GSX
www.gsx.com

White Paper

Managing Sharepoint with GSX

Download a free trial at www.gsx.com

Contents

1- Introduction

What is SharePoint, and how is it used?

These seemingly trivial questions are critical to getting a handle on SharePoint management.

From years of experience with SharePoint customers, GSX has come to a greater understanding of how it is structured and deployed in various companies. We have found, for example, that one company may use it for online surveys, while another uses it to develop intranet and business applications.

While SharePoint is a great tool for enabling people to work together with shared data, its oversight presents two challenges:

- It has to work for users, and
- Costs have to be kept under control.

1.1 The explosion of SharePoint demands

We have found that SharePoint data proliferation usually increases dramatically over time,regardless of company profile, resulting in the rapid growth of administrative demands.

Security and integrity requirements also increase with time, including permissions and profil management, versioning, search, and the indexer.

SharePoint collaboration services have to be up and running all of the time and performing acceptably. Would it be acceptable to say that your SharePoint service is available if it takes a user five minutes to upload a 10 Kb document?

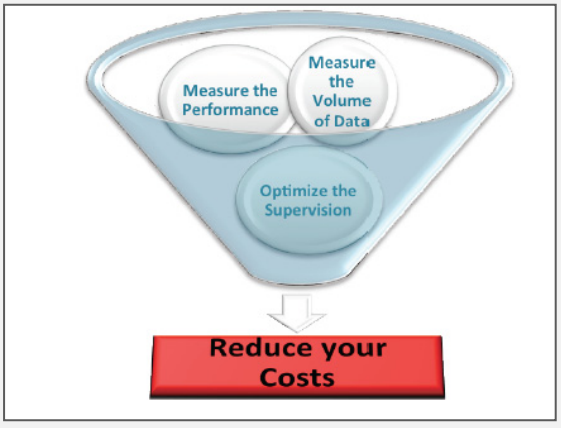
Unfortunately, most traditional SharePoint monitoring tools only give a system view of servers and services, rather than a true view of the user experience. Also, management and control over the entire environment often requires several tools that are limited in monitoring and
reporting capabilities.

1.2 Keeping a lid on SharePoint costs

It's not enough for SharePoint installations to be useful, their costs must also be kept under control. Two essential components to monitor in that regard are:

- **The amount of data,** to manage expanding storage, security, and administration.
- **Delivery performance,** to keep a handle on upkeep and maintenance.

Moreover, monitoring and reporting must be in a form that administrators can understand, so that costly upper level administrators and engineers can focus on high-level tasks.



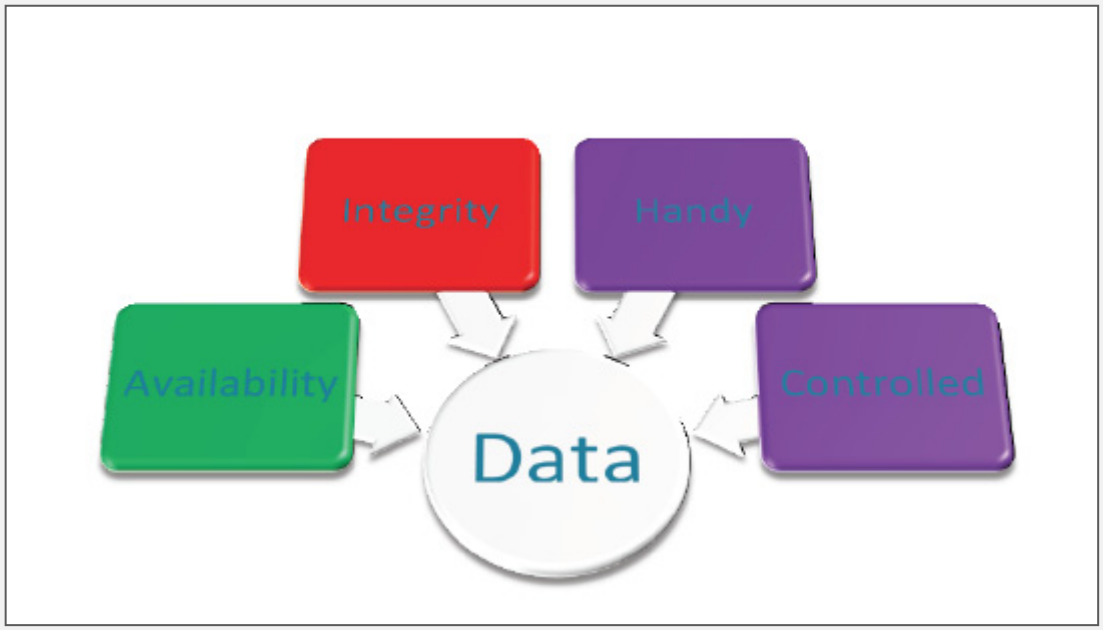
2. Make it work for the user!

As SharePoint becomes critical to workplace efficiency, it is vital to ensure that its services are both available and acceptable to users. System monitoring tools can often see green, while users actually see red. For example, if it takes a user ten minutes to access a service, that service is de facto unavailable.

As the object of SharePoint is to deliver end-user services, it is essential monitor system performance from the users' point of view. To do this manually would entail continuous testing from a user perspective – a boring and laborious task. Tools such as SCOM provide general system information, but they don't reveal service status because a system can be up while the service is down.

From the standpoint of the user, SharePoint data must:

- **Be delivered** in a reasonable time,
- **Be accurate** when delivered by the research, indexer, and versioning, and
- **Provide the ability** for the user to modify, organize, save, and copy.

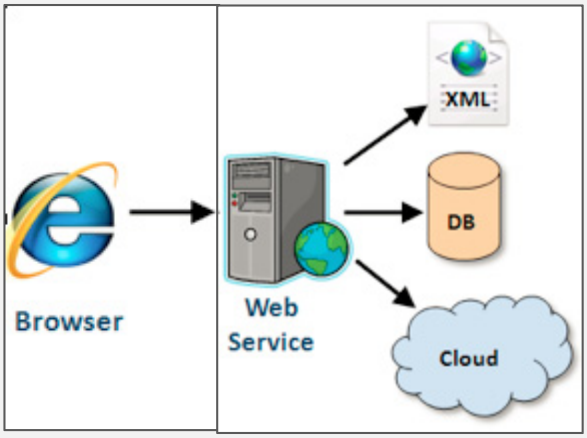


These three aspects have to be constantly monitored to assure optimal return on your SharePoint investment. Imagine the potential for loss if the sales team is working with outdated business proposals, or if the production and marketing teams can't find the right information.

2.1 Measuring the user's Web experience

Since SharePoint's Web services are the core for the user experience, it is critical for monitoring tools to simulate user activity to see if these services are being delivered as advertised.

Tests performed by GSX Monitor give you a clear view on your user experience because they cover all the features as a user. More than just testing the service, GSX Monitor tests the performance of these services. This information is important to have, because a decrease in service performance can be the first step in a major problem.



GSX Solutions' flagship product, GSX Monitor and Analyzer, continuously tests the availability and performance of SharePoint Web services as delivered to the user. This helps customers:

- Control service delivery through an interactive visual dashboard that displays the real time status of your entire environment (see Figure 1 below).
- Reduce costs by highlighting underperforming servers that need immediate attention before they impact business.
- Measure against set SLA's to forecast potential

