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EdgeSight for XenApp

Effective, practical instructions to monitor your Citrix XenApp servers using EdgeSight 5.4

Vaqar Hasan

[PACKT]
PUBLISHING

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BIRMINGHAM - MUMBAI

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I would like to dedicate this book to my late parents, Irshad Hasan and Saleha Khatoun.

I would also like to dedicate this book to my wife, Mahira, for helping me spare enough time at home to complete this book.

I wish to thank the reviewers and the team at Packt Publishing, especially Joel and Neha, for their support and belief in me.

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I would like to thank my wife, Sarah Howell, for her endless support.

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Preface

Citrix EdgeSight for XenApp provides the most comprehensive performance-management and reporting solution for the Citrix XenApp infrastructure. Administrators have real-time visibility to session-level performance and provide visibility into key metrics such as profile load time and login script execution.

Citrix EdgeSight is a complicated tool and a beast of an application in itself. With this in mind, we've made an attempt to cover the recipes that a Citrix administrator might come across while managing and supporting their XenApp farm on a daily basis.

This book follows a cookbook style and is packed with simple yet incredibly effective and practical recipes covering the basics to the advanced. All recipes contain step-by-step instructions with screenshots for practical and easy learning.

What this book covers

Installing EdgeSight Server (Intermediate) will describe the prerequisites to install EdgeSight and illustrates its installation.

Installing EdgeSight agents (Simple) will take an in-depth look at the installation of the EdgeSight agent and lists the troubleshooting steps that should be performed if the agent fails to register with the EdgeSight Server.

Configuring the server settings (Intermediate) will present the common server settings that need to be configured after the installation of the EdgeSight Server.

Configuring users, groups, and authentication (Intermediate) will focus on other settings that we should also configure after the installation of the EdgeSight Server.

Defining alerts (Advanced) will explore EdgeSight alerts and illustrate how to create alerts and define action when the defined alert condition is/are met.

Managing the real-time dashboard (Intermediate) will assist in setting up the real-time dashboard to provide a comprehensive view of the XenApp server health state in real time.

Working with EdgeSight reports (Intermediate) will walk through the steps required to work with built-in reports and how to subscribe to reports for automatic delivery.

Monitoring the Citrix license usage (Intermediate) will describe how EdgeSight can be used to report Citrix usage in your environment.

Resolving performance problems (Advanced) will focus on how to use EdgeSight to ensure applications are meeting business metrics at all times by monitoring performance from the user's perspective.

Grooming EdgeSight database (Advanced) will take an in-depth look at how to groom the EdgeSight database to optimize its performance.

What you need for this book

To try out the recipes in this book, you will need to build a Citrix XenApp farm. For the EdgeSight database, you can use the same database server that is being used as the data store for your XenApp farm. Another infrastructure server that is used in the recipes is the messaging server (Microsoft Exchange Server) to send alerts via e-mail.

Who this book is for

This is an ideal book for Citrix XenApp professionals who need to keep a close eye on the performance of their XenApp servers and generate reports.

This cookbook explores basic to advanced recipes that cover the most common tasks a professional might undertake while administering their EdgeSight Server in their day-to-day job.

Conventions

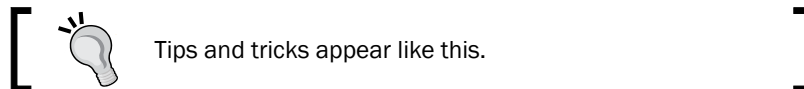
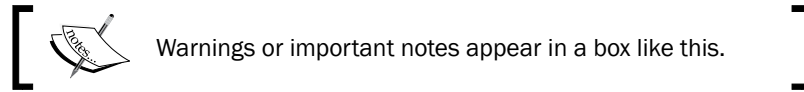
In this book, you will find a number of styles of text that distinguish between different kinds of information. Here are some examples of these styles and an explanation of their meaning.

Code words in text, database table names, folder names, filenames, file extensions, pathnames, dummy URLs, user input, and Twitter handles are shown as follows: "The EdgeSightXA6Agentx64.msi installer file is used to install EdgeSight agent Version 5.4, while EdgeSightXAAgentx64.msi is used to install EdgeSight agent Version 5.3."

Any command-line input or output is written as follows:

```
Msiexec /i EdgeSightXA6Agentx64.msi /l logfile.log /q SERVER_  
NAME=ServerName COMPANY=CompanyName DEPARTMENT=DeptName  
REBOOT=ReallySuppress
```

New terms and **important words** are shown in bold. Words that you see on the screen, in menus or dialog boxes for example, appear in the text like this: "Verify that the default departments were created successfully by navigating to **Configure | Company Configuration | Device Management | Departments.**"



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Instant EdgeSight for XenApp

Welcome to *Instant EdgeSight for XenApp*. The focus of this book will be on EdgeSight for XenApp, which will include EdgeSight Server, EdgeSight Server Console, EdgeSight agents, the database server, web server, and Citrix License Server.

Installing EdgeSight Server (Intermediate)

We will now perform an installation of Citrix EdgeSight Server 5.4 and also discuss its prerequisites. If possible, you should install the server components on separate servers but they can all be installed together on a single server.

Getting ready

Install the following roles and features using the server manager before proceeding with the installation of the EdgeSight Server in Windows Server 2008:

- ▶ Microsoft .NET Framework 3.5 SP1
- ▶ Microsoft Message Queuing (MSMQ); install common components only
- ▶ IIS 7.0 (also install the following web server roles)
 - Static Content
 - Default Document
 - ASP.NET
 - ISAPI Extensions

- ❑ ISAPI Filters
- ❑ Windows Authentication
- ❑ Request Filtering
- ❑ The following management tools:
 - ▶ IIS 6 Management Compatibility
 - ▶ IIS 6 Metabase Compatibility
 - ▶ IIS 6 WMI Compatibility
 - ▶ IIS 6 Scripting
 - ▶ IIS 6 Management Console

For your database server you can use SQL Server 2008 R2, SQL Server 2008 SP2, or SQL Server 2005 SP4. SQL Server 2012 is the supported database server. Citrix has a database matrix; you can check the article *Citrix Document ID CTX114501* at the following link:

<http://support.citrix.com/article/CTX114501>

How to do it...

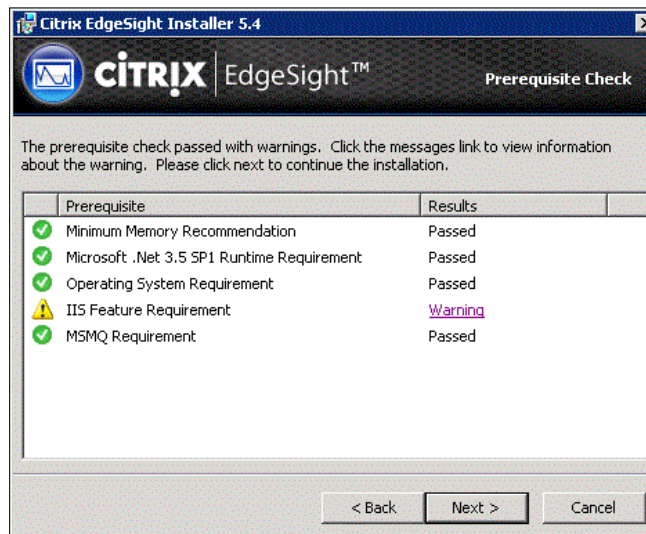
In this recipe we are going to perform the required operations for installing the EdgeSight Server:

1. Insert the Citrix XenApp CD and click on **Manually install components**.

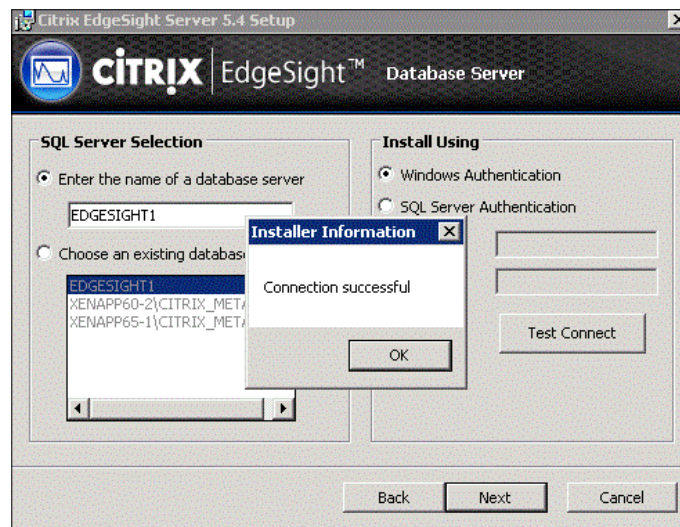


2. Click on **Server Components** and then click on **Application Performance Monitoring**.

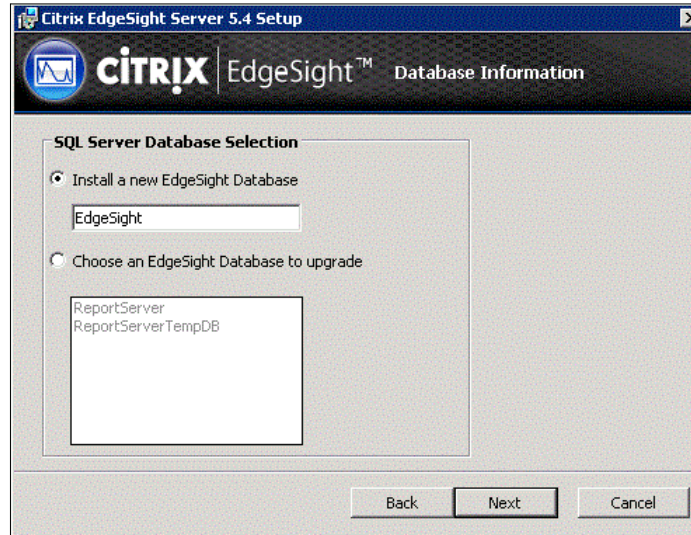
3. On the **Welcome** screen, click on **EdgeSight Server** and then click on **Next**.
4. Select **Edgesight Server Website and Database**; click on **Next**.
5. Click on **Warning** to read the warning message, ignore the SSL certificates warning if not using SSL certificates, and click on **OK**.



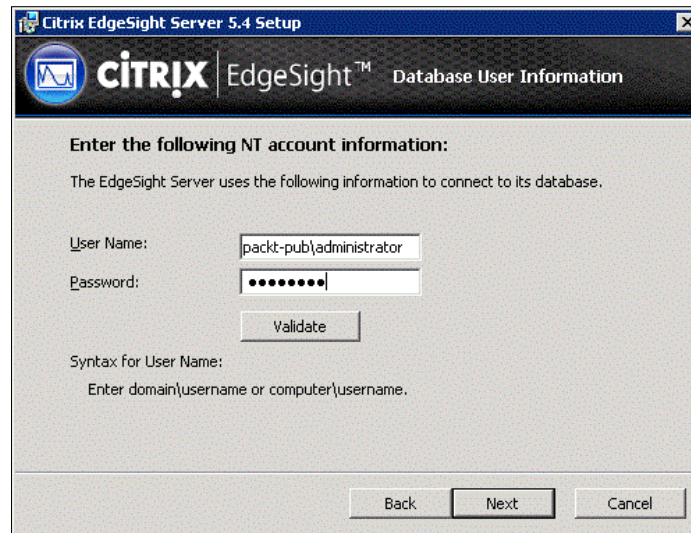
6. Accept the **License Agreement** checkbox and select **Custom** as the setup type.
7. Enter the name of your database server and click on **Test Connect** after selecting the appropriate authentication method.



8. Enter the name of the new database that will be created on the database server.

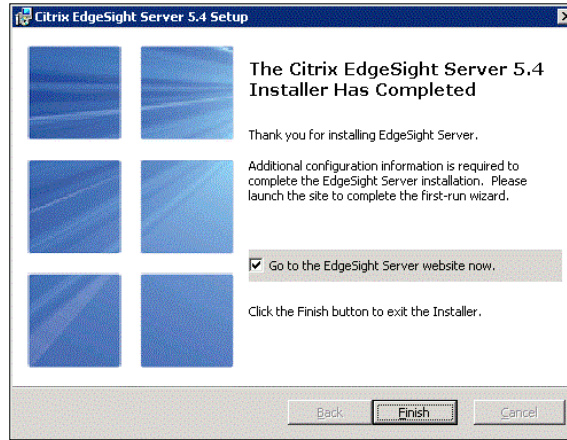


9. Enter the credentials that the web server uses when connecting to the database and then click on **Validate**. After successful validation click on **Next**.




10. Accept the default sizes for the **File Group Size** and **Log Files Size** options and click on **Next**.
11. Accept the default path or modify it if required, click on **Next**, and then on **Install**.

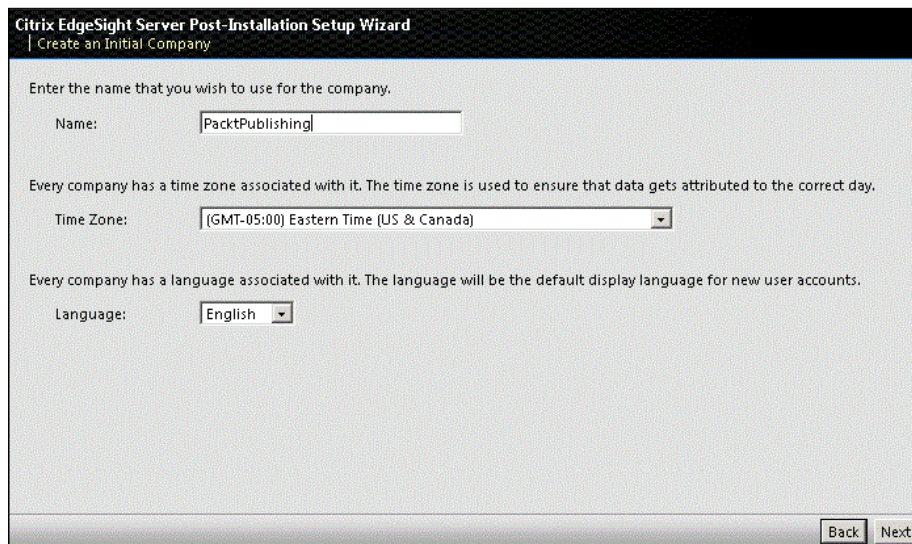
12. Verify that **Go to the EdgeSight Server website now.** is checked and click on **Finish**.



13. Click on **Next** to continue with the **Post Installation Setup Wizard** web page to configure initial configuration of the EdgeSight Server.

[ This wizard can also be completed later by going to <http://<ServerName>/edgesight/>]

14. Enter a name in the company **Name** field and select the **Time Zone** and **Language** values you want to use for this company. Then click on **Next**.



