---

This page last changed on Oct 27, 2009 by sarahv.

- [About the Citrix EdgeSight Wiki](#)
- [EdgeSight Wiki Community](#)
- [Getting Involved in the EdgeSight Wiki](#)

## About the Citrix EdgeSight Wiki

---

This page last changed on Apr 27, 2010 by [ronaldb](#).

Welcome to the Citrix EdgeSight Wiki. The Citrix EdgeSight Wiki is a collaborative authoring encyclopedia project supported by Citrix EdgeSight Engineering. This is intended to be a collaborative Web site for the EdgeSight community. This Wiki is part of an initiative to enhance the information available about EdgeSight reports and is the primary source of information about reports.

This Wiki focuses primarily on historical reports. However, it also includes information about real-time reports and other helpful EdgeSight product information.

The EdgeSight Engineering and Documentation teams, as well as EdgeSight escalation engineers, technical support personnel and product managers regularly review the Wiki content, vetting it for technical accuracy.

We are hoping that this Wiki helps you find the reports you need, interpret the reports you choose, and find new ways to use reports. We also hope it provides an opportunity to converse with EdgeSight users with similar interests on the discussion tabs of each article.

## EdgeSight Wiki Community

---

This page last changed on Dec 24, 2009 by [sarahv](#).

- [EdgeSight TV](#)
- [EdgeSight Wiki Spotlight](#)
- [Who Are We? EdgeSight Wiki Editors and Contributors](#)



## EdgeSight TV

---

This page last changed on Apr 27, 2010 by [ronaldb](#).

This page provides links to EdgeSight multimedia presentations and a schedule of upcoming events.

Table of Contents

- 1 [What's New?](#)
- 2 [Upcoming Events](#)
- 3 [Videos](#)
- 4 [Chats](#)

## What's New?

- [EdgeSight Wiki Tour](#)

## Upcoming Events

None scheduled at this time.

## Videos

- [EdgeSight Wiki Tour](#)
- [Introduction to EdgeSight](#)
- [EdgeSight for Load Testing](#)
- [EdgeSight for Load Testing \(how to create a script\)](#)

## Chats

## EdgeSight Wiki Spotlight

---

This page last changed on Dec 24, 2009 by [sarahv](#).

- [Christian Tobon](#)

## Christian Tobon

---

This page last changed on Jan 04, 2010 by [sarahv](#).



Christian was chosen as our first EdgeSight Wiki Contributor Spotlight winner because he was one of the first Citrix employees outside of EdgeSight engineering to make contributions to the Wiki. He also happened to have made the most contributions in our initial development and review period.

## Q&A with Christian Tobon

### **How long have you worked at Citrix?**

I started in June 2005, so this June will be my 5th year at Citrix.

### **What positions have you held?**

- Tech Support Engineer I
- Tech Support Engineer II
- Senior Tech Support Engineer II
- Escalation Engineer
- Lead Escalation Engineer

### **What do you like about your job?**

I mostly enjoy being able to work through complex environment issues, which ultimately leads to higher customer satisfaction.

### **What is the most interesting thing you've learned about EdgeSight?**

EdgeSight is just such a detailed product, that I cannot name just a single aspect. I think the process inception may be the most interesting piece to gather application crashes, errors and network traffic.

### **What hobbies do you have outside of work?**

I enjoy indoor rock climbing and watching tons of movies, as well as playing video games.

## Who Are We? EdgeSight Wiki Editors and Contributors

---

This page last changed on Aug 05, 2011 by [ronaldb1](#).

Citrix contributors to the EdgeSight Wiki include:

### EdgeSight Engineering

- **Ron Brown** (editor), Senior Technical Writer (EdgeSight)
- **Joel Sheppherd**, Manager of EdgeSight Testing
- **Jeffrey Klofft**, Vice President of EdgeSight Engineering
- **Sarah Vallieres**, Senior Technical Writer (XenServer and EdgeSight) - [profile](#)

### EdgeSight Technical Support

- **Chiu Chan**, EdgeSight Escalation
- **Christian Tobon**, EdgeSight Escalation

### Other

- Steve Weizman
- John Scoles

## Getting Involved in the EdgeSight Wiki

---

This page last changed on Apr 28, 2010 by [ronaldb](#).

