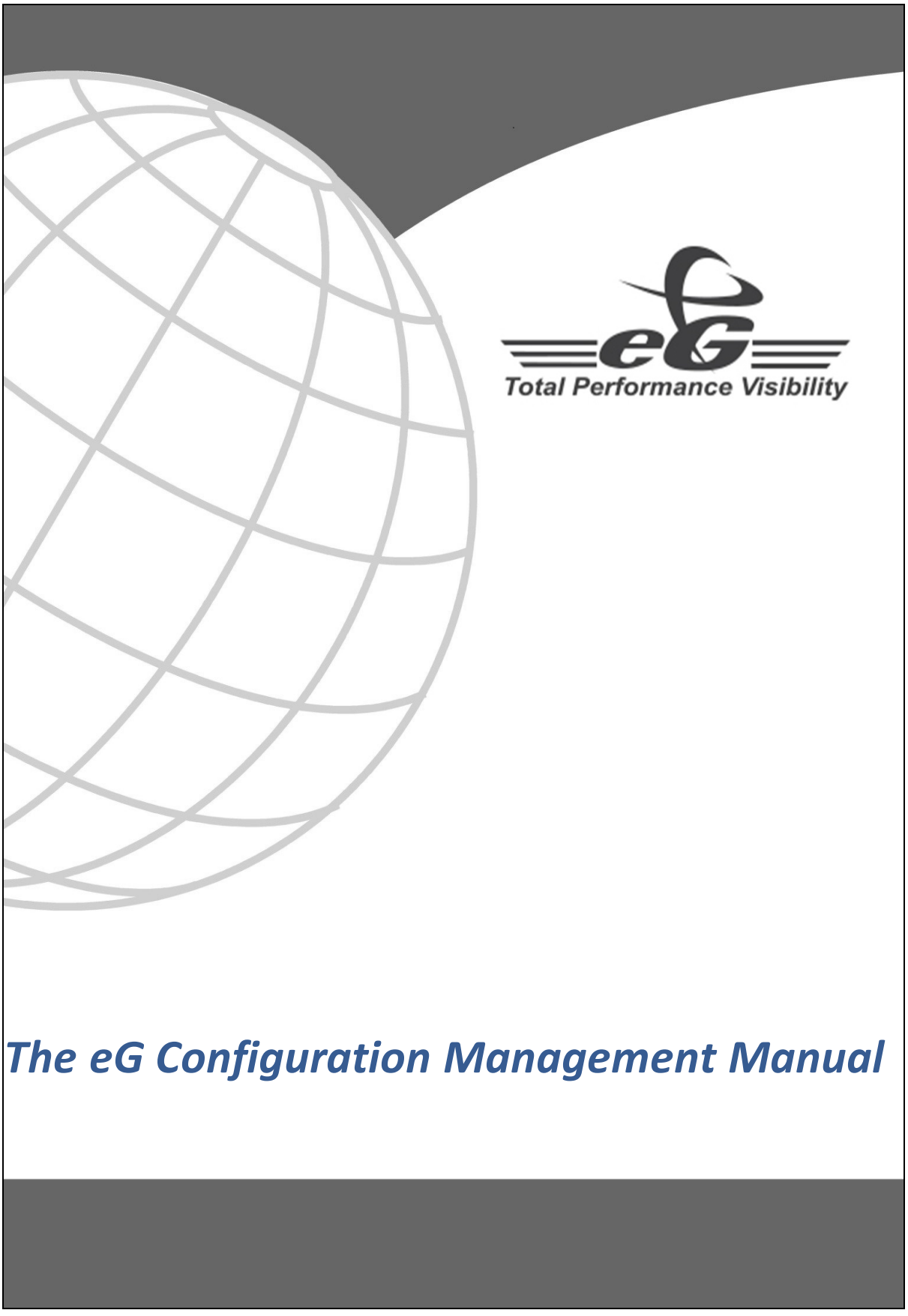

The eG Configuration Management Manual

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Chapter 1: Introduction

Today's IT implementations are increasingly more complex. A single server can contain thousands of configuration elements, including system files, kernel parameters, registry keys, application settings, and firmware switches. Each of these elements may need to meet specific IT business requirements. Since a typical organization may have hundreds or even thousands of servers, the number of configurations to be tracked and managed can reach millions parameters.

Change within an IT environment is a constant and can range from the planned, such as application and operating system upgrades, patch installations, and approved configuration updates, to the unplanned, including accidental system alterations and malicious security breaches. It is often these "unplanned" changes that have the greatest impact on the organization. Leading analyst firms estimate that, on average, more than 60 percent of all critical system and application outages are caused by inappropriate changes.

The costs associated with unplanned and uncontrolled change can impact an organization on many levels. Unplanned and uncontrolled change can lead to a longer time-to-value for new products and services, and can cause inconsistent and unpredictable service. Uncontrolled change can also increase security and compliance risks, opening an infrastructure to malicious attacks and limiting an organization's ability to apply compliance strategies or the principles of good corporate governance. Auditors who discover evidence of uncontrolled change are likely to cite the organization for deficiencies or, in the most severe case, a material weakness.

Finally, uncontrolled change can increase administrative costs as systems fail to provide the level of service expected and IT teams are forced to duplicate efforts and repeat processes in an effort to ensure systems remain functional.

Traditional methods of managing and monitoring configuration settings are impeded by IT staffs that simply do not have time or resources to look at each element of a complex infrastructure individually. This can initially result in systems being deployed into the infrastructure that are not fully configured to a defined standard. Even when deployed properly, over time, the lack of visibility into the environment will result in "configuration drift" - configuration settings that, without staff knowledge, have changed over time until they are far from what they are supposed to be. Configuration drift negatively impacts an enterprise's operational performance and availability, security, and, eventually state of compliance to internal and external standards.

What administrators require therefore is a single, integrated solution that can collect, consolidate, and present in a central interface, the basic configuration and configuration change information

related to all the components in the environment. eG Enterprise is such a solution. The optional **Configuration Management** module offered by this solution employs agent-based and agentless mechanisms to extract critical configuration and change details from each of the managed components in the environment, stores the data so collected in a central repository, and allows administrators to periodically query on the data via a 100%, web-ased, easy-to-use **Configuration Management** console so that, the following tasks can be performed with elan:

1. From time- to- time, take stock of the applications, operating systems, devices, software, hardware, and services that are available in the environment;
2. Quickly access the basic configuration information pertaining to any system/application in the environment;
3. Accurately identify systems on which critical services have stopped, or on which mandatory software is missing;
4. Detect unplanned/unauthorized configuration changes with minimal effort;
5. Assess how a configuration change could have influenced overall performance/health of the system/application;
6. Run periodic checks to verify whether the entire infrastructure adheres to defined standards or not, and thus isolate deviations;

In short, using the **eG Configuration Management** module, administrators can find quick and easy answers for the following questions:

Using the Configuration Management capability of eG Enterprise, the following questions can be answered quickly and accurately:

- Which are the platforms on which a particular application is currently running?
- What are the applications currently executing on a particular system?
- Which versions of an operating system are currently available in the target environment? Do any of these operating systems require an upgradation?
- What is the current configuration of an application?
- Are all mandatory software (like antivirus software) available and running on all managed systems? Which system does not have such software?
- Are all services critical to the functioning of your system and applications, up and running?
- Has the hotfix/patch been applied to all target systems?
- Do any systems require additional hard disk space? If so, which ones?

- Do any systems require their RAM size to be increased? If so, which ones?
- Have all Windows systems been updated with their latest service pack?
- Which are the systems that are supported by a particular processor family?
- Which systems in your environment have been assigned static IP addresses, and which ones hold dynamic IP addresses?
- How many printers has a system been configured with? What is the current status of each printer?
- Have any configuration changes occurred during the last 24-hours? If so, when exactly, and what are its details? Was this a planned change or an accidental one? Could this configuration change have induced a drop in the performance level of the system/application?
- Can any difference be noticed in the configuration of two components of the same type? If so, could this difference be the cause for the poor performance of one of the components?
- Which are the systems that fulfill a specific configuration requirement?

The sections that will follow discuss how the **eG Configuration Management** console can be used to swiftly query, view, and analyze configuration information.

1.1 Configuration Management Home Page

This page enables the administrator to understand, at a glance, the software, service, hotfix, and operating system configuration of the components in the monitored environment, and provides a quick summary of the configuration changes that were effected in the environment in the recent past. The details are as follows:

1. The first section of the page provides the details of **Machines** or hosts that are being monitored in the target environment. By default, this section displays a pie chart depicting the distribution of machines on the basis of the operating systems available in the environment as depicted in Figure 1.1. Accordingly, the **By OS** option is chosen by default from the drop-down list at the right, top corner of this section. Using the pie chart, you can determine the type of operating systems that are currently in use in the environment, and the number of installations of each operating system. This information enables administrators to efficiently track the usage of OS licenses across the environment and plan the purchase of additional licenses (if required). To quickly identify the machines on which a particular OS has been installed, simply click on a particular slice in the pie chart; this will lead you to the **INVENTORY BY OPERATING SYSTEM** page that provides a version-wise list of machines that are currently using the corresponding

operating system.

If you select the **By OS Version** option from the drop-down list at the right, top corner of the **Machines** section, then a table displaying the following details will appear:

- The OS installed in the machines **Version of the OS**
- The number of installations of each OS in the target environment

Besides helping you keep tabs on license consumption, this information also enables you to effectively plan future upgrades / installations. In other words, if one/more operating systems need to be upgraded, or if service packs/hotfixes need to be deployed on an operating system, then the information provided here will help you assess your workload and accordingly plan and schedule your work. Clicking on an **Operating System** here will once again take you to the **INVENTORY BY OPERATING SYSTEM** page, using which you can quickly identify the machines that are running on a particular version of an operating system.

To view the number of network devices that have been managed in the environment, pick the **Network Devices** option from the drop-down list at the right, top corner of the **Machines** section. Doing so will reveal a distribution pie chart depicting the number of network devices of each type that are currently monitored. Likewise, select the **Virtual Servers** option to know which virtualized platforms are in use in the environment, and how many servers per platform are currently managed. Clicking on a slice in the **Network Devices** pie chart will reveal which devices of a type are currently managed. Clicking on a slice in the **Virtual Servers** pie chart will reveal the managed virtual components of the virtualized platform that is clicked on.

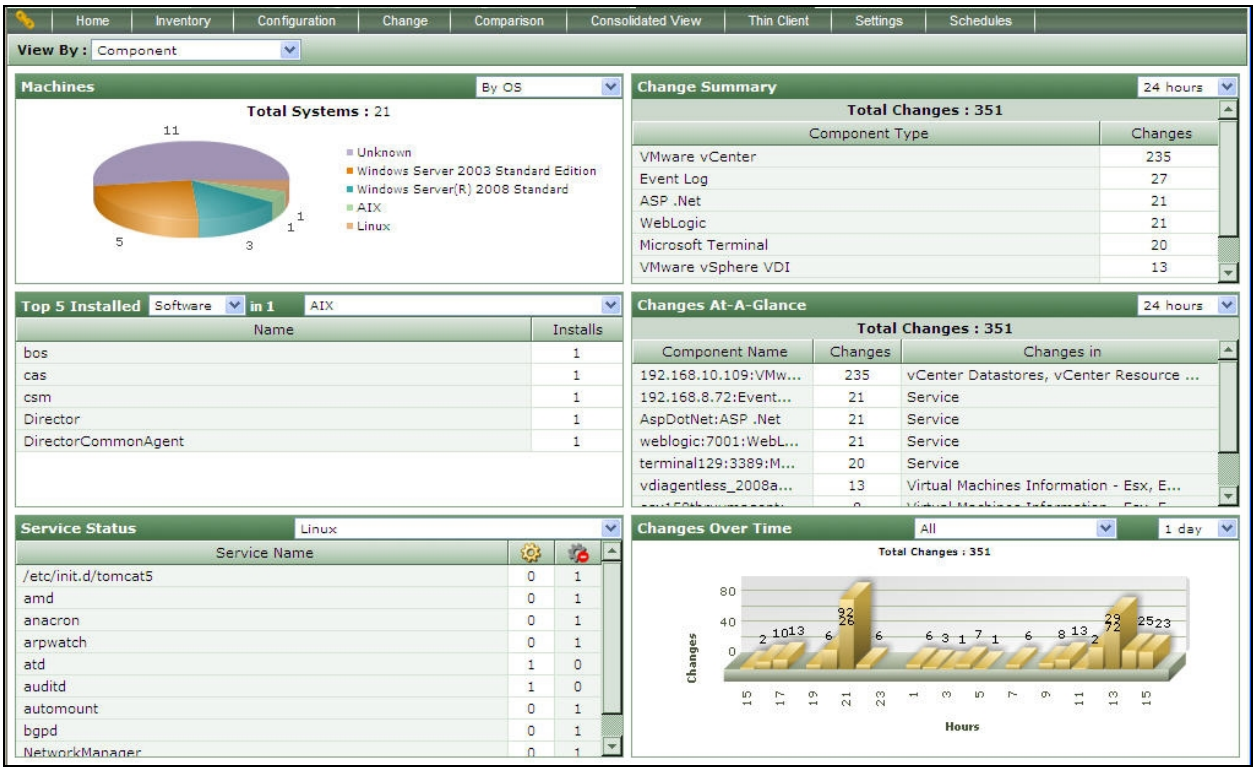


Figure 1.1: Home page of configuration management

Note:

As stated earlier, the **By OS** option is the default selection in the drop-down list, in the **Machines** section. To override this default setting, use the menu sequence *Settings -> Dashboard ->Other panels*, and set the **Machine Distribution** flag in the page that appears to **By OS Version**. Save the changes to the page by clicking the **UPDATE** button therein.

2. Below the **Machines** section, you can view the Top-N software, services, or hotfixes installed on a chosen operating system. By default, this section displays the top **5 Software** (in terms of number of machines on which the software has been installed) installed on a particular operating system. To view the top services/hotfixes, select the relevant option from the drop-down list adjacent to the label **Installed** in this section. Also, note that eG Enterprise discovers all the operating systems that are in use in the environment, arranges them in the ascending order of the OS names, and selects the first OS in the sorted list as the default operating system for consideration by this section. You can choose a different operating system by selecting another option from the drop-down list adjacent to the text in the section title.

   This section lists the names of the top-5 (by default) software/services/hotfixes installed on a particular OS across the environment, along with the number of **Installs** of every

software/service/hotfix. This information helps you ascertain, from a single glance, whether all software, services, and hotfixes that are critical to the functioning of a chosen OS are available on all installations of that OS. For instance, if a critical anti-virus software has to be present on all Windows 2000 machines in the environment, you can effortlessly verify the availability of this software using the details provided by this section.

Clicking on a software/service/hotfix here will lead you to the corresponding **INVENTORY** page, using which you can instantly identify the systems on which the software/service/hotfix clicked on is available and the systems on which it is not available.

3. The third section provides the **Service Status**. This section enables you to quickly audit the status of critical services installed on a chosen operating system so that, you can accurately isolate services that were inadvertently/deliberately stopped and on how many hosts. Selecting an operating system from the drop-down list in the **Service Status** section of this page, will display a list of all services that are currently available across all hosts that are running the chosen operating system. Against every service name, the number of hosts on which the service is currenly running and the number of hosts on which the service is not running will be displayed. While the  symbol indicates that a service is currently operational, the  symbol indicates that the service has stopped. Click on the service name to switch to the **INVENTORY : SERVICE STATUS** page, using which you can precisely identify the systems on which the service is running and those on which it is not.
4. Adjacent to the **Machines** section is the **Change Summary** section. This section provides you with a quick look at the component-types for which configuration changes have been made during the last 24 hours (by default), and the number of changes that were effected per component-type. This way, administrators of individual application silos in an environment - say, database administrator, web server administrator, etc. - will receive an overview of the configuration changes that applications of interest to them have undergone during the last 1 day (by default). By choosing a different duration from the drop-down list at the right, top corner of this section, you can view the change summary for a broader time period (say, 48 hours, 72 hours, etc.). For further analysis of the changes, click on a **Component Type** displayed in this section. This will lead you to the **CONFIGURATION CHANGES:DETAILED** page, which will enable you to instantly infer which components of the chosen type have undergone configuration changes during the chosen period.

   Note:

To override the default duration of **24 hours**, open the **DASHBOARD SETTINGS:OTHER PANELS** page using the menu sequence, *Settings -> Dashboard ->Other panels*, and pick a different option from the **Change Summary** section.

You can even indicate the duration options that need to be available for selection in the drop-down list. By default, the following options will be available: *24,48,72,96,120,144,168*.

You can alter this list, using the steps provided below:

- Edit the **eg_configtests.ini** file in the **{EG_INSTALL_DIR}\manager\config** directory.
- In the **[CONFIGURATION_CHANGE]** section of the file, append the desired options to the comma-separated list available against the **ChangeSummary** parameter. For instance, to include the options 192 and 216, your specification should be:

  ChangeSummary=24,48,72,96,120,144,168,192,216

5. Beneath the **Change Summary** section, a **Changes At-A-Glance** section is available, that provides a component-level change summary for the last 24 hours (by default). You can change the default time period by selecting a different option from the drop-down list at the right, top corner of this section. By choosing a specific time period, you can view the components that have undergone a configuration change during the chosen period, the number of configuration changes that were made per component, and also the configuration parameter that has changed. In the event of a problem with a component during a time period in the past, administrators can use this section to figure out whether the configuration of the component changed during the said period, what was the configuration change, and also determine whether this change could have contributed to the problem. Clicking on the component name or on the number of changes or on the type of changes will take you to the **CONFIGURATION CHANGES:DETAILED** page, which will provide you with a detailed description of the corresponding configuration changes.

   Note:

   To override the default duration of **24 hours**, open the **DASHBOARD SETTINGS:OTHER PANELS** page using the menu sequence, *Settings -> Dashboard ->Other panels*, and pick a different option from the **Changes At-A-Glance** section.

   You can even indicate the duration options that need to be available for selection in the drop-down list. By default, the following options will be available: 24,48,72,96,120,144,168. You can alter this list, using the steps provided below:

- Edit the **eg_configtests.ini** file in the **{EG_INSTALL_DIR}\manager\config** directory.
- In the **[CONFIGURATION_CHANGE]** section of the file, append the desired options to the comma-separated list available against the *ChangesAtAGlance* parameter. For instance, to include the options 192 and 216, your specification should be:

  ChangesAtAGlance=24,48,72,96,120,144,168,192,216

6. The **Daywise Change Distribution** section, by default, provides a graph indicating the count of configuration changes that were effected across the environment, every day during the default period of 1 week. Accordingly, the **All** and 1 week options are chosen by default from the drop-down lists available in this section. To view a quick summary of the configuration changes that were made per day for a specific component-type during a different time period, select a different option from both these drop-down lists. Administrators of specific application silos in an environment will find this change distribution graph useful, as it would help them closely track, on a daily basis, the number of configuration changes that were made to the applications of interest to them. Clicking on the bar corresponding to a particular day in this bar graph, will take you to the **CONFIGURATION CHANGES:DETAILED** page. This page provides detailed information pertaining to the configuration changes, that were performed on the chosen component on the day clicked on.

   Note:

   To override the default duration of **1 week**, open the **DASHBOARD SETTINGS:OTHER PANELS** page using the menu sequence, *Settings -> Dashboard ->Other panels*, and pick a different option from the **Daywise Change Distribution** list.