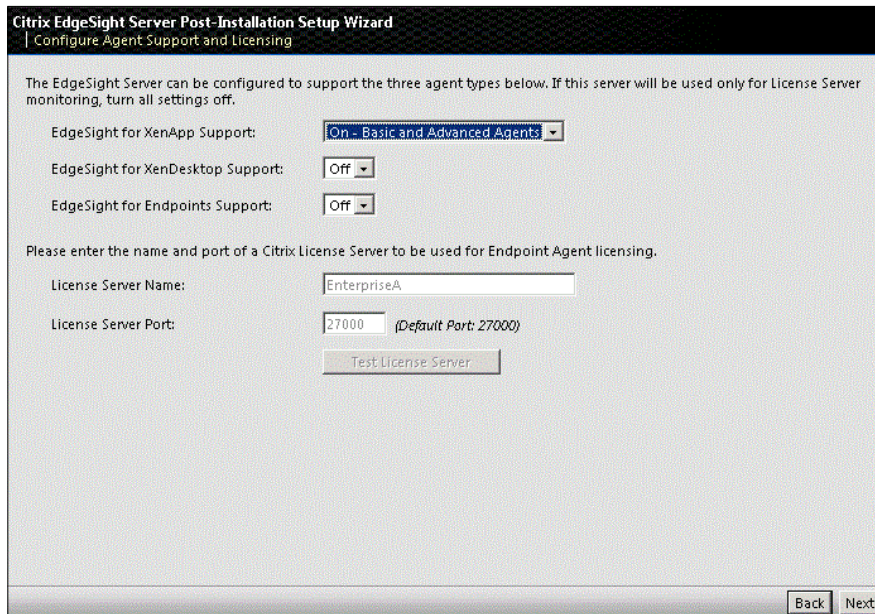
15. Create a Superuser account with a valid e-mail address.

The screenshot shows the 'Create the Superuser Account' step of the Citrix EdgeSight Server Post-Installation Setup Wizard. The window title is 'Citrix EdgeSight Server Post-Installation Setup Wizard' and the subtitle is 'Create the Superuser Account'. The main text reads: 'The Superuser has full access to all of the companies in the EdgeSight Server database. Log in with this user to create additional users.' Below this, there are input fields for 'First Name' (containing 'Super'), 'Last Name' (containing 'User'), and 'Email/Login' (containing 'SuperUser@packt-pub.net'). A note states: 'The password must be at least 5 characters in length.' There are two password input fields, 'Password' and 'Confirm', both containing seven dots. At the bottom right, there are 'Back' and 'Next' buttons.

16. Enter the FQDN or IP address of your SMTP server to be used to route the e-mails generated by the EdgeSight Server.

The screenshot shows the 'Configure Email Settings' step of the Citrix EdgeSight Server Post-Installation Setup Wizard. The window title is 'Citrix EdgeSight Server Post-Installation Setup Wizard' and the subtitle is 'Configure Email Settings'. The main text reads: 'Periodically, the EdgeSight Server will send email in response to certain events. Please enter the address of an SMTP server that the EdgeSight Server can use to send email.' Below this, there is an input field for 'SMTP Server' containing '192.168.1.110'. Another instruction reads: 'Please enter the email address to which the EdgeSight Server should send email when important events occur on the server and select the language in which the emails should be sent.' This is followed by an 'Email Address' field containing 'Alerts@packt-pub.net' and a 'Language' dropdown menu set to 'English'. A final instruction reads: 'Please enter the Display Name and Email Address that will appear in the "From:" field of any email sent from the EdgeSight Server.' This is followed by a 'Display Name' field containing 'EdgeSight Alert' and an 'Email Address' field containing 'EdgeSight@packt-pub.net'. At the bottom right, there are 'Back' and 'Next' buttons.

17. Select the type of agents from the drop-down menu for which uploads are supported according to your licenses.



18. Review your choices and click on **Finish**; this will open the EdgeSight Server login web page.

How it works...

The EdgeSight Server is managed through a web-based console and can be accessed from any desktop with Internet Explorer 7.0 or greater with JavaScript enabled. Other software components that are needed on the system from which users access the EdgeSight Server web console include:

- ▶ Adobe Flash
- ▶ Adobe Reader
- ▶ Microsoft Excel



To update the Excel spreadsheets, EdgeSight requires full write permissions; therefore you should use the Microsoft Excel that comes with Microsoft Office 2003 or 2007 and not Excel Viewer. Also make sure that you confirm to your Microsoft Office license agreements.

As of this date, Microsoft Excel 2010 is not supported.

There's more...

It is nice to know some EdgeSight terminology; refer to the following table:

Term	Description
Company	Primary organizational unit, a single server can support multiple companies.
Department	Companies are broken into departments and create a hierarchical tree.
Devices	Any system with the EdgeSight agent installed.
Custom Groups	A user-defined collection of devices.
Users	Users who can log in and display reports and perform other administrative tasks.
Superuser	Has access to all companies hosted on the server and can create other users.

A single EdgeSight Server can support multiple companies, each company with its own time zone, SMTP settings, license server, and Superuser account.

The Superuser credential information should be stored and saved for future reference. The Superuser account cannot be deleted.

EdgeSight 5.4 also requires a Citrix License Server 11.6 or above. Without configuring the Citrix License Server, the EdgeSight agents will not upload data to the EdgeSight Server. To monitor your Citrix licensing server, the version of the licensing server should be at least 11.9.

If you plan to install License Administration Console and EdgeSight Server on the same machine then install EdgeSight Server first.

Only Enterprise and Platinum licenses are supported to be used by EdgeSight 5.4.



Enterprise licenses monitor only the basic metrics.

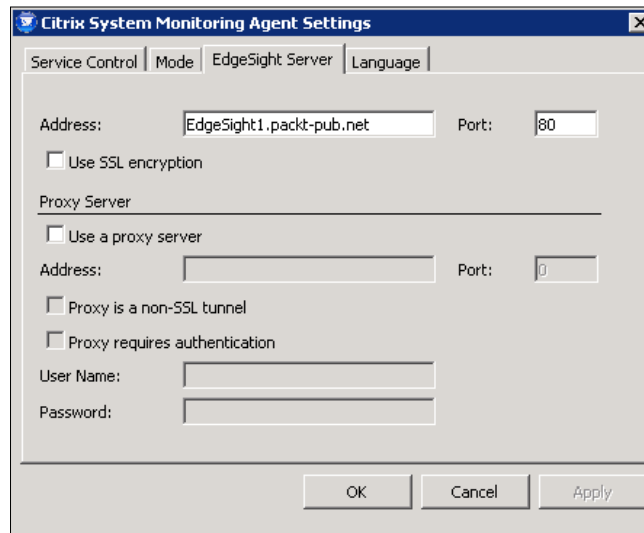
Installing EdgeSight agents (Simple)

The EdgeSight agent needs to be installed on each XenApp server that we need to monitor. After the agent has been installed, the agent attempts to contact the EdgeSight Server to download its configuration. The installation of the agent requires a reboot of the server and may take up to 10 minutes before the XenApp server appears in the EdgeSight Console.

Getting ready

If you have to use a proxy server, remember that, for the communication to happen between the EdgeSight agent and the server, you must configure a proxy to route the EdgeSight traffic to the EdgeSight Server. You can do this by reconfiguring the EdgeSight agent network settings of the Citrix System Monitoring Agent with these new proxy values.

The following screenshot shows the EdgeSight agent settings screen where you need to provide the proxy settings:



You must also configure antivirus software running on your EdgeSight Server and all XenApp servers with EdgeSight agent to exclude specific processes and files.

Antivirus exclusions

Ensure that these agent services are not subject to script blocking on both the EdgeSight Server and the XenApp server.

EdgeSight Server	XenApp Server
RSshApp.exe	RScorsvc.exe
RSshSvc.exe	

These files are located in the following folders:

- ▶ The RSshApp.exe and RSshSvc.exe files are located at
%CommonProgramFiles%\Citrix\System Monitoring\
Server\RSSH\

- ▶ The RScorsvc.exe file is located at %ProgramFiles%\Citrix\System Monitoring\Agent\Core\

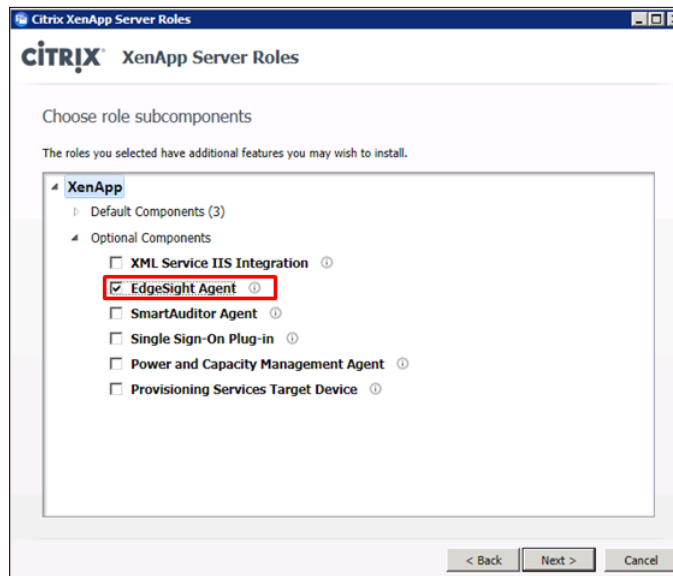
Also exclude the following folders from script blocking:

EdgeSight Server	XenApp Server
%ProgramFiles%\Citrix\System Monitoring\Server	%ALLUSERSPROFILE%\Citrix\System Monitoring\Data
%ProgramFiles%\Microsoft SQL Server\MSSQL\Data\	
%SystemRoot%\SYSTEM32\Logfiles	

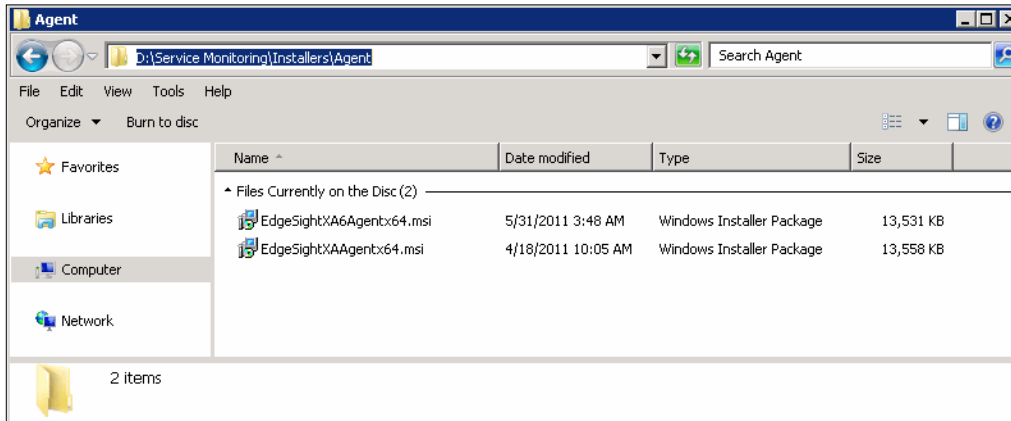
For XenApp servers with Windows Server 2003 the %ALLUSERSPROFILE%\Citrix\System Monitoring\Data folder can be found at %ALLUSERSPROFILE%\Application Data\Citrix\System Monitoring\Data\

How to do it...

1. The EdgeSight agent can be installed during the XenApp installation or after the XenApp installation. If you want to install the EdgeSight agent with the installation of the XenApp server, during the installation of the XenApp server, when selecting the roles to be installed, make sure you select the **EdgeSight Agent** option:



- The EdgeSight agent can also be installed after the installation of XenApp or on an existing XenApp server. The XenApp 6.5 CD image contains two agent installer files, as shown in the following screenshot:



The `EdgeSightXA6Agentx64.msi` installer file is used to install EdgeSight agent Version 5.4, while `EdgeSightXAAgentx64.msi` is used to install EdgeSight agent Version 5.3.

The installation of the agent is straightforward; the only thing one should keep in mind is that the company name should match the name specified during the EdgeSight Server setup.

- The agent can also be installed via the command-line interface. A typical command line to install the agent would be:

```
Msiexec /i EdgeSightXA6Agentx64.msi /l logfile.log /q SERVER_
NAME=ServerName COMPANY=CompanyName DEPARTMENT=DeptName
REBOOT=ReallySuppress
```

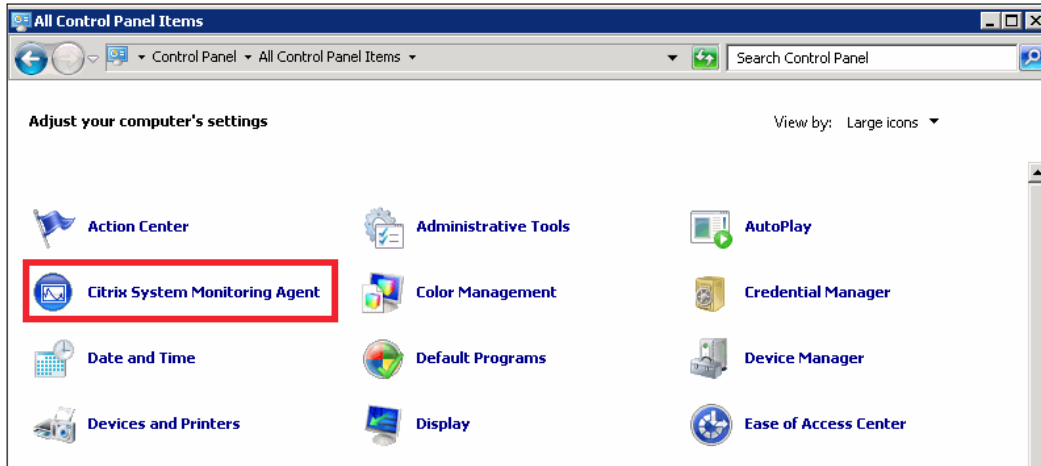
How it works...

The agent runs as a service and collects the data from a number of sources including Windows Management Instrumentation (WMI) and Windows Performance Counters.

The XenApp agent collects performance data every 15 seconds and periodically consolidates this data into five-minute samples. The data uploaded to the EdgeSight Server is consolidated into an hourly granularity. By default, this data is uploaded to the EdgeSight Server once a day.

There's more...

If you ever need to modify the agent configuration after installation, you can use the **Citrix System Monitoring Agent** control panel applet on the XenApp server.



The EdgeSight agent operates in either the basic mode or the advanced mode. The agents in advanced mode collect more detailed metrics. For more details on the differences, refer to the *Citrix Document ID CTX124427* documentation at <http://support.citrix.com/article/CTX124427>.

XenApp Edition	Default Agent Mode	Mode Tab Availability
Platinum	Advanced	No
Enterprise	Basic	Yes

To configure the agent mode when installing the agent using the command line, add the `FUNCTIONALITY_MODE` argument. It can have two values `Advanced` and `Basic`.

Configuring the server settings (Intermediate)

Now that the installation and the post-installation wizards have completed successfully, we still need to complete a few tasks such as configuring the Reporting Services, creating departments, and groups.

Getting ready

Reporting Services is a component of Microsoft SQL Server and is required as part of a Citrix EdgeSight installation to provide a robust and flexible reporting environment. Reporting Services provides a central location for report storage and management. They can be installed on the database server, web server, or a separate server itself. If you do not have Reporting Services configured, the EdgeSight installation process will not give any warning; the installation will end successfully but no reports will be available on the EdgeSight Console.

You can open a web browser and point the URL to `http://<ServerName>/ReportServer` to verify the existence of Reporting Services on a server. This URL could be different if the Reporting Services were customized. This is depicted in the following screenshot:



This web page also displays the version of the Reporting Services we have installed.