This page provides an overview of how to create EdgeSight Wiki articles.

Table of Contents

- 1 [Why a Wiki?](#)
- 2 [We Welcome Contributions](#)
- ◦ 2.1 [How to Help with the Wiki](#)
- 3 [Tutorial: Editing and Creating a Wiki Article](#)
- ◦ 3.1 [Controlling Changes](#)
- ◦ 3.2 [Unacceptable or Offensive Content](#)
- ◦ 3.3 [Technical Accuracy](#)
- 4 [Wiki Syntax](#)
- 5 [Stub Articles](#)
- 6 [Wiki Guidelines](#)
- 7 [Illustration Guidelines](#)
- ◦ 7.1 [Warnings about Screen Captures](#)
- 8 [Stewardship](#)
- 9 [Wiki Style](#)
- 10 [References](#)

## Why a Wiki?

After reviewing user feedback about the difficulties they had in learning to use EdgeSight, we wanted to create an environment where people could come to exchange ideas and learn. After some thought, we choose a Wiki because the software lends itself to free-form collaboration. For information about the unique qualities of this medium, see Wikipedia's section about [Wiki characteristics](#).

Rather than stopping contributions by making it difficult to contribute or creating review bottlenecks, we decided to create a community based on trust. We hope that users will help other users by enhancing techniques and supplementing information.

## We Welcome Contributions

The EdgeSight Reporting Wiki welcomes contributors from all members of the EdgeSight community, including customers, VARs, and internal Citrix personnel.

We are always looking for contributions that tell the EdgeSight community how you used one of our reports. Likewise, if you have received information from Citrix Technical Support about our reports that you think would interest the broader community, we would appreciate you posting it.

## How to Help with the Wiki

We recognize that there may be people who feel they lack the expertise to make technical or use case contributions to EdgeSight Wiki but would like to contribute in another way. If you fall into this category or you are looking for easy ways to contribute, see the article, [Ways You Can Help](#).

## Tutorial: Editing and Creating a Wiki Article

Anyone with a MyCitrix account can edit Wiki articles. In fact, we encourage contributions. See [Creating an EdgeSight Wiki Article](#). However, because the structure of some top-level articles provides the overall Table of Contents structure to the Wiki, some of these articles have restricted permissions.

If you are a frequent contributor, to apply for permission to create or modify top-level articles, send an email to the managing editors of the Wiki. <xxx>

## Controlling Changes

The EdgeSight Wiki is designed to make it easy to "correct mistakes, rather than making it difficult to make them."

1

Consequently, at any given time information on the Wiki may be no more correct than the information you would find on a product forum. To help make it easier for you to vet content on your own, we encourage contributors to use footnotes (cite sources).

An editor in the EdgeSight Engineering team maintains all content on the EdgeSight Wiki. In practice, this person reviews recent changes to Wiki pages, and if possible, sends the pages to the appropriate Subject Matter Expert on the EdgeSight engineering team for technical review. However, due to the difficulty in recreating the customer's unique circumstances, EdgeSight engineering does not test techniques and use cases customers propose in the articles.

Ensuring the validity and significance of content helps make it easy for readers to find the information they need. Controlling changes helps create a Wiki environment that is helpful for all users.

## Unacceptable or Offensive Content

Please alert the Wiki editor immediately if you find unacceptable content, including text that contain swears or other unsuitable words, offensive images, and copyright violations.

## Technical Accuracy

While contributions are regularly reviewed by EdgeSight Engineering, it helps other Wiki users if you include footnotes providing the source of the information. When articles are in an unreviewed state, this lets other Wiki users determine for themselves if the newly added content is at a sufficiently reliable.

The best way to determine if an article is technically accurate is review the changes that were made since the last time the article was technically reviewed. See [Displaying Version History](#).