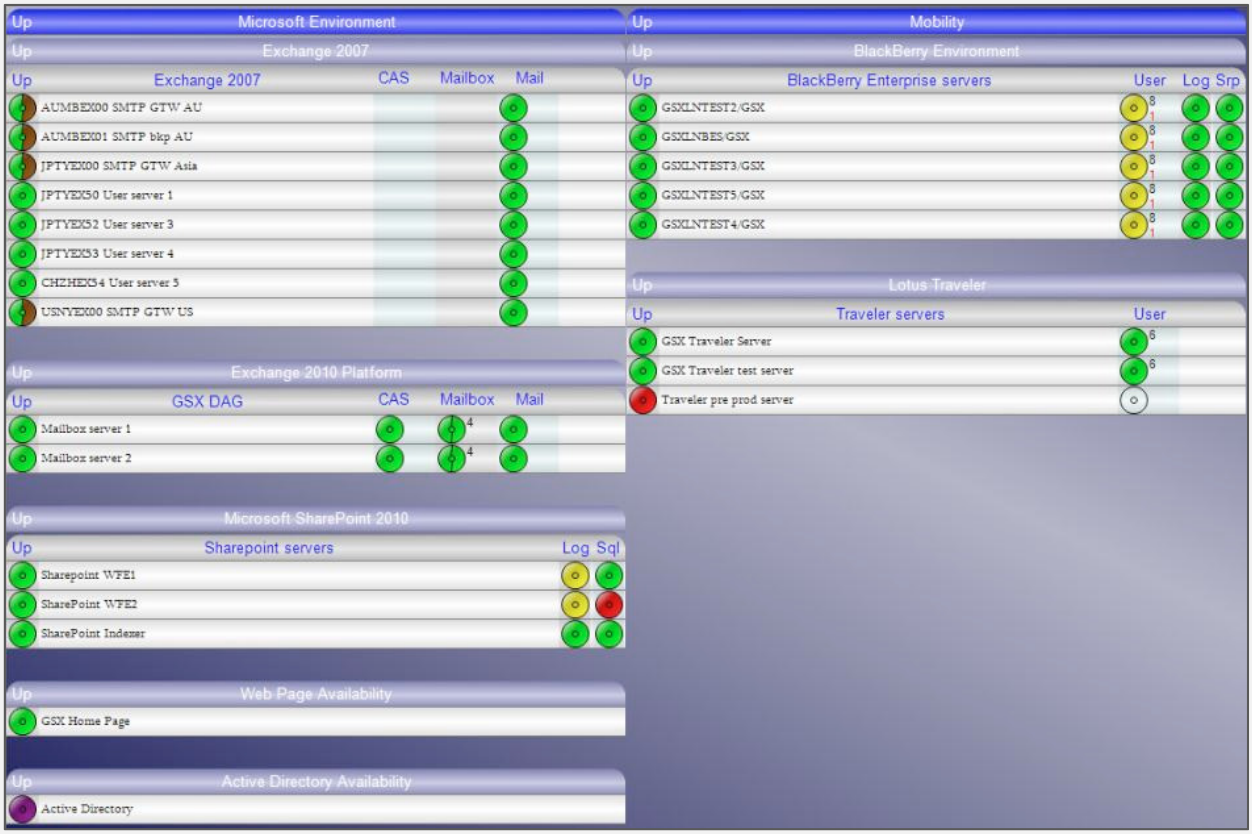


Figure 1: *GSX gives you the real time status of your entire collaborative environment.*

2.2 Assuring data delivery

Depending on the specific deployment, various Web services are invoked.

To assure access to data, GSX Monitor simulates the activity of a user performing real actions for a given Web service:

Webs give you an alert if a user is unable to access the SharePoint site.

Permissions constantly checks to verify that permissions for a site or list are up, to assure user access.

Webpart lists the calendar, BI, RSS flow, SQL, etc., and monitor that they are effectively displayed and available.

Sharepoint Sites: Webpart examples

User Profile monitors administrator access to user profiles (organogram, responsibilities,etc.) and checks that the characteristics of a user account match what they truly are, to be sure that the service is available.

Users Group constantly attempts to list the users and groups that are allowed to access a specific site, to assure that administrators can add or remove users in a SharePoint cross-site group.

Views assures that a site administrator can show a library with a custom view, by generating a list of documents, exactly as a user would.

Imaging tests if images libraries can be correctly opened.

List Item checks to see if it is possible to add and erase list items, to assure that a user can form these actions.

2.3 The right data at the right moment

It's no good to access data if it's not the latest information.

Imagine if a sales professional is shown an outdated price list, or if the document SharePoint presents is an older version. To assure users are able to find the correct version of the document they need, several Web services are checked by GSX:

Site Data looks as a user would for the metadata related to a specific site, such as name,date, department, and division. If the read attempt fails, an alert will be sent.

Alert allows the administrator to create alerts for libraries or changes within them, such as erased document, modified document, or sum of the documents modified in the week. This enables the administrator to guarantee the integrity of the lists of SharePoint documents.

Versions make sure that users can access previous versions of documents.

In addition to the web services the Indexer allows you to set threshold alerts for this critical feature of your SharePoint database (see Figure 2):

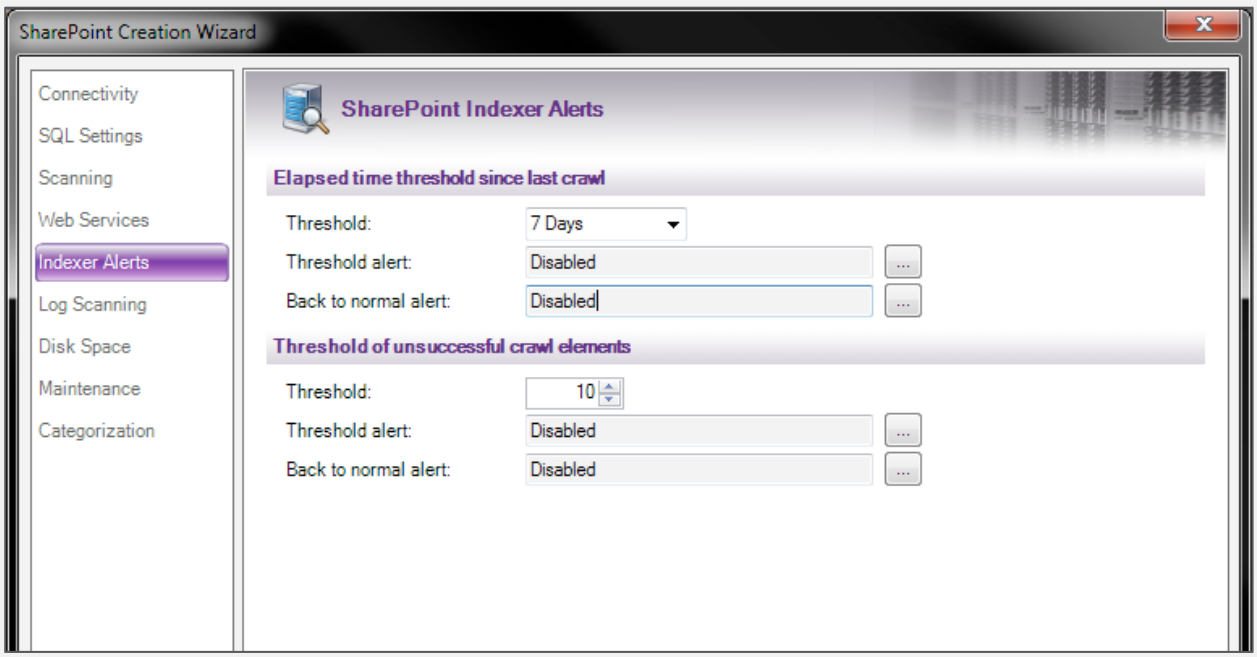


Figure 2: *Setting SharePoint Indexer threshold alerts.*

Elapsed time threshold since the last crawl alerts you if the last crawl hasn't taken place within the specified time.

Threshold of unsuccessful crawl elements alerts the administrator if a high percentage of indexer crawls failed, due to non-normalized documents, damaged data in the SQL database, or some other reason. Corrective action can then be taken before the problem seriously impacts user searches.

Test search services acts searches for a specific keyword to make sure that users can find what they are looking for in SharePoint.

2.4 Let's use the data

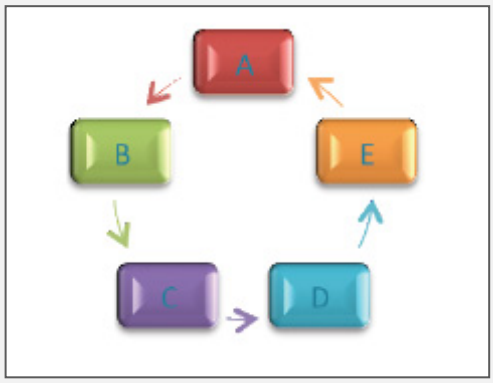
It's not enough for SharePoint data to be accessible, users have to be able to collaboratively modify, organize, share, copy, and integrate the data. GSX Monitor therefore performs the following usability tests:

Copy gets the stream of a document to assure that you can copy a document or library.

Forms tries to use a specific form, such as for customer feedback, to assure that the service is available.

Sites tries to read all the information from a template site (name, permissions by default, settings by default, etc.) to assure that a site can be created in SharePoint.

Workflow attempts to start a workflow to assure that a chain of actions can be defined.



Upload Document assures that users can upload documents.

2.5 Working as a group

Since the whole idea of SharePoint is collaboration, GSX Monitor also continually tests that you can work together as a group:

Document Workspace accesses a document workspace and manipulates its content to assure this service is operational.

Create a site collection creates a site collection, checks the availability of the site, and then erases it.

Blog Post creates a blog entry and then erases it.

Create a meeting creates a meeting workspace, checks that the URL is available, and then creates a meeting.

Test Excel Services simulates a user opening an Excel spreadsheet and reading a field.