For more information on how to install and configure Reporting Services to be used by EdgeSight, refer to the *Citrix Article ID CTX111313* documentation at the following link:

<http://support.citrix.com/article/CTX111313>

How to do it...

1. As soon as you log in for the first time on the EdgeSight web console, you will see a message on the top such as **Reporting Services is not configured or is configured incorrectly**. In the **Report Server URL** field, enter the URL of your reporting server and the credentials for the Reporting Server. Click on the **Save Changes** button.

The screenshot shows the 'Configuration' tab of the EdgeSight web console. At the top, there is a red error message: 'Reporting Services is not configured or is configured incorrectly.' Below this, the 'Report Server URL' section contains a text input field with the value 'http://localhost/reportserver'. A descriptive paragraph explains that this is the URL for the Reporting Services web service. The 'Report Server Credentials' section includes a 'User' field with 'packt-pub\administrator' and a 'Password' field with masked characters. A note mentions that SQL Server 2008 merged the 'Manage Shared Schedules' role with the 'System Administrator' role. The 'Data Source Credentials' section is partially visible at the bottom.

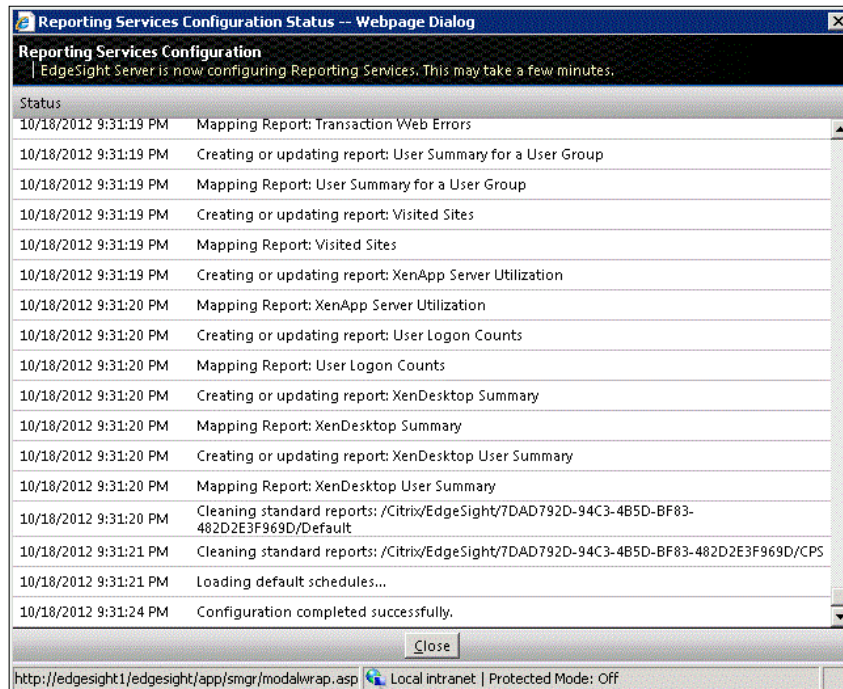


If you have created a new user ID to be used by the EdgeSight Server to connect Reporting Services web services, use this ID. You can later modify the information entered here by navigating to **Configure | Server Configuration | Reporting Services | Report Server**.

- The **Reporting Services Configuration Status – Webpage Dialog** window pops up. Wait a few minutes for the pop-up window to configure the Reporting Services. Once the Reporting Services have been configured, click on the **Close** button.

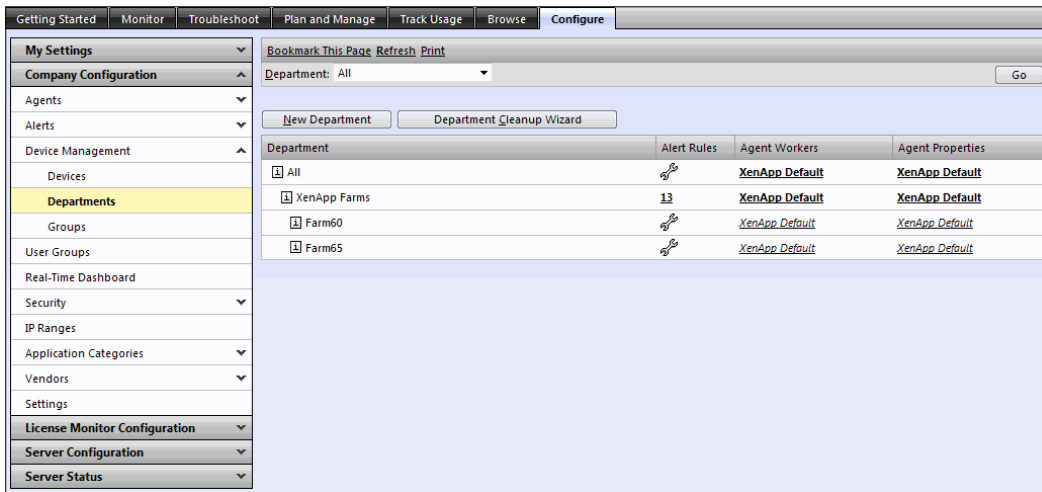


A department is a logical grouping of agent devices within a company that have the same configurations and alerts applied. We can map one or multiple alert rules, alert actions, worker configurations, and agent configurations to devices in the department.



If the **Reporting Services Configuration Status – Webpage Dialog** window does not appear and times out after 20 minutes, there is a delay in communication from the EdgeSight web server with SQL Server Reporting Services. If this happens then ensure that the SQL Server Agent service is in *started* state. This is required for publishing the schedules.

- Verify that the default departments were created successfully by navigating to **Configure | Company Configuration | Device Management | Departments**.



The **All** root department and the **XenApp Farms** subdepartments are created by default during the EdgeSight installation and are usually referred as the default departments. The default departments cannot be renamed, moved, or deleted but we can modify their worker and agent properties.

The subdepartments override configuration settings inherited from parent departments. If you have two alerts mapped to the **All** department and three are mapped to a subdepartment, then that means that a total of five alert rules will be applied to this subdepartment.

[

You can create departments based on the type of application published on the XenApp server such as the Office 2007 servers, the Office 2010 servers, the geographical location of the server, or any other hierarchical structure.

]

- After installing the EdgeSight agent and rebooting the XenApp server you will receive an e-mail from the EdgeSight Server that a new instance has been discovered. Verify that you start getting those e-mails. The following screenshot displays the e-mail received from the EdgeSight Server after a new device gets registered with it:

EdgeSight - New Instance - Machine: 'XENAPP65-3' Domain: 'PACKT-PUB'
 EdgeSight@packt-pub.net
 Sent: Fri 10/19/2012 3:33 PM
 To: Alerts

New EdgeSight Instance Information:

Machine:	XENAPP65-3
Domain:	PACKT-PUB
IP Address:	192.168.1.126
FQDN:	XenApp65-3.packt-pub.net
Assigned Company:	PacktPublishing
Assigned Department:	All\XenApp Farms\Farm65
WebServer:	EDGESIGHT1


To view more detailed information visit: [Devices](#).

- Navigate to **Configure | Company Configuration | Device Management | Devices** to verify that the XenApp servers on which the agent has been installed start to appear in the EdgeSight console.

The screenshot shows the EdgeSight console interface. The 'Configure' tab is active, and the 'Devices' section is expanded. The 'Devices' table contains the following data:

Device	Domain	Model	#@MHz	Last Upload
XENAPP65-3	PACKT-PUB	VMware Virtual Platform	2@ 2300	10/19/2012 3:33 PM
XENAPP65-1	PACKT-PUB	Virtual Machine	1@ 1995	10/18/2012 10:29 PM
XENAPP65-2	PACKT-PUB	Virtual Machine	1@ 2009	10/18/2012 10:21 PM
XENAPP60-2	PACKT-PUB	VMware Virtual Platform	2@ 2300	10/18/2012 10:10 PM
XENAPP60-1	PACKT-PUB	Virtual Machine	1@ 1995	10/18/2012 10:06 PM

- Verify the EdgeSight Server's license status by navigating to **Configure | Server Configuration | EdgeSight Licensing**.

 If a XenApp agent licensing violation has occurred, then the following message will be displayed:
EdgeSight has detected a problem with Licensing. Click here for more information.

7. Verify that you only upload the data from the agents to the EdgeSight database that is important to you. Navigate to **Configure | Server Configuration | Data Maintenance | Upload Configuration** to make your selection according to your requirements.

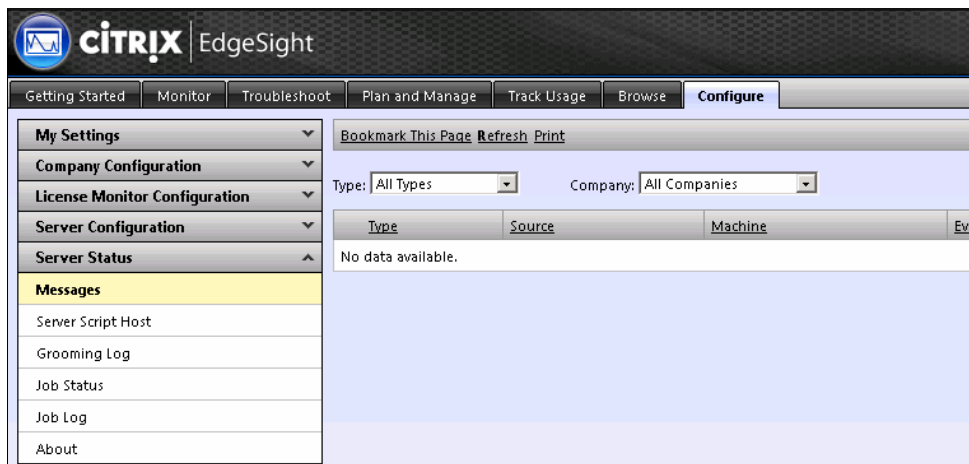


An important message is displayed at the top of the page, informing the administrator that the amount of data uploaded to the server directly impacts the size of your database and the performance of the server. The server will run faster and will be able to support more devices if you do not upload data that is not important to you.

There's more...

A single server can support multiple companies. Companies are broken down into departments.

To display the most recent messages related to server maintenance jobs, events, or the registration of new agents, browse to **Server Status | Messages**.



Modifying the e-mail notification settings

You must provide a valid SMTP server name or IP address as the EdgeSight Server uses e-mail for alerts and error event notifications.

In case you ever need to go back and modify the e-mail notification settings for a company in EdgeSight, navigate to **Configure | Server Configuration | Settings | Notifications**.

Getting Started | Monitor | Troubleshoot | Plan and Manage | Track Usage | Browse | **Configure**

Bookmark This Page Refresh Print

Agent Support | Agent Database Broker | **Notifications** | Timeouts | Data Upload | Crash Processing | SSL | SNMP

SMTP Server: 192.168.1.110
Address of SMTP server used to send email from EdgeSight Server.

SMTP Port: 25
Port of SMTP server used to send email from EdgeSight Server.

EdgeSight Server: EDGESIGHT1
The EdgeSight server name.

Administrative Email Address: Alerts@packt-pub.net
The email address to which EdgeSight Server should send administrative emails.

Email From Address: EdgeSight@packt-pub.net
The default "from" email address for all mail sent from EdgeSight Server.

Language: English
Language of email sent from EdgeSight Server.

New Agents: Send Email
Send an email when a new agent is registered with the EdgeSight Server (recommended).

Agent Errors: Send Email
Send an email when an agent error occurs (recommended).


Server Errors: Send Email
Send an email when a server error occurs (recommended).

Communication Errors: Log Message
Write a database message when an agent communication error occurs (recommended).

Bad HTTP Payload Read: Do Nothing
Send an email when there is bad HTTP read of a payload (not recommended).

Attach Payload: No
Attach the payload (if available) when an error occurs (not recommended).

Before saving your changes you must also test the communication with your messaging server by clicking on the **Test Email** button.

 Based on your SMTP server and its version, you might also need to configure you SMTP server to allow the EdgeSight Server to send an e-mail.

Configuring users, groups, and authentication (Intermediate)

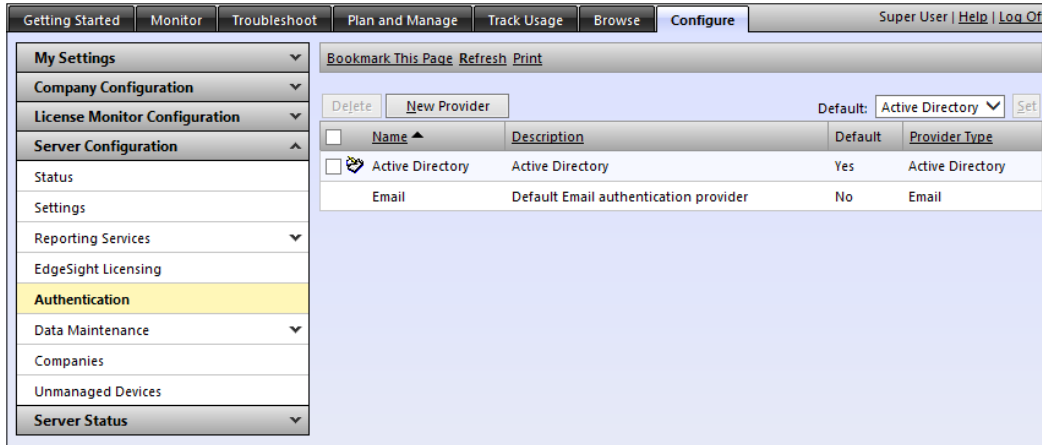
After you've completed the EdgeSight Server installation and configured the server setting, it is time to create users, assign groups, and configure an authentication provider. In this recipe we will use Active Directory as the authentication provider.

Getting ready

Before creating a new Active Directory as the authentication provider we need to get the LDAP path. The LDAP path is formulated as `LDAP://DomainName.com`.

How to do it...

1. To configure an authentication provider, browse to **Configure | Server Configuration | Authentication** and click on the **New Provider** button.



The screenshot shows the EdgeSight configuration interface. The top navigation bar includes tabs for Getting Started, Monitor, Troubleshoot, Plan and Manage, Track Usage, Browse, and Configure. The user is logged in as Super User. The left sidebar shows a tree view with 'Authentication' selected. The main content area displays a table of authentication providers. The 'Active Directory' provider is selected and marked as the default.

<input type="checkbox"/>	Name	Description	Default	Provider Type
<input checked="" type="checkbox"/>	Active Directory	Active Directory	Yes	Active Directory
<input type="checkbox"/>	Email	Default Email authentication provider	No	Email



The default authentication provider that is created with the installation of EdgeSight cannot be edited or deleted.

2. Select **Active Directory** from the list of authentication provider and click on **Next**.
3. Enter a name and description to identify the provider. If you want to configure this as the default authentication provider then also select **Make this the default authentication provider**. Also enter the LDAP path with the appropriate user credentials and then click on the **Test** button. After the message **The test completed successfully**, click on the **Finish** button.