## Wiki Syntax

For information about Wiki syntax and macros, see the main article [EdgeSight Wiki Syntax](#).

## Stub Articles

The EdgeSight Wiki contains stub articles or brief articles that are still under development.

1

You can tell an article is a stub because stubs are typically accompanied by boilerplate text indicating the article is a stub.

We welcome contributions to stub articles. Often, stubs represent ideas or suggestions we've received but have not had time to research. Consequently, any contributions you can make to these articles can be highly valuable to helping us start research, stimulating other contributions, and helping the EdgeSight community in the interim.

# Wiki Guidelines

When contributing please be specific about the task you were trying to perform or goal you were trying to achieve, the specific reports you used, and what metrics you looked at. Any observations you have about what these metrics mean in practice in your environment are always greatly appreciated.

For information about acceptable content, see [EdgeSight Wiki Editorial Policies](#).

# Illustration Guidelines

The EdgeSight Wiki always welcomes screen captures of reports or other aspects of your environment as well as copyright-free technical illustrations. See [copyright information](#) for further details.

.PNG and .JPEG graphics are the optimum file formats for use with the underlying Wiki software, Confluence. Please consider users with slow connection speeds and ensure file sizes are not excessively large when posting graphics.

# Warnings about Screen Captures

When posting screen captures to the Edgesight Wiki, be careful they do not contain information that would allow unscrupulous individuals to hack your organization. This information includes, but is not limited to, real IP addresses, user names, device or workstation names, and domain names. If you post a screen capture on the Wiki, you implicitly agree, when you post it, to accept all responsibility for the public display of any information contained in it.

# Stewardship

(Coming soon.) If you are are a frequent contributors, you can run for one of many of levels of volunteer stewardship. A combination of contribution frequency and quality of contributions can increase your level. With higher levels not only titles inidcating your level of expertise but also the ability to delete pages, lock articles from being changed in case of vandalism or editorial disputes, and block users from editing.

# Wiki Style

The EdgeSight Wiki style is primarily based on [Wikipedia's style](#) as explained in the [Wikipedia:Manual of Style](#). However, it draws on Citrix's product branding guidelines and the *Chicago Manual of Style*. See the main article, [EdgeSight Wiki Style](#).

# References

## Creating an EdgeSight Wiki Article

This page last changed on Oct 27, 2009 by sarahv.

This page provides information about editing EdgeSight Wiki content.

Table of Contents

- 1 [Editing Content](#)
- 2 [Formatting](#)
- - 2.1 [Spell Checking](#)
- 3 [Style](#)
- 4 [Displaying Version History](#)
- - 4.1 [Scope of Content](#)
  - 4.2 [Sharing EdgeSight Experiences](#)
  - 4.3 [Suggestions for Content](#)
  - 4.4 [Requesting Review](#)

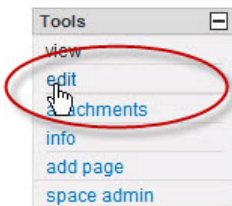
## Editing Content

This topic provides information about editing content and creating articles.

### To edit pages

**Note:** To edit articles, you must be logged in with your **MyCitrix** account.

1. Select the **Tools** menu in the upper-right corner and then select **Edit**.



2. Make changes to the content.

Many formatting tools are available in the bar across the top of the **Rich Text** view, which is only available in Internet Explorer. Otherwise, modify the content in the **Wiki Markup** view by using the Wiki's notation syntax, which is somewhat similar to Wikipedia. The **Notation Guidelines** that appear when you click the **Wiki Markup** tab.

3. Click **Save**.

### To create pages

1. Select the **Tools** menu in the upper-right corner and then select **Add page**. The page you are creating is added as a child of the page you are currently on.

2. Enter the title for the article on the page.

3. Create a link to the article from one of the main link pages. Pages are not automatically compiled into a larger table of contents, so it will be difficult for readers to find your page if you do not add it to one of the navigation pages.