Chapter 2: Inventory

2.1 Inventory View

2.1.1 Inventory by Operating System

One of the key requirements of IT asset management, is to periodically take stock of the operating systems (OS), that are in use in the IT environment and their versions. In large IT environments, the knowledge of operating systems and versions will also come in handy while you plan mass OS upgrades, or, when you want to identify targets for installing critical software/patches, or for troubleshooting host-level issues. For instance, you may want to deploy a software that can operate only on version *B.11.11* of *HP-UX*. In large IT infrastructures, it would take days, even weeks, for you to manually identify the hosts that run the OS that is compatible with your software. What you hence need is a single, central interface, that enables you to execute simple queries on the configuration management database, and quickly retrieve the OS, version, and system information you need from across the environment.

Towards this end, the **Configuration Management** module of the eG Enterprise Suite provides the **INVENTORY BY OPERATING SYSTEM** page. This page, which can be accessed by the menu sequence, *Inventory->View->By Operating System*, allows you to quickly and accurately identify those systems that are running a specific version of an operating system.

By default, this page displays a pie chart that reveals the distribution of all hosts in the target environment based on operating system - from this pie chart, you can easily determine how many hosts are running a particular operating system. To know the names of these hosts, use the table below. By default, this table lists all the operating systems that are in use in your environment, the hosts (i.e., **Systems**) running each such operating system, and the exact version of the OS that is executing on the hosts. Accordingly, the *All* option is chosen by default in the **Operating System** list.

To view the host and version details across the operating systems do the following:

1. Select *All* option from the **Operating system** list box as depicted in Figure 2.1.
2. To run a quick search across the systems to locate a particular system, use the **Search by System(s**) option in this page. Specify the whole/part of the system name to search for in the **Search by System(s)** text box and click the right-arrow button next to it.
3. Then click the **SUBMIT** button.

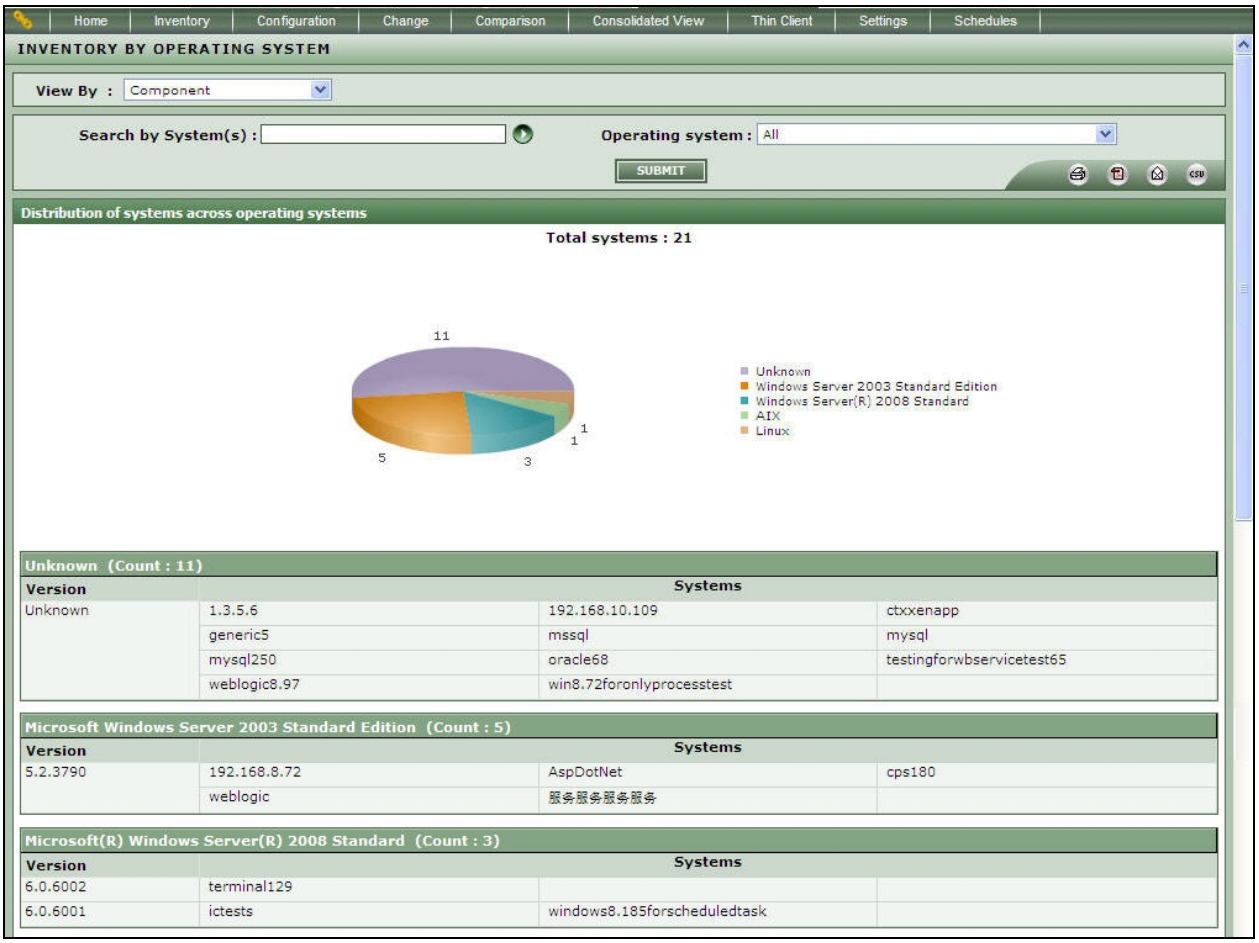


Figure 2.1: Viewing inventory across the operating systems

4. You will now view the complete list of systems, that are using each version across the operating systems.
5. If the right-arrow button is clicked with the *All* option chosen from the **Operating System** list, then, this page will provide the version details of all hosts with names that embed the specified search string, regardless of the operating system in use.

To view the host and version details specific to a operating system do the following:

1. Select an OS of your choice from the **Operating system** list box as depicted in Figure 2.2.
2. Then click the **SUBMIT** button.

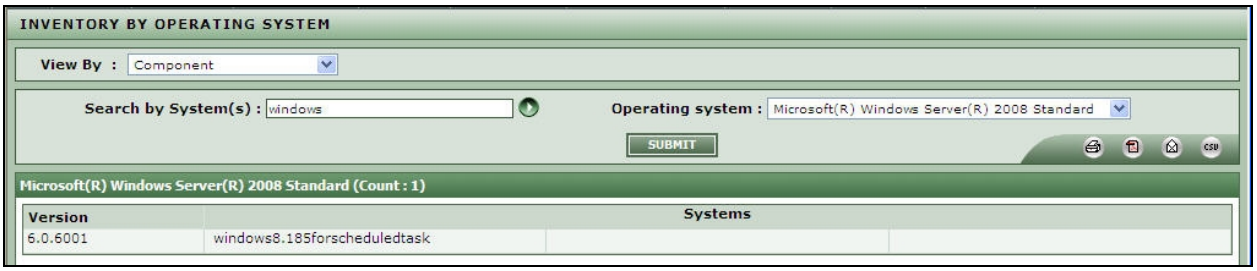


Figure 2.2: Viewing inventory for a specific operating system

3. If the right-arrow button is clicked with a particular operating system chosen from the **Operating System** list, then, this page will provide the version details of only those systems that fulfill both the filter criteria - i.e., systems running the chosen operating system that have names containing the specified search string.

   Note:

   The pie chart will be available, only if the **ALL** option is selected from the **Operating system** list box.

4. Clicking on a particular system will take you to the **INVENTORY BY SYSTEM** page, which provides the basic configuration of that system and the applications managed on it.

2.1.2 Inventory by System

Improper system configuration can very often adversely impact system performance, thereby causing significant delays in the operations of the applications executing on the system. Therefore, while troubleshooting an application slowdown, it would be good practice to begin by checking the basic configuration of the system, on which that application is functioning.

In case of large IT data centers that may be plagued by multiple performance issues, auditing each affected system manually to determine its configuration can only delay the problem investigation process. For efficiently troubleshooting issues, you need quick and easy access to the basic configuration details of a particular system, or all systems in your target environment.

To assist in this, the **CONFIGURATION MANAGEMENT** console provides an easy-to-use **INVENTORY BY SYSTEM** page, that enables you to pick a system and quickly view its basic configuration information.

This page can be accessed by the following menu sequence, *Inventory->View->By System*

To view the basic configuration of a system, do the following:

1. Select a specific system from the **System** list box as shown in Figure 2.3. To view the configuration of all the systems in the target environment, select the **All** option from this list box.
2. Then, click the **SUBMIT** button.
3. To run a quick search across the systems to locate a particular system, use the **Search by System(s)** option in this page. Specify the whole/part of the system name to search for in the **Search by System(s)** text box and click the right-arrow button next to it. All systems with names that embed the specified search string, will then populate the **System** list box. From this list box, select the system of interest to you, and click the **SUBMIT** button.

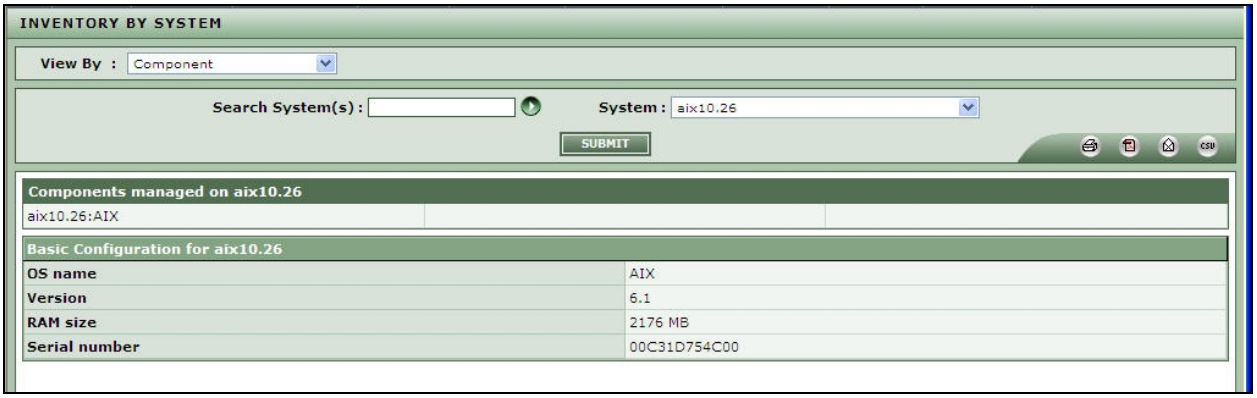
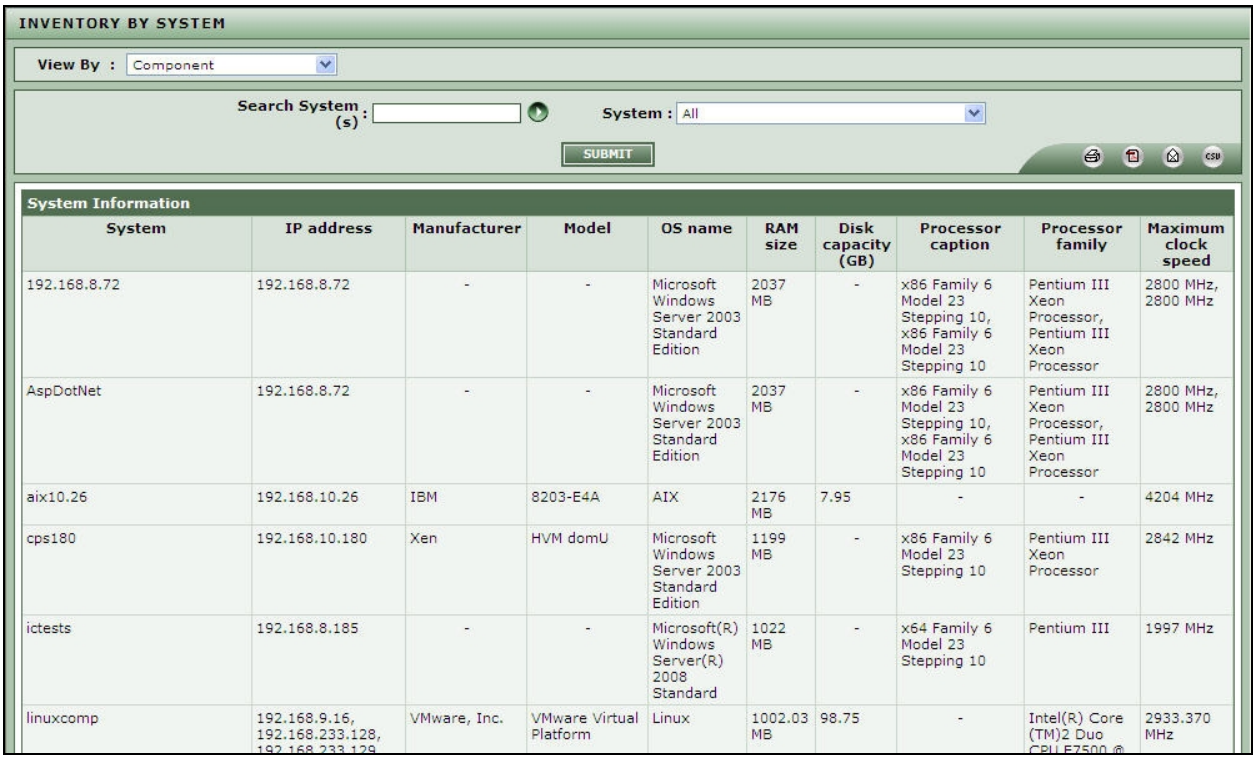


Figure 2.3: Viewing Inventory for a specific system

4. This will first bring up a **Components managed on {System}** section, that lists all the hosts/applications that have been managed in the eG Enterprise system, using the nick name of the chosen system. This will be followed by a **Basic Configuration for {System}** section, where the basic configuration details of the selected system will be displayed - such details will typically include the Operating system name, Version, RAM size, and Serial number. In the event of a system slowdown, you can use this page to easily figure out whether the issue is due to say, inadequate RAM allocation to the system. This page will also indicate which applications have been affected by the system-level performance deterioration.
5. More configuration information will be made available in this page, depending upon the operating system of the chosen host - for instance, if the system chosen is running a Windows OS, then the basic configuration details will additionally include the service pack version, registered user, system directory, and Windows directory.

To view the basic configuration of a system, do the following:

1. Select *All* option from the **System** list box as depicted in Figure 2.4.
2. Then, click the **SUBMIT** button.



System	IP address	Manufacturer	Model	OS name	RAM size	Disk capacity (GB)	Processor caption	Processor family	Maximum clock speed
192.168.8.72	192.168.8.72	-	-	Microsoft Windows Server 2003 Standard Edition	2037 MB	-	x86 Family 6 Model 23 Stepping 10, x86 Family 6 Model 23 Stepping 10	Pentium III Xeon Processor, Pentium III Xeon Processor	2800 MHz, 2800 MHz
AspDotNet	192.168.8.72	-	-	Microsoft Windows Server 2003 Standard Edition	2037 MB	-	x86 Family 6 Model 23 Stepping 10, x86 Family 6 Model 23 Stepping 10	Pentium III Xeon Processor, Pentium III Xeon Processor	2800 MHz, 2800 MHz
aix10.26	192.168.10.26	IBM	8203-E4A	AIX	2176 MB	7.95	-	-	4204 MHz
cps180	192.168.10.180	Xen	HVM domU	Microsoft Windows Server 2003 Standard Edition	1199 MB	-	x86 Family 6 Model 23 Stepping 10	Pentium III Xeon Processor	2842 MHz
ictests	192.168.8.185	-	-	Microsoft(R) Windows Server(R) 2008 Standard	1022 MB	-	x64 Family 6 Model 23 Stepping 10	Pentium III	1997 MHz
linuxcomp	192.168.9.16, 192.168.233.128, 192.168.233.129	VMware, Inc.	VMware Virtual Platform	Linux	1002.03 MB	98.75	-	Intel(R) Core (TM)2 Duo CPU E7500 @	2933.370 MHz

Figure 2.4: Viewing inventory across the systems

3. This will invoke a table, that lists all the systems in the target environment and the configuration information pertaining to each system.

2.1.3 Inventory by Network Devices

Network devices such as routers, switches, network nodes, etc., are common-place in IT infrastructures. As the infrastructure grows in size and complexity, more number of such devices are bound to be introduced. It is therefore a challenge for administrators to keep track of how many devices of what types are currently available in the environment. Moreover, if a device fails or is experiencing performance issues, administrators may want to quickly check the configuration of the problem device to determine whether improper configuration of the device is the source of the problem.

To enable administrators to determine this with minimal effort, the **CONFIGURATION MANAGEMENT** console offers the **Inventory by Network Devices** page.

To use this page, do the following:

1. Follow the *Inventory -> View -> By Network Devices* menu sequence.
2. Figure 2.5 will then appear. By default, Figure 2.5 reveals the details of all managed network

devices in the target environment. Accordingly, **All** is the default selection in the **Component Type** list.