Step 2 - Configure the authentication provider

Name:

Description:

Make this the default authentication provider

LDAP Path:

The account specified here is used to query Active Directory for users and groups. Both the account name and the password will be stored in the database. The password will be encrypted. You should not use an account whose password may expire. If the password expires, you will not be able to add Active Directory users and groups to EdgeSight Server and logins may begin to fail. This account is not used to authenticate users to EdgeSight Server. A users own user name and password will be used during the authentication process. The user name can be in one of the following forms:

- NT Domain (e.g. yourdomain\username)
- User Principal Name (e.g. username@yourdomain.com)
- Distinguished Name (e.g. cn=username,cn=Users,dc=yourdomain,dc=com)

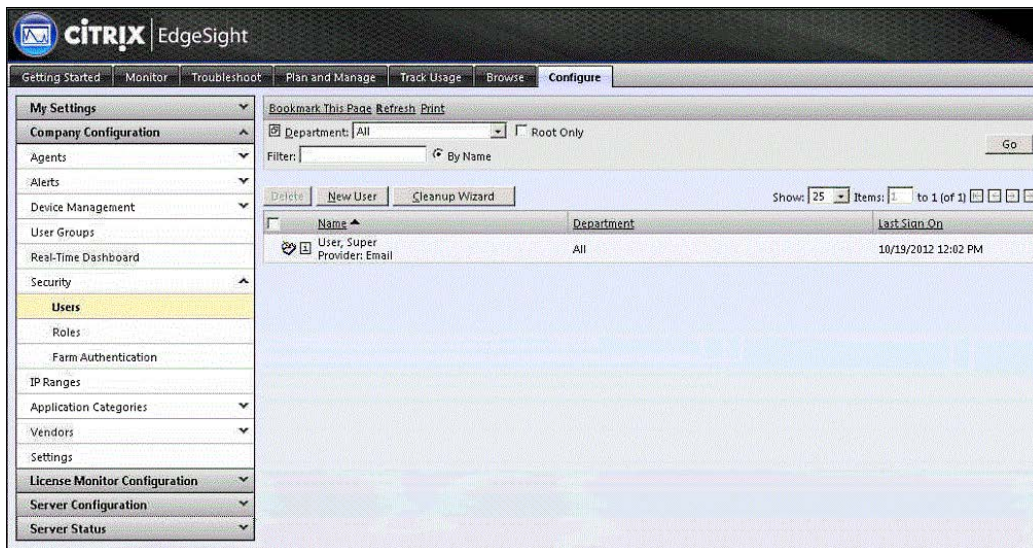
NOTE: The examples above will have to be modified to reflect your Active Directory structure.

User Name:

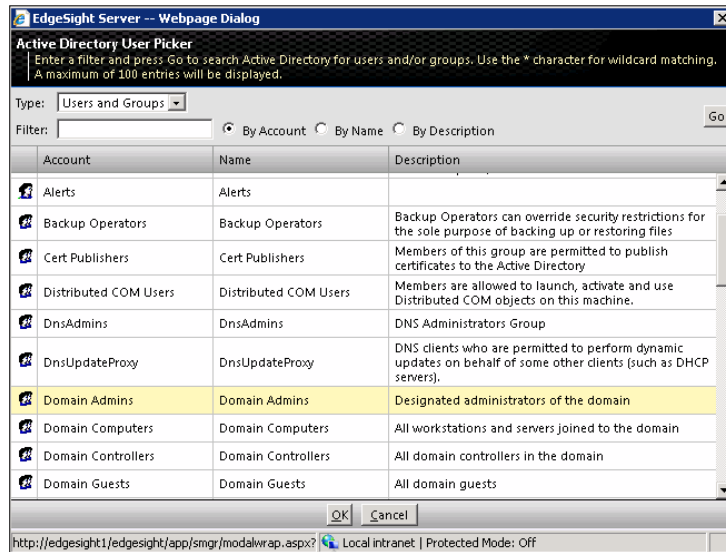
Password:

The test completed successfully

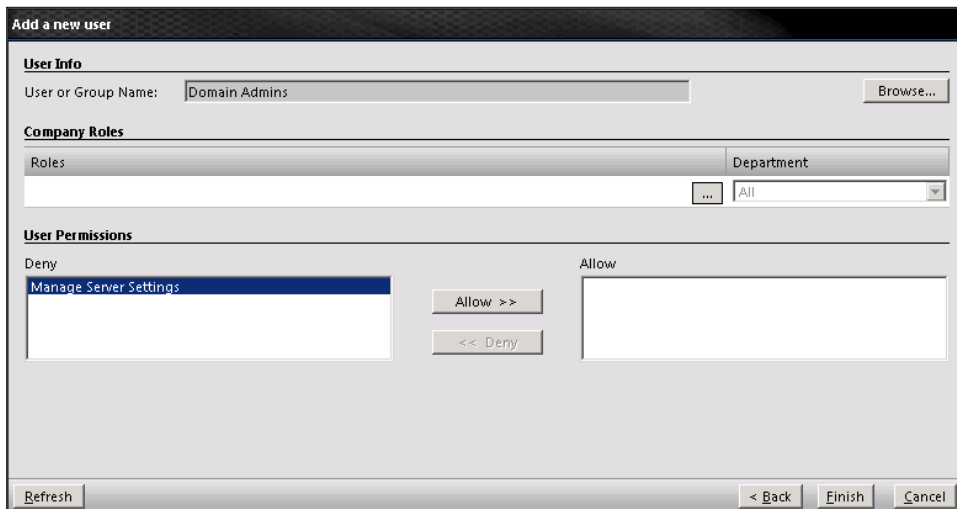
- Now we will create a new user in EdgeSight using the Active Directory User Picker and select a user from our Active Directory domain. To do this navigate to **Configure | Company Configuration | Security | Users** and then click on the **New User** button.



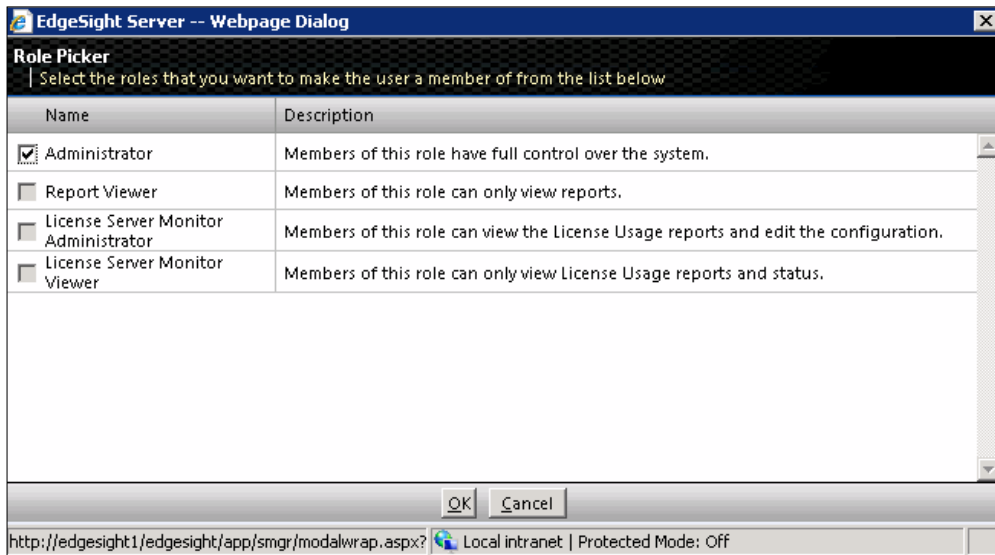
5. Select **Active Directory** as the authentication provider and click on **Next**.
6. Click on the **Browse** button to select **User** or **Group** from the **Active Directory User Picker** window.
7. Select the appropriate type as **Users, Groups, or Users and Groups** from the **Type** drop-down menu and click on the **Go** button to populate the list from Active Directory. Select the **User** or **Group** value you want to assign the permissions to and click on **OK**. Here we have selected the **Domain Admins** group.



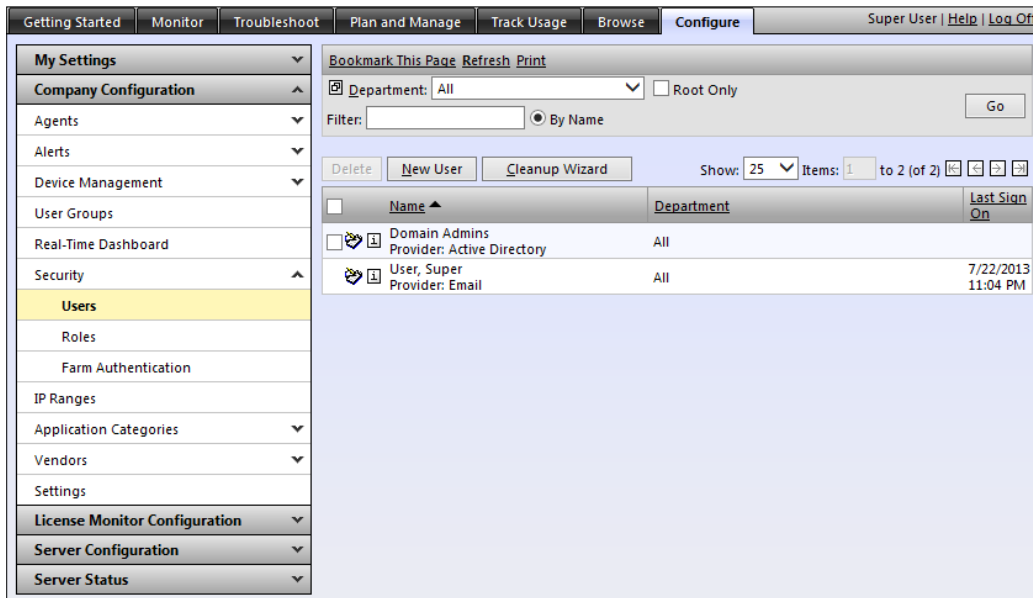
8. Click on the **Save** button to select the role from the **Role Picker** pop-up window.



- Select the role you want to make this new user a member of and click on **OK**. You will be then returned to the **Add a new user** web page.



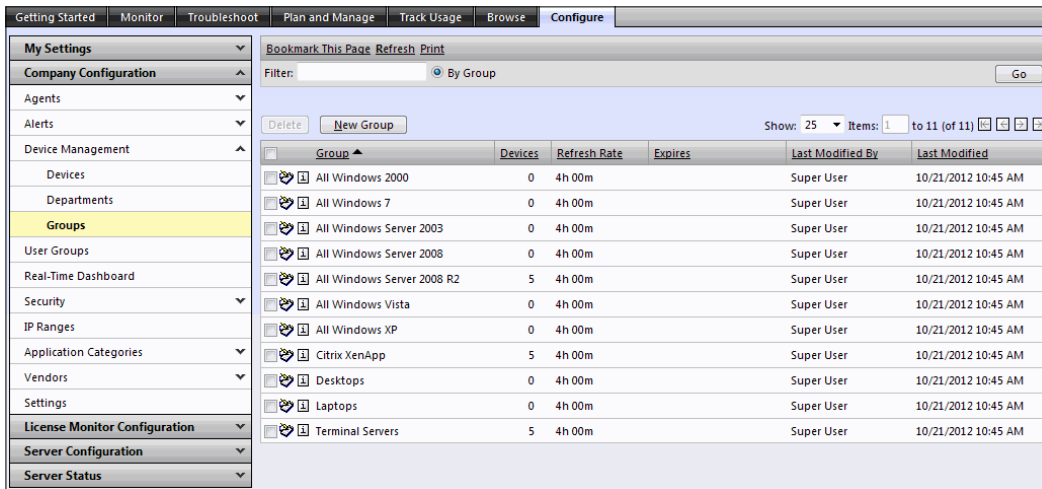
- Select user permissions to be granted to the user from the **Deny** list box and click on **Allow** to grant the permission.
- Click on **Finish** and verify that the new user you created now appears in the list.



Let us now see how to manage groups.

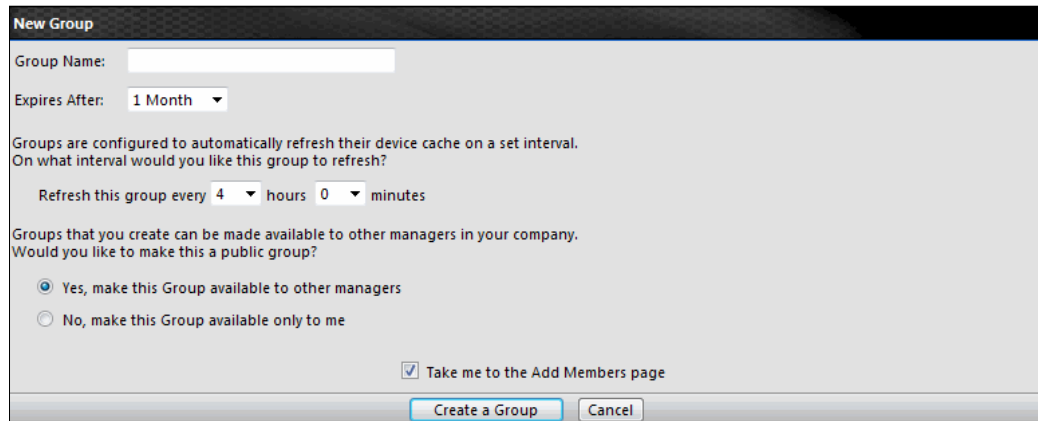
The **User Groups** page enables you to create collections of users by directly selecting users by username, IP address, IP range, or by running a query against the EdgeSight database. The examples of groups include common operating systems and common hardware:

1. To create a group, browse to **Configure | Company Configuration | Device Management | Groups** and then click on the **New Group** button.



The groups in the previous screenshot were created automatically during the installation of the EdgeSight Server.

2. Enter a name for the group and click on the **Create a Group** button.



The expiration period is the time after which this newly created group will automatically be deleted. This feature facilitates the management of groups created for short-term projects with a set duration, such as the evaluation of software. Groups can also be set to never expire.

The refresh period refreshes the device cache. This refresh rate generally provides you with sufficient currency of data without performing unnecessary cache refreshes.

How it works...

If you do not create the Active Directory authentication provider, you can still use the default authentication provider (**Email**) that is installed with the installation of the EdgeSight Server. The default authentication provider uses an e-mail address as the username:

Add a new user

User Info

First Name: Vaqar Last Name: Hasan

Email: vaqarhasan@packt-pub.net

NOTE: An email will be sent to the user explaining the sign in process and providing a temporary password.

Company Roles

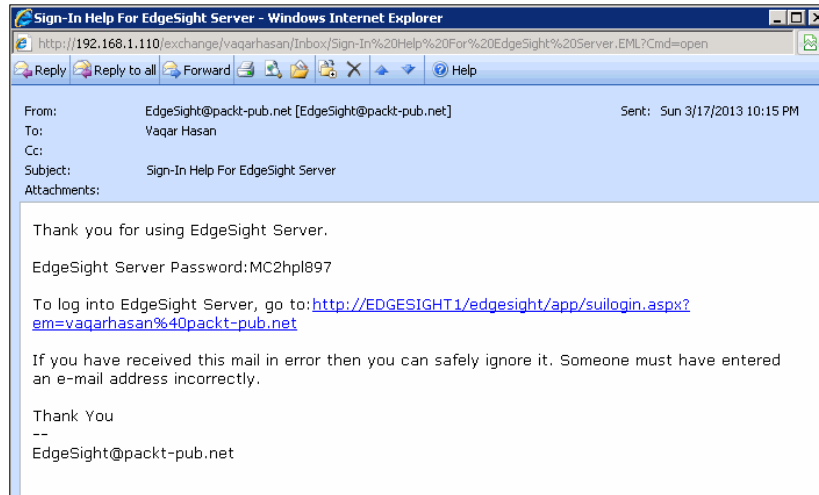
Roles	Department
Administrator	All

User Permissions

Deny	Allow
	Manage Server Settings

Buttons: Allow >> << Deny Refresh < Back Finish Cancel

When you create a new user, you will have to provide the e-mail address for that user. Then an e-mail is sent to the user explaining the first-time login process and also providing a temporary password. When the user first logs in, they are requested to change their password.