## Formatting

Because the [Wiki software](#) for the EdgeSight Wiki is different than Wikipedia, it also uses a different Wiki markup language. Wiki markup language than Wikipedia, the syntax differs slightly. The conventions are based on Confluence's Wiki markup language and conversion software and not those of Wikipedia's [MediaWiki](#) software.



## Spell Checking

Currently, the EdgeSight Wiki functionality does not include a spell checker. To check spelling in content you add, we suggest using a Web browser, such as [Google's Chrome](#), that provides this capability or copying the content into a wordprocessing program.

## Style

For information about style, see the article, [EdgeSight Wiki Style](#).

## Displaying Version History

Displaying history and determining what changes were made since the last EdgeSight Engineering review is one of the most effective ways to determine the validity of technical content.

### To display a history of changes for an article

1. From the the **Tools** menu, select **Info**. The version history appears in the right corner.
2. Expand the version history by clicking the **Recent Changes** link.

## Scope of Content

The EdgeSight Wiki is not meant to be a replacement for the EdgeSight product documentation nor is it meant to duplicate it.

In general, Wiki content should reference the product documentation rather than repeat it. For example, if an article refers to performing a series of tasks it should summarize the tasks the user needs to perform in the EdgeSight console rather than providing step-by-step instructions (mouse clicks) in the user interface.

## Sharing EdgeSight Experiences

One of the main purposes for creating the EdgeSight Wiki is to allow users to share their experiences managing Citrix environments using EdgeSight. Consequently, we strongly encourage any and all types of contributions. If you have something you want to share about EdgeSight, we want you to add it!

Generally, there are two methods for sharing on the Wiki with the broader EdgeSight community:

1. Adding case studies in a subheading in an article.
2. Adding Comments to articles. In future iterations of this Wiki, resources permitting, we hope to provide a **Discussion** tab similar to Wikipedia. See the article [EdgeSight Wiki Roadmap](#). <xxx xref>

## Suggestions for Content

If there is an article or topic that you would like to see created in the EdgeSight Wiki, but you don't have the time or information required to create it, suggest it to the EdgeSight Wiki editor <link xxxx>. Ideas for articles might include ideas for different ways to use EdgeSight, use cases, scenarios and case studies, things you dn't understand about EdgeSight, and information not covered in the EdgeSight product documentation.

While we don't gaurantee our ability to start all topics or research them, we will provide you with feedback about your idea and, if it is do-able, queue the article for authoring.

## Requesting Review

If there is information in a Wiki article you would like reviewed for technical accuracy, please send a request to the Wiki editor. <link xxxx>.

## EdgeSight Wiki Style

---

This page last changed on Sep 02, 2009 by [sarahv](#).

This page provides information about EdgeSight Wiki style. While brief, it functions as the EdgeSight Wiki's [style guide](#).

### Table of Contents

- 1 [Overview](#)
- ◦ 1.1 [Philosophy](#)
- 2 [Formatting](#)
- 3 [Sources and Citations](#)
- ◦ 3.1 [When to Use Footnotes and Cite Sources](#)
- ◦ 3.2 [Internal Wiki Links](#)
- ◦ 3.3 [External Links](#)
- 4 [Editorial Policies](#)

## Overview

The EdgeSight Wiki style is drawn primarily from the [Wikipedia:Manual of Style](#). However, since the Wiki provides technical information specific to Citrix products it also draws on internal documents that cover Citrix's product naming conventions and documentation style. In some cases, the EdgeSight Wiki style uses conventions from [Chicago Manual of Style](#).

These guidelines are meant to document where the EdgeSight Wiki style differs from the standards put forth by Wikipedia or points significant enough to warrant repeating. If a subject is not covered in the guidelines provided in this article, use the conventions in the *Wikipedia:Manual of Style*.

## Philosophy

Because we are extremely grateful to receive contributions from all EdgeSight users, these stylistic guidelines are not required to create articles. They are not meant to be onerous or make it difficult to create contributions.

The guidelines are provided for frequent contributors who want to contribute to the EdgeSight Wiki community overall as well as for the editors internal use. Adding content in cleaner condition frees resources for other tasks such as doing research on different ways to use EdgeSight and responding to requests for articles.