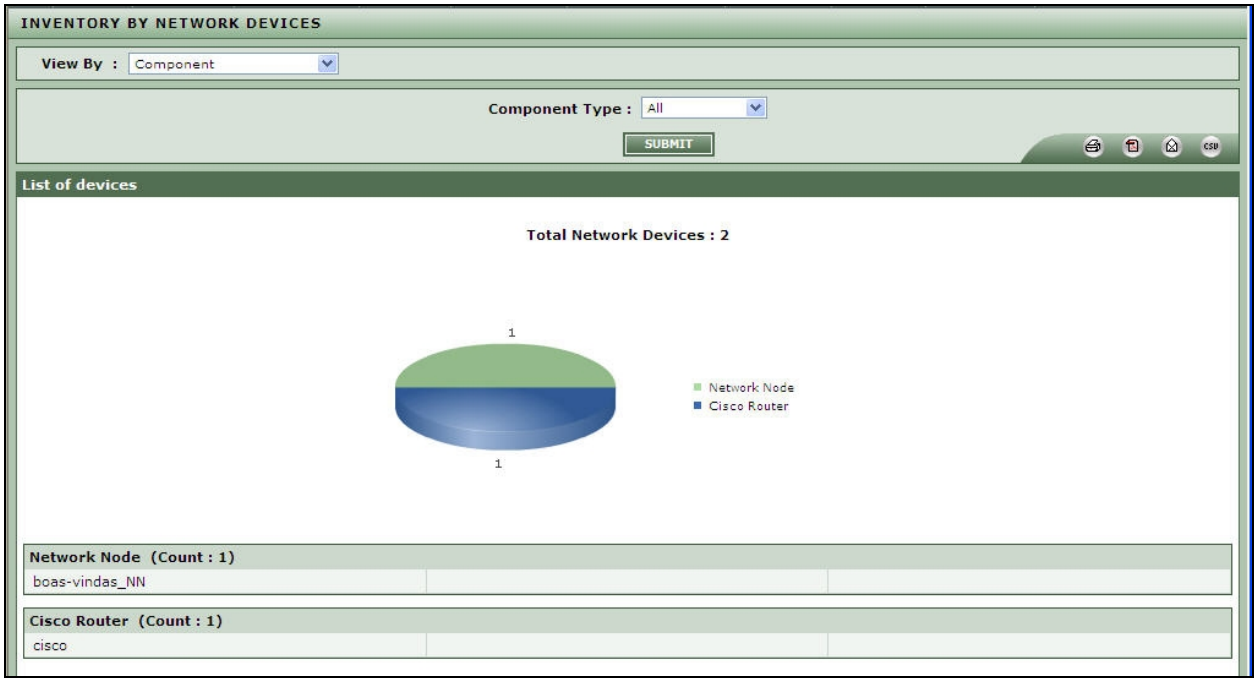
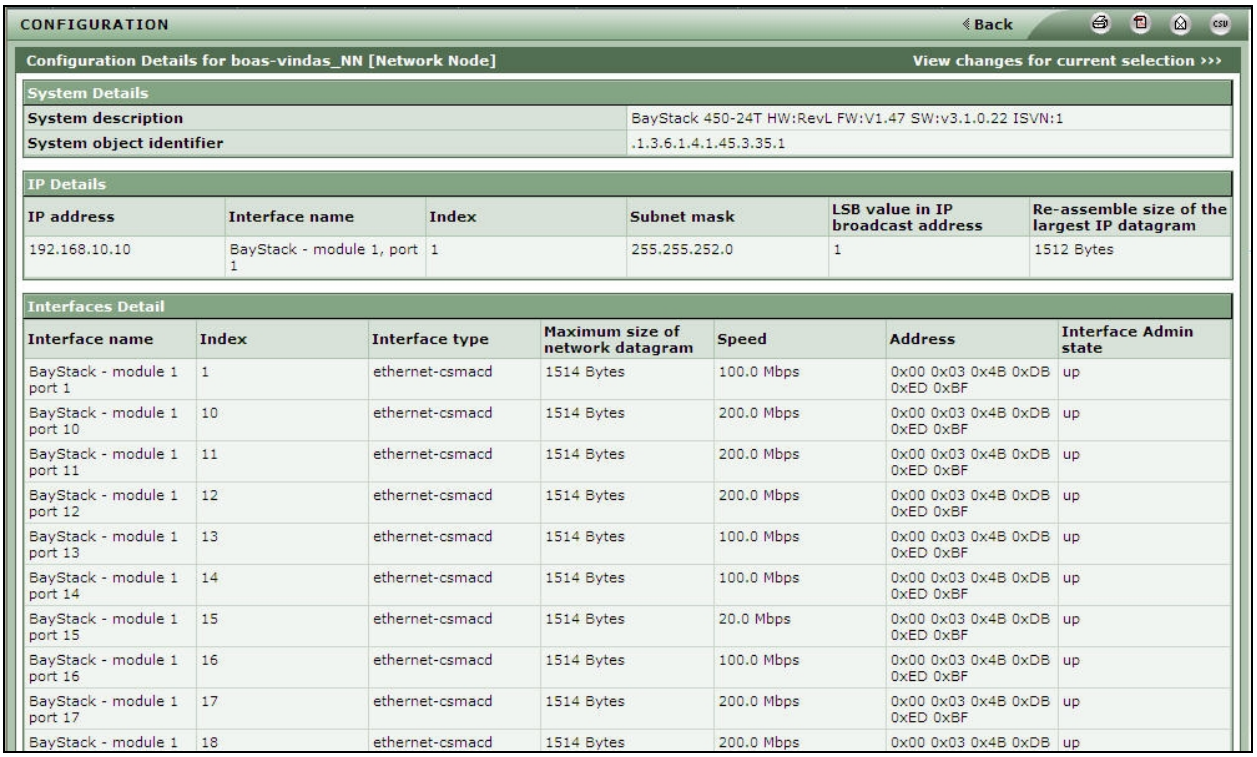


Figure 2.5: The details of all network devices that are in use in the environment

3. If the **Component Type** chosen is **All**, then, Figure 2.5 will provide a pie chart depicting the distribution of network devices on the basis of the device type. Using this pie chart, you can understand, at a glance, the number and nature of network assets that are being maintained by the environment.
4. The pie chart will be followed by multiple sections - one each for every device type - displaying the list of managed devices of that type. Clicking on a device name here will lead you to Figure 2.6, where the basic configuration of that device will be revealed. If a device suddenly behaves abnormally, then, this configuration information may aid further prognosis.



CONFIGURATION — Back

Configuration Details for boas-vindas_NN [Network Node] — View changes for current selection >>>

System Details

System description	BayStack 450-24T HW:RevL FW:V1.47 SW:v3.1.0.22 ISVN:1
System object identifier	.1.3.6.1.4.1.45.3.35.1

IP Details

IP address	Interface name	Index	Subnet mask	LSB value in IP broadcast address	Re-assemble size of the largest IP datagram
192.168.10.10	BayStack - module 1, port 1	1	255.255.252.0	1	1512 Bytes

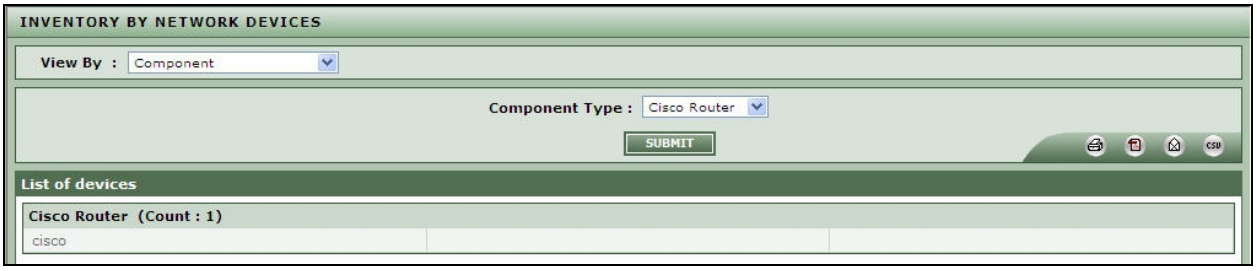
Interfaces Detail

Interface name	Index	Interface type	Maximum size of network datagram	Speed	Address	Interface Admin state
BayStack - module 1 port 1	1	ethernet-csmacd	1514 Bytes	100.0 Mbps	0x00 0x03 0x4B 0xDB 0xED 0xBF	up
BayStack - module 1 port 10	10	ethernet-csmacd	1514 Bytes	200.0 Mbps	0x00 0x03 0x4B 0xDB 0xED 0xBF	up
BayStack - module 1 port 11	11	ethernet-csmacd	1514 Bytes	200.0 Mbps	0x00 0x03 0x4B 0xDB 0xED 0xBF	up
BayStack - module 1 port 12	12	ethernet-csmacd	1514 Bytes	200.0 Mbps	0x00 0x03 0x4B 0xDB 0xED 0xBF	up
BayStack - module 1 port 13	13	ethernet-csmacd	1514 Bytes	100.0 Mbps	0x00 0x03 0x4B 0xDB 0xED 0xBF	up
BayStack - module 1 port 14	14	ethernet-csmacd	1514 Bytes	100.0 Mbps	0x00 0x03 0x4B 0xDB 0xED 0xBF	up
BayStack - module 1 port 15	15	ethernet-csmacd	1514 Bytes	20.0 Mbps	0x00 0x03 0x4B 0xDB 0xED 0xBF	up
BayStack - module 1 port 16	16	ethernet-csmacd	1514 Bytes	100.0 Mbps	0x00 0x03 0x4B 0xDB 0xED 0xBF	up
BayStack - module 1 port 17	17	ethernet-csmacd	1514 Bytes	200.0 Mbps	0x00 0x03 0x4B 0xDB 0xED 0xBF	up
BayStack - module 1	18	ethernet-csmacd	1514 Bytes	200.0 Mbps	0x00 0x03 0x4B 0xDB	up

Figure 2.6: Viewing the configuration of a network device

5. You can return to the **INVENTORY BY NETWORK DEVICES** page by clicking on the **Back** button at the right, top corner of Figure 2.6.

6. Once back in the **INVENTORY BY NETWORK DEVICES** page, you can pick a particular device type from the **Component Type** list and click the **SUBMIT** button to view the count of and the names of devices of that type alone (see Figure 2.7).



INVENTORY BY NETWORK DEVICES

View By : Component

Component Type : Cisco Router

SUBMIT

List of devices

Cisco Router (Count : 1)

cisco

Figure 2.7: Viewing the details of virtual hosts operating on a particular virtual platform

7. Here again, you can click on a device to view its configuration.

2.1.4 Inventory by Virtual Platforms

In large virtualized infrastructures, multiple virtualization platforms (eg., Citrix XenServer, VMware vSphere, etc.) often co-exist. As a routine practice, administrators of these environments may have to periodically take stock of the number and names of virtual hosts that are available in the environment and the virtualized platform on which they operate. Moreover, if a virtual host under-performs, they may need instant access to the configuration information pertaining to that host to identify inconsistencies (if any) in configuration, which could have caused the host to suffer performance anomalies.

To enable administrators to easily maintain the inventory of virtual platforms and hosts and to provide them with on-demand access to the configuration of specific hosts, the **CONFIGURATION MANAGEMENT** console offers the **Inventory by Virtual Platforms** page.

To use this page, do the following:

1. Follow the *Inventory -> View -> By Virtual Platforms* menu sequence.
2. Figure 2.8 will then appear. Figure 2.8 reveals the details of all virtualization platforms that are in use in the target environment. Accordingly, *All* is the default selection in the **Component Type** list.

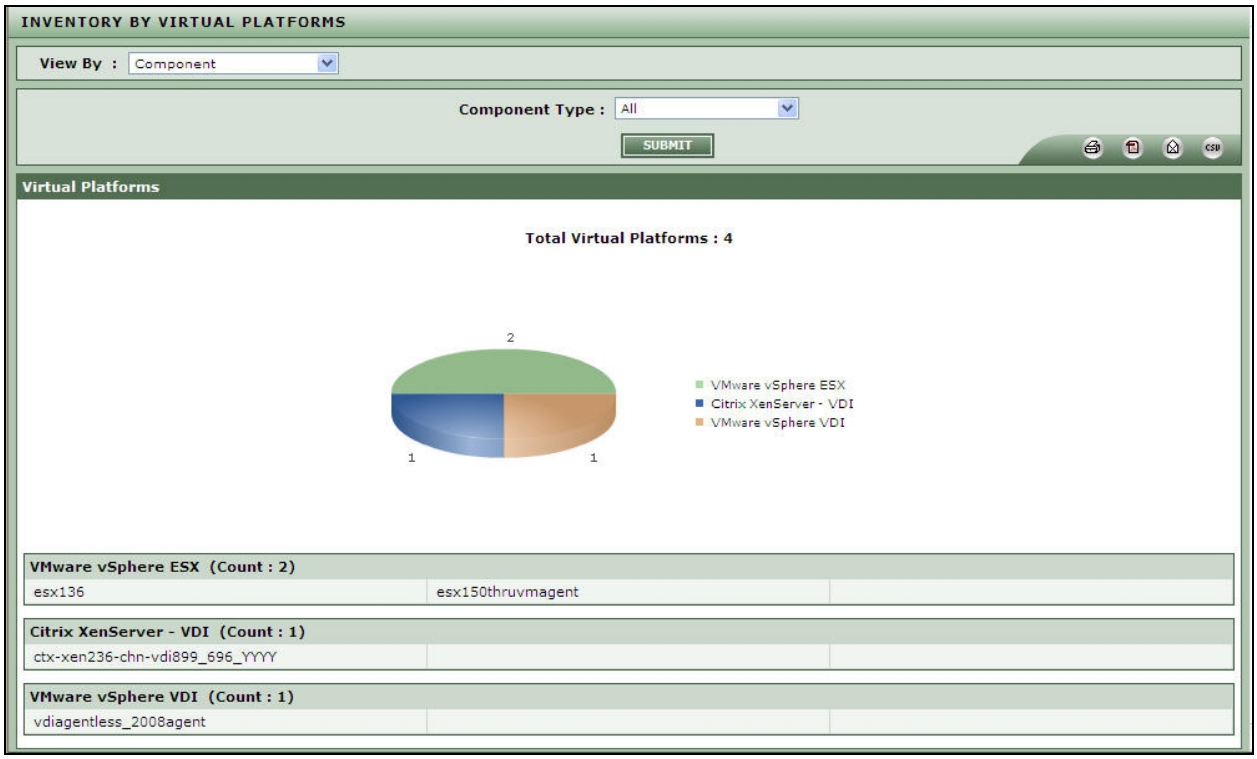
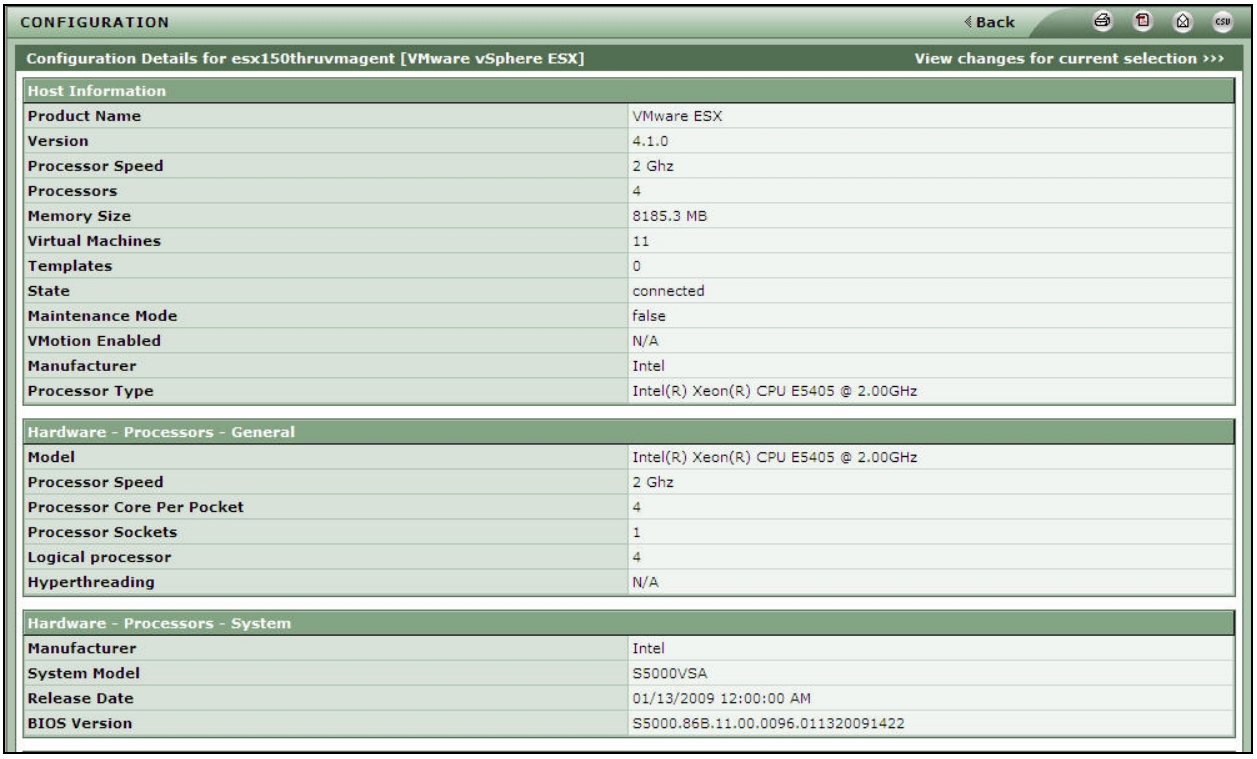


Figure 2.8: The details of all virtual platforms that are in use in the environment

3. If the **Component Type** chosen is *All*, then, Figure 2.8 will provide a pie chart depicting how many virtual hosts of each virtual platform are being currently managed.

4. The pie chart will be followed by multiple sections - one each for every virtual platform - displaying the list of virtual hosts operating on that platform. Clicking on a virtual host will lead you to Figure 2.9, where the basic configuration information pertaining to that host will be revealed. If a virtual host suddenly behaves abnormally, then, you can view the configuration information to figure out whether the host has been sized right, whether too many VMs have been spawned on that host, and so on.



Host Information	
Product Name	VMware ESX
Version	4.1.0
Processor Speed	2 Ghz
Processors	4
Memory Size	8185.3 MB
Virtual Machines	11
Templates	0
State	connected
Maintenance Mode	false
VMotion Enabled	N/A
Manufacturer	Intel
Processor Type	Intel(R) Xeon(R) CPU E5405 @ 2.00GHz

Hardware - Processors - General	
Model	Intel(R) Xeon(R) CPU E5405 @ 2.00GHz
Processor Speed	2 Ghz
Processor Core Per Pocket	4
Processor Sockets	1
Logical processor	4
Hyperthreading	N/A

Hardware - Processors - System	
Manufacturer	Intel
System Model	S5000VSA
Release Date	01/13/2009 12:00:00 AM
BIOS Version	S5000.86B.11.00.0096.011320091422

Figure 2.9: Viewing the configuration of a virtual host

5. You can return to the **INVENTORY BY VIRTUAL PLATFORMS** page by clicking on the **Back** button at the right, top corner of Figure 2.9.

6. Once back in the **INVENTORY BY VIRTUAL PLATFORMS**, you can pick a particular virtual platform from the **Component Type** list and click the **SUBMIT** button to view the count of and the names of virtual hosts that are operating on that virtual platform alone (see Figure 2.10).

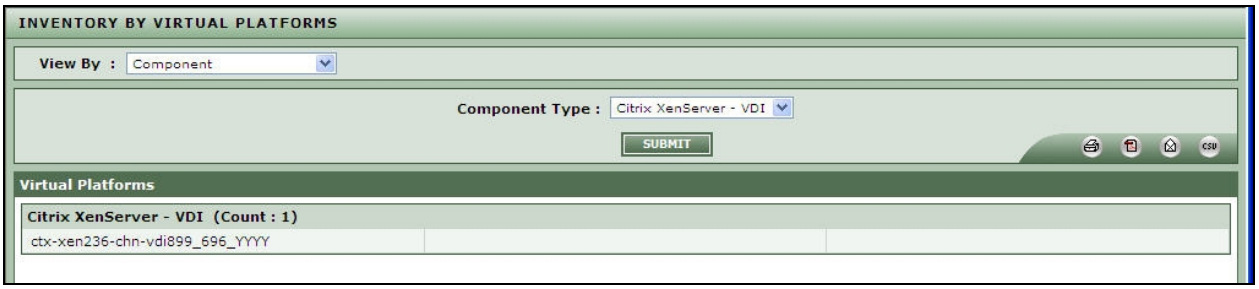


Figure 2.10: Viewing the details of virtual hosts operating on a particular virtual platform

7. Here again, you can click on a virtual host to view its configuration.

2.1.5 Inventory by Servers

By default, the **INVENTORY BY SERVERS** page reveals the distribution of components i.e., servers across the individual component type in the target environment.

This page can be accessed by the following menu sequence, *Inventory->View->By Servers* field.

To view the distribution of components of a chosen component type in your environment, do the following:

1. Select a component type from the **Component Type** list box as depicted in Figure 2.11. If multiple component types are available, then *All* option will be selected by default from this list box.
2. Then click the **SUBMIT** button.