There's more...

Once you have configured Active Directory as the authentication provider, then the users or groups you assigned the permissions will be able to log in to the EdgeSight website using their Active Directory credentials.

Defining alerts (Advanced)

Citrix EdgeSight alert is a powerful rules- and actions-based system that instructs the EdgeSight agents to send an alert in real time when a predefined situation has occurred on a monitored object. Alerts are defined by rules.

The action can be configured to send either an e-mail alert or SNMP trap. The generated alerts are also listed and organized within the EdgeSight web console.

After an alert rule has been created, it should be mapped to a department.

How to do it...

1. To create an alert, navigate to **Configure | Company Configuration | Alerts | Rules | New Alert Rule**.

The screenshot shows the 'Configure' tab in the EdgeSight interface. The left sidebar is expanded to 'Rules'. The main area displays a table of existing alert rules. At the top, there are buttons for 'Delete' and 'New Alert Rule', and a 'Show: 25 Items: 1 to 15 (of 15)' filter.

<input type="checkbox"/>	Alert Rule	Rule Type	# Depts	Last Modified By	Last Modified
<input type="checkbox"/>	Configuration Logging Database Unavailable	Configuration Logging Database Unavailable	1	User_Super	10/18/2012 9:21 PM
<input type="checkbox"/>	Farm Data Store Connection Failure	Farm Data Store Connection Failure	1	User_Super	10/18/2012 9:21 PM
<input type="checkbox"/>	Health Monitoring and Recovery Action Failure	Health Monitoring and Recovery Action Failure	1	User_Super	10/18/2012 9:21 PM
<input type="checkbox"/>	Health Monitoring and Recovery Test Failure	Health Monitoring and Recovery Test Failure	1	User_Super	10/18/2012 9:21 PM
<input type="checkbox"/>	IMA Service is Unresponsive	IMA Service is Unresponsive	1	User_Super	10/18/2012 9:21 PM
<input type="checkbox"/>	License Server Connection Failure	License Server Connection Failure	1	User_Super	10/18/2012 9:21 PM
<input type="checkbox"/>	Number of Servers in a Zone is too High	Number of Servers in a Zone is too High	1	User_Super	10/18/2012 9:21 PM
<input type="checkbox"/>	Published Application Concurrent Usage Limit	Published Application Concurrent Usage Limit	1	User_Super	10/18/2012 9:21 PM
<input type="checkbox"/>	Session in Down State	Session in Down State	1	User_Super	10/18/2012 9:21 PM
<input type="checkbox"/>	System Slowdown	System Slowdown	1	-	10/24/2012 8:07 PM
<input type="checkbox"/>	Terminal Server Client Connection Error	Terminal Server Client Connection Error	1	User_Super	10/18/2012 9:21 PM
<input type="checkbox"/>	Terminal Server License Server Discovery Failure	Terminal Server License Server Discovery Failure	1	User_Super	10/18/2012 9:21 PM

2. We will create an alert rule based on an application, so select the **Application Alerts** radio button and click on **Next**.
3. Select **Application Performance** as the alert type and click on **Next**.
4. Give the alert rule a name, the name of the process we want to monitor, and the CPU time in percent. Click on **Next**.

The 'Alert Rules Creation Wizard' dialog box is shown, with the 'Define Alert Rule Conditions' step. The 'Rule Type' is set to 'Application Performance' and the 'Rule Name' is 'Internet Explorer 80 Percent CPU'. The 'Standard Parameters' section is expanded, showing the following fields:

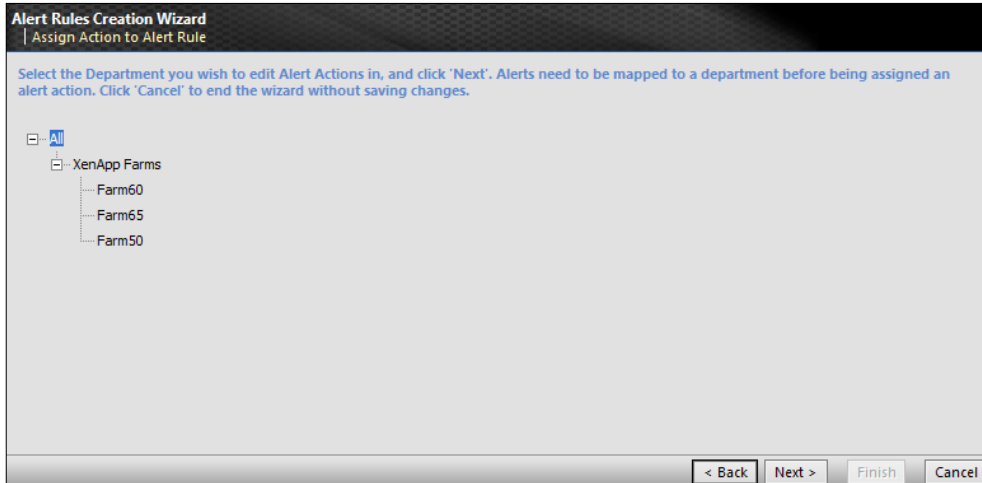
Parameter	Value	Required
Process file name	ijexplore.exe	<input type="checkbox"/> Not like
Process company name		<input type="checkbox"/> Not like
• CPU time (percent)	80	
• Private bytes allocated (KBytes)		
• Handle count		
• Page faults per second		
• Thread count		
• Thread queue length		

Advanced parameters are available. Click here to view them...

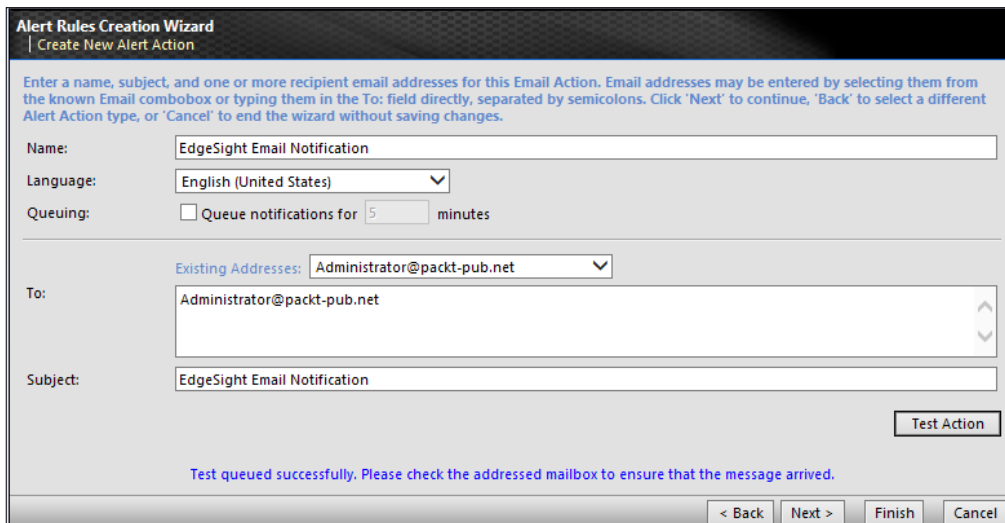
• — Indicates a required parameter.
• — Indicates a parameter from a set where at least one is required.

Buttons: < Back, Next >, Finish, Cancel

5. Select departments to assign this alert rule to and click on **Next**.
6. Select the department you wish to edit alert actions in and click on **Next**.



7. We now need to assign an action to this alert rule; we will create a new action. So select the **Create New Alert Action** radio button and click on **Next**.
8. We will send an e-mail notification as the alert action so select **Send an email notification** radio button and click on **Next**.
9. Enter a name, subject, and one or more recipient e-mail addresses for this e-mail action. You can click the **Test Action** button to test whether EdgeSight was able to successfully queue the message or not. Click on **Finish**.



How it works...

Creating too many real-time alerts can affect the XenApp server performance as each rule that is created requires more work to be performed by the agent.

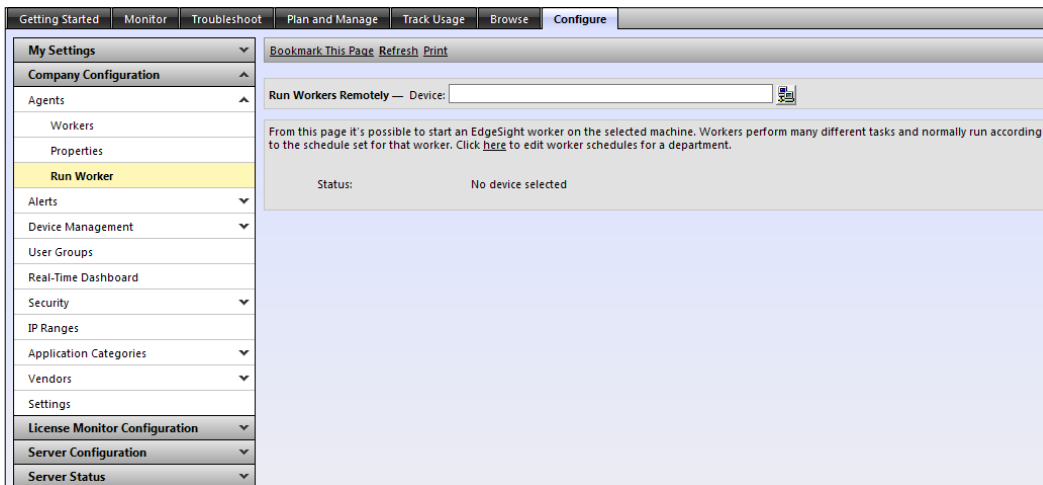
We should only create alerts for those critical situations that require immediate action. If the situation is not critical, the delivery of alerts based on the normal upload cycle will probably be sufficient.

By default, the alert data and other statistics are uploaded to the server daily.

There's more...

When a new alert rule is created or any existing rule is modified, this change is applied to all the devices in the department when those devices next upload data to the EdgeSight Server; alternatively, you can manually upload the alert rule data by clicking on **Run Remotely**.

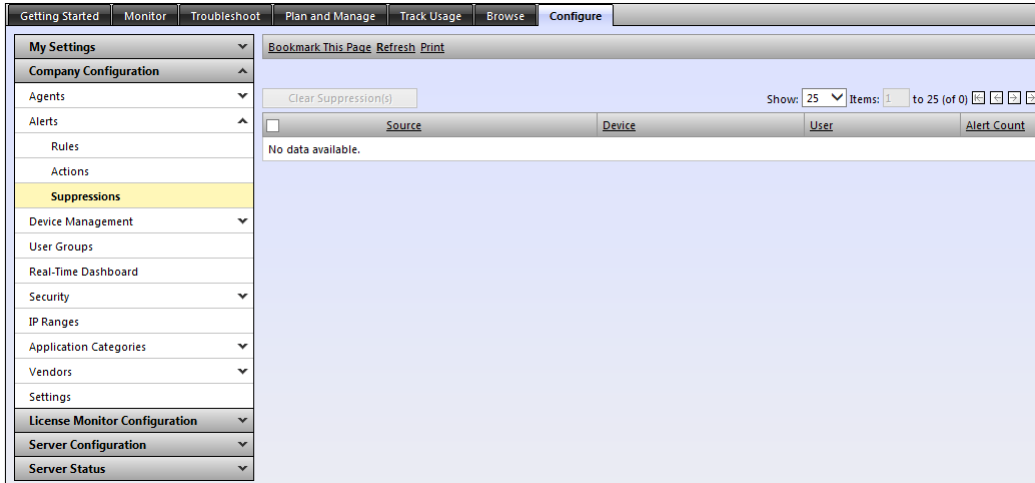
Administrators can also force certain agent devices to perform a configuration check within the EdgeSight web console by navigating to **Configure | Company Configuration | Agents** and then selecting the device from the device picker.



We can also temporarily prevent certain types of alert that match a criterion from being displayed on the console using **Alert Suppression**.

To suppress an alert, navigate to **Monitor | Alert List**, click on the down arrow , and then select **Suppress Alert**.

To clear an alert navigate to **Configure | Company Configuration | Alerts | Suppressions**.



This is per user basis and other EdgeSight administrators will still see those alerts suppressed by you.

Managing the real-time dashboard (Intermediate)

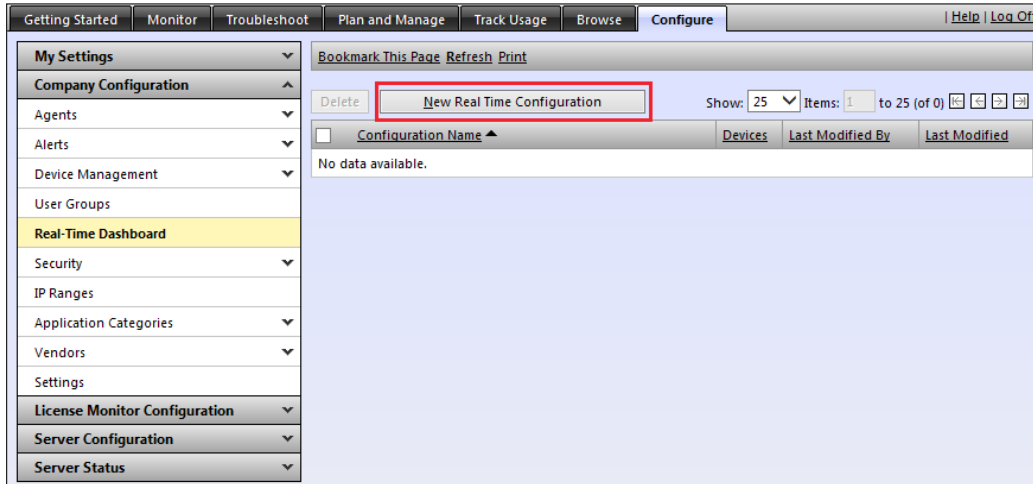
The EdgeSight dashboard provides a comprehensive view of the XenApp server's health state in real time. The dashboard queries the agent databases for counter values based on the configuration created by the EdgeSight administrator.