In general, the Wiki editors will try to clean up or edit articles for style on a regular basis. However, it is possible that an article might require editing before the editors reach that point in the schedule. Currently, the EdgeSight Wiki does not have a function that indicates if article should be cleaned up. However, it is possible to email the Wiki editors directly to suggest that articles be reviewed for this purpose.

## Formatting

## Sources and Citations

In general, footnotes and citations should contain the following elements:

- Author's Name
- Title of work (and/or link to Web site)
- Publication or Delivery Date
- Date Accessed
- Publisher or Company

The EdgeSight Wiki appreciates all contributions. Consequently, we feel it is more important for contributors to worry less about ensuring bibliographic format is followed and more about ensuring the information is verifiable (by indicating where you found it). The Wiki editor can clean up bibliographic formatting as necessary.

For contributors interested in creating entries using the format the Wiki editors use, the format is provided in the article, [Formatting Sources and Citations for the EdgeSight Wiki](#).

## When to Use Footnotes and Cite Sources

Citrix does not guarantee the technical accuracy of content in the EdgeSight Wiki. While Citrix tries to review the Wiki's content regularly, like Citrix forums, it may not be possible to ensure content at any given time is accurate.

Consequently, it is important to provide readers and Citrix Technical Support a way to trace back the source of technical information. It is not necessary to cite every single sentence; providing what Wikipedia refers to as "general referencing" is acceptable. (That is, if all facts in a paragraph stem from the same source, only referencing it once. See [Formatting Sources and Citations for the EdgeSight Wiki](#).)

Furthermore, citing sources is also crucial to prevent plagiarism and unfairly reproducing the labor and intellectual property of others. Citrix does not want or intend to reproduce material from non-Citrix consultants or other experts without acknowledging their contribution.

Some examples of when sourcing is critical:

- When a Wiki contributor outside of EdgeSight Engineering adds information about a metric (report counter) that expands upon information contained in the report counters glossary. If the second party assumes the information is correct and makes a purchasing decision based on the information, information the contributor intended to be helpful could be harmful. Including the source - whether a note that it is from a technical support call with John Smith, slides from a presentation at Synergy, or an email received from Citrix Consulting - can save a lot of time in verifying this information and let readers determine the level of technical accuracy they feel is acceptable on their own.
- When providing information about relatively obscure Performance Monitoring counters or other aspects of networking that should be verified.
- When providing information about Citrix product performance. For example, listing the maximum percentage of CPU utilization Citrix recommends for the XenApp data collector.
- When adding potentially controversial information or information likely to be challenged.

When sourcing is desirable:

- To provide additional information or guidance about information. For example, indicating the manual somebody might find a procedure about configuring a XenApp feature. While not necessarily strictly relevant to the article, this type of helpful information could save many people time.

When sourcing is not necessary:

- When explaining how you used the feature, especially when providing information about how your organization used EdgeSight or use cases.
- When making a general widely accepted point. For example, a point you could (theoretically) find in three different books about XenApp or Microsoft Windows.
- While the nature of our articles differs in that we encourage readers to contribute personal experiences as well as factual information, generally, we look to Wikipedia's guidelines as a model of Wikis, referencing, and verifiability. Additional guidelines for helping Wiki users determine the reliability of content are elaborated on in Wikipedia's article, [Verifiability](#).

## Internal Wiki Links

Linking key words, glossary definitions, is a crucial aspect of making articles useful and retrievable. [Wikifying](#) the EdgeSight Wiki, to use a *Wikipedia* word, is an on-going effort and we welcome any and all help in this area.

To reduce visual clutter, only link the first instance of a word. It is acceptable to repeat links for words in new, larger sections within articles.

Valuable items to link include report counter names (to the report counters glossary), report names, EdgeSight best practices (such as the principles of good grouping), and other, relevant Wiki articles.

## External Links

When linking to an external Web site, include a footnote and note the date you accessed the Web site. Despite the best intentions of the EdgeSight Wiki editors, due to the size and complexity of the Wiki, it is not possible to keep external links up-to-date. Likewise, content on the Web changes frequently and information cited could be deleted from an whitepaper a few weeks later.