3- Keeping costs in line

While watching the SharePoint service and managing its performance is critical for your users, it is equally critical to manage SharePoint costs, which can easily spin out of control. To this end, GSX helps administrators to:

- Control the size of the environment
- Optimize SharePoint resources
- Monitor the platform

3.1 Controlling the size of your SharePoint environment

The number of sites In a SharePoint environment can increase dramatically as users create multiple sites and upload numerous documents. This can have a severe impact on service and make it difficult for users to obtain the information they need. The increasing size of SQL databases can raise capacity planning concerns.

When a migration occurs, administrators also need to have insight into the data, its usage, the sites and their performance.

GSX Monitor enables you to manage the evolution of your data:

- In real time, or
- With the reporting module.

3.1.1 Managing data in real time

The real time view in GSX Monitor provides invaluable information for managing the evolution of data within your environment.

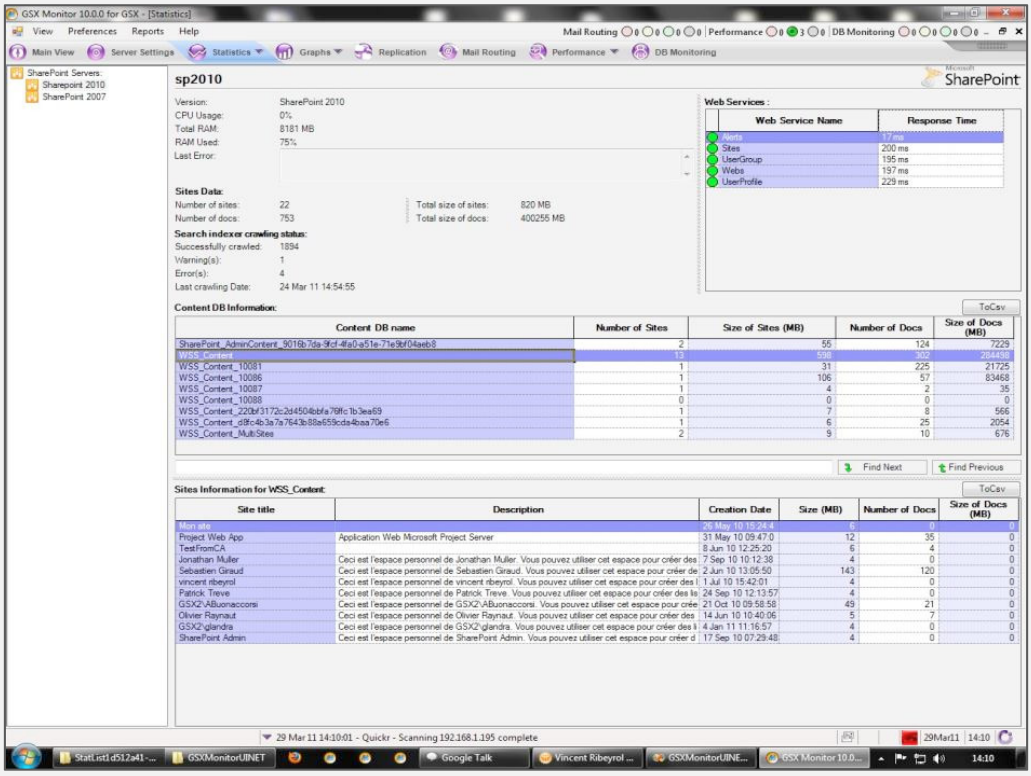


Figure 3: *Viewing real time SharePoint statistics*

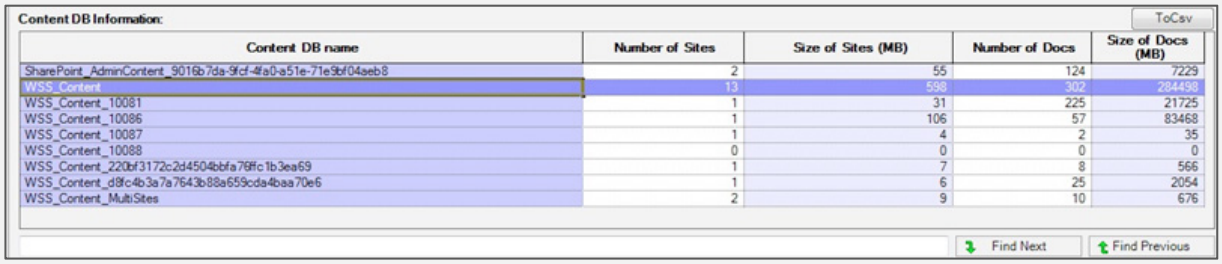
On top you will see useful system information on Version, CPU Usage, Total RAM, RAM Used, and the Last event log error.

Below that you will find a general overview of the size of your infrastructure:

Number of site collections (that contain all the sites and subsites) displays SQL data on the total size of sites, number of documents, and total size of documents for your entire SharePoint environment.

The size of the site collections is generally larger than the total size of all documents as it includes such items as webparts and workflow configuration files. Knowing the difference can be valuable.

Just below this you will see the **content database Information** with the database name,number of site collections per database, the sizes of the sites, the number of documents, and their size.


Content DB Information:

ToCsv

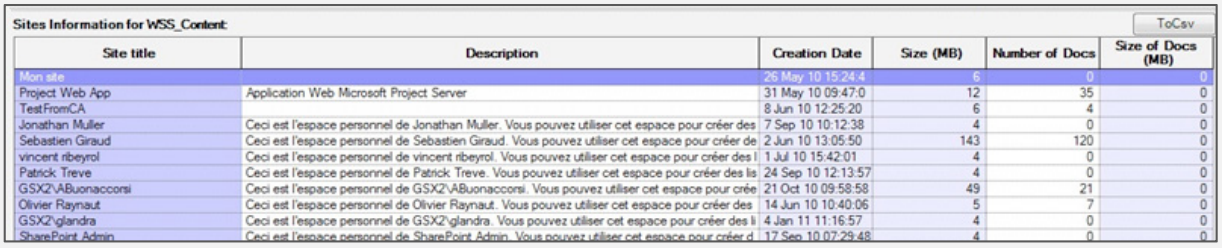
Content DB name	Number of Sites	Size of Sites (MB)	Number of Docs	Size of Docs (MB)
SharePoint_AdminContent_9016b7da-9fcf-4fa0-a51e-71e9bf04aeb8	2	55	124	7229
WSS_Content	13	598	302	284498
WSS_Content_10081	1	31	225	21725
WSS_Content_10086	1	106	57	83468
WSS_Content_10087	1	4	2	35
WSS_Content_10088	0	0	0	0
WSS_Content_220bf3172c2d4504bbfa76ffc1b3ea69	1	7	8	566
WSS_Content_d8fc4b3a7a7643b88a659cda4baa70e6	1	6	25	2054
WSS_Content_MultiSites	2	9	10	676

Find Next Find Previous

Figure 4: *Viewing SharePoint content DB information in GSX Monitor*

This enables you to see how the data is split among site collections, and the size of the collections. If you have a problem with a large content database, it will be seen here.

For each content database, you will find the list of all the sites it contains, including, the name of the site, description, creation date, size, number of documents, and size of the documents).


Sites Information for WSS_Content:

ToCsv

Site title	Description	Creation Date	Size (MB)	Number of Docs	Size of Docs (MB)
Mon site		26 May 10 15:24:4	6	0	0
Project Web App	Application Web Microsoft Project Server	31 May 10 09:47:0	12	35	0
TestFromCA		8 Jun 10 12:25:20	6	4	0
Jonathan Muller	Ceci est l'espace personnel de Jonathan Muller. Vous pouvez utiliser cet espace pour créer des	7 Sep 10 10:12:38	4	0	0
Sebastien Giraud	Ceci est l'espace personnel de Sebastien Giraud. Vous pouvez utiliser cet espace pour créer de	2 Jun 10 13:05:50	143	120	0
vincent ribeyrol	Ceci est l'espace personnel de vincent ribeyrol. Vous pouvez utiliser cet espace pour créer des l	1 Jul 10 15:42:01	4	0	0
Patrick Treve	Ceci est l'espace personnel de Patrick Treve. Vous pouvez utiliser cet espace pour créer des lis	24 Sep 10 12:13:57	4	0	0
GSX2\ABuonaccorsi	Ceci est l'espace personnel de GSX2\ABuonaccorsi. Vous pouvez utiliser cet espace pour crée	21 Oct 10 09:58:58	49	21	0
Olivier Raynaut	Ceci est l'espace personnel de Olivier Raynaut. Vous pouvez utiliser cet espace pour créer des	14 Jun 10 10:40:06	5	7	0
GSX2\glandra	Ceci est l'espace personnel de GSX2\glandra. Vous pouvez utiliser cet espace pour créer des li	4 Jan 11 11:16:57	4	0	0
SharePoint Admin	Ceci est l'espace personnel de SharePoint Admin. Vous pouvez utiliser cet espace pour créer d	17 Sep 10 07:29:48	4	0	0

Figure 5*: Viewing SharePoint site information in GSX Monitor*

Database by database you can easily check for inappropriately sized sites and determine the storage needs of your SharePoint infrastructure.