Getting ready

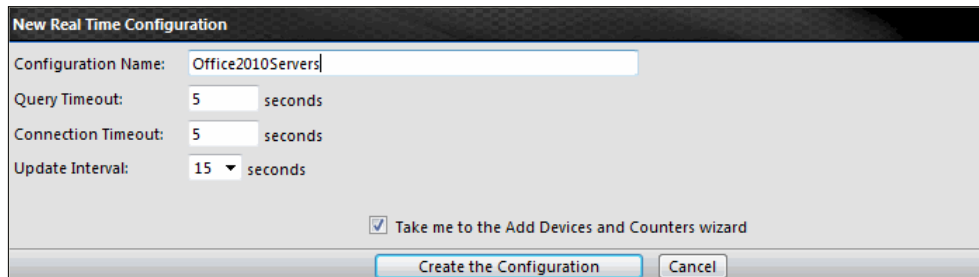
To populate the dashboard, we first need to create a new real-time configuration. Each configuration defines what counters will be displayed in the dashboard. We can create multiple configurations and each configuration will have its own devices. A device can be a member of multiple configurations.

How to do it...

1. Log on to the EdgeSight website, navigate to **Configure | Company Configuration | Real-Time Dashboard**, and then click on the **New Real Time Configuration** button.

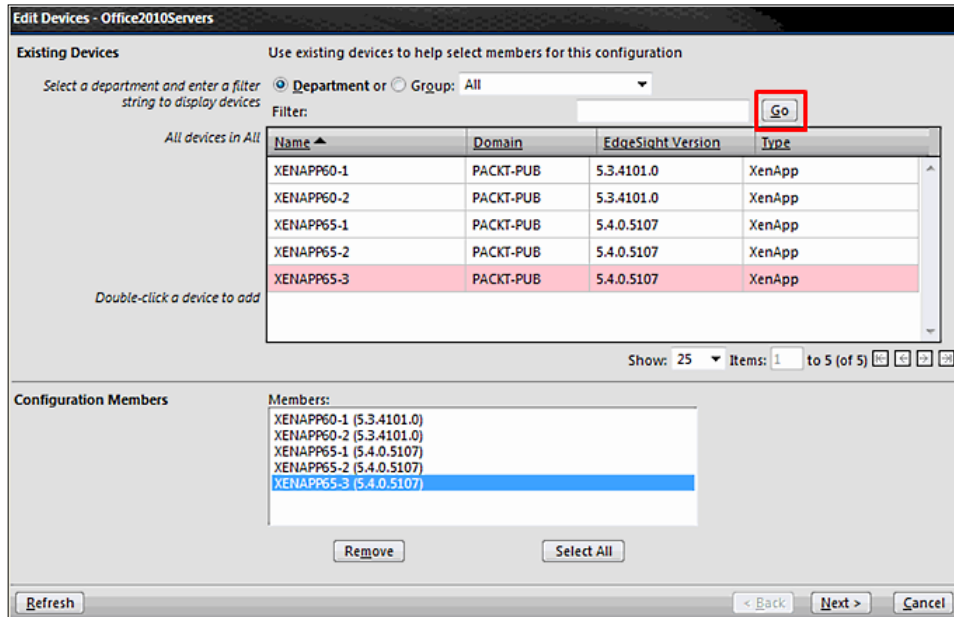


2. Enter a name for the configuration, verify **that Take me to the Add Devices and Counter wizard** is checked, and then click on **the Create the Configuration** button.

A screenshot of the 'New Real Time Configuration' dialog box. It contains the following fields and options:

- Configuration Name: Office2010Servers
- Query Timeout: 5 seconds
- Connection Timeout: 5 seconds
- Update Interval: 15 seconds
- Take me to the Add Devices and Counters wizard
- Buttons: Create the Configuration, Cancel

- This takes us to the **Edit Devices** screen. To populate the list, click on **Go** button and then double-click on the device name to add it to the **Configuration Members** list. Click on **Next**.



Each configuration can contain a maximum of 20 devices and each configuration can only monitor a maximum of 8 counters.

4. Checkmark the counter that you want to monitor and enter the threshold value for that counter. Click on **Next** and then click on **Finish**.

Performance Counters	Threshold	Threshold
CPU		
<input checked="" type="checkbox"/> % Privileged Time	40 %	<input type="checkbox"/> % Total Processor Time
<input type="checkbox"/> % User Time	40 %	<input type="checkbox"/> Interrupts per Second
<input type="checkbox"/> Privileged Time secs	10 second(s)	<input type="checkbox"/> Processor Time secs
<input type="checkbox"/> User Time secs	10 second(s)	
Memory		
<input checked="" type="checkbox"/> % Committed Bytes In Use	40 %	<input type="checkbox"/> Committed Kbytes
<input type="checkbox"/> Page Faults per Second	1000 /sec	<input type="checkbox"/> Pages Input per Second
<input type="checkbox"/> Pool NonPaged KBytes	64000 KB	<input type="checkbox"/> Pool Paged KBytes
TCP		
<input checked="" type="checkbox"/> Current Connections	30 connection(s)	<input type="checkbox"/> Failed Connections
<input type="checkbox"/> Reset Connections	10 connection(s)	<input type="checkbox"/> Segments Received per Second
<input type="checkbox"/> Segments Retransmitted	10 /sec	<input type="checkbox"/> Segments Sent per Second
Disk		
<input checked="" type="checkbox"/> % Disk Time	40 %	<input type="checkbox"/> Current Disk Queue Length
<input type="checkbox"/> Disk Kbytes per Second	50 KB / sec	
System		
<input checked="" type="checkbox"/> Context Switches per Second	10000 /sec	<input type="checkbox"/> Process Count
<input type="checkbox"/> Processor Queue Length	5 thread(s)	<input type="checkbox"/> System Calls per Second
XenApp Counters		
Session Counts		
<input checked="" type="checkbox"/> Active Sessions	40 session(s)	<input type="checkbox"/> Inactive Sessions
<input type="checkbox"/> Total Sessions	40 session(s)	
EUEM Counters		
<input checked="" type="checkbox"/> Average ICA Round Trip Time	100 ms	<input type="checkbox"/> Average Network Round Trip Time
<input type="checkbox"/> Peak ICA Round Trip Time	100 ms	<input type="checkbox"/> Peak Network Round Trip Time

5. Click on the name of the configuration you just created. In this case it is **Office2010Servers**.

- Click on **Start Updating**. To stop querying the devices, click on **Stop Updating**.

The screenshot shows the EdgeSight Dashboard interface. At the top, there are buttons for 'Stop Updating' and 'Hide Legend'. Below these are status indicators for thresholds: a red circle for '> 100% of threshold', an orange circle for '75-100% of threshold', a green circle for '< 75% of threshold', a grey circle for 'No data available', and a grey circle with an exclamation mark for 'Error retrieving data'. The main content is divided into two sections. On the left, there is a 'Status: Started' section with 'Last Updated: 15:18:18' and 'Updated 5 of 5 Devices'. Below this is a table with columns for device names and various performance metrics. On the right, there is a table of counter names and their thresholds.

Counter Name	Threshold
▶ % Privileged Time	40 %
▶ % Committed Bytes In Use	40 %
▶ Current Connections	30 connection(s)
▶ % Disk Time	40 %
▶ Context Switches per Second	10000 /sec
▶ Active Sessions	40 session(s)
▶ Average ICA Round Trip Time	100 ms

Device Name	% Privileged Time	% Committed Bytes	Curr. Connections	% Disk Time	Context Switches/sec	Active Sessions	Avg ICA RTT
XenApp60-1.packt-pub.net	Green	Orange	Green	Green	Green	Green	Green
XenApp60-2.packt-pub.net	Green	Red	Green	Green	Green	Green	Green
XenApp65-1.packt-pub.net	Green	Red	Green	Green	Green	Green	Green
XenApp65-2.packt-pub.net	Green	Red	Green	Green	Green	Green	Green
XenApp65-3.packt-pub.net	Green	Red	Green	Red	Green	Green	Green

There's more...

If the threshold for a device consistently exceeds your defined threshold, you may use the device troubleshooter icon to further investigate the root cause of the problem.

Working with EdgeSight reports (Intermediate)

EdgeSight reports are based on the data stored in the agent database as well as the server database. The reports can be historical as well as real-time. In case of real-time reports, the data is pulled directly from the agent database.

In this recipe we will subscribe to a report and configure it to be delivered via an e-mail.

Getting ready

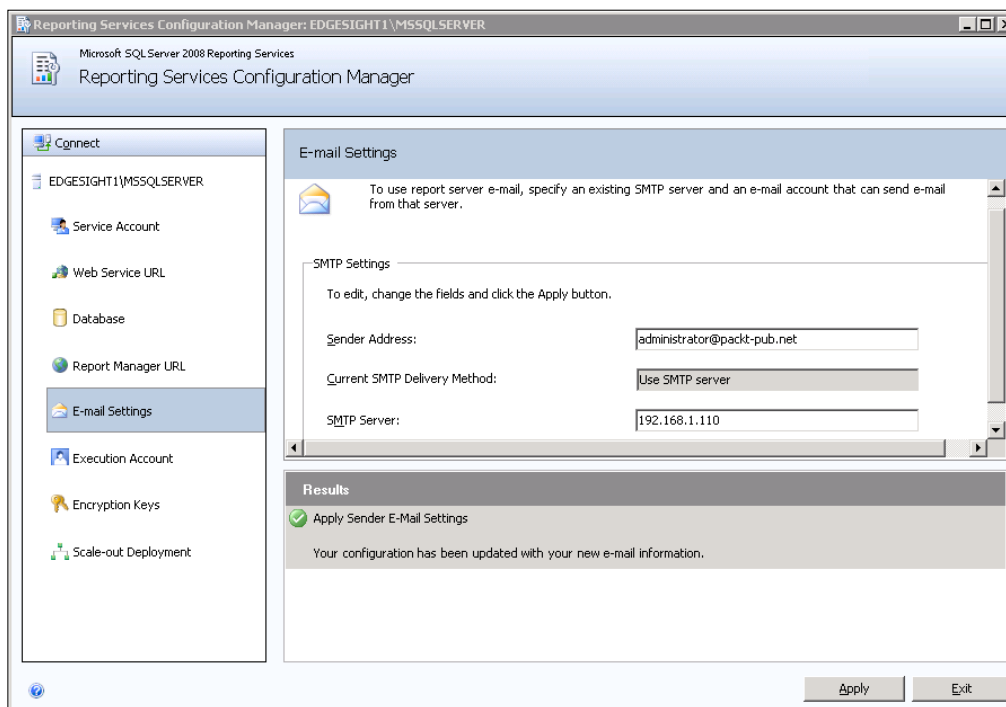
EdgeSight comes with a wide range of built-in reports. We can download these reports and/or export them to a variety of different formats. We can also add our own custom reports to the report server. One great feature that EdgeSight also offers is the automatic delivery of the report of our choice to run at a custom schedule; the report is sent to a specific folder or e-mail addresses.

How to do it...

1. First we need to verify that the e-mail settings for the Reporting Services are configured properly. Log on to the server hosting your reporting services, open the **Reporting Services Configuration Manager**, and then select **Email Settings**. By default the **Sender Address** and **SMTP Server** fields are not populated automatically. After entering the appropriate information click on **Apply**.

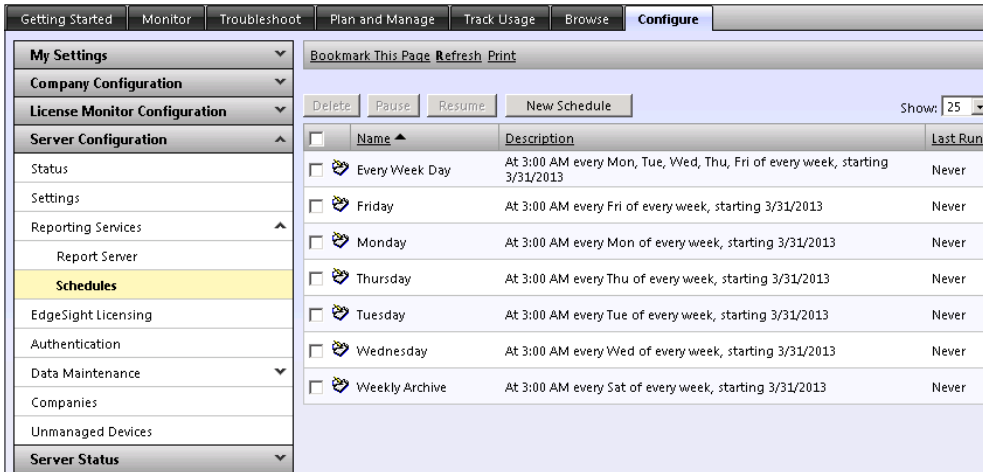


The **Sender Address** field should be a valid e-mail address and appears as the address of origin in the e-mail.





Ensure that SMTP relaying is permitted by your mail server and that it also allows the EdgeSight Server to relay mail; otherwise, the recipients will not receive e-mails from the EdgeSight Server.

- Open the EdgeSight website, navigate to **Configure | Server Configuration | Reporting Services | Schedules**, and then click on the **New Schedule** button.



- Specify a name for the schedule and specify other details as per your requirement. Click on the **Add Schedule** button.

The 'Add New Schedule' dialog box is shown. The 'Name' field contains 'Daily Alerts Reports'. Under 'Schedule Details', 'Schedule Type' is set to 'Daily'. The 'On the following days' radio button is selected, with checkboxes for Sun, Mon, Tue, Wed, Thu, Fri, and Sat, all of which are checked. The 'Repeat after this number of days' field is set to 1. The 'Start time' is set to 03:00. Under 'Start and End Dates', 'Begin on' is set to 2013-04-02. The 'Add Schedule' button is highlighted.

 The start time is based on a 24-hour clock. 

- Click on the **Browse** tab and the **Subscriptions** link of the report you want to subscribe to.

The screenshot shows the 'Browse' tab in the EdgeSight interface. At the top, there are navigation tabs: Getting Started, Monitor, Troubleshoot, Plan and Manage, Track Usage, Browse, and Configure. Below the tabs is a search bar with a 'Search' button. To the right of the search bar are links for 'Bookmark This Page', 'Refresh', and 'Print'. Below the search bar is a 'Refine your search:' section with a 'Time Frame' dropdown menu showing 'Historical (130)' and 'Real-time (8)'. To the right of the search bar is a 'Sort by: Name' dropdown menu. Below the search bar is a list of reports with a 'Subscriptions' link highlighted in red. The link is part of a list of links: Alerts, Properties, Download, and Subscriptions.

- Click on the **New Subscription** button to create a new subscription.
- The default delivery is through e-mail; in case you want to save the report to a specified folder, you can click on the **Delivered by** drop-down menu and select **File Share**. To select the schedule, click on the **Schedule** drop-down menu and select the schedule you want the report to be processed at; click on the **Create Subscription** button.