Providing an "Accessed on..." date in footnotes can help reduce reader frustration by giving them an idea of how long ago the information was cited.

## Editorial Policies

See the main article, [EdgeSight Wiki Editorial Policies](#).

## EdgeSight Wiki Editorial Policies

---

This page last changed on Oct 27, 2009 by [sarahv](#).

To create an environment that is useful and enjoyable for all users, the Wiki employs specific editorial policies. This article provides guidelines about subject matter, tone, citations, and usefulness. Content that does not meet these standards will be edited appropriately or deleted.

Table of Contents

- 1 [Subject Matter](#)
- 2 [Neutral Point of View/Reduced "Marketing-ese"](#)
- 3 [Citing Sources](#)
- 4 [Copyrights](#)
- 5 [Renaming and Deleting Articles](#)
- 6 [Conduct and Flaming](#)

## Subject Matter

The EdgeSight Wiki is an editable encyclopedia designed to help the EdgeSight developer and user community exchange techniques for better managing Citrix products through EdgeSight. Subjects for articles can include ways to manage XenApp farms or XenDesktop deployments using EdgeSight, case studies/use cases and scenarios, information about the meaning of reports or metrics, and tips for using EdgeSight.

Ideally, articles focus on a specific problem and the way somebody uncovered the problem or resolved it using EdgeSight. Originally, the EdgeSight Engineering team intended the Wiki to bridge the gap between farm-management tasks XenApp administrators wanted to perform and how to translate those tasks into EdgeSight features. This remains a primary goal and is a desirable subject for articles. The Wiki is not meant to replace Knowledge Center ("KB") articles or duplicate content already in the product documentation.

While it is acceptable to allude to techniques using Windows Performance Monitor and other commonly used monitoring tools, the primary focus should be on using EdgeSight. Likewise, it is acceptable to provide background information about tasks or architecture of the product being monitored (for example, XenApp or XenDesktop) provided they are required to understand the article.

When creating articles, determine if the topic is sufficient to expand beyond a dictionary definition or if the information could be folded into a larger article. Likewise, if part of a large article grows disproportionately to other sections, determine if this section should be broken off into another article.

## Neutral Point of View/Reduced "Marketing-ese"

The intention of the EdgeSight Wiki is to provide the user community with clear, easy to understand factual information about using EdgeSight to manage their environment. Ultimately, we want to make it easier for people to use EdgeSight. The Wiki is not intended to be a vehicle to promote or market Citrix products.

Clear speech and substantial, useful content is encouraged in articles. Content should be concrete with specific details and not vague. For example, it should name the specific features used to accomplish a task or refer to specific reports run. Ideally, articles should not be laden with industry jargon.

Content contributed that is unclear or has an excessive marketing tone will be edited appropriately.

## Citing Sources

To contribute to the factual nature of the Wiki, all information added should refer to specific features and product versions. In general, use footnotes, if possible, whenever providing information about Microsoft functionality.

Refer to Citrix product documentation, if possible, if directing readers to find a non-EdgeSight feature in a specific component. For example, if telling readers to create a Health Monitoring & Recovery test in XenApp add a footnote and write, "as described in the *Citrix XenApp 5.0 Administrator's Guide*." (It is not desirable to duplicate the steps to perform in the user interface, especially for products and components besides EdgeSight.)

If you are referring to techniques first explained in third-party white papers or Web sites, cite the Web site or author. This not only gives credit where credit is due, it also lets readers find additional information about the subject.

## Copyrights

Do not copy and paste or reproduce any copyrighted material without permission of its owner. Likewise, do not add copyrighted images, icons, or diagrams to the Web site that were created by parties outside of Citrix. Use your own words whenever possible.

Diagrams must not use any icons or clipart that is not copyright free. Creating diagrams with the standard icon set provided in Visio is acceptable. Be careful when using third-party clipart.

Any material suspected of copyright violations will be deleted.