Statistics can be exported to Excel, or you can view them in the GSX Analyzer reporting tool, which consolidates the data and enables you to view trends and generate reports.

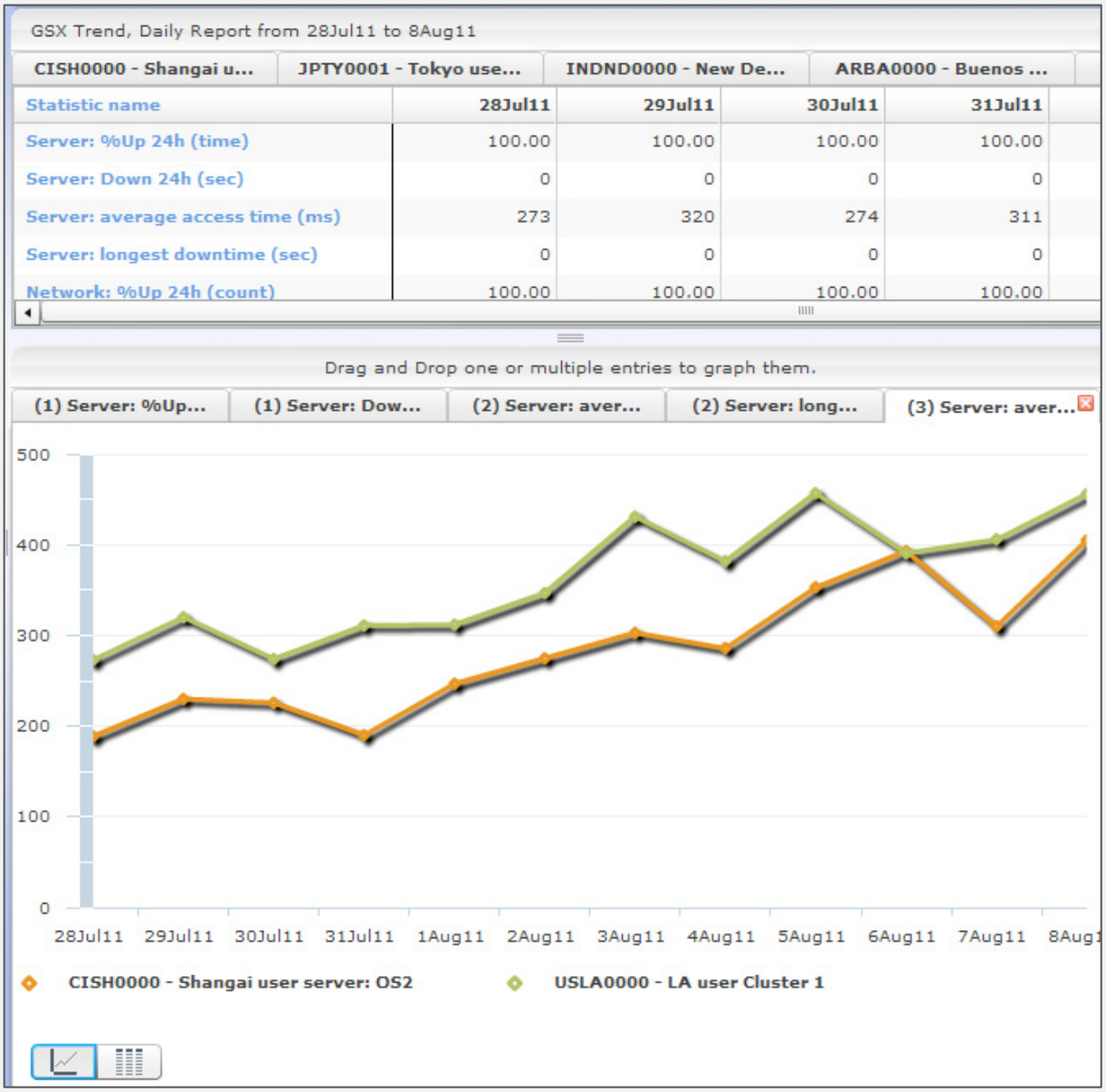


Figure 6: *Viewing trends in GSX Analyzer*

This real time view of your overall environment also enables you to compare the information among the servers or across your SQL environment in the correct time frame. Multiple tabs provide a wide range of Information about your environment, including alerts, log reports, and trending and environmental health.

GSX Analyzer is fully customizable according to customer, server groups, team type, and so on. You can create custom access profiles according to servers and/or the features that you want to offer.

The GSX Analyzer dashboard can be customized according to various users' permissions. The main view shows the performance and the size of your environment at a glance, up to 15 days' of history, and a list of the last 10 alerts.

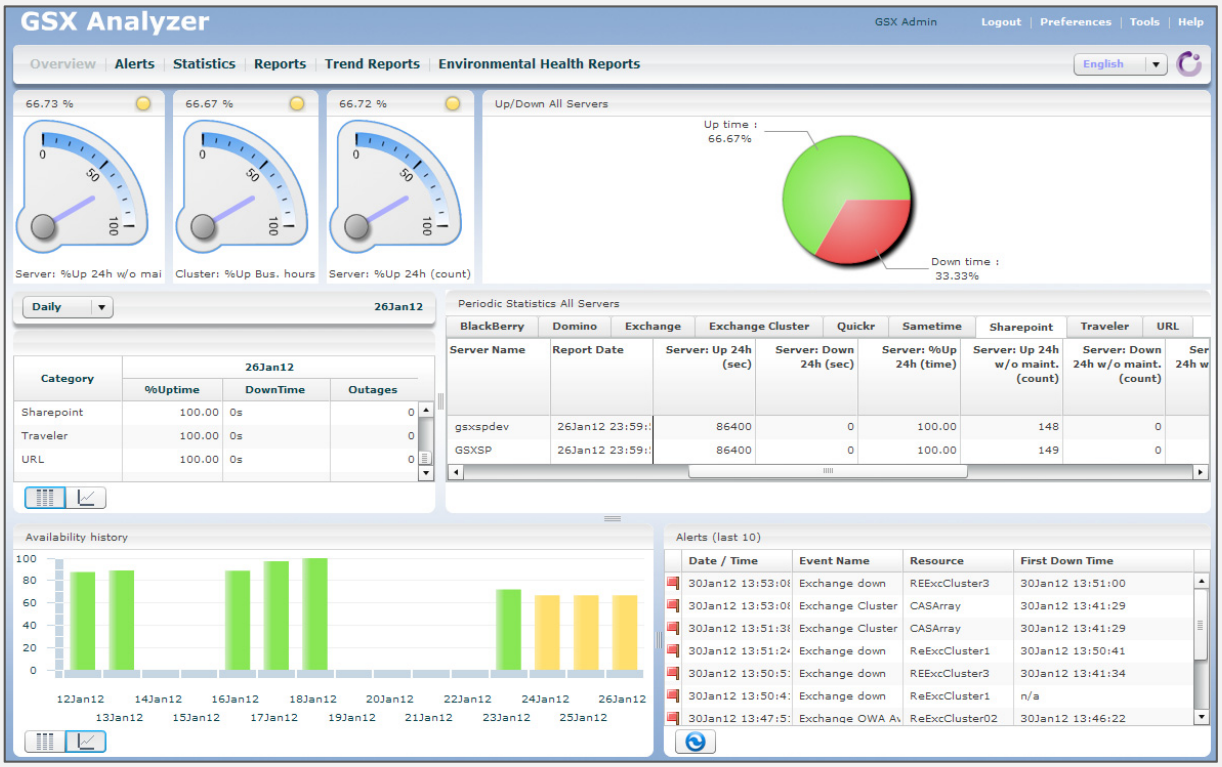


Figure 7: *Viewing environment status in the GSX Analyzer dashboard.*

3.1.2 Generating SharePoint reports

GSX enhances and simplifies SharePoint reporting with an intuitive, template-driven interface. The SharePoint administrator has a clear view on the size and growth of the environment, and can anticipate disk and SQL storage problems. For example, under the GSX Analyzer “Trends profile” tab you can edit and activate trend reports, and designate recipients.

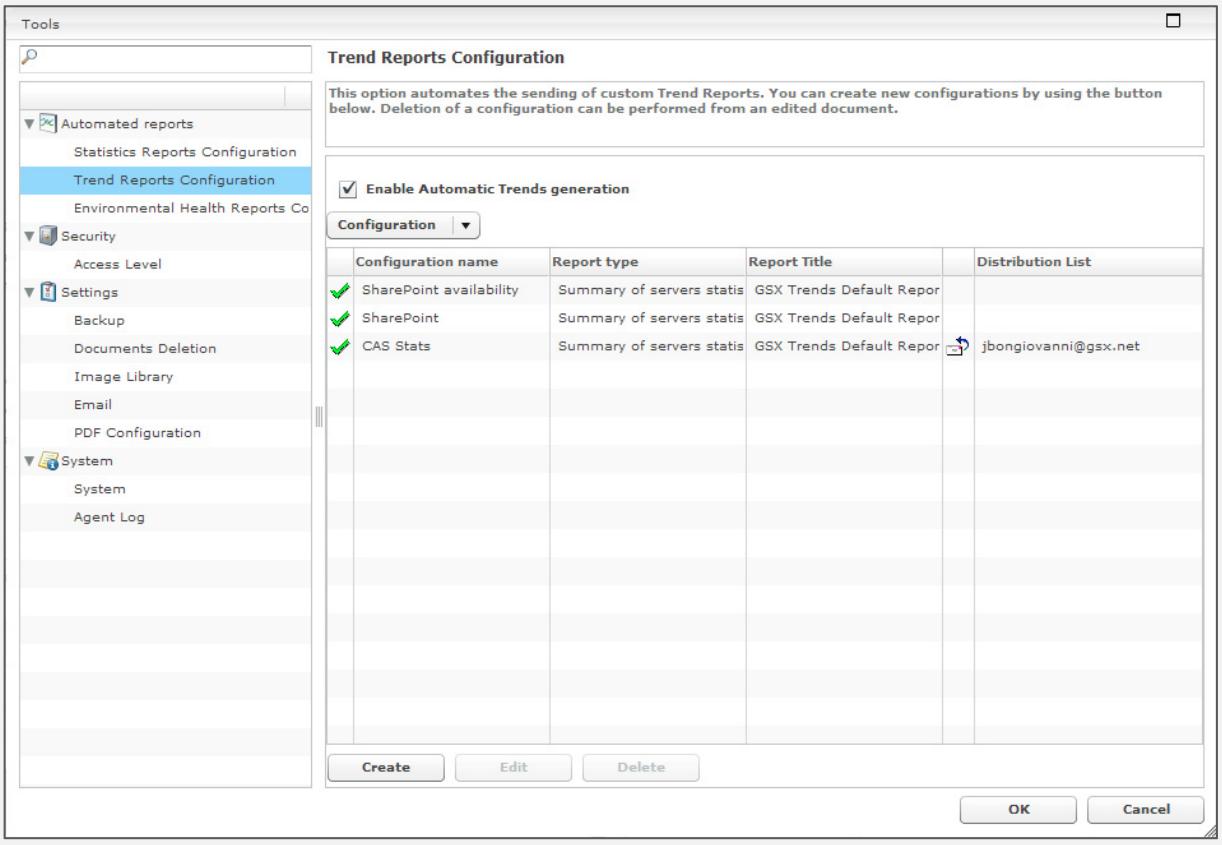


Figure 8: *GSX Analyzer trend report listing.*

Reports can be published online or distributed via email. Once they are set up, the management of multiple reports is very easy. Moreover, you can customize the report (logo,text, title, etc.) and preview it on GSX Analyzer.

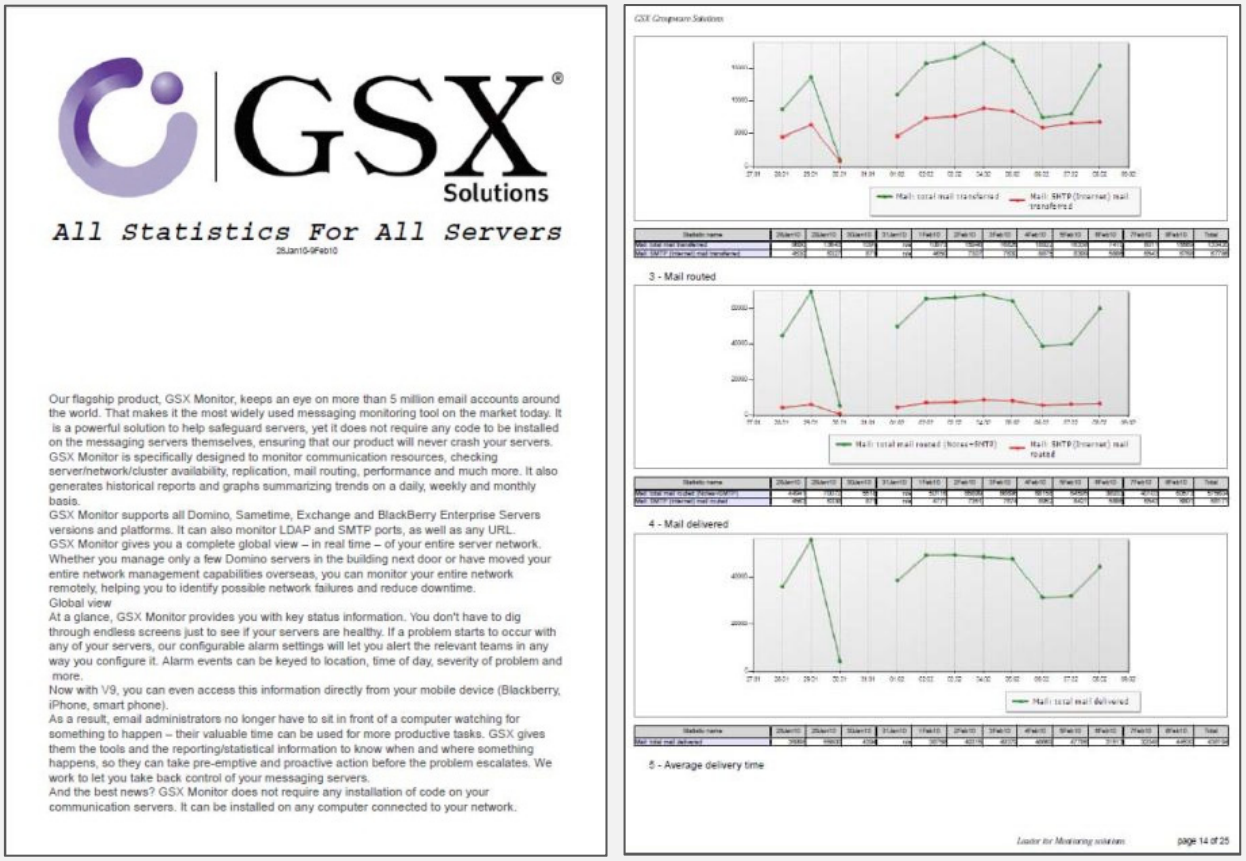
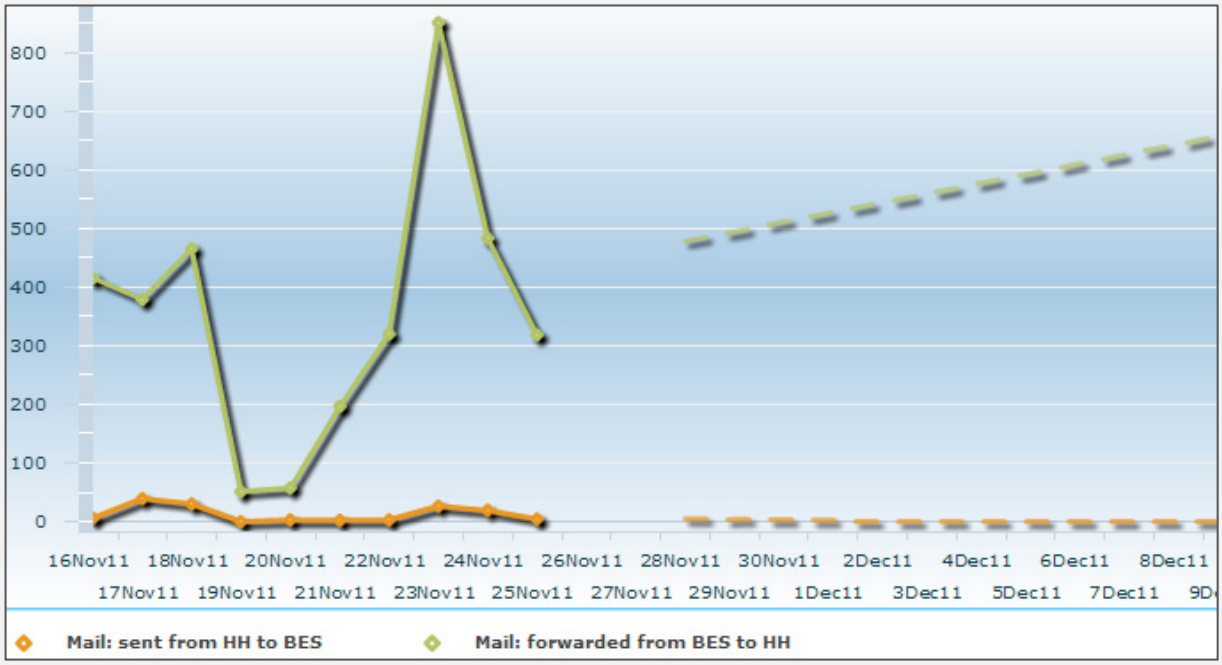


Figure 9: *An automatically distributed SharePoint report.*

3.1.3 Forecasting

When it comes to Capacity Planning, reporting on usage, performance and capacity are even more critical. GSX Analyzer allows you in a very user friendly way to generates reports with this functionality.

Simply click on the Forecasting box, select the time period and GSX will calculate what should be your statistics in the future regarding what you get previously.



3.2 Optimizing SharePoint resources

Containing costs requires a clear view of the performance of your global environment, together with alerts to emerging problems.

3.2.1 Preventing adverse business impacts

Declining performance and outages caused by an explosion of SharePoint data can have a major business impact and incur costs for crisis management, consulting and analysis.

GSX Monitor helps prevent these problems, by alerting administrators to take corrective action before they have a major impact.

When you configure sites you want to monitor, GSX will constantly test access time and alert you if there is a timeout.

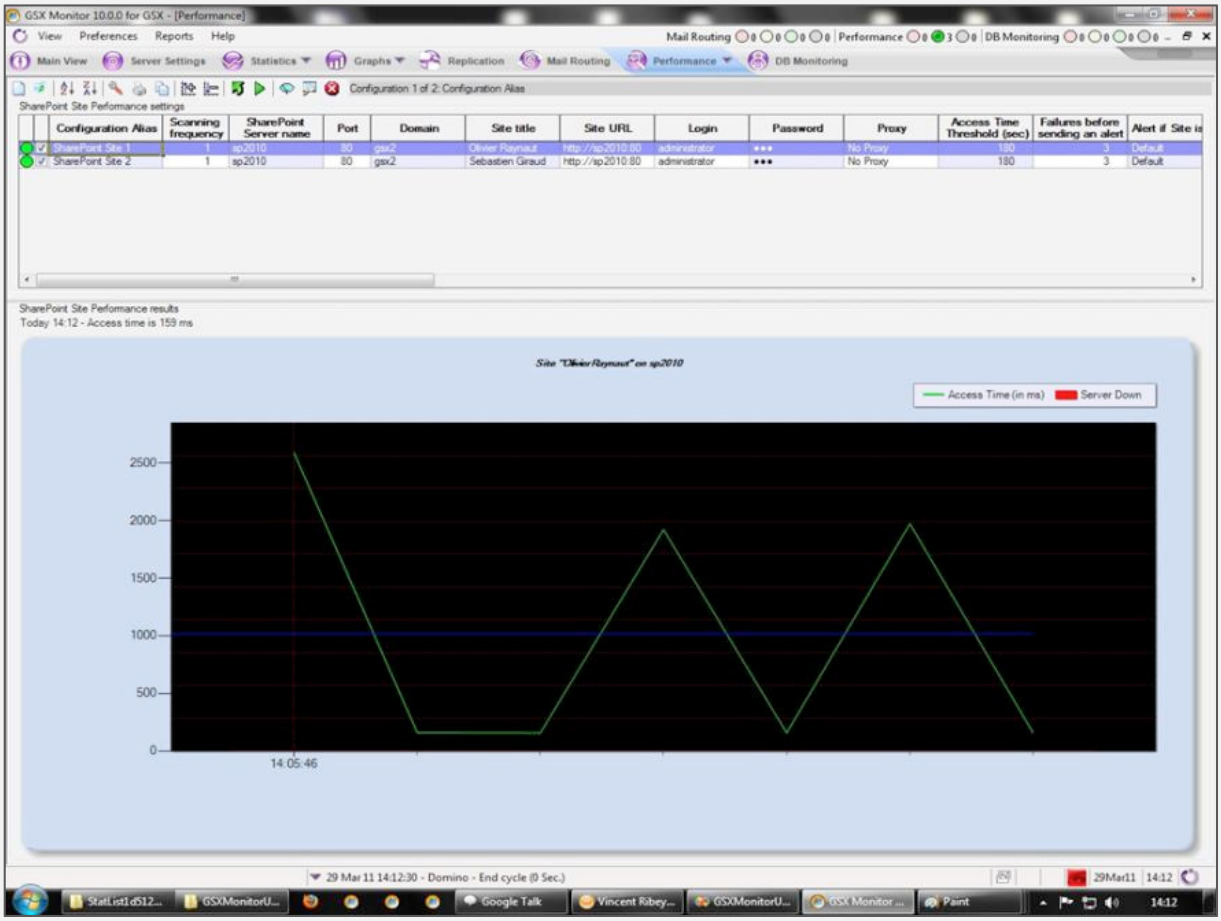


Figure 10: *GSX constantly tests a site's performance.*

For each server, you will be able to display real time graphs for various parameters, such as access time, and CPU and RAM usage. The administrator can then troubleshoot problems by viewing statistics for previous days.

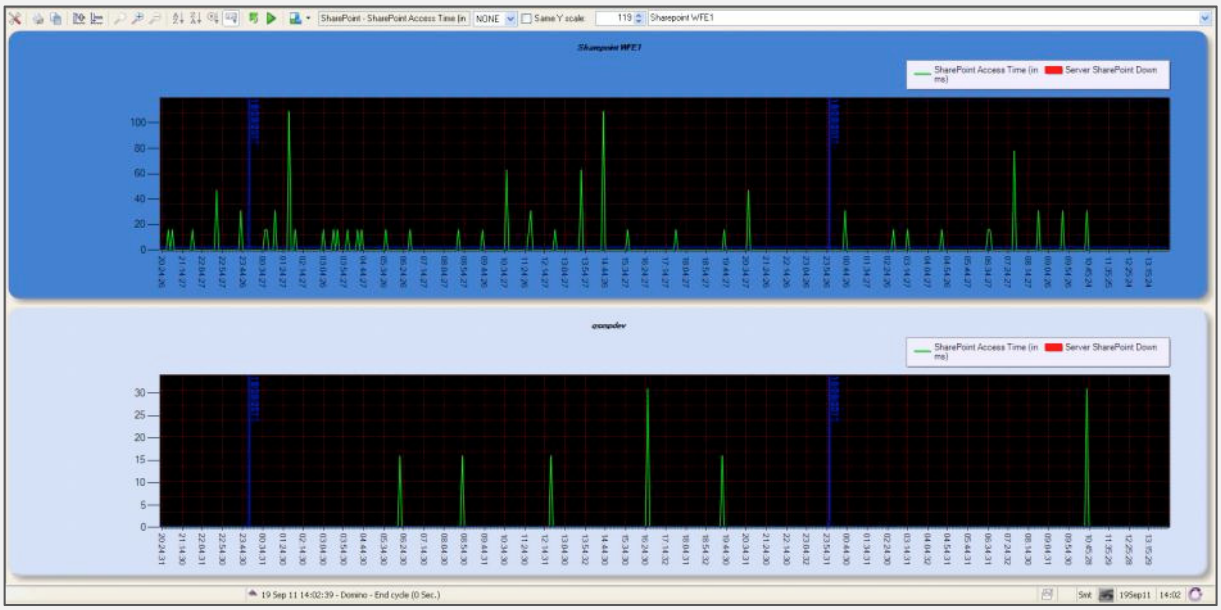


Figure 11: *Troubleshooting SharePoint problems in GSX Monitor.*

GSX also gives you a quick view via user simulation of response (in ms) for various server parameters, to help pinpoint critical service deterioration.

Web Services :

Web Service Name	Response Time
Alerts	16 ms
SiteData	266 ms
Sites	172 ms
UsersGroups	219 ms
Webs	203 ms

Figure 12*: Viewing response in ms for various server parameters.*

Another important indicator in GSX Monitor is the warnings and errors derived by crawling the database to catch the metadata involved in a user search.

Search indexer crawling status:

Successfully crawled:	3765
Warning(s):	1
Error(s):	20
Last crawling Date:	21 Jan 12 22:58:53

Figure 13*: Warnings and errors derived by crawling the database.*

3.2.2 Anticipating costs

While real time statistics help to contain immediate business impacts, you also need measures that will help to control long term costs. For that you need to have a clear view of the performance of multiple SharePoint servers over time.

One means is to compare the performance of various servers in terms of key performance indicators against service levels. This gives administrators a clear picture of where to invest additional resources.

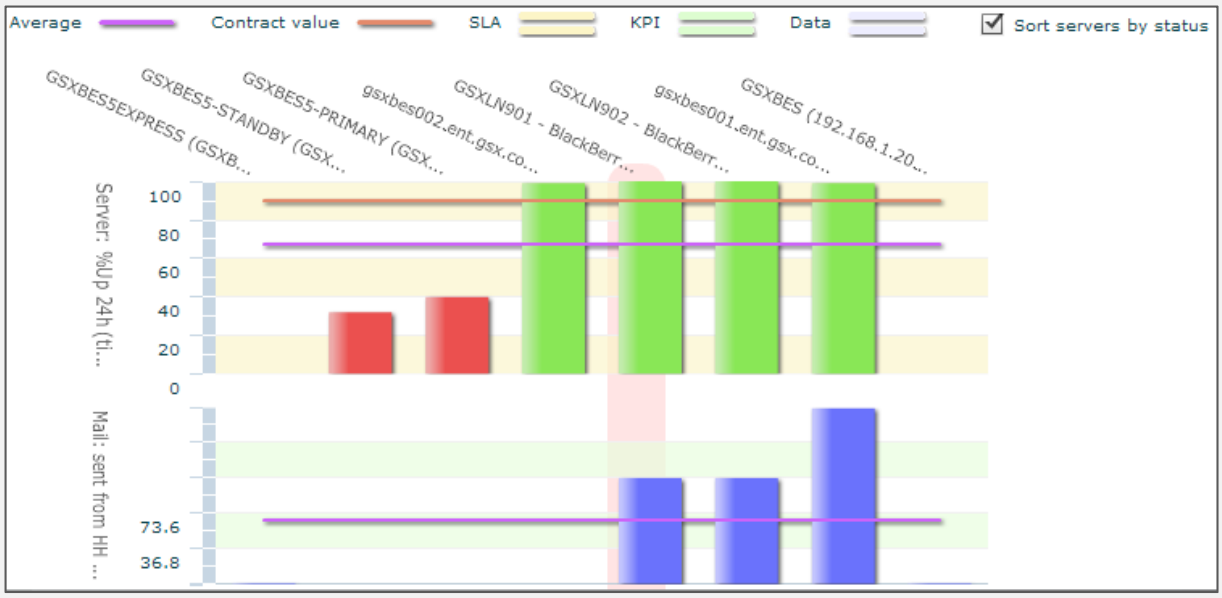


Figure 14: *Comparing server performance.*

Will merging with a new company require an additional SharePoint server? How does the growing number of documents impact memory usage? Do service demands peak on certain days of the week? Is a shortage of disk space impacting access time? Are loads balanced among servers?

GSX Analyzer's automatic trending can help answer these and other questions in order to keep your costs in line, while maintaining a high level of service to various business lines.

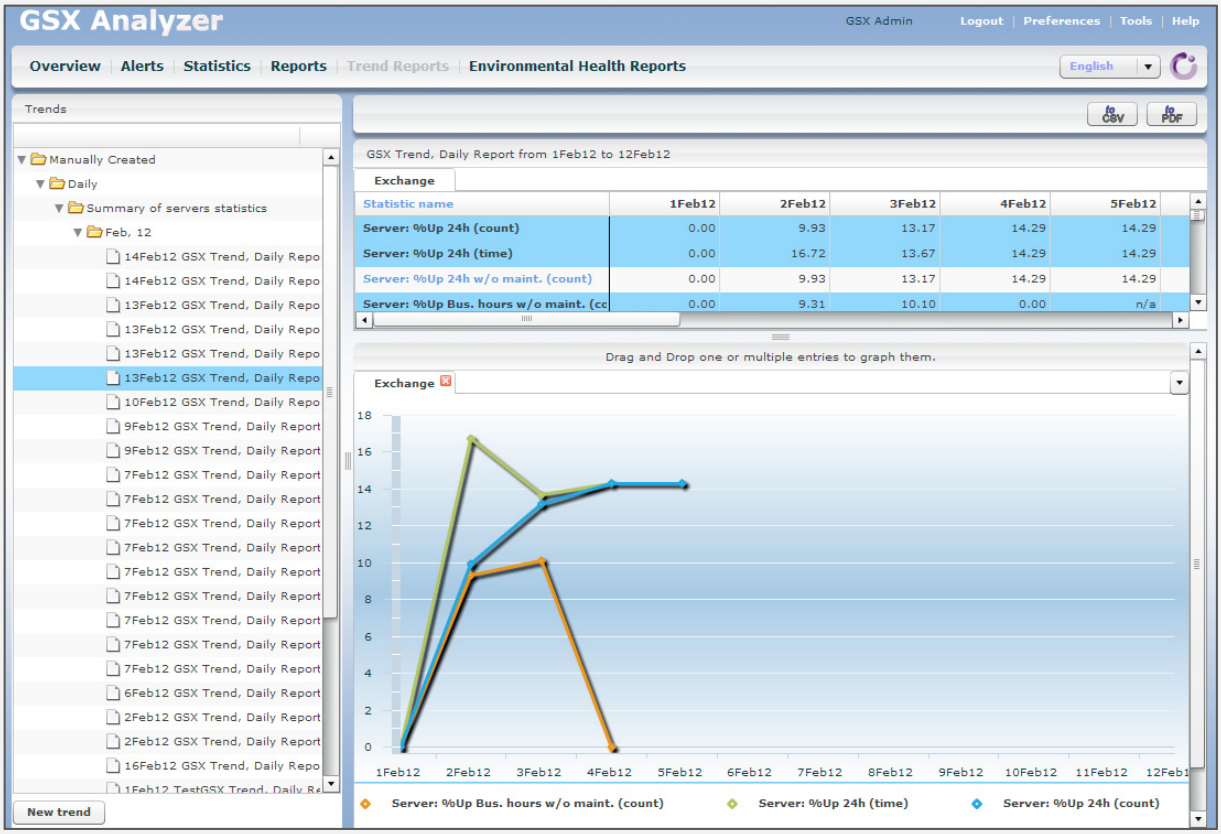


Figure 15: *Tracking trends with GSX Analyzer.*

When services are delivered by a third party, GSX Monitor and Analyzer gives you an independent tool to measure against SLAs and detect performance problems before they do.

Forecasting capabilities to precisely predict your needs.

3.2.3 Optimize your SharePoint Human resources

The explosion of SharePoint systems has outpaced growth in the number of skilled SharePoint administrators, making it essential to automate monitoring and the reporting so as to conserve their skills for more critical tasks.

With GSX, you can delegate day-to-day supervision to junior SCOM administrators, who can then report to senior administrators on any issues that arise. Predefined and customized templates and alerts simplify their task of overseeing complex SharePoint environments.

3.3 Reducing supervisory costs

Managing SharePoint operations requires a view of multiple factors, including log problems, SQL problems, and site and indexer performance, so you can quickly pinpoint emerging issues.

GSX gives you a complete view of your entire collaborative environment in a single console, including Exchange, SharePoint, Web Pages, AD, BlackBerry Servers, and Domino.

No code on server: Easy to deploy, maintain and use!

In monitoring all of these environments, GSX acts as a user and does not install any code on the monitored servers themselves. Moreover, the administrator doesn't have to check the status of the server one by one – they are all in the same view.

3.3.1 Easily manage your Alerts

GSX Monitor has a simple yet powerful alert system which allows you to define which team will be alerted and in what manner.

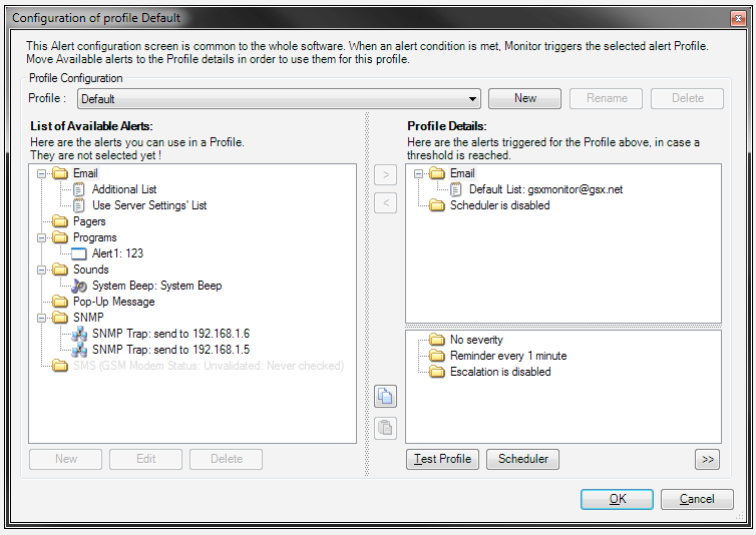


***Figure 16**: Configuring alert profiles.*

You can set separate alert profiles, such as to warn your storage team of capacity issues, and mobility teams of BlackBerry availability issues. "Program" alerts can, for example, execute a Power Shell command to automatically diagnose or fix SharePoint problems.

SMS alerts can be sent via the GSM network should a general network failure occur.

GSX Monitor efficiently distributes alerts to the appropriate parties according to three parameters you set:

- **Severity**
- **Send** reminders until the issue is resolved
- **Escalation**, for example, to the senior engineer after a set period of time.

Some customers send all alerts to SCOM, while others only use SCOM as an operations tool. Either way GSX Monitor provides an easy way to organize alerts.

Each time an alert is sent to a team, it is also sent in real time to GSX Analyzer.

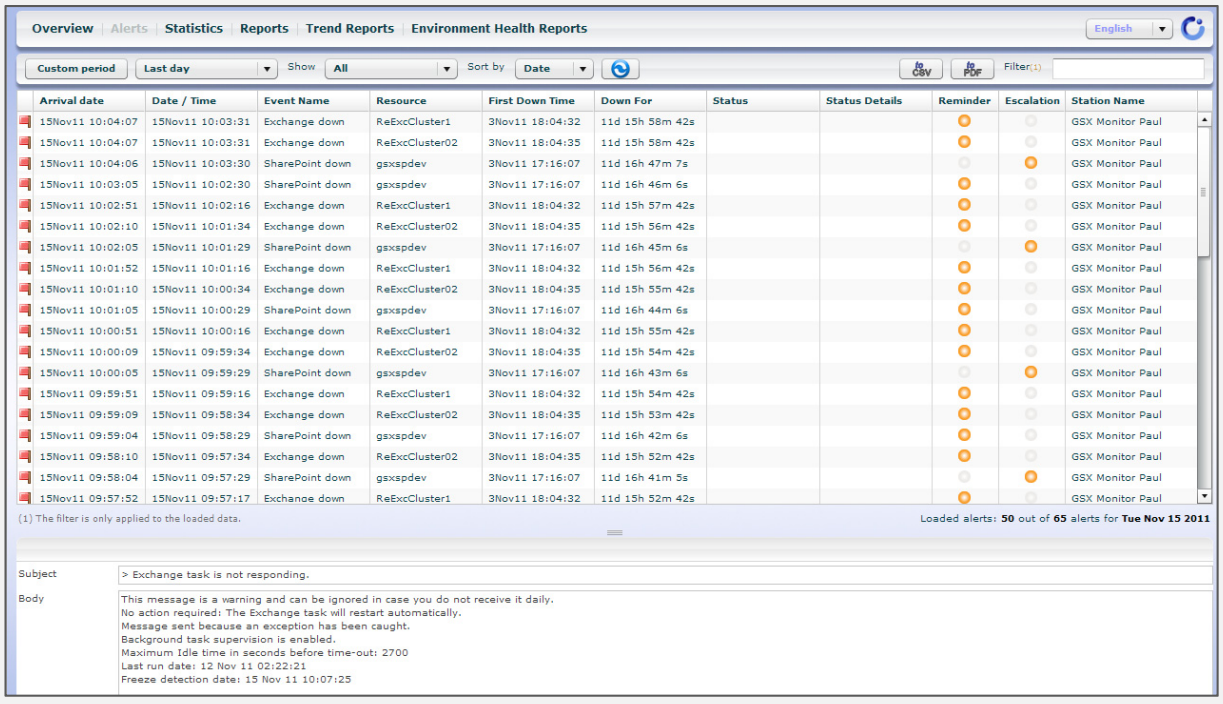


Figure 17: *Viewing alerts in GSX Analyzer.*

3.3.2 SCOM Integration

Seamless integration with SCOM via the GSX Management Pack makes it easy to manage your Exchange and SharePoint environments. To configure the integration between SCOM and GSX you just have to state a new device management setting in SCOM, and then import the management pack.

Once configured, SCOM is able to collect the SNMP Traps in the alerts view.

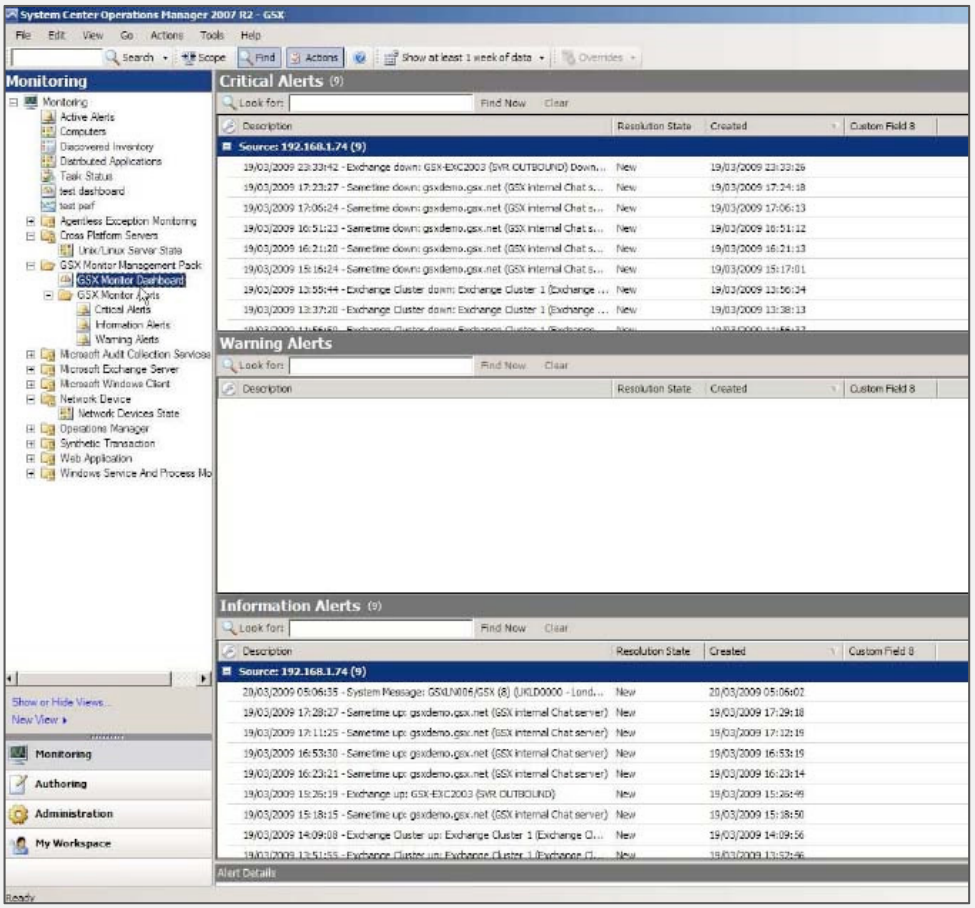


***Figure 18**: Viewing SNMP Trap alerts in SCOM*

GSX enables you designate by profile that alerts to escalate to SCOM. This allows you to alert the right team at the right moment, depending on the threshold you configure, to correct issues before they severely impact the business. It also enables you to centralize your alerts in SCOM, to optimize how they are processed.

4- Conclusion

The proliferation of SharePoint usage raises the dual concern of maintaining adequate service levels while controlling costs. The agentless, user-oriented approach of GSX Monitor & Analyzer, with full SCOM integration, provides a comprehensive and flexible solution to meet these ends.

In short, GSX provides an all-in-one solution to assure SharePoint delivery, while keeping a lid on costs.

Your Next Action

To learn more about how GSX Monitor & Analyzer can monitor your SharePoint environment, register to our upcoming SharePoint webinars
http://www.gsx.com/eventsnews/?Tag=GSX+

Events or schedule a live demonstration with one of our experts
http://www.gsx.com/contact-us/request-a-demonstration-of-gsx-v10/

Visit http://www.gsx.net/resource_center/technical_support for more information.

GSX Solutions

sales@gsx.com

GSX_Solutions

GSX-Solutions

GSX-Groupware-Solutions

www.gsx.com/blog

GSXSolutions