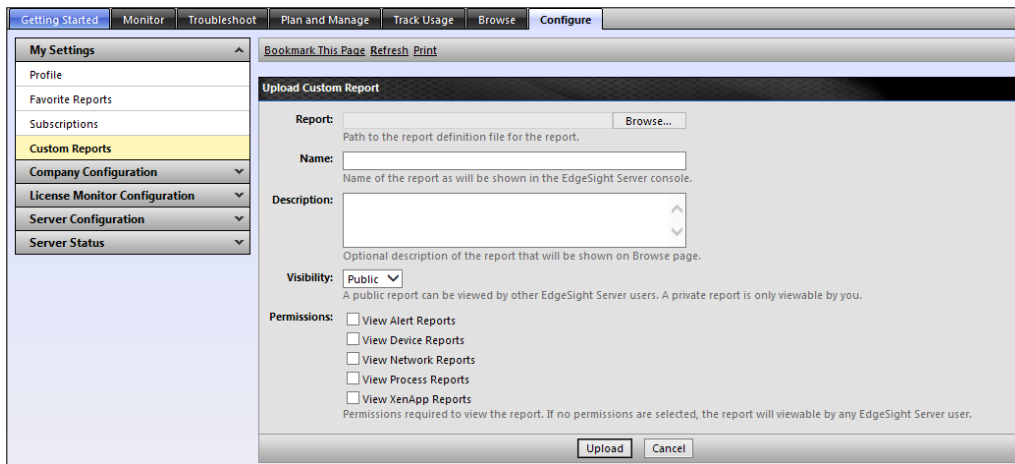
The screenshot shows the 'Create new subscription for: Alerts' dialog box. The dialog box is divided into several sections:

- Delivered by:** Email (dropdown)
- Language:** English (dropdown)
- Visibility:** Public (selected radio button), Private (radio button)
- Delivery Options:**
 - To:** Administrator@packt-pub.net
 - Cc:** (empty field)
 - Bcc:** (empty field)
 - (Use ";" to separate multiple email addresses.)
 - Reply-To:** (empty field)
 - Subject:** @ReportName was executed at @ExecutionTime
 - Format:** Web archive (dropdown)
 - Priority:** Normal (dropdown)
 - Comment:** (text area)
- Processing Options:**
 - Schedule:** Daily Alerts Reports (dropdown, highlighted with a red box)
- Report Parameters:**
 - Department or Group: All (dropdown) Root Only
 - Start:** 2013-07-15 (calendar icon)
 - End:** 2013-07-22 (calendar icon)
 - Group By:** Alert Name (dropdown)
 - Then Group By:** Device (dropdown)
 - Top:** 20 (dropdown)
 - Optional Parameters:** (+) (button)

 At the bottom of the dialog box are two buttons: 'Create Subscription' and 'Cancel'.

There's more...

The built-in reports provided by EdgeSight can be modified to meet the business requirements more closely. To modify a report, click on the **Download** link and save the file with the default extension of .RDL (Report Definition Language). Then use your favorite XML Editor to open the .RDL file and change the SQL query within the <CommandText> tag. You might also need to modify the field names <Field Name> and the data fields <DataField> tags. Once done save the file, navigate to **Configure | My Settings | Custom Reports**, and then click on the **Upload** button.



The screenshot shows the 'Upload Custom Report' dialog box in the EdgeSight interface. The dialog has a sidebar on the left with a tree view containing 'My Settings', 'Profile', 'Favorite Reports', 'Subscriptions', 'Custom Reports' (highlighted), 'Company Configuration', 'License Monitor Configuration', 'Server Configuration', and 'Server Status'. The main area contains the following fields and options:

- Report:** A text field with a 'Browse...' button. Below it is the text: 'Path to the report definition file for the report.'
- Name:** A text field. Below it is the text: 'Name of the report as will be shown in the EdgeSight Server console.'
- Description:** A text area. Below it is the text: 'Optional description of the report that will be shown on Browse page.'
- Visibility:** A dropdown menu set to 'Public'. Below it is the text: 'A public report can be viewed by other EdgeSight Server users. A private report is only viewable by you.'
- Permissions:** A list of checkboxes:
 - View Alert Reports
 - View Device Reports
 - View Network Reports
 - View Process Reports
 - View XenApp ReportsBelow the list is the text: 'Permissions required to view the report. If no permissions are selected, the report will viewable by any EdgeSight Server user.'

At the bottom of the dialog are 'Upload' and 'Cancel' buttons.

If you set the visibility to **Private**, then only the user uploading the report can view it.



Citrix EdgeSight Reporting wiki is a collaborative authoring web encyclopedia project that has several reports with real-life scenarios and other helpful EdgeSight product information. It is available at the following link:

<http://community.citrix.com/edgesight/>

Monitoring the Citrix license usage (Intermediate)

EdgeSight can report the usage reported by the Citrix License Server for all types of Citrix licenses used in the organization.

In addition to Citrix licensing, EdgeSight can also display published application usage and session durations with both summary and detailed information. These reports are also available from the **Browse** tab.

Getting ready

To monitor your Citrix licensing server, the version of the licensing server should be at least 11.9.

How to do it...

1. We must first specify at least one Citrix License Server by navigating to **Configure | License Monitor Configuration | License Servers** and then clicking on the **New License Server** button. For the license server name we can specify either the IP address or the FQDN of the license server.

The screenshot shows the 'Configure' tab in the Citrix EdgeSight console. The left-hand navigation pane has 'License Servers' selected under 'License Monitor Configuration'. The main content area displays a success message: 'Connection to License Server was successful.' Below this is the 'Edit License Server Configuration' form. The form contains the following fields and controls:


- License Server:** Text input field containing '192.168.1.110'.
- Display Name:** Text input field containing 'EnterpriseA'.
- Server Port:** Text input field containing '27000'.
- Enable Server Polling:** A checked checkbox.
- Test Connection:** A button to verify the connection.
- Update License Server:** A button to save the configuration.
- Cancel:** A button to close the dialog.

2. To configure the polling interval between two pools, navigate to **Configure | License Monitor Configuration | Settings**.

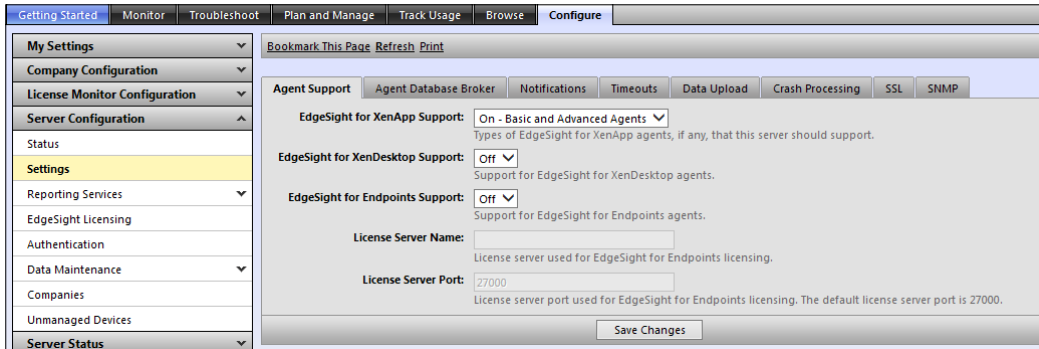
The screenshot shows the 'Configure' tab in the Citrix EdgeSight console. The left-hand navigation pane has 'Settings' selected under 'License Monitor Configuration'. The main content area displays the 'License Server Monitor' settings form. The form contains the following fields and controls:

- Polling Interval (min):** A dropdown menu set to '15'. Below it is the text: 'Polling Frequency in minutes for the configured License Servers'.
- Total poll duration:** A text field showing '00:00:01'. Below it is the text: 'The combined time to successfully poll all License Servers'.
- Polling Errors:** A dropdown menu set to 'Send Email'. Below it is the text: 'Send an email to the Administrator if License Server Monitor polling fails'.
- Save Changes:** A button to save the configuration.

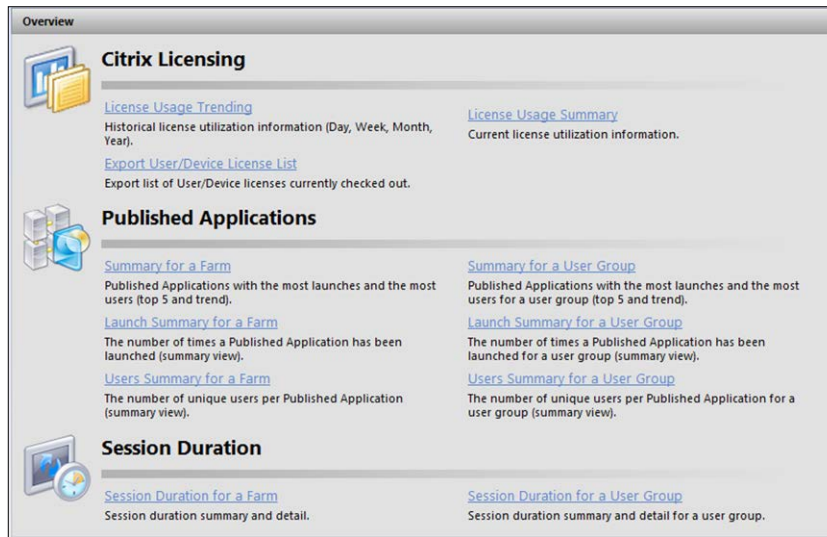
Setting the polling interval to 15 minutes means that a polling cycle will be initiated 15 minutes from the time that the last polling cycle completed.

 The total poll duration is the sum of the time taken to successfully poll all the enabled license servers during the last poll. We can use this value to help us set a realistic polling interval.

- For usage information about the published application, make sure that the **EdgeSight for XenApp Support** feature is configured as **On - Basic and Advanced Agents** by navigating to **Configure | Server Configuration | Settings | Agent Support**.



- To track the usage of Citrix licenses, applications, and session durations, click on the **Track Usage** tab.



How it works...

Once the license server has been configured for monitoring, EdgeSight Server directly polls the license server for information on license usage.

License server monitoring does not require an EdgeSight agent on the Citrix License Server.

There's more...

To view the license server poller logfile, navigate to **Configure | Server Status | Server Script Host**. Locate the `core_lsm_license_poller` script, then click on the drop-down menu, and select **View Log**.

App Name	State	Last Change	Path
<input checked="" type="checkbox"/> es_queue	Running	4/14/2013 7:56:04 PM	C:\Program Files (x86)\Citrix\System Monitoring\Server\EdgeSight\Scripts\rssh
<input checked="" type="checkbox"/> core_clean_temp	Stopped	4/14/2013 7:56:03 PM	
<input checked="" type="checkbox"/> core_lsm_license_poller	Running	4/14/2013 7:56:04 PM	
<input checked="" type="checkbox"/> Stop	Running	4/14/2013 7:56:04 PM	
<input checked="" type="checkbox"/> Start	Running	4/14/2013 7:56:04 PM	
<input checked="" type="checkbox"/> Clear Log	Running	4/14/2013 7:56:04 PM	
<input checked="" type="checkbox"/> core_zbatch_run	Stopped	4/14/2013 11:15:32 PM	

If there is any error in the polling, the logfile will display the error code and the reason for the failure and an e-mail are also sent to the EdgeSight administrator. If the license server poller is not able to connect to the Citrix License Server then an error code of -96 is written to the logfile.

You can also disable polling on any particular license server for maintenance or any other reason. If you disable polling, the previously collected license information from disabled servers will still appear in the **License Usage Trending** report, but no new license information is displayed for the disabled server in the **License Usage Summary** report until polling is enabled back.

You can also remove a license server configuration from the EdgeSight database by deleting it. If you delete a license server configuration, all license usage data associated with that license server is deleted from the EdgeSight database. After deletion, no data from the license server is displayed in the license usage reports.

Resolving performance problems (Advanced)

EdgeSight provides a centralized console to investigate problems related to sessions, applications, systems, and networks without requiring us to somehow log in or connect to the device having the problem.

Getting ready

The important thing here is that the end device you are troubleshooting should have the EdgeSight agent installed.

How to do it...

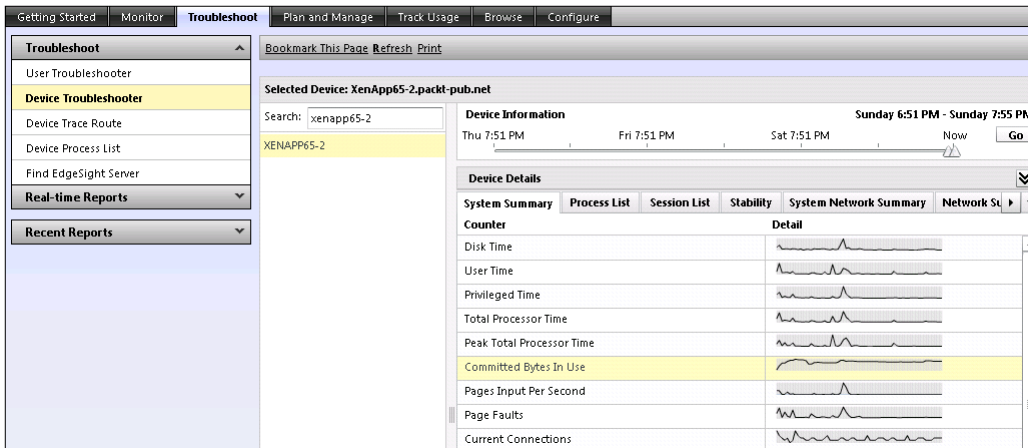
1. To get the real-time performance data of a device, navigate to **Troubleshoot | Device Troubleshooter**.
2. Either enter the IP address or the name of the device you are troubleshooting in the **Search** field or browse in the department tree.

You can also use the slider to change the time frame for the data you want to be displayed.

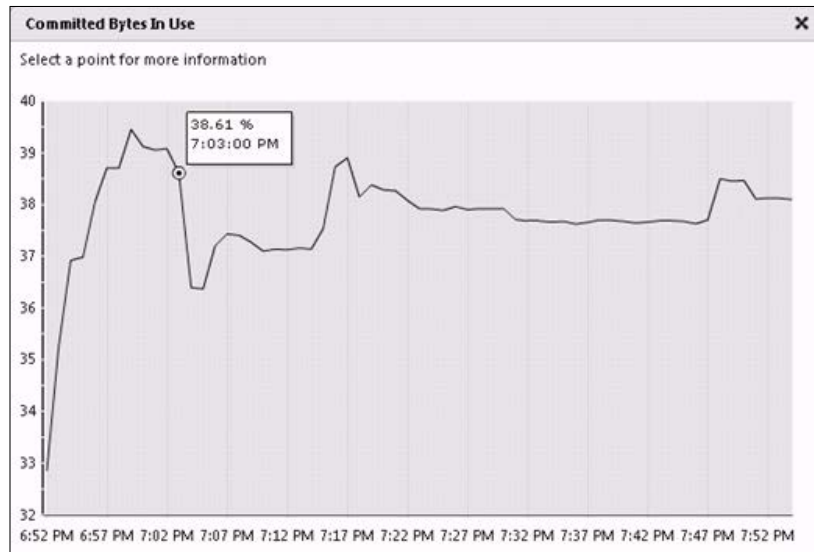
3. Click on the **Go** button.



4. Click on the **System Summary** tab and look for important counters here such as **Committed Bytes In Use**, which displays the usage of the system memory.



5. Click on the counter you want to have a much deeper look at and EdgeSight will display more detailed information in a pop-up window. You can also click on a point on the pop-up chart to display point-in-time data for the counter.



How it works...

In cases where the device is a XenApp server running a basic-level agent, data will not be displayed in some of the tabs; instead, a message is displayed in each affected tab.

There's more...