## Renaming and Deleting Articles

If you believe an article is incorrectly named, please contact the Wiki editor. If you suspect an article plagiarizes or in any other way violates copyright agreements, contact the editor immediately. Likewise, if you believe an article should be deleted or combined with another article, contact the editor.

## Conduct and Flaming

The EdgeSight Wiki aims to create an atmosphere of friendliness and support. While disagreements may arise about performance monitoring techniques or technical details, please assume the good intentions of the other party and refrain from personally critical, *ad hominem* remarks.

Citrix reserves the right to delete comments that are derogatory towards any of its products or employees.

## Formatting Sources and Citations for the EdgeSight Wiki

---

This page last changed on Sep 02, 2009 by [sarahv](#).

[overview](#)

## EdgeSight Wiki Syntax

This page last changed on Oct 27, 2009 by sarahv.

This article provides an overview of Wiki syntax, including how to create links and a brief introduction to macros.

**Important:** To enter this syntax, you must be in the Wiki Markup view.

Table of Contents

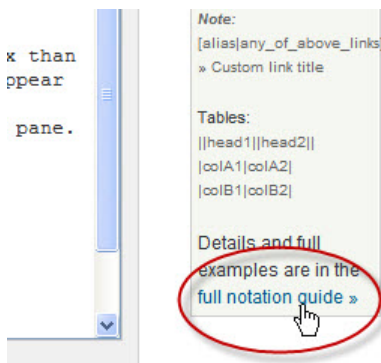
- 1 [Wiki Syntax](#)
  - 1.1 [Why is the syntax different than Wikipedia?](#)
  - 1.2 [Wiki Links](#)
- 2 [Wiki Macros](#)

## Wiki Syntax

Wiki articles can be edited in two modes: the **Rich Text** view and the **Wiki Markup** view. By clicking the **Rich Text** tab, you can edit articles in a WYSIWYG view and use toolbar icons for formatting tasks.



When you edit articles in the **Wiki Markup** view, you enter the raw Wiki syntax directly. Because the EdgeSight Wiki is powered by [Altassian Confluence](#), it uses a different Wiki syntax than Wikipedia. When you edit articles in the Wiki Markup view, some basic syntax guidelines appear in a right pane. For full syntax guidelines, click the [full notation guide](#) link at the bottom of the pane.



## Why is the syntax different than Wikipedia?

There are many enterprise Wiki software products on the market. Unfortunately, there is no standardized markup language for Wikis. Confluence uses a different Wiki markup language than MediaWiki, the back-end software for Wikipedia.

## Wiki Links

This section provides an overview of Wiki syntax for creating links. For additional details, see the notation guidelines.

## Wiki Macros

Wiki macros let you insert generated lists or commonly used expressions into Wiki articles by adding a keyword in braces to the Wiki articles' markup. For information, see the main article, [Wiki Macros](#).



## Wiki Macros

---

This page last changed on Apr 27, 2010 by [ronaldb](#).

This article provides an overview of Wiki macros. Wiki macros let you quickly insert commonly used items, such as generated lists, into Wiki articles.

**Important:** To enter the macros, you must be in the Wiki Markup view.

Table of Contents

- 1 [Comments in Articles \(hidden\)](#)
- 2 [Table of Contents](#)
  - 2.1 [List of Subpages](#)
- 3 [Page Tree \(with expanding headings\)](#)
- 4 [Footnotes](#)

## Comments in Articles (hidden)

You can add comments that will not appear on the Wiki pages by using a comment macro. To use the comment macro, put the comment text between the word "rem" in braces (curly brackets):

```
H4. Sample Heading for Comment Macro Example

{rem}
This is the comment text. It will not be rendered in the page on the Wiki.
{rem}

Here is some text under the header.
```

## Table of Contents

The table of contents that appears in articles is generated automatically based on the headings in the articles. You can add this table of contents by using the table of contents macro.

```
h1. Example of Table of Contents Macro

To add a table of contents to any article, where you want the table of
contents to appear, add the word estoc in braces (curly brackets):
{estoc}
```