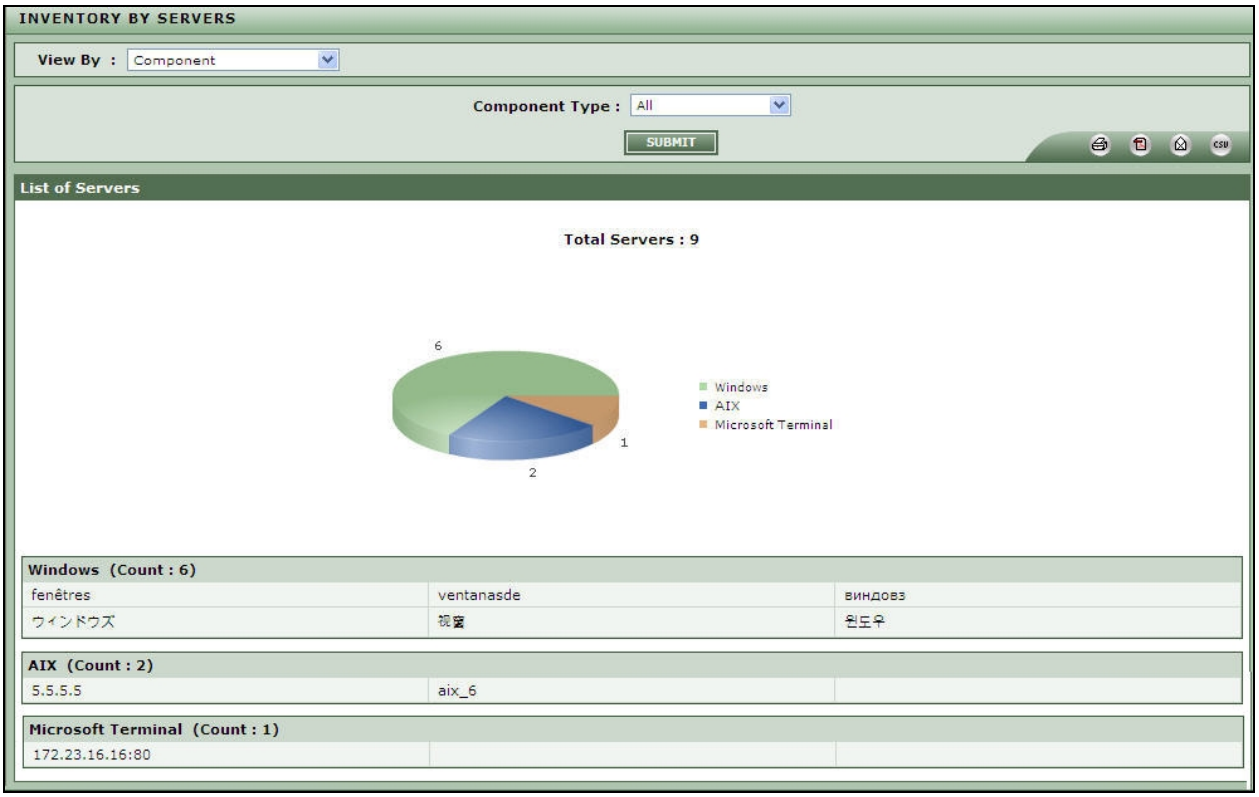


Figure 2.11: Viewing inventory for the servers in the environment

3. Doing so, will provide a table containing the entire list of components with respect to the chosen component type.
4. Clicking on an individual component, will take you to the **CONFIGURATION** page, that provides the basic configuration details of the chosen component.

To view the distribution of components across all the component types, do the following:

1. Select *All* option from the **Component Type** list box as depicted in Figure 2.11.
2. Then click the **SUBMIT** button.

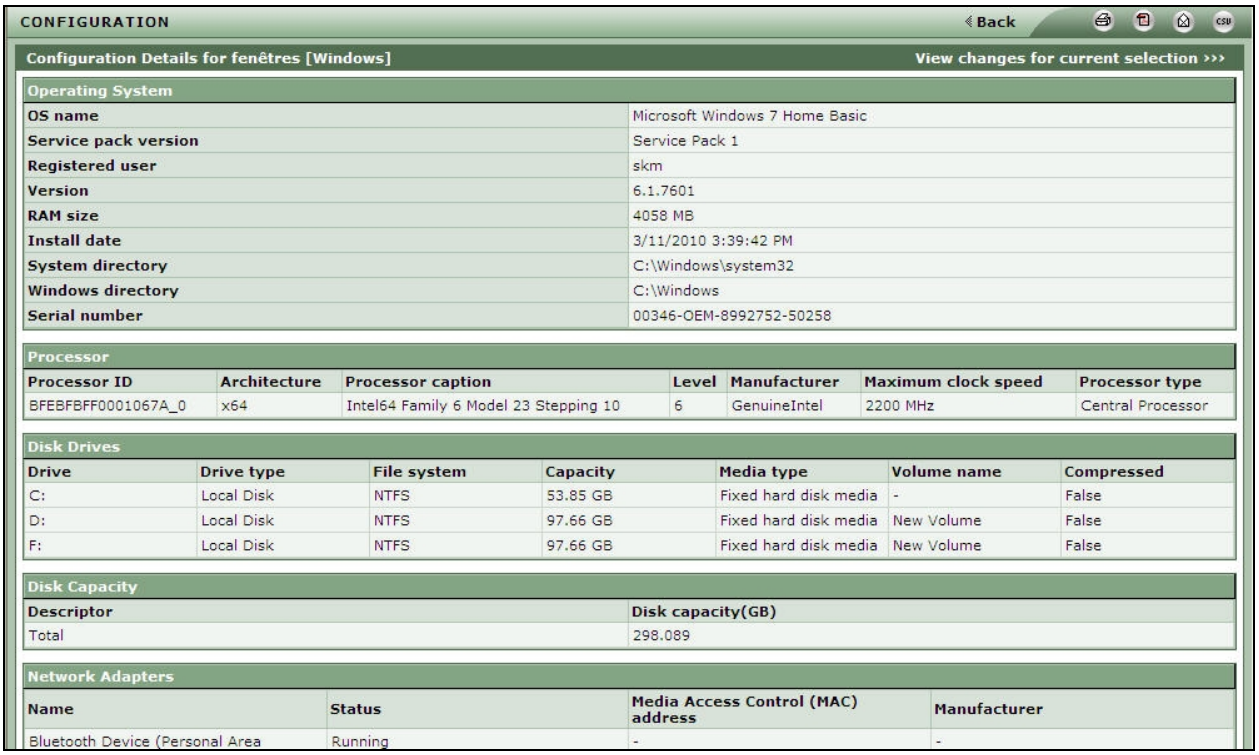


Figure 2.12: Viewing the configuration for a chosen component

3. This will provide a graphical pie chart illustrating the distribution of the components that are available with each of the component type present in your environment and below the pie chart, tables containing the entire list of components that are available with each of the component type will be listed in individual tables.

4. Clicking on an individual component, will take you to the **CONFIGURATION** page as shown in Figure 2.12, that provides the basic configuration details of the chosen component.

   Note:

   A graphical pie chart will be displayed, only if *All* option is selected from the **Component Type** list box.

   The component types listed in the **Component Type** list box of Figure 2.11 is exclusive of the component types that belong to the **Network Devices** and **Virtual Platforms** categories.

2.2 Availability/Unavailability

2.2.1 Determining the availability/unavailability of a Software

In most IT infrastructures, some software will be marked as critical/essential for security/business reasons, and might have to be deployed on almost all the systems in the infrastructure. For instance,

in highly secure environments, anti-virus software might have to be present on all target systems to protect the data/hardware from malicious virus attacks. As the size of the infrastructure keeps increasing, it often becomes difficult for administrators to track the availability of such software on the new additions to the target environment. The page eases the pain of such administrators, by serving as a single, central interface using which they can quickly verify the availability of critical software across the environment.

This page can be accessed by the following menu sequence, *Inventory->Availability/Unavailability->Software*.

Note:

This page will also appear, when a software displayed in the **Top-N Installed Software** section of the **Home** page is clicked; in such a case, this page will indicate the **availability/unavailability of the software** that was clicked on.

To view the availability and unavailability of a specific software, do the following:

1. Select an operating system (OS) from the **Operating System** list as depicted in Figure 2.13. To set the desired OS to be displayed by default in this page use the menu sequence Settings -> Display and provide the required OS name in the **Operating System for Software/Service/Hotfix availability page**.
2. Now, select the desired software in the **Software Name**.
3. Upon selecting specific software from the **Software Name** list box, **All** option will be selected in the **Show** field. (see Figure 2.13)
4. Finally, click on the **SUBMIT** button.

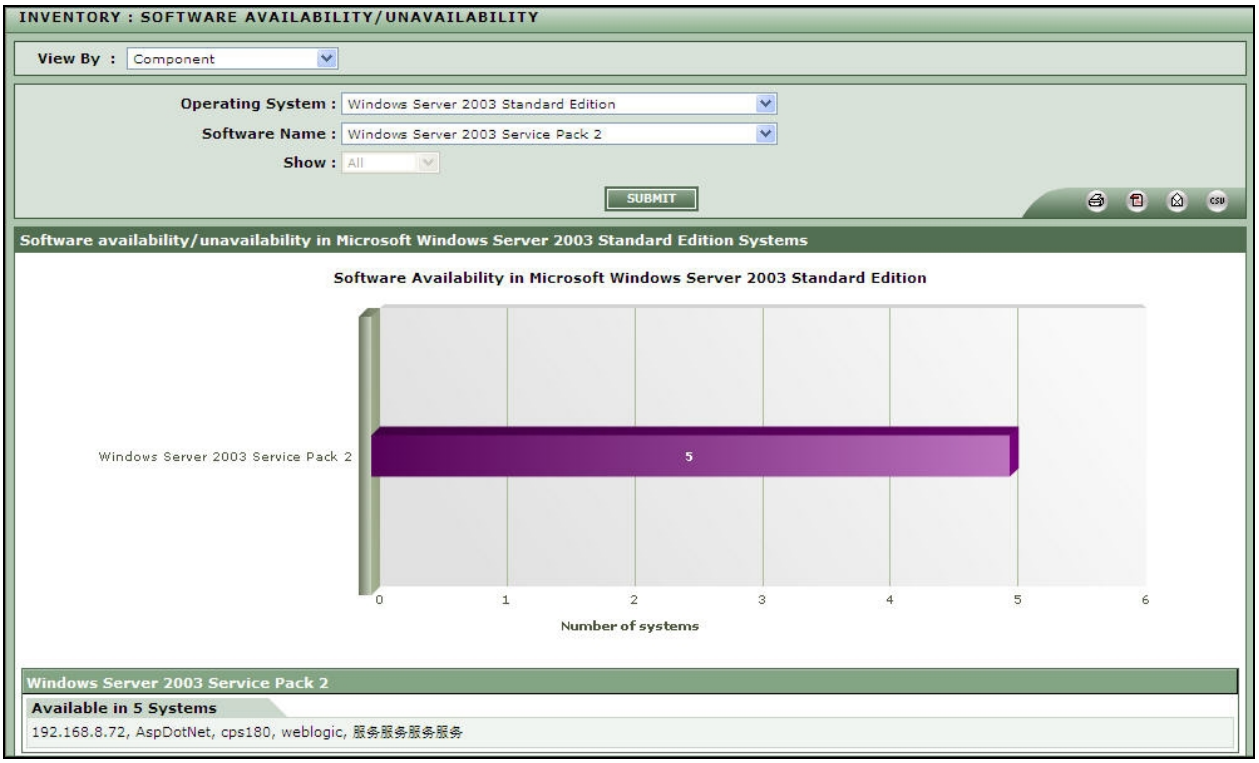


Figure 2.13: Viewing inventory for a specific software

5. Doing so will display a bar graph depicting the availability of the selected software, in the systems that have the chosen OS installed.
6. Below this graph, you will also see a table providing the entire list of systems, on which the selected software is available/unavailable as depicted in Figure 2.13.
7. Clicking on the specified system name will take you to the **INVENTORY BY SYSTEM** page, which provides the basic configuration of that chosen system.

To view the list of all the software installed on all the systems executing on a specific OS do the following:

1. Select an OS from the **Operating System** list as depicted in Figure 2.14.
2. Next select the **All** option from **Software Name,** and select the **All** option from the **Show** list. By default, the *All* option will be selected from the **Service Name** and from the **Show** lists.
3. Finally, click on the **SUBMIT** button.

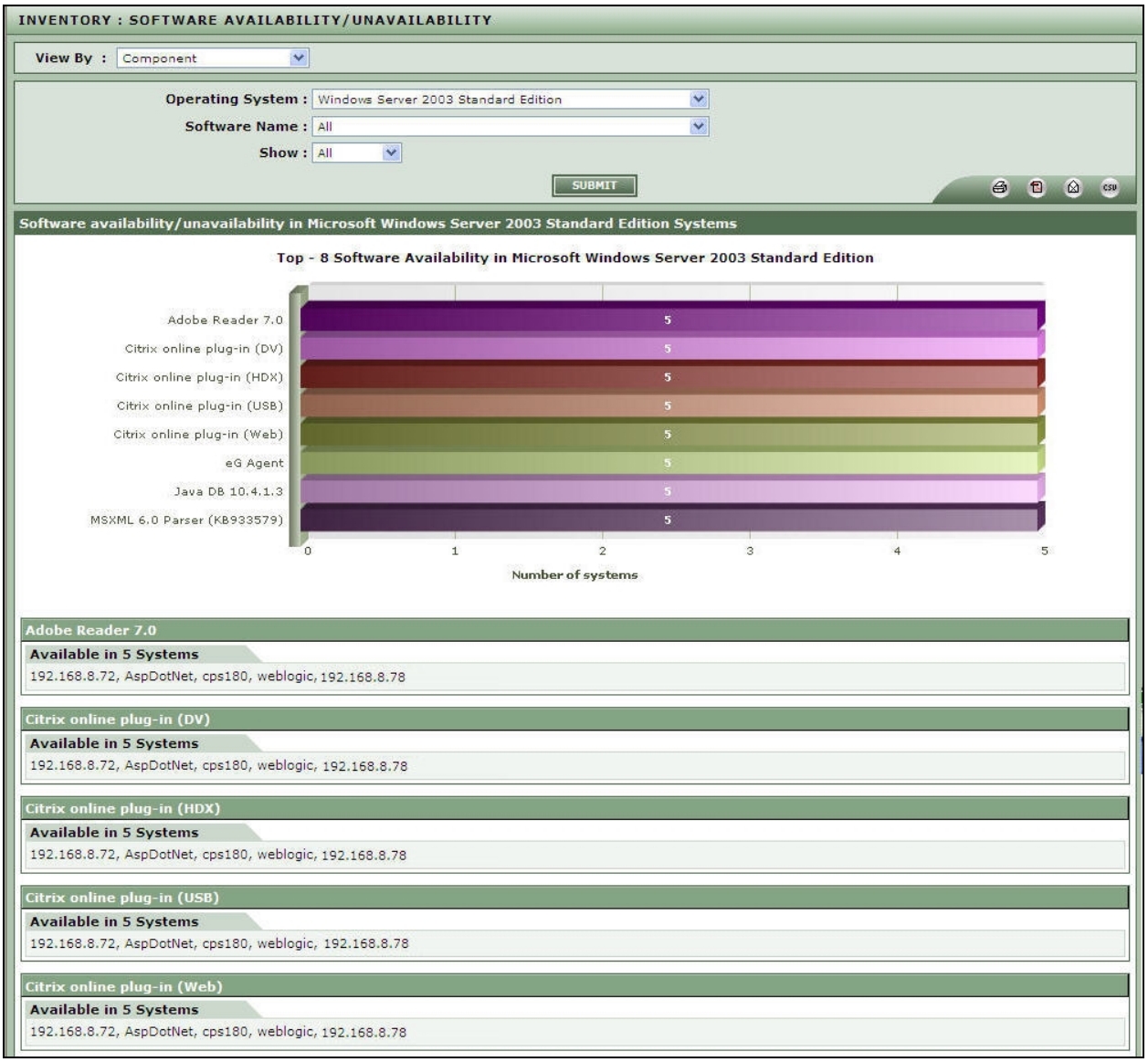


Figure 2.14: Viewing inventory across the softwares

4. Doing so will display a bar graph, depicting the availability of all the software installed on a specified OS. Below this graph you will also see a table providing the entire list of systems on which each software is currently available/unavailable as depicted in Figure 2.14.
5. Clicking on a system name will take you to the **INVENTORY BY SYSTEM** page, which provides the basic configuration of that chosen system.
6. Click on the to print this page and to save this report in PDF format click on this and to mail this page to specified recipient click on .

2.2.2 Determining the availability/unavailability of a hotfix/patch

In large environments, administrators often have to deploy a hotfix/patch on one/more hosts running a particular operating system, in order to ensure peak performance of those hosts - for instance, whenever Microsoft releases a new service pack for its Windows OS, the same might have to be applied on all Windows hosts in an IT infrastructure. During patch application, administrators might want to track the progress of the work, and also occasionally estimate the time and effort involved in the exercise, by determining, at frequent intervals, the number of hosts on which the patch is yet to be deployed, and which hosts they are. Similarly, subsequent to patch application, administrators would want to verify whether the patch has been successfully deployed on all the target hosts. To enable administrators of large environments to perform this availability check with minimal effort, eG Enterprise provides the **INVENTORY : HOTFIX/PATCH AVAILABILITY/UNAVAILABILITY** page.

This page can be accessed by the following menu sequence, *Inventory->Availability/Unavailability->Hotfix/Patch*.

Note:
This page will also appear, when a hotfix/patch displayed in the **Top-N Installed Hotfixes** section of the **Home** page is clicked; in such a case, this page will indicate the **availability/unavailability of the hotfix/patch** that was clicked on.

To view the availability and unavailability of a specific hotfix, do the following:

1. Select an operating system(OS) from the **Operating System** list. By default, all the discovered operating systems will populate this list, and will be sorted in the ascending order of the OS names; the first OS in the sorted list will by default be chosen from this drop-down list. To override this default setting, use the menu sequence *Settings->Display*, select an OS of your choice from the **Operating System for Software/Service/Hotfix availability page** list, and click the **UPDATE** button therein.
2. Next, select the desired hotfix from the **Hotfix/Patch Name** as shown in Figure 2.15. By default, the **All** option is chosen from this list, indicating that the page reveals the availability of all hotfixes/patches across the environment, by default.
3. If the **All** option is chosen from the **Hotfix/Patch Name**, then, you would be prompted to pick an option from the **Show** list. By default, the **All** option is chosen from the **Show** list as well. This indicates that, by default, this page will display the systems on which all the hotfixes/patches have been deployed. To view the systems on which only the top hotfixes/patches (in terms of number of installations) have been deployed, pick a 'Top-N' option from the **Show** list.

4. Finally click on the **SUBMIT** button.

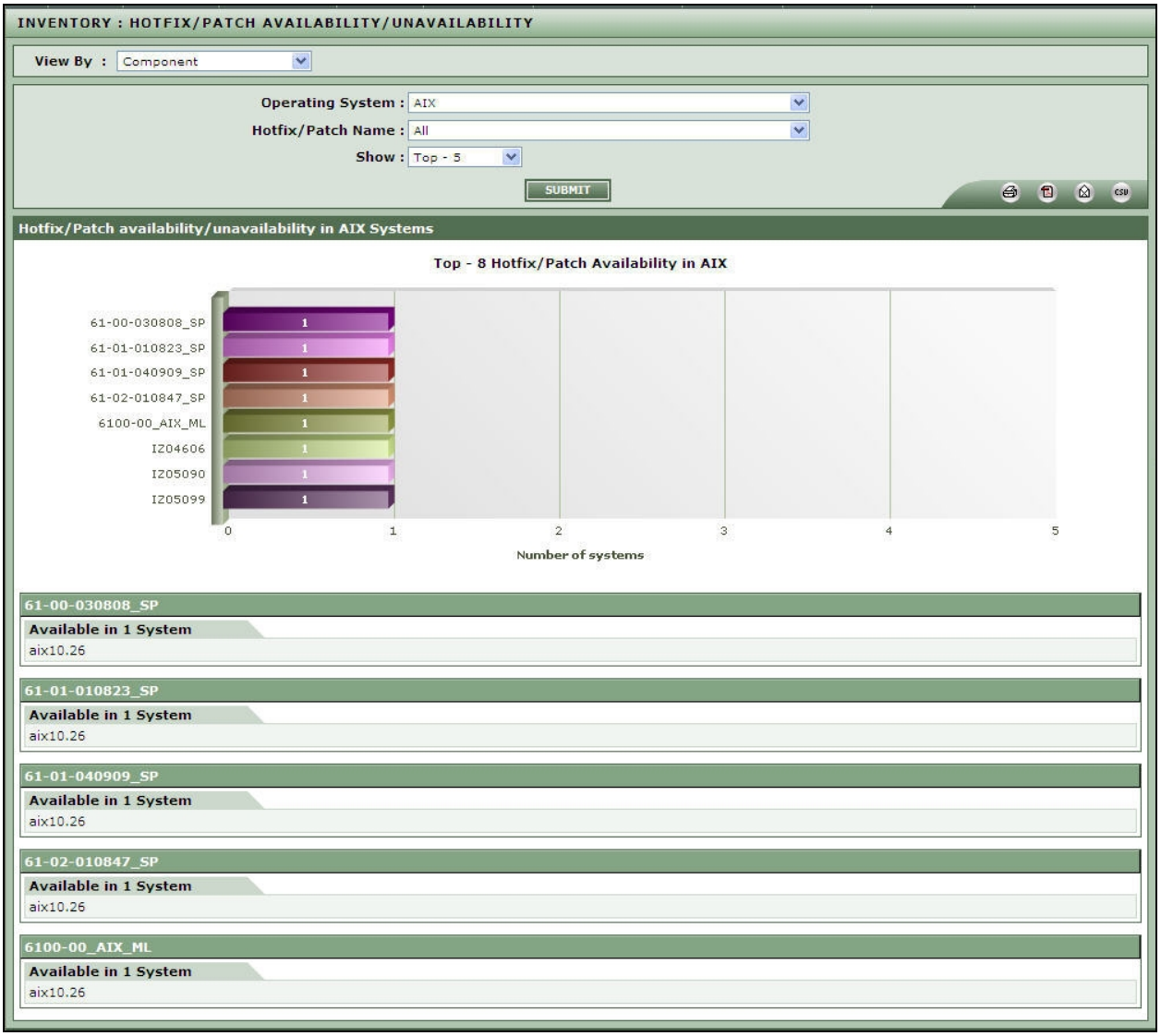


Figure 2.15: Viewing inventory across the hotfixes

5. Doing so will display a bar graph depicting the number of systems running the chosen OS, on which the selected hotfix is currently available. If the *All* option had been chosen from the **Hotfix/Patch Name** list, then a 'Top-N' bar graph will be displayed here instead, indicating the number of systems on which each of the top hotfixes (in terms of number of installations of the hotfix) have been deployed (see Figure 2.15).

   Note:

The 'N' in the 'Top- N' bar graph is configurable. For this purpose, first, edit the **eg_ configtests.ini** file in the **{EG_INSTALL_DIR}\manager\config** directory. In the **[MISC_ ARGS]** section of the file, provide a number of your choice against the **TopNAvailabilityInGraph** parameter. For instance, if the **TopNAvailabilityInGraph** parameter is set to 10, then a **Top-10** graph will appear in this page, revealing the number of systems on which each of the top-10 hotfixes have been deployed.

6. Below this graph, you will also find a table providing the detailed list of systems on which the chosen hotfix(es) is currently available, and also the list of systems on which the hotfix(es) is not available. If a Top-N option is chosen from the **Show** list, then this table will provide the system details for only the top-N hotfixes/patches. For example, if the **Show** list is set to **Top-10**, then this table will display the names of the systems on which each of the top-10 hotfixes/patches are currently available and/or unavailable. Clicking on a system name in this list will take you to the **INVENTORY BY SYSTEM** page, which provides the basic configuration of the chosen system.

2.3 System Distribution

2.3.1 Distribution of Systems by hard disk capacity

Prior to increasing the hard disk capacity of a few/more systems in their environment, administrators need to know which are those systems that require more hard disk space. For instance, if administrators want to reconfigure systems with 1 GB hard disk with a 2 GB hard disk, then, the first step towards this is to know which systems in their environment are currently configured with a 1 GB hard disk. In large IT infrastructures, it would take administrators days, even weeks, to manually identify the target systems. Using this page however, this otherwise cumbersome procedure, is made easy.

This page provides the complete list of systems, that have been configured with hard disk space in the given range.

To access this page, use the following menu sequence: *Inventory->System Distribution->By Hard Disk Capacity*.

To view the disk space configuration of systems using this page, do the following:

1. By default, the **Between** option is chosen from the **Hard Disk Capacity** list box as depicted in Figure 2.16. Similarly, from the adjoining list boxes, the values 0 GB and 300 GB are by default chosen - this indicates that the page will, by default, search for those systems with a disk space configuration in the range 0 GB - 300 GB. If required, you can specify a different capacity range by selecting the desired options from these list boxes.

2. Besides the **Between** option, you can pick any of the following options from the **Hard Disk capacity** list:

   - **Less Than**: Select this option and pick a disk capacity from the list box that appears alongside, to view the list of systems that have been configured with hard disk capacity that is less than the chosen value.
   - **Less Than Or Equal To**: Select this option and pick a disk capacity from the list box that appears alongside, to view the list of systems with disk space configuration that is less than or equal to the chosen value.
   - **Greater Than**: Select this option and pick a disk capacity from the list box that appears alongside, to view the list of systems with a total disk capacity that is greater than the chosen value.
   - **Greater Than Or Equal To**: Select this option and pick a value from the list box that appears alongside, to view the list of systems with a total disk capacity that is greater than or equal to the chosen value.

     Note:
     You can configure the disk capacity values that need to populate the list box(es), that appears next to the **Hard Disk Capacity** list. To achieve this, do the following:

     - Edit the **eg_ configuration.ini** file in the **{EG_ INSTALL_ DIR}\manager\config** directory.
     - In the **[MISC_ARGS]** section of the file, you can provide a comma-separated list of RAM sizes in MB against the **MemorySizeinMB** parameter. For instance, your specification can be: *MemorySizeinMB=0,256,512* . Similarly, you can use the parameter **MemorySizeinGB** to provide a comma-separated list of RAM sizes in GB. For instance, your specification can be: *MemorySizeinGB=1,2,4,6,8,16,32,64.*
     - Finally, save the file.

3. Then, click the **SUBMIT** button. (see Figure 2.16).

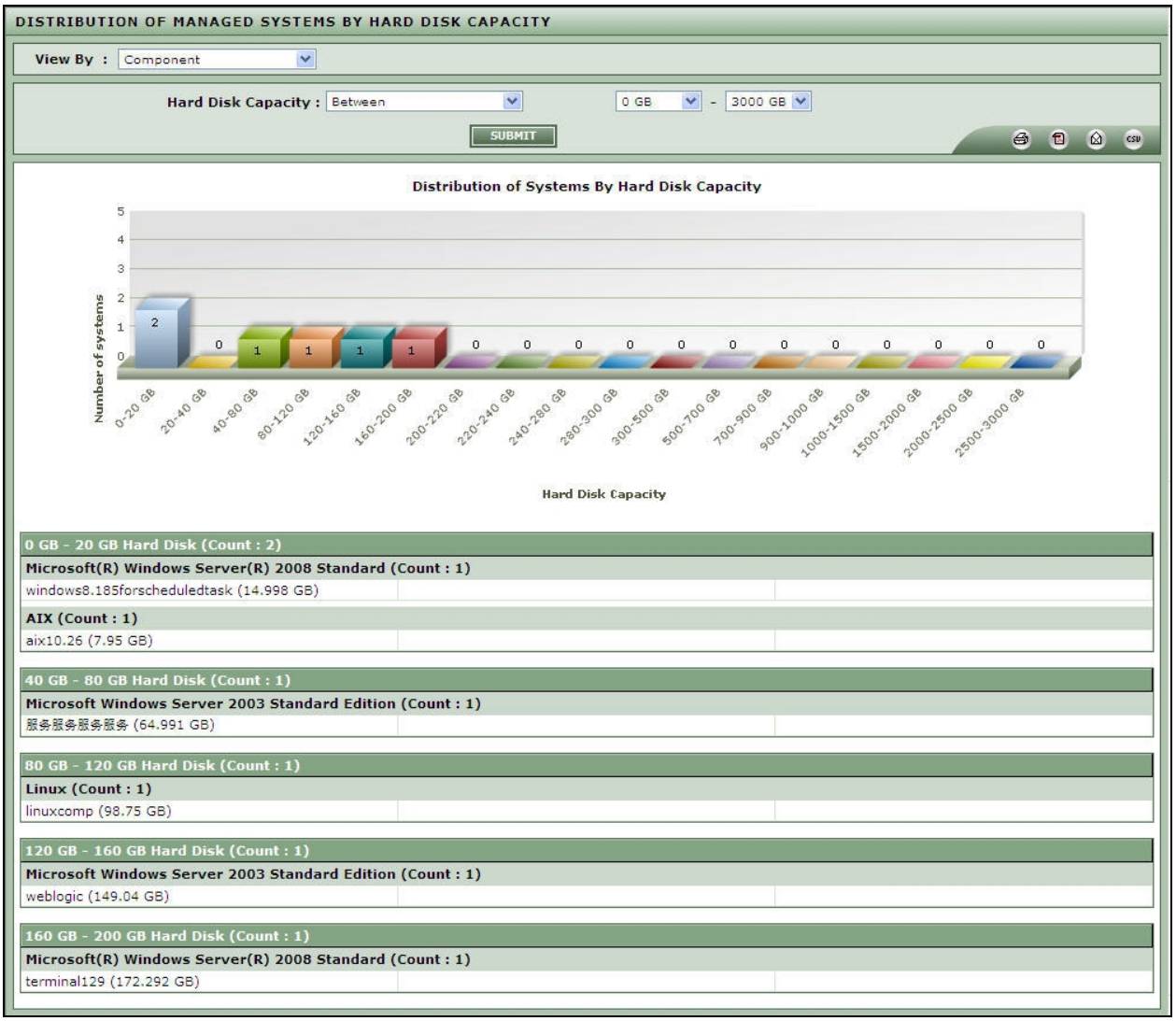


Figure 2.16: Distribution of systems by hard disk capacity

4. As a result, the report will first provide a distribution bar graph. This graph depicts the distribution of systems on the basis of their disk capacity. Each bar in this graph, represents the number of systems with disk capacity that falls within a sub-range in the specified range. For example, for the default disk capacity range of 0 GB to 300 GB, the bar graph will reveal the count of systems with disk capacity between 0 - 20GB, 20 - 40GB, 40 - 60GB, 60 - 80GB, 80 - 120GB, 120 - 160GB, 160 - 200GB, 200 - 220GB, 220 - 240GB, 240 - 280GB, and 280 - 300GB. While planning a hard disk upgrade, you can use this graph to quickly figure out the number of systems with a low disk capacity; using this system count you can easily compute the workload involved and estimate the time required to complete the upgrade.

5. In the table below the bar graph, you will find the complete list of systems with disk capacity that falls within each sub-range of the specified size range. This system list will typically be grouped by operating system.
6. If you had chosen any option other than the **Between** option, then the distribution bar graph will not appear. Instead, only the list of systems that fulfill the specified disk capacity condition will appear. This system list once again will be grouped by operating system.
7. Clicking on the individual system, will take you to the **INVENTORY BY SYSTEM** page, where you can view the basic configuration details of the chosen system.

2.3.2 Distribution of systems by RAM size

Before installing a new application/software in an IT infrastructure, it is routine for administrators to identify the systems that fulfill the resource (disk space, RAM, CPU, etc.) requirements of the new application so that, the probable hosts for the application can be isolated. In the absence of an automated Configuration Management solution, administrators may have to manually scout the environment for such systems.

Also, while planning a memory upgrade across the environment, administrators might want to know which systems have been configured with inadequate RAM, so that such systems can be marked as candidates for the upgrade. To acquire this knowledge, administrators may have to manually check the RAM allocation to each system in the target environment; the larger the environment, the more cumbersome will be this process.

In order to ease the pain of those administrators who are faced with such challenges, the eG **Configuration Management** console provides the **DISTRIBUTION OF SYSTEMS BY RAM SIZE** page. This page prompts you to provide a RAM size range, and then automatically triggers an environment-wide search for systems with a RAM configuration that falls within the specified range. Once such systems are identified, the names of these systems will be displayed in this page. This way, you can rapidly identify the targets for installing new software and even those systems that require a RAM upgrade.

This page can be accessed by the following menu sequence, *Inventory->System Distribution->By RAM Size* field.

Once you access the page, do the following:

1. By default, the **Between** option is chosen from the **RAM Size** list box as depicted in Figure 2.17. Similarly, from the adjoining list boxes, the values 0 MB and 8 GB are by default chosen - this indicates that the page will, by default, search for those systems with a RAM configuration in the

range 0 MB - 8 GB. If required, you can specify a different size range by selecting the desired options from these list boxes.

2. Besides the **Between** option, you can pick any of the following options from the **RAM Size** list:

   - **Less Than:** Select this option and pick a RAM size from the list box that appears alongside, to view the list of systems with RAM that is less than the chosen size.
   - **Less Than Or Equal To**: Select this option and pick a RAM size from the list box that appears alongside, to view the list of systems with RAM that is less than or equal to the chosen size.
   - **Greater Than**: Select this option and pick a RAM size from the list box that appears alongside, to view the list of systems with RAM that is greater than the chosen size.
   - **Greater Than Or Equal To**: Select this option and pick a RAM size from the list box that appears alongside, to view the list of systems with RAM that is greater than or equal to the chosen size.

   Note:

   You can configure the RAM sizes that need to populate the list box(es), that appears next to the **RAM Size** list. To achieve this, do the following:

   - Edit the **eg_configuration.ini** file in the **{EG_INSTALL_DIR}\manager\config** directory.
   - In the **[MISC_ARGS]** section of the file, you can provide a comma-separated list of RAM sizes in MB against the **MemorySizeinMB** parameter. For instance, your specification can be: *MemorySizeinMB=0,256,512*. Similarly, you can use the parameter *MemorySizeinGB* to provide a comma-separated list of RAM sizes in GB. For instance, your specification can be:

     MemorySizeinGB=1,2,4,6,8,16,32,64.

   - Finally, save the file.
   - Then, click the **SUBMIT** button (see Figure 2.17).

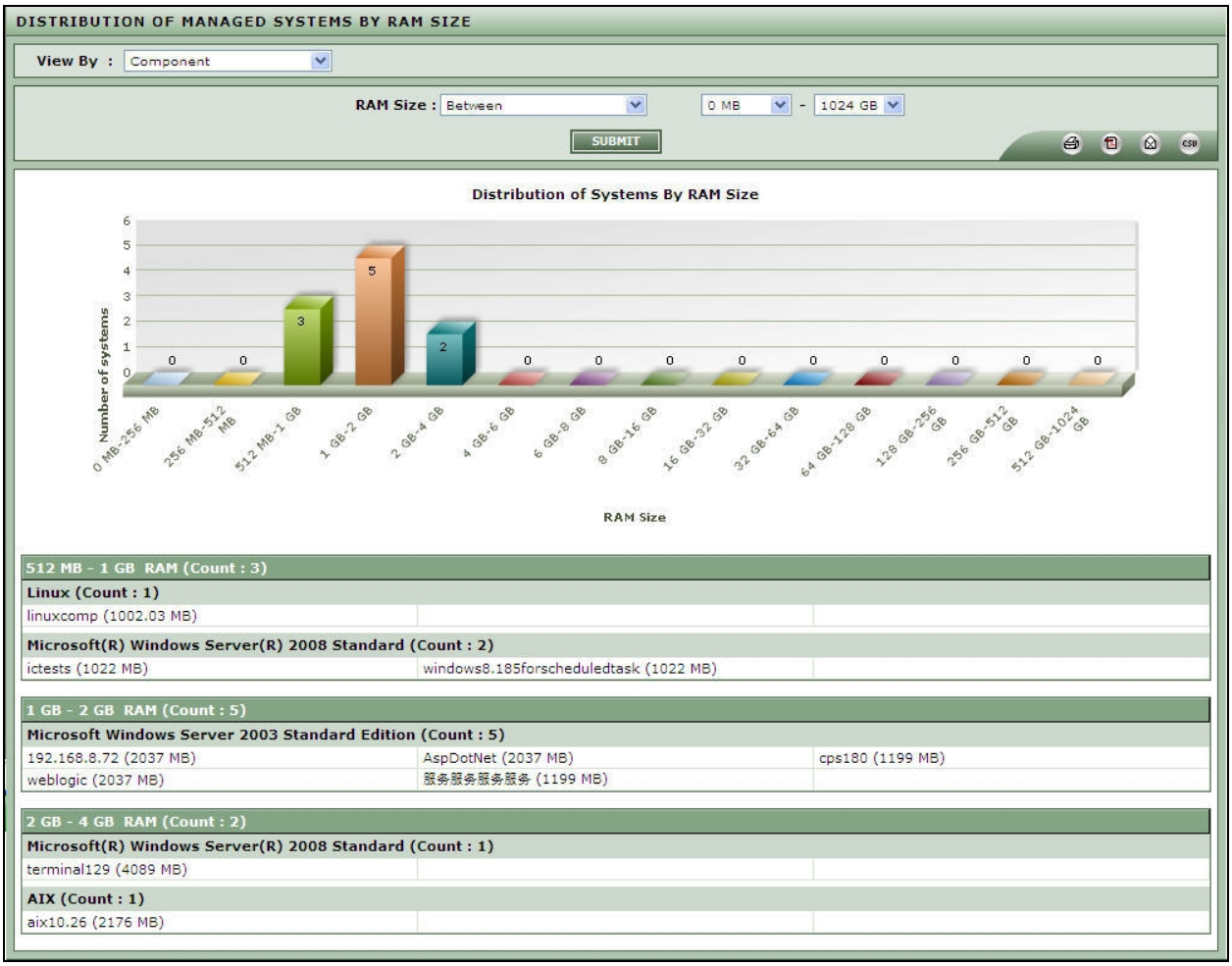


Figure 2.17: Distribution of systems by RAM size

3. As a result, the report will first provide a distribution bar graph. This graph depicts the distribution of systems on the basis of their RAM size. Each bar in this graph represents, the number of systems with RAM size that falls within a sub-range in the specified range. For example, for the default RAM size range of 0 MB to 8 GB, the bar graph will reveal the count of systems with RAM size between 0 MB - 256 MB, 256 MB - 512 MB, 512 MB - 1 GB, 1GB - 2 GB, 2 GB - 4 GB, 4 GB - 6 GB, and 6 GB - 8 GB. While planning a memory upgrade, you can use this graph to quickly figure out the number of systems with RAM that requires upgrading, and can thus compute the workload involved and estimate the time required to complete the upgrade.
4. In the table below the bar graph, you will find the complete list of systems with RAM that falls within each sub-range of the specified size range. This system list will typically be grouped by operating system.

5. If you had chosen any option other than the **Between** option, then the distribution bar graph will not appear. Instead, only the list of systems that fulfill the specified RAM size condition will appear. This system list once again will be grouped by operating system.
6. Clicking on the individual system, will take you to the **INVENTORY BY SYSTEM** page, where you can view the basic configuration details of the chosen system.

2.3.3 Distribution of Systems by Service Pack

In large Windows-based environments, administrators often find it painful to keep track of service packs issued by Microsoft at frequent intervals, and to make sure that the systems in their environment are updated with their latest service packs. Fatal errors in operation can occur on a Windows system, if a required service pack is not applied on it. The first step towards avoiding such adversities, is to identify the systems on which a service pack is yet to be deployed. To enable administrators to perform this identification quickly and easily, the eG Configuration Management console provides the **DISTRIBUTION OF SYSTEMS BY SERVICE PACK** page.

This page can be accessed by the following menu sequence, *Inventory->System Distribution->By Service Pack.*

To use this page to view the systems with/without a specific service pack, do the following:

1. Select an operating system from the **Operating System** list as depicted in Figure 2.18.
2. Then, select the required service pack from the **Service Pack** list. If multiple service packs have been discovered from the environment, then, the **All** option will be selected from the **Service Pack** list, by default as depicted in Figure 2.18 . If only a single service pack exists, then the same will be displayed by default in the **Service Pack** list.
3. Next, click the **SUBMIT** button.

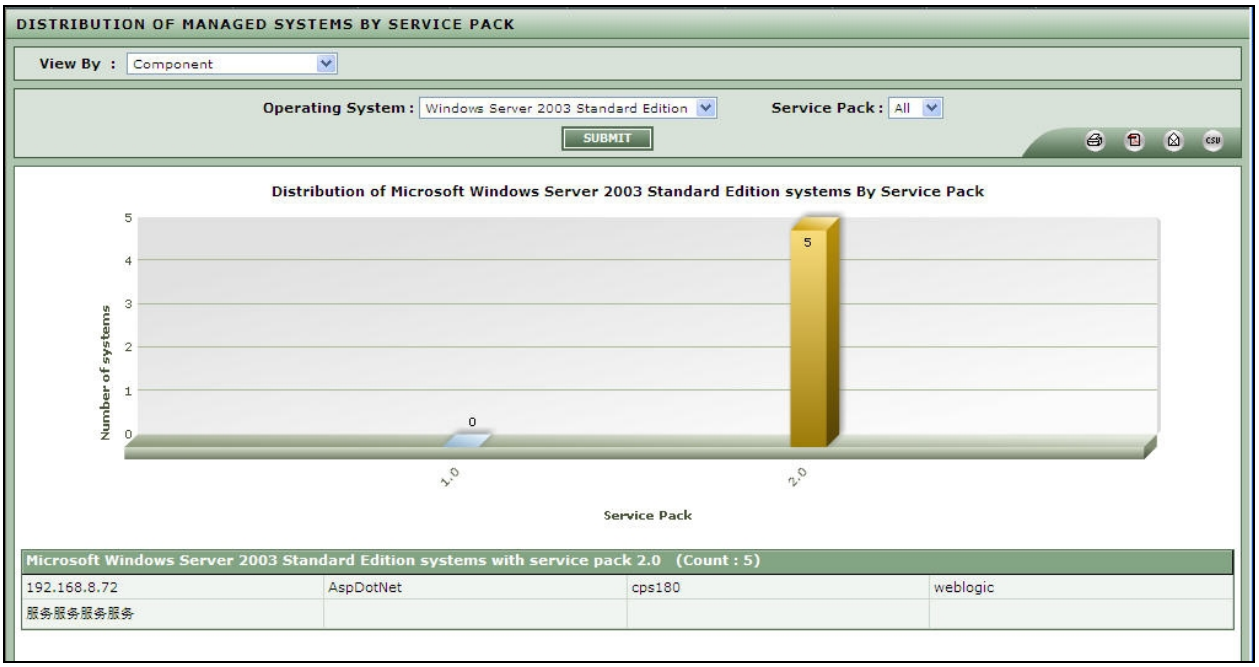


Figure 2.18: Distribution of systems across the service packs

4. This will invoke a distribution bar graph, which reveals the number of systems on which each available service pack has been deployed. Below this bar graph, you will find the complete list of systems on which each service pack pre-exists, and also those systems on which a service pack is yet to be deployed.

To view details pertaining to specific service pack, do the following:

1. Select an operating system from the **Operating System** list as depicted in Figure 2.19.
2. Then, select the required service pack from the **Service Pack** list.
3. Next, click the **SUBMIT** button.

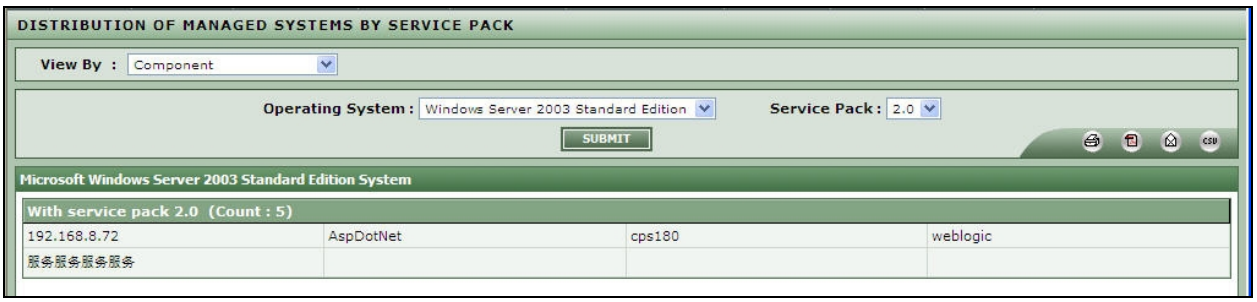


Figure 2.19: Distribution of systems for a specific service pack

4. The resulting report will not include the distribution graph. Instead, you will find the complete list of systems on which the chosen service pack pre-exists, and those on which the same service pack has not been applied yet.
5. Clicking on the individual system will take you to the **INVENTORY BY SYSTEM** page, where you can view the basic configuration details of the system.

2.3.4 Distribution of Systems by Manufacturer

In order to efficiently manage their IT assets, administrators require an accurate inventory of the hardware and software used across the organization. By providing a report that lists the number and names of systems per manufacturer, this page enables administrators to take stock of and maintain their IT inventory, and thus helps further the cause of IT asset management.

This page can be accessed by the following menu sequence: *Inventory->System Distribution->By Manufacturer.*

To view the systems purchased from all the manufacturers, do the following:

1. Select **All** option from the **System Manufacturer** list box as depicted in Figure 2.20. If multiple manufacturers exist, then, the **All** option will be chosen here by default. If only a single manufacturer exists, then that manufacturer's name will be displayed here by default.
2. Then, click the **SUBMIT** button.

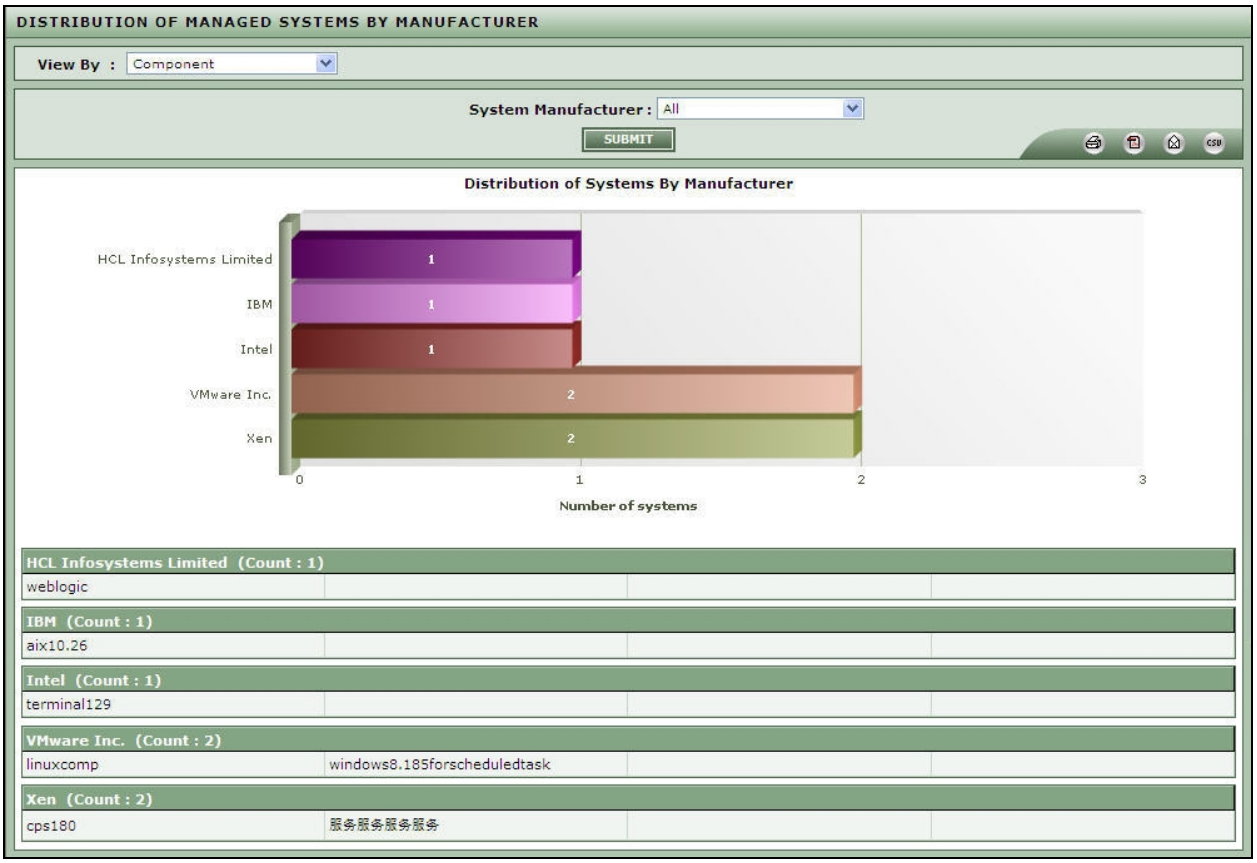


Figure 2.20: Distribution of systems across the manufacturers

3. This will invoke a distribution graph, that depicts how the systems in your environment are distributed on the basis of the manufacturer. Each bar in this graph will indicate the number of systems that have been purchased from a particular manufacturer. Below the graph, you will find the complete list of systems that have been purchased per manufacturer.

To view the systems purchased from a particular manufacturer, do the following:

1. Select a specific manufacturer from the **System Manufacturer** list box (see Figure 2.21).
2. Then, click the **SUBMIT** button.

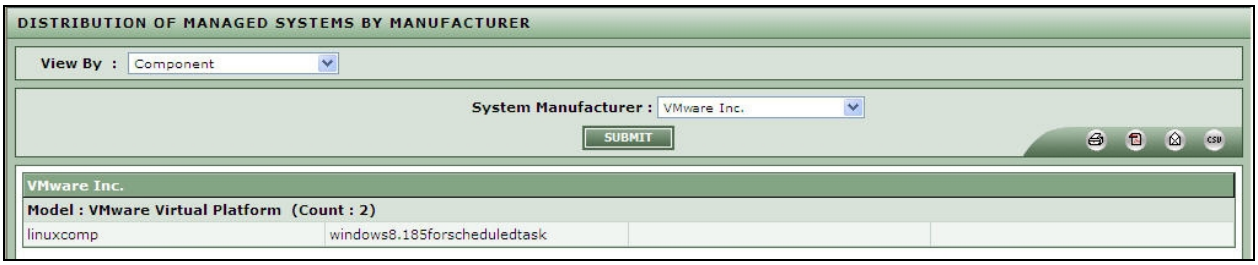


Figure 2.21: Distribution of systems for a specific manufacturer

3. As a result, the distribution graph will not appear. Instead, the details of systems purchased from the chosen manufacturer will alone be available.
4. Clicking on the individual system will take you to the **INVENTORY BY SYSTEM** page, that provides the details such as basic configuration and the components managed on that system.

2.3.5 Distribution of Systems by Processor family

If a processor upgrade is recommended for a target environment to ensure peak performance of its components, the administrator would typically go about this task by first identifying the number and names of systems that support the processor to be upgraded. In large environments, this could prove to be an herculean effort. To simplify this, the Configuration Management console provides the **DISTRIBUTION OF SYSTEMS BY PROCESSOR FAMILY** page. Using this page, administrators can instantly identify the systems that are using a particular processor.

This page can be accessed by the following menu sequence: *Inventory->System Distribution->By Processor Family*.

To view the systems using all the processors, do the following:

1. Select **All** option from the **Processor Family** list box as depicted in Figure 2.22. If multiple processors are in use in your environment, then, the **All** option will be chosen here by default. If only a single processor is in use across the environment, then that processor's name will be displayed here by default.
2. Then, click the **SUBMIT** button.

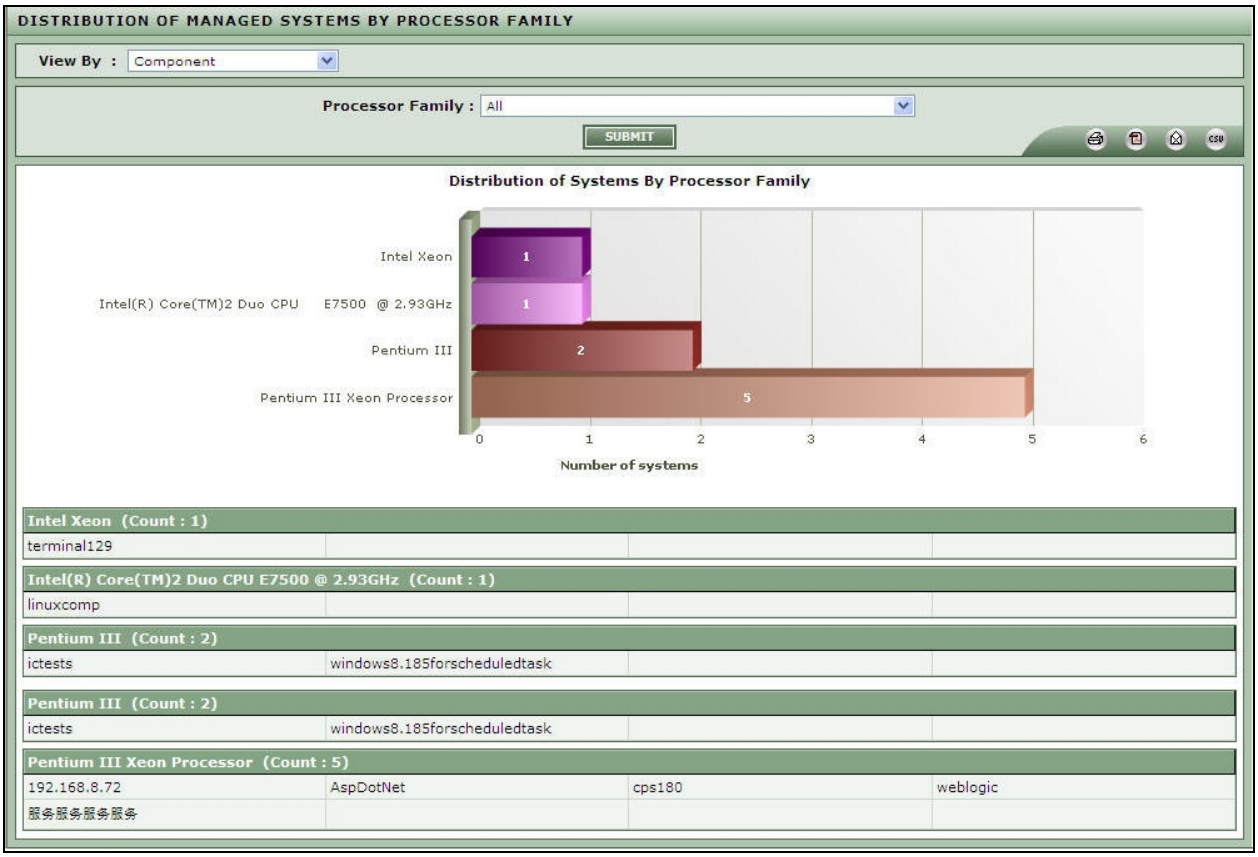


Figure 2.22: Distribution of systems across the processor families

3. This will invoke a distribution graph that depicts how the systems in your environment are distributed on the basis of the processor family. Each bar in this graph will indicate the number of systems that are supporting a particular processor. Below the graph, you will find the complete list of systems using each processor.

To view the systems using a specific processor, do the following:

1. Select a specific processor from the **Processor Family** list box (see Figure 2.23).
2. Then, click the **SUBMIT** button.

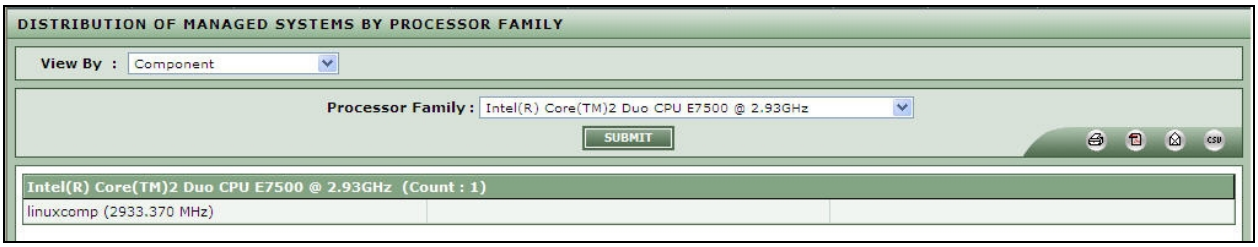


Figure 2.23: Distribution of systems for a specific processor family

3. As a result, the distribution graph will not appear. Instead, the details of systems per processor will alone be available.
4. Clicking on the individual system will take you to the **INVENTORY BY SYSTEM** page, that provides the details such as basic configuration and the components managed on that system.

2.3.6 Systems with Static and Dynamic IP Address Allocation

An IP address conflict is most common in environments, where a mix of static IP address assignment and dynamic IP address generation techniques are deployed - in other words, in environments where the IP addresses of some systems are manually assigned (i.e., static IP address assignment), and the same for some other systems are dynamically generated using the DHCP server. The first step to resolving, or even preventing such conflicts is to understand which systems hold a static IP address, and which ones have been dynamically assigned. The **SYSTEMS WITH STATIC AND DYNAMIC IP ADDRESS ALLOCATION** page provides this much-needed clarity. Using this page, administrators can quickly figure out which systems running a particular operating system have been assigned static IP addresses, and which systems hold dynamic IP addresses.

This page can be accessed using the following menu sequence: *Inventory->System Distribution->By IP Address*.

To view the systems based on how their IP address was assigned, do the following:

1. Select *All* option from the **Operating System** list box as depicted in Figure 2.24. If your environment consists of multiple operating systems, then, the *All* option will be chosen here by default. If only a single operating system is in use in your environment, then the same will be selected here by default.
2. Then, click the **SUBMIT** button.

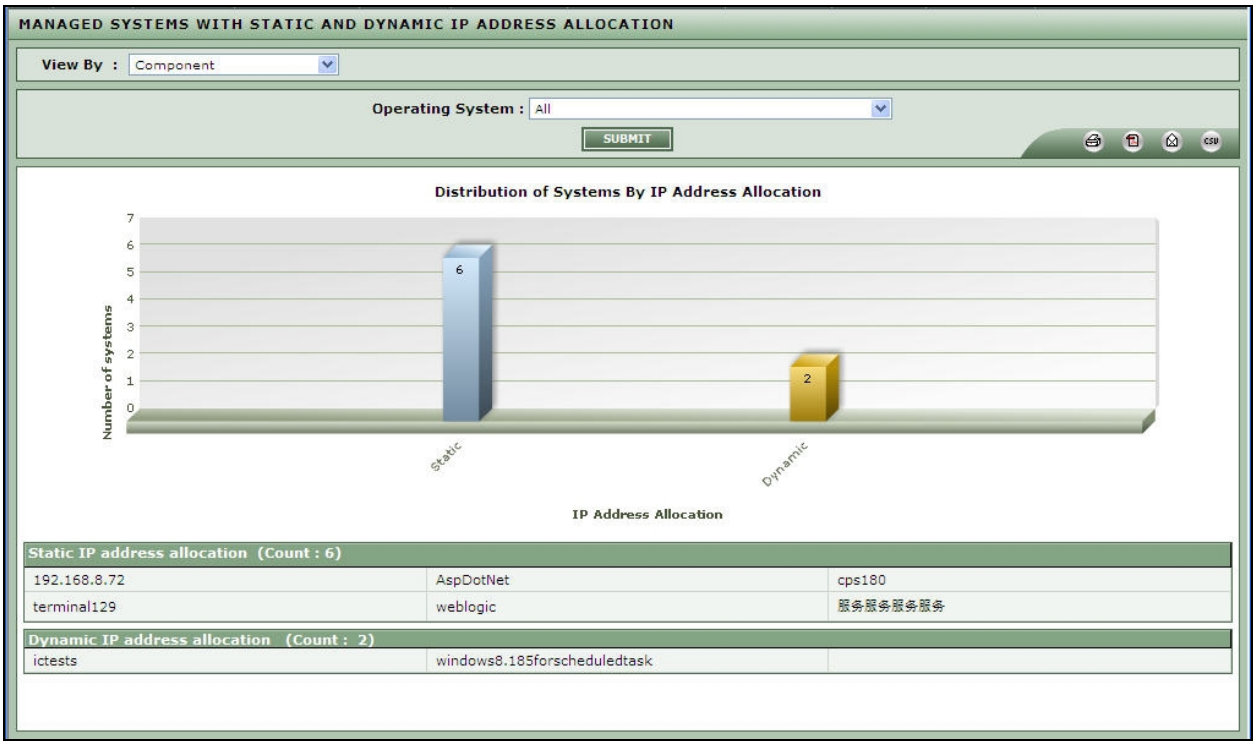


Figure 2.24: Distribution of systems by static & dynamic IP address across the operating systems

3. This will invoke a distribution graph that depicts how the systems in your environment are distributed, on the basis of their IP address assignment mode. Each bar in this graph, will indicate the number of systems for which the IP address was statically assigned, and the number of systems for which it was dynamically generated. Below the graph, you will find the complete list of systems with statically assigned and dynamically generated IPs.

To view the systems using a specific processor, do the following:

1. Select a specific operating system from the **Operating System** list box as depicted in Figure 2.25.
2. Then, click the **SUBMIT** button.

Figure 2.25: Distribution of systems by static & dynamic IP address for a specific operating system

3. As a result, the distribution graph will not appear. Instead, the details of systems will alone be available.
4. Clicking on the individual system will take you to the **INVENTORY BY SYSTEM** page, that provides the details such as basic configuration and the components managed on that system.

2.3.7 Systems configured with network gateway routers

In IT infrastructures where network activity surges sporadically, administrators often resort to reconfiguring specific systems with a different gateway, whenever traffic tends to get bursty on their default gateway. Before attempting such a switch, administrators may want to know which gateway is being used by these systems by default. While the gateway information can be obtained by executing a simple command on the target systems, in large environments, this would take hours. Administrators therefore require a single, central interface that provides them with the network gateway configuration of all the systems in their environment, with minimal effort and time. Using the **SYSTEMS CONFIGURED WITH NETWORK GATEWAY ROUTERS** page, administrators can quickly and easily identify the systems that have been configured with a specific gateway.

This page can be accessed by the following menu sequence: *Inventory->System Distribution->By Gateway* .

To view the systems configured across the gateways, do the following:

1. Select *All* option a gateway from the **Gateway IP Address** list box as depicted in Figure 2.26. If multiple gateways have been configured in your environment, then, the *All* option will be chosen here by default. If only a single gateway is in use in your environment, then the same will be selected here by default.
2. Then, click the **SUBMIT** button.

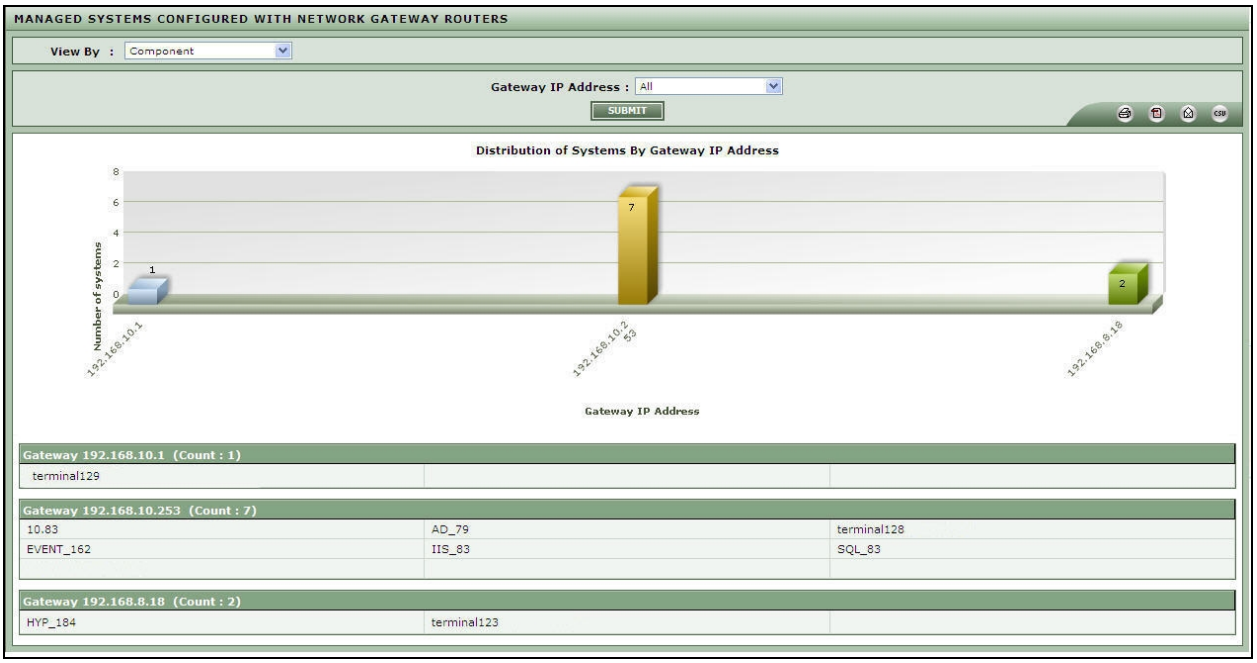


Figure 2.26: Distribution of systems across the gateway IP addresses

3. This will invoke a distribution graph that depicts, how the systems in your environment are distributed on the basis of their network gateway configuration. Each bar in this graph will indicate the number of systems that have been configured with a specific gateway. Below the graph, you will find the complete list of systems per gateway configuration.

To view the systems configured to the chosen gateway, do the following:

1. Select a desired gateway from the **Gateway IP Address** list box as depicted in Figure 2.27.
2. Then, click the **SUBMIT** button.

Figure 2.27: Distribution of systems across the gateway IP addresses

3. As a result, the distribution graph will not appear. Instead, the details of systems configured with the chosen gateway will alone be available.
4. Clicking on the individual system will take you to the **INVENTORY BY SYSTEM** page, that provides the details such as basic configuration and the components managed on that system.

2.4 Configured Printers

In large IT environments where tens of network printers are in use, administrators may want to quickly know which systems have been configured with which printer. If a printer goes offline suddenly, then this information will enable the administrator to identify the systems, that will be impacted by the non-availability of the printer. To view the critical printer information, use the **CONFIGURED PRINTERS** page in the eG Configuration Management console.

This page can be used to access the complete list of systems, that have been configured with a specific printer, and also those printers that are configured for a specific system. If required, you can even configure this page to list only the default printers associated with a system(s).

This page can be accessed by the following menu sequence: *Inventory->Configured Printers*.

Using this page you can the determine the following:

- printer configuration of a specific system
- systems with which a specific printer is associated

To view the printer configuration of a specific system, do the following:

1. Select **System** option from the **Search by** list box to know which printers a particular system has been configured with, and provide the whole/part of the system name to search for in the text box alongside (see Figure 2.28).
2. Next, indicate how you want the output of this query to be grouped, by selecting an option from the **Output** section. By selecting the **Printer** option from the **Output** section, then the results of this query will be grouped on the basis of the printer name.
3. Finally, click the **SUBMIT** button.

Figure 2.28: Viewing list of printers and the systems to which it is configured

To view the printer configuration for the systems with which a specific printer is associated do the following:

1. Select **Printer** option from the **Search by** list box to know which systems a specific printer has been configured for, and provide the whole/part of the printer name to search for in the text box alongside (see Figure 2.29).
2. Next, indicate how you want the output of this query to be grouped, by selecting an option from the Output section. By selecting the System option from the Output section, will ensure that the results of this query are grouped according to the system name.
3. Finally, click the **SUBMIT** button.

Figure 2.29: Viewing list of systems and its printers that are configured

4. If the text box is left blank, then, regardless of the option chosen from the **Search by** list, this page will report the printer configuration of all the managed systems in the target environment.

To view the default printer configured for a specific system or all systems, do the following:

1. Select the **Default** check box as depicted in Figure 2.30.
2. Finally, click the **SUBMIT** button.

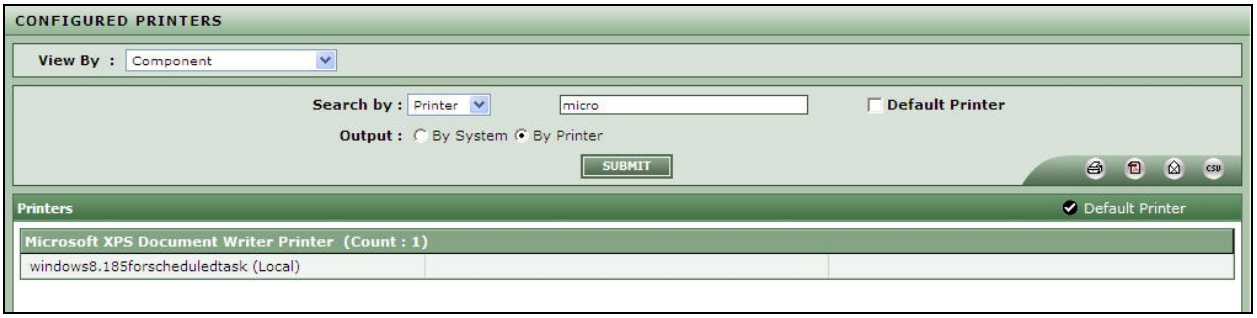


Figure 2.30: Viewing default printers

3. Doing so will invoke the printer configuration details, that fulfill the specified criteria. Default printers can be identified using the image, next to the printer name.

2.5 Search Inventory

This page serves as an easy-to-use search engine, with the help of which you can run quick searches across the environment for the inventory of operating systems, hot fixes, software, services, network adapters, and hard disks. The page allows you to build multiple search queries in no time, and even permits a few/all such queries to be executed simultaneously on the CMDB, so that a wide variety of details pertaining to multiple IT assets, can be retrieved and viewed in a single interface.

This page can be accessed by the following menu sequence: *Inventory->Search*.

To build search conditions using this page, first, indicate what to search for by picking one of the following options from the **Search for** list.

- Hotfix
- Harddisk
- Network Adapter
- OS
- Software

The rest of the search process will vary, depending upon the option chosen from the **Search for** list. Each of these options have been discussed below.

2.5.1 Hotfix

Select the **Hotfix** option, if you want to search the environment for the details of one/more hotfixes; this information will enable administrators to identify systems on which critical hotfixes are missing so that, they can initiate the steps necessary to apply the hotfixes on such systems.

To search for hotfixes, do the following:

1. Pick an option from the **Search by** section to indicate the basis for your search. The available options are as follows:

   - **Name**: Select this option, if you want to search for a specific hotfix as depicted in Figure 2.31. When this option is chosen, you will be required to select the **OS** to which the hotfix pertains and the **Hotfix** to search for. If you want the details of all hotfixes, then, pick the **All** option from the **Hotfix** list. To view the list of systems on which the chosen hotfix has been installed, set the **Installed** flag to **Yes**. This will invoke a **Display Columns** list, from which you can select the installation details that you want displayed for the chosen hotfix. To view the list of

systems from which the chosen hotfix has been uninstalled, set the **Installed** flag to **No**. To view the complete list of systems on which the chosen hotfix was installed/uninstalled, set the **Installed** flag to **All**.

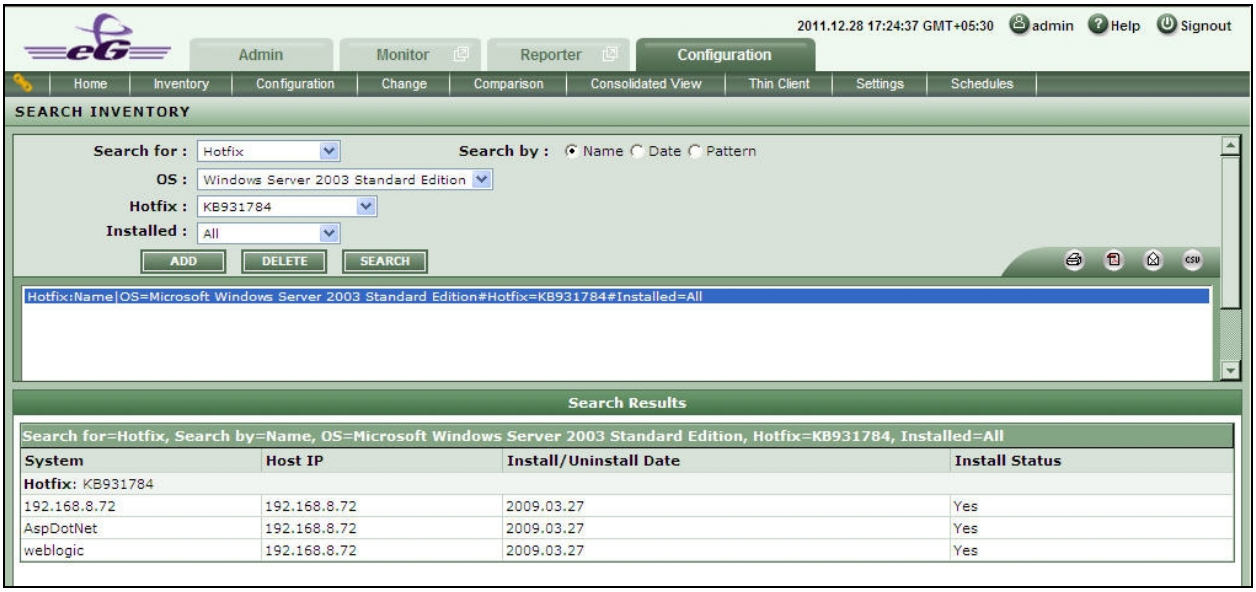


Figure 2.31: Inventory search of a hotfix through name wise

- **Date**: Select this option if you want to search for those hotfixes that were installed and/or uninstalled, during a specified period as depicted in Figure 2.32. If this option is chosen, then, you will be required to specify the time period for the search using the **From** and **To** calendar controls against **Date**. To search for only those hotfixes that were installed during the indicated period, set the **Installed** flag to **Yes**. To search for only those hotfixes that were uninstalled during the indicated period, set the **Installed** flag to **No**. To search for all hotfixes, whether installed or uninstalled during the specified period, set the **Installed** flag to **All**.

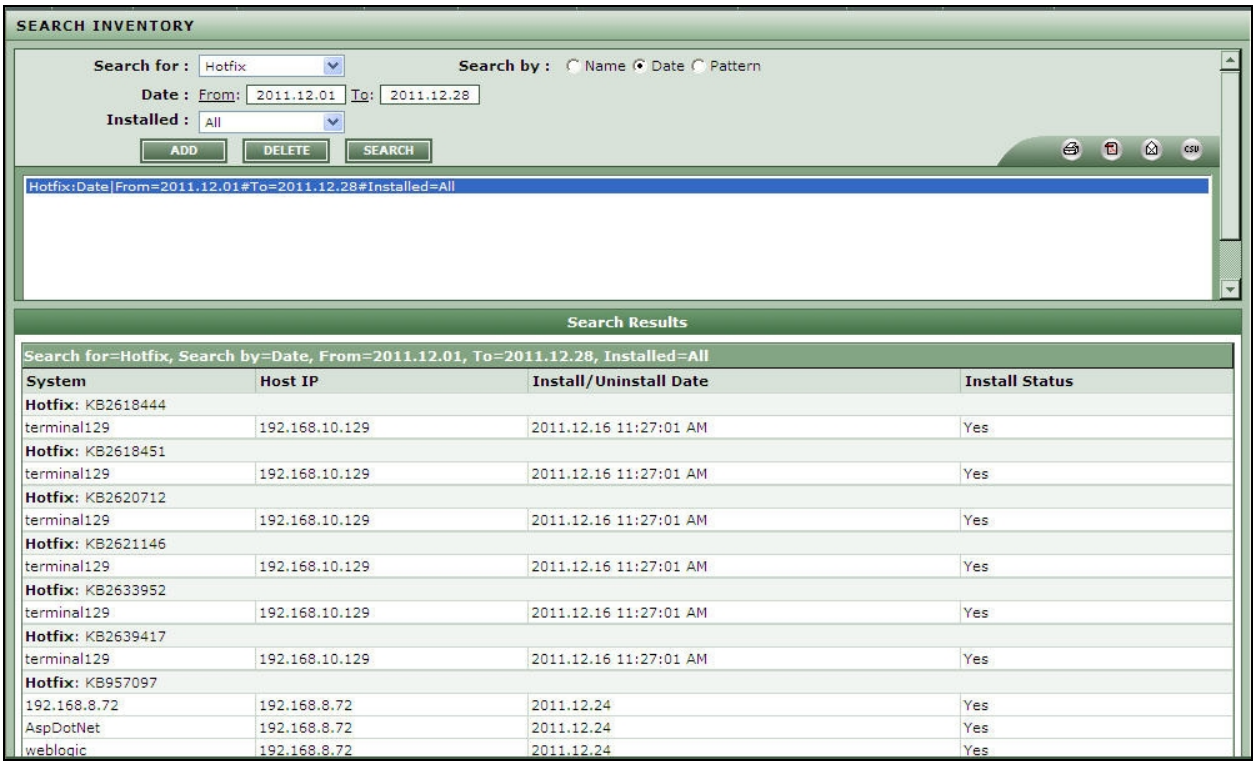


Figure 2.32: Inventory search of a hotfix through date wise

- **Pattern**: Select this option, if you want to search for those hotfixes with names that match a specified pattern as depicted in Figure 2.33. Upon selecting this option, you will be required to provide a comma-separated list of **Patterns** to search for. You can either provide the whole/part of the hotfix names in the **Pattern** text box, or use wild card characters to indicate the patterns. For instance, to look for hotfixes with names that begin with the strings 'Q123' and 'C425', your **Pattern** specification can be: *Q123*,C425**. To search for all hotfixes, simply enter * in the **Pattern** text box. If you want to view the list of systems on which the hotfixes that match the specified patterns are still available, set the **Installed** flag to **Yes**. This will invoke a **Display Columns** list from which you can select the installation details that you want displayed for the hotfixes. To view the list of systems from which the hotfixes that match the configured patterns have been uninstalled, set the **Installed** flag to **No**. To view the details of all hotfixes that match the configured patterns, regardless of their current availability, set the **Installed** flag to **All**.

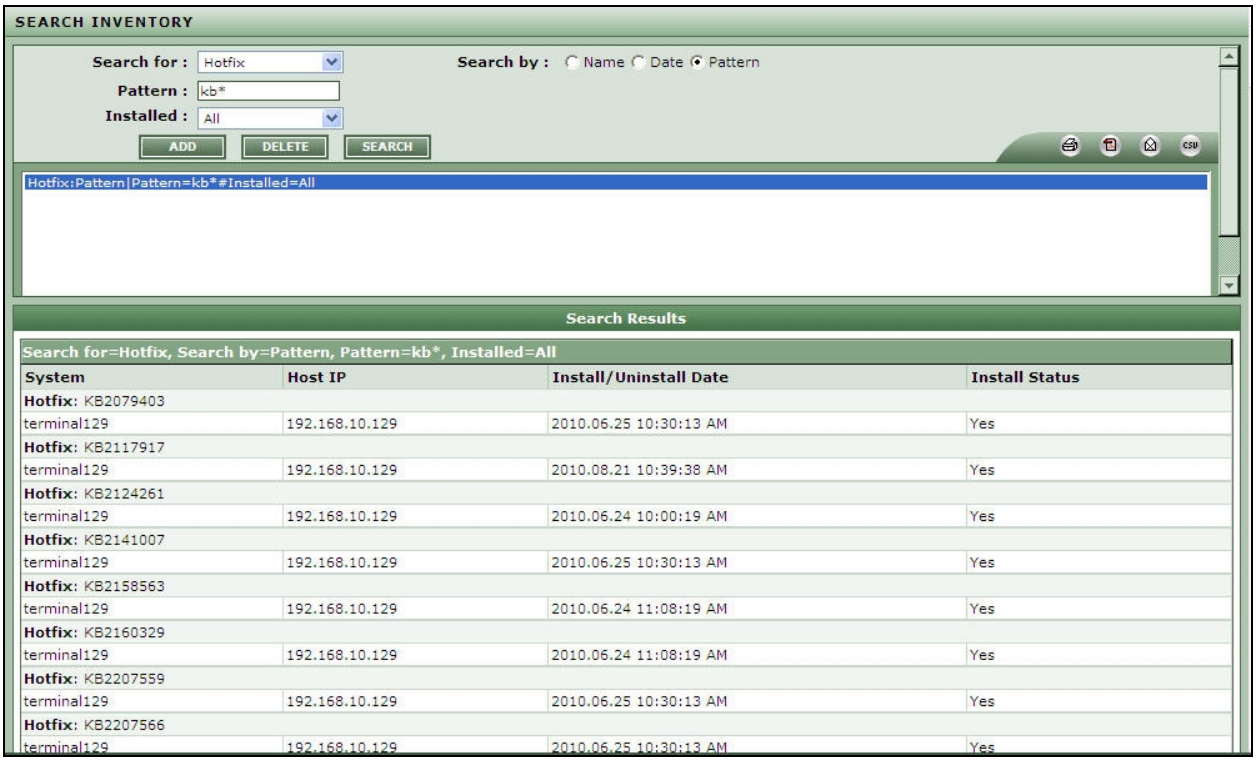


Figure 2.33: Inventory search of a hotfix through pattern wise

- Every time you pick a **Search by** option and build a search query, you can add that search query to the list box below by clicking on the **ADD** button in this page. This way, you can add multiple queries to the list. To remove a query from the list, select the query and click the **DELETE** button. To execute a single query, select it from the list box and click the **SEARCH** button. This page will then display the details of hotfixes that fulfill the search criteria included in the chosen query.
- If multiple queries are to be executed simultaneously, select all the queries of interest to you from the list box, and click the **SEARCH** button as depicted in Figure 2.34. Each query will be executed independently, and the results of each query will be displayed in separate sections in this page. To execute all the queries in the list box at one shot, just click on the **SEARCH** button.

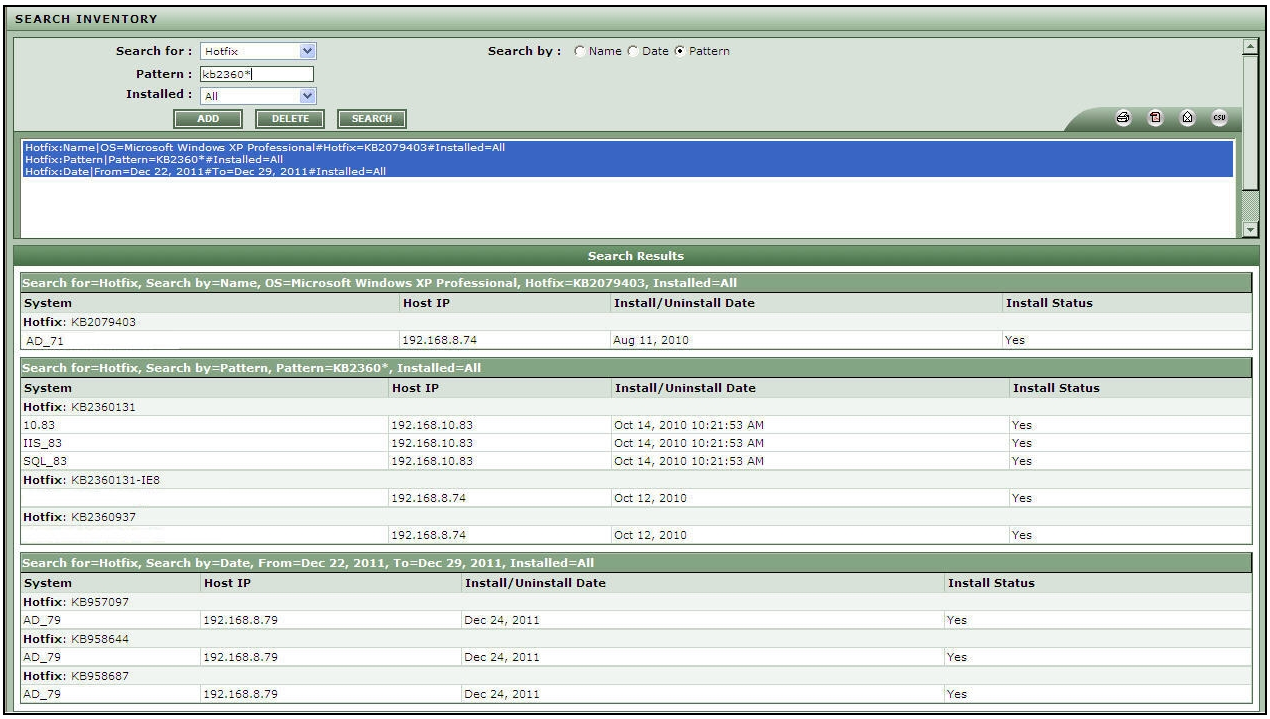


Figure 2.34: Inventory for multiple search of hotfix

2.5.2 Harddisk

To view the systems with a particular hard disk capacity or those that are using a specific type of filesystem, pick the **Harddisk** option from the **Search for** list as depicted in Figure 2.35. This system list is useful if a hard disk resize is planned across the environment, and there is a need to identify the systems with a low hard disk capacity.

Once the **Harddisk** option is chosen, proceed as follows:

1. Select the basis for your search by picking an option from the **Search by** section.
2. If you select the **Filesystem Type** option from **Search by**, a **Filesystem Type** list box will appear. Upon selecting an operating system from the **OS** list, the **Filesystem Type** list will be populated with the complete list of filesystems supported by all managed systems running the chosen OS. Choose a **Filesystem Type** from this list.

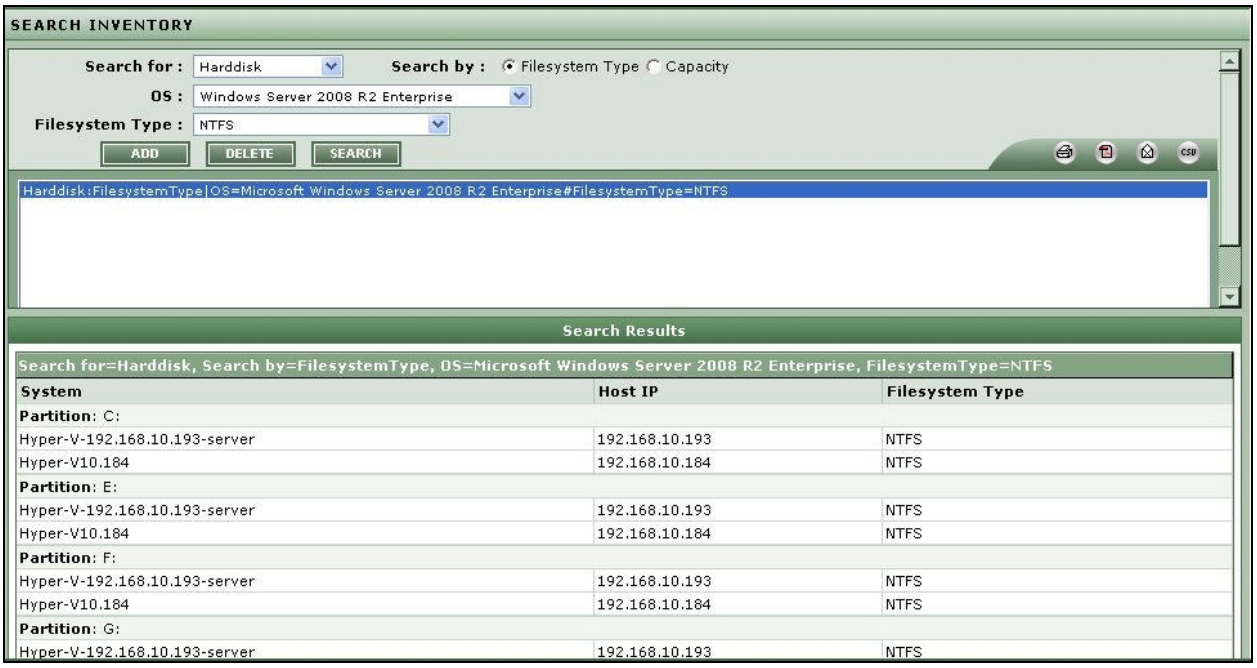


Figure 2.35: Inventory search of a harddisk through filesystem type wise

3. On the other hand, if you select the **Capacity** option from **Search by**, a **Capacity** list box will appear in this page as depicted in Figure 2.36. Once you select an operating system from the **OS** list, the **Capacity** list will be automatically populated with the hard disk capacity of all the managed systems that are running the chosen OS. Choose a hard disk capacity from the **Capacity** list.

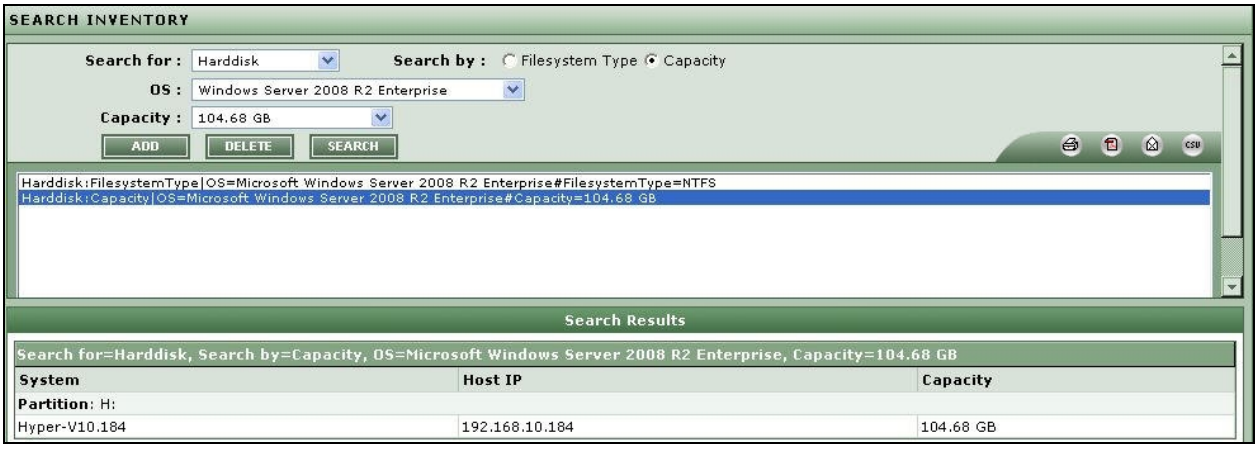


Figure 2.36: Inventory search of a harddisk through capacity wise

4. Every time you pick a **Search by** option and build a search query, you can add that search query to the list box below by clicking on the **ADD** button in this page. This way, you can add multiple

queries to the list. To remove a query from the list, select the query and click the **DELETE** button. To execute a single query, select it from the list box and click the **SEARCH** button. This page will then display the details of systems that fulfill the search criteria included in the chosen query. If multiple queries are to be executed simultaneously, select all the queries of interest to you from the list box, and click the **SEARCH** button. Each query will be executed independently, and the results of each query will be displayed in separate sections in this page. To execute all the queries in the list box at one shot, just click on the **SEARCH** button.

2.5.3 Network Adapter

To search for the systems on which a specific Network adapter has been installed/uninstalled, do the following.

1. Select **Network adapter** from the **Search for** list box as depicted in Figure 2.37.
2. This will invoke a **Search by** flag that provides two options namely, **Name** and **Pattern**. By picking an option from **Search by**, you can indicate the basis for your search.
3. If you want to view the systems that support a particular network adapter, set the **Search by** flag to **Name**. Then, pick an operating system from the **OS** list box, so as to populate the **Network adapter** list, with all the network adapters that are supported by the managed systems that are running the chosen OS. Next, pick the adapter to search for from the **Network adapter** list. To view the systems supporting all the network adapters, pick the *All* option from the **Network adapter** list.
4. To view the list of systems on which the chosen network adapter has been installed, set the **Installed** flag to **Yes**. This will invoke a **Display Columns** list, from which you can select the installation details that you want displayed in your result set. To view the list of systems from which the network adapter has been uninstalled, set the **Installed** flag to **No**. To view the complete list of systems on which the chosen adapter was installed/uninstalled, set the **Installed** flag to *All*.

Figure 2.37: Inventory search of a network adapter through name wise

5. On the other hand, choose the **Pattern** option against **Search by** as depicted in Figure 2.38, if you want to search for those adapters with names that match a specified pattern. Upon selecting this option, you will be required to provide a comma-separated list of *Pattern*s to search for. You can either provide the whole/part of the adapter names in the **Pattern** text box, or use wild card characters to indicate the patterns. For instance, to look for adapters with names that begin with the strings 'Q123' and 'C425', your **Pattern** specification can be: *Q123*,C425**. To search for all network adapters, simply enter * in the **Pattern** text box. If you want to view the list of systems on which the adapters that match the specified patterns are still available, set the **Installed** flag to **Yes**. This will invoke a **Display Columns** list from which you can select the installation details that you want displayed in the result set. To view the list of systems from which the adapters that match the configured patterns have been uninstalled, set the **Installed** flag to **No**. To view the details of all network adapters that match the configured patterns, regardless of whether they were installed/uninstalled from a system, set the **Installed** flag to *All* (see Figure 2.38).

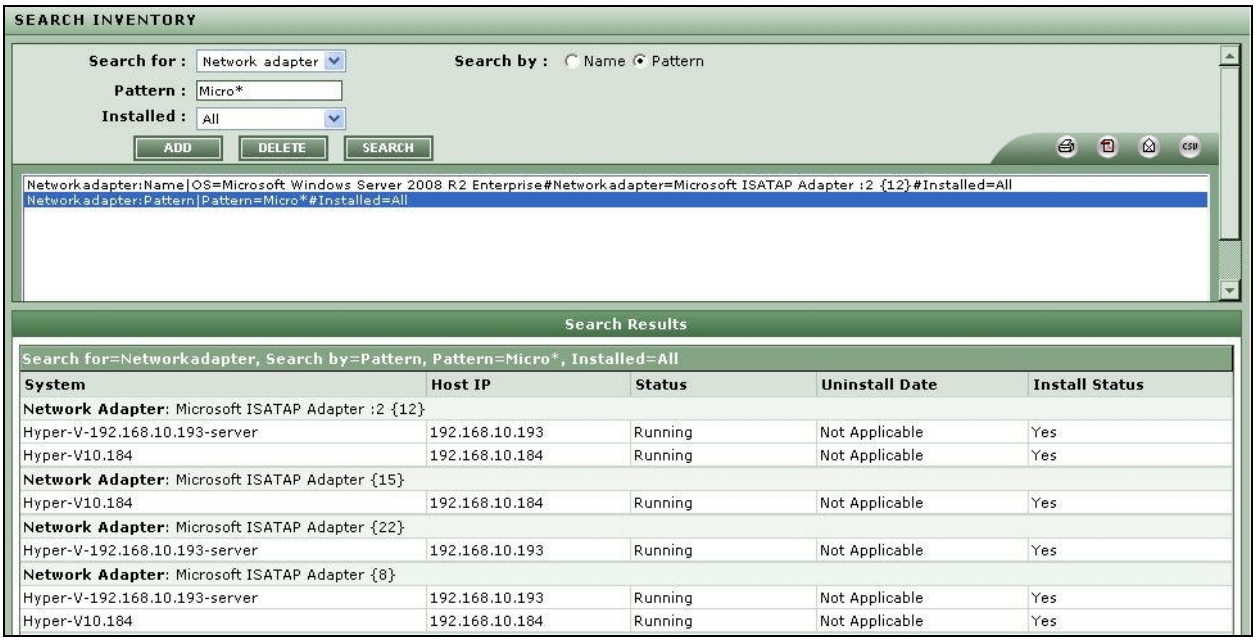


Figure 2.38: Inventory search of a network adapter through pattern wise

6. Every time you pick a **Search by** option and build a search query, you can add that search query to the list box below by clicking on the **ADD** button in this page. This way, you can add multiple queries to the list. To remove a query from the list, select the query and click the **DELETE** button. To execute a single query, select it from the list box and click the **SEARCH** button. This page will then display the details of systems that fulfill the search criteria included in the chosen query. If multiple queries are to be executed simultaneously, select all the queries of interest to you from the list box, and click the **SEARCH** button. Each query will be executed independently, and the results of each query will be displayed in separate sections in this page. To execute all the queries in the list box at one shot, just click on the **SEARCH** button.

2.5.4 Operating System

1. To locate systems that are running specific operating systems, select **OS** from the **Search for** list. Such a list of systems will be useful not only during a routine stock taking exercise, but will also come in handy while planning a software/service pack deployment, RAM upgrade, etc.
2. To invoke this list, do the following after selecting **OS** from the **Search for** list:
3. Indicate the basis for your search by picking one of the following options from the **Search by** section:
4. **RAM size**: Select this option as depicted in Figure 2.39, if you want to know which systems

running a specific OS have been configured with a particular RAM size. Upon selecting this option, pick an OS from the **OS** list, and then, choose one of the following options from the **RAM size** list.

- **Equals**: Select this option and then pick a RAM size from the list box adjacent to it to invoke the list of systems running the chosen OS that have been configured with the chosen RAM size (see Figure 2.39).
- **Less