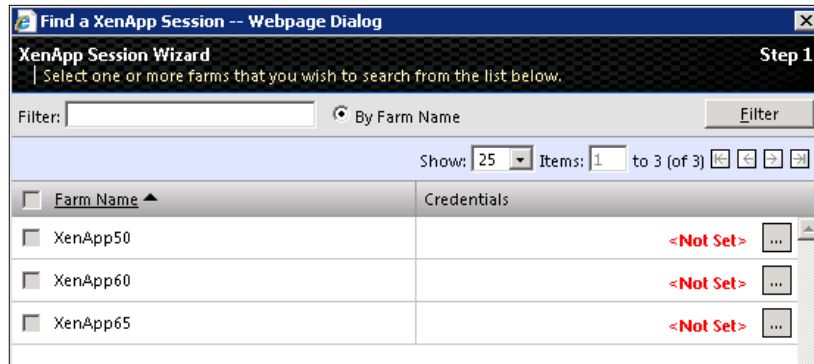
Similar to **Device Troubleshooter**, the **User Troubleshooter** page can be used to display detailed performance data for sessions across a farm for any specified user. You will need to provide the username, and optionally the name of the server hosting the session, and then click on **Find Sessions**.

Several steps are involved from the time a user clicks on the icon of a published application to launch and use the application till the time the application finally launches. EdgeSight for XenApp can be used to diagnose those slow logins or slow sessions problems reported by the users; it lets you examine the steps involved and the time required to complete each step.

The screenshot shows the 'User Troubleshooter' interface. The search form is populated with 'Enter a User: -pub.net/administrator' and 'Device (Optional):'. The table below is currently empty.

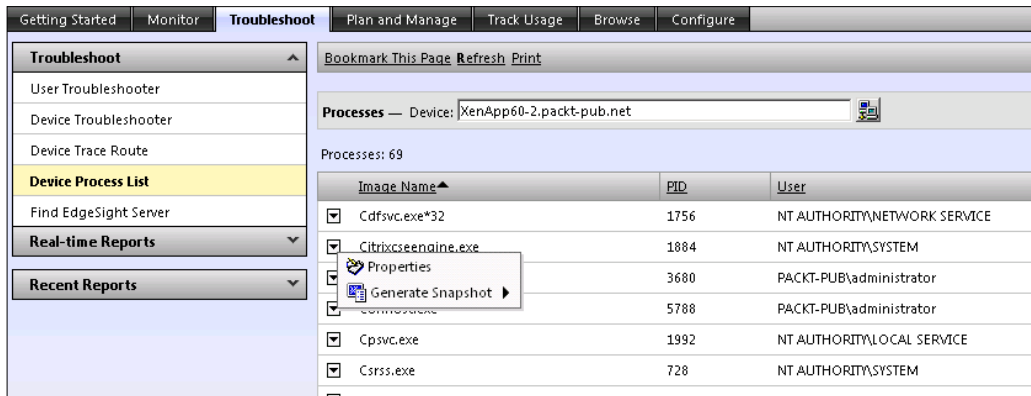
Session ID	Server Name	Initial Application	Client Name/IP	Logon Time	Logoff Time

If no default credentials were specified for the farm before, then you can click on the browse button [...] and provide the credentials in the **Find a XenApp Session – Webpage Dialog** window.



You can specify unique credentials for each XenApp farm in your environment.

You can also use the **Device Process List** page to display detailed information about processes that are currently running on the selected device.



You can also generate a diagnostic snapshot (**Normal** or **Full**), which allows us to remotely analyze the current state of the selected device and investigate whether a particular process is the cause of the problem you are investigating. The snapshot generates a dump file on the selected device and is also uploaded to the server as an alert.

One other very useful troubleshooting tool here is the **Device Trace Route** tool.

The **Device Trace Route** tool can be used to identify and route problems you may have; it allows you to execute a trace route from the selected remote device to a specified network host.

Grooming EdgeSight databases (Advanced)

Due to the large amount of data collected by EdgeSight, it is recommended that good housekeeping should be completed by the EdgeSight administrator for EdgeSight to provide optimal results.

Similar problems can also be noticed if there is not enough disk space on the drive or other problems with the database. As a result of any of these problems, grooming errors might occur and those will also be displayed in the console.

In EdgeSight the primary database management mechanism is called **grooming** and is defined as the process of removing older data from a database at regular intervals to make room for new data.

How to do it...

There are eight data files in the EdgeSight database; the default location of these files is at C:\Program Files\Microsoft SQL Server\MSSQL10.MSSQLSERVER\MSSQL\DATA\.

1. We first need to find the data files that are larger in size than other data files. We can run the following query to extract this information:

```
SELECT Name, (size*8)/1024 Size
FROM sys.master_files
WHERE DB_NAME(database_id) = 'Edgesight'
```

The following table is the output I received after executing the query. Your output (size) will be different:

Name	Size
Edgesight	2,500
Edgesight_log	45,052
Edgesight_FG1_Data	12,820
Edgesight_FG2_Data	25,350
Edgesight_FG3_Data	7,322
Edgesight_FG4_Data	46,623
Edgesight_FG5_Data	8,250
Edgesight_FG6_Data	245,020
Edgesight_FG7_Data	12,500

From the previous results we can see that in our case the database Edgesight_FG6_Data is the largest in size. The size is in MBs.

- The next step is to determine the names of the tables that are hosted by that particular file group. We can determine those names by running the following query:

```
SELECT DISTINCT object_name(sys.sysindexes.id) as 'Table Name'
,sys.filegroups.name as 'File Group Name'
FROM sys.sysindexes, sys.filegroups
WHERE objectproperty(sys.sysindexes.id,'IsUserTable') = 1
AND sys.filegroups.data_space_id = sys.sysindexes.groupid
ORDER BY sys.filegroups.name
```

The output from this query in my case was as follows:

	Table Name	File Group Name
28	alert	FG5
29	alert_param	FG5
30	alert_param_stage	FG5
31	drive_space	FG5
32	system_perf	FG5
33	core_net_stat	FG6
34	core_net_trans	FG6
35	ctrx_atm_computer	FG7
36	ctrx_atm_comput...	FG7
37	ctrx_atm_item	FG7
38	ctrx_atm_item_sta...	FG7
39	ctrx_atm_test	FG7

Query executed successfully.

3. The next step now would be to find out the number of rows in each table. Run the following query in SQL Server Management Studio to find the number of rows in both the `core_net_trans` and `core_net_stat` tables:

```
SELECT sysobjects.Name, sysindexes.Rows
FROM sysobjects INNER JOIN sysindexes ON sysobjects.id =
sysindexes.id
WHERE sysindexes.IndId < 2 AND sysobjects.Name IN('core_net_stat',
'core_net_trans')
```

The output from this query in my case was as follows:

Name	Rows
core_net_stat	250475223
core_net_trans	2457843

These results clearly tell us that the table named `core_net_trans` has more rows than `core_net_stat` and hence `core_net_trans` would also be much larger in size compared to `core_net_stat`.

4. The next step would be to find out the number of records that for some reason could not be deleted after the number of Groom Days has passed. The default **Groom Days** value for both the `core_net_trans` and `core_net_stat` tables is 10 days. To verify the Groom Days you can navigate to **Configure | Server Configuration | Data Maintenance | Grooming**.

Report Data	SQL Server Table	SQL Server View	Groom Days
Broker History	broker_history		30
Company Devices	instance	vw_es_archive_device_asset_summary	30
Device Asset Changes	asset_change		90
Disk Usage	drive_space	vw_es_archive_drive_space	30
Environmental Usage	image_event	vw_es_archive_environmental_usage	30
License Server Monitor	lsm_license_statistics	vw_lsm_archive_license_statistics	365
Light Trace Events	ltrace_event	vw_es_archive_light_trace_event	30
Messages	message		30
Network Performance	core_net_stat	vw_es_archive_application_network_performance	10
Network Transactions	core_net_trans	vw_es_archive_application_transaction_performance	10
Process Performance	image_perf	vw_es_archive_application_performance	30
Process Usage	usage	vw_es_archive_application_usage	90

5. We can use the following query to determine the number of records (if any) that could not be deleted:

```
SELECT COUNT(*) FROM CORE_NET_TRANS
WHERE dtperiod < GETUTCDATE() - 10
```



If rows are returned from the preceding query that were older than 11 days, then that would mean that grooming failed. If no rows are returned older than the 10 days, further investigation needs to be performed and you might start from taking a look at what, and how much, data is stored inside the particular table.

- Now we can run this query to delete rows by increments of 100,000:

```
Declare @row int; cf1 declare @date datetime; cf1 set @date =
GETUTCDATE() - 10

Set @row = (select COUNT(*) from core_net_trans where dtperiod < @
date);

While @row <> 0

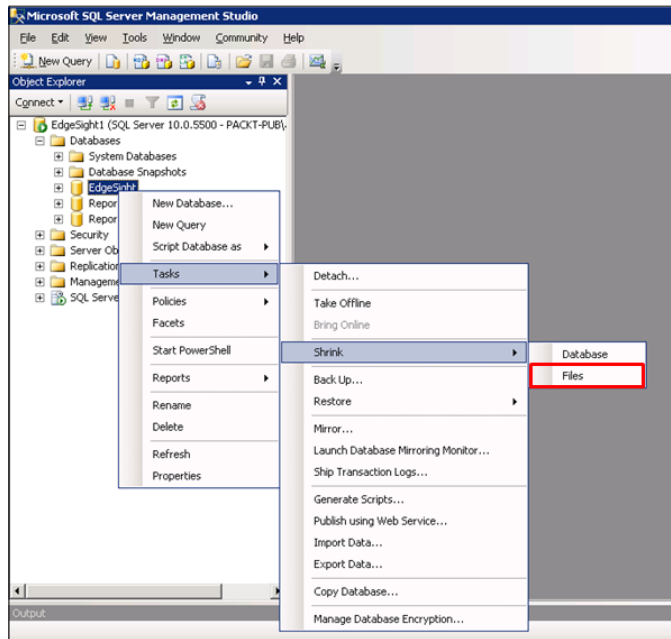
Begin

Delete top(100000) from core_net_trans where dtperiod < @date

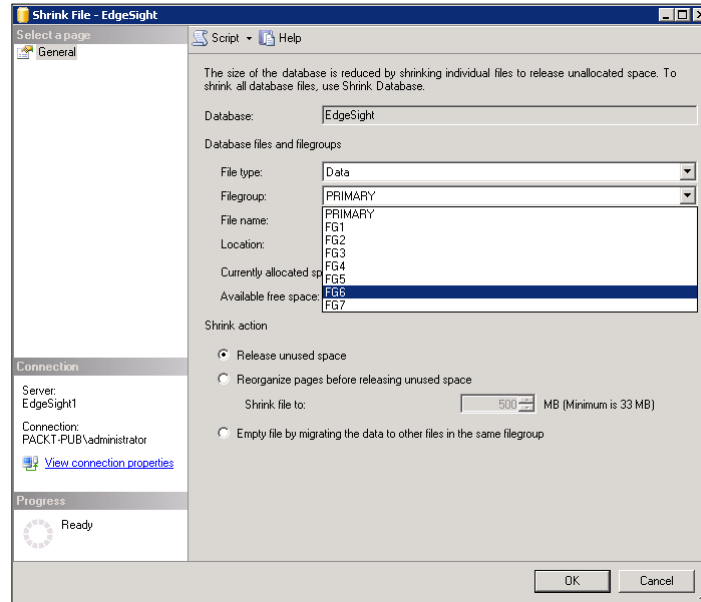
Set @row = (select COUNT(*) from core_net_trans where dtperiod < @
date);

End;
```

- We also need to reclaim the disk space after removing the unwanted rows. To do that, open SQL Server Management Studio and right-click on your EdgeSight database name. Here I have used EdgeSight as the name; hence, click on **EdgeSight | Tasks | Shrink | Files**.



8. Select **FG6** as the **Filegroup** value and click on **OK**.



There's more...

You can also limit data uploads from the agents to the EdgeSight Server database by deselecting the type of performance data you are not interested in gathering. To configure these settings, navigate to **Configure | Server Configuration | Data Maintenance | Upload Configuration**.

Getting Started Monitor Troubleshoot Plan and Manage Track Usage Browse Configure		
My Settings	Bookmark This Page Refresh Print	
Company Configuration	The amount of data uploaded to the server directly impacts the size of your database and the performance of the server. The server will run faster and will be able to support more devices if you do not upload data that is not important to you.	
License Monitor Configuration		
Server Configuration	Enable Data Upload	Report Data SQL Server View
Status	<input checked="" type="checkbox"/>	Device Asset Changes
Settings	<input checked="" type="checkbox"/>	Disk Usage ww_es_archive_drive_space
Reporting Services	<input type="checkbox"/>	Environmental Usage ww_es_archive_environmental_usage
EdgeSight Licensing	<input checked="" type="checkbox"/>	Light Trace Events ww_es_archive_light_trace_event
Authentication	<input checked="" type="checkbox"/>	Network Performance ww_es_archive_application_network_performance
Data Maintenance	<input checked="" type="checkbox"/>	Network Transactions ww_es_archive_application_transaction_performance
Upload Configuration	<input checked="" type="checkbox"/>	Process Performance ww_es_archive_application_performance
Grooming	<input checked="" type="checkbox"/>	Process Usage ww_es_archive_application_usage
Jobs	<input checked="" type="checkbox"/>	Session Performance ww_ctrx_archive_session_perf
Companies	<input checked="" type="checkbox"/>	Stability ww_es_archive_alert
Unmanaged Devices	<input checked="" type="checkbox"/>	System Performance ww_es_archive_system_performance
Server Status	<input checked="" type="checkbox"/>	XenApp Application Response ww_ctrx_archive_application_response

This also optimizes the EdgeSight Server performance.

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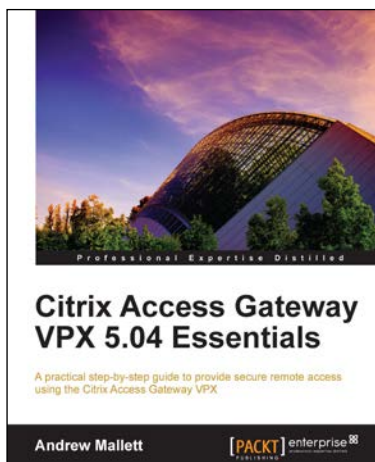
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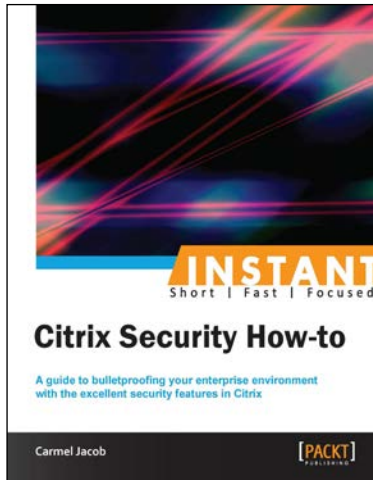
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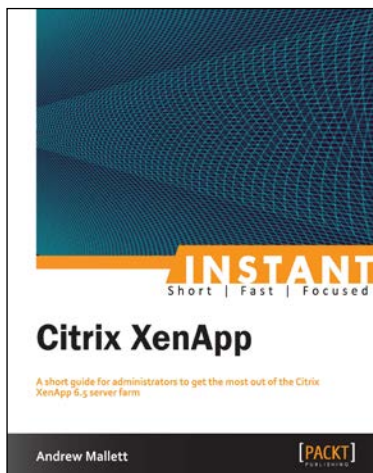


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