## List of Subpages

You can add a list of automatically generated subpages or children to articles by using the "children" macro.

```
h1. Example of Children Macro

To add a list of child articles to a page, enter the word "children" in
braces (curly brackets) where you want the list to appear:
{children}
```

## Page Tree (with expanding headings)

To add a list of expanding and collapsing headings to page, that lists all of its child pages, use the pagetree macro:

# Footnotes

Creating footnotes requires two separate tasks:

## Task 1

In the place in the paragraph where you are creating the footnote marker (that is, the superscript number), enter the bibliographical information, as follows:

```
{footnote} [Citrix XenDesktop 3.0 Administrator's  
Guide|http://support.citrix.com/servlet/KbServlet/download/19149-102-  
19637/XDAdminGuide.pdf]. Citrix Systems, 2009.{footnote}
```

For example,

```
XenDesktop has a variety of connection scenarios. However, there are  
several typical connection scenarios, including Connecting from an  
appliance, a domain-joined or repurposed computer, and a fat client device  
on a LAN. {footnote} [Citrix XenDesktop 3.0 Administrator's  
Guide|http://support.citrix.com/servlet/KbServlet/download/19149-102-  
19637/XDAdminGuide.pdf]. Citrix Systems, 2009.{footnote}
```

## Task 2

To output the footnote information you entered, go to the **References** section of the article and enter the following syntax:

```
{display-footnotes}
```

All of the footnotes you've added to this article will display where you entered the macro once the page is rendered.

## Ways You Can Help

---

This page last changed on Oct 27, 2009 by [sarahv](#).

The EdgeSight Wiki is a large project that we hope will contribute to the larger XenApp and XenDesktop communities. There are many small tasks contributors can do to help improve the retrievability, usability, beauty, usefulness, and enjoy-ability of the content.

This article talks about a few opportunities for ways to help.

## How You Can Help

This is an on-going list of tasks that people looking to make small, non-technical contributions to the Wiki can perform. The Wiki editors and EdgeSight engineering are extremely grateful to any and all who help with these tasks.

### Graphical Improvements

This is our ongoing list of desired aesthetic improvements to the Wiki:

- Adding screen captures for every report, ideally with different filters applied. See .
- Adding illustrations to articles, especially ones that illustrate points, provide useful screen captures.
- Adding graphics to articles that look visually bland, especially beside the table of contents section.
- Creating technical illustrations, balancing the page layout and so on.

### Technical Improvements

This is our current list of desired technical improvements to the Wiki:

- Add links for the first instance of report counters any where report counters are mentioned, especially in articles about the reports themselves
- Add links between articles about reports and related tasks
- Create hyperlinks between the letters at the top of the page in the report list and in the sections
- Create expanding thumbnails for report screen captures

This is our ongoing list of desired technical improvements:

- Fixing typos and grammatical errors
- Fixing broken links
- Creating redirects
- Adding **See Also** references and references to relevant procedures in product documentation

Additional ideas for ways to help can be found in Wikipedia's article about these magical creatures. See [WikiFairies](#) and [WikiGnomes](#).

## List of Stub Articles

---

This page last changed on Oct 07, 2009 by [sarahv](#).

This is a list of stub articles that are still under development.

## FAQ

---

This page last changed on Apr 28, 2010 by [normanw1](#).

This page provides a list of Frequently Asked Questions (FAQ). In the future, we hope to expand these FAQs into EdgeSight Wiki articles.

### **Why do reports sometimes display a user named CITRIX\UNKNOWN?**

The UNKNOWN user appears when EdgeSight cannot determine the user account. In some cases, the operating system can not determine the user account name, and, in turn, EdgeSight records it as CITRIX\UNKNOWN. Look at the SYS\_EVENT\_TXT file around the same time for more information or check the Event Logs on the server.

## EdgeSight Wiki Site Map

---

This page last changed on Oct 27, 2009 by [sarahv](#).

## Home

---

This page last changed on Jun 26, 2009 by [gregan](#).

This is the home page for the EdgeSight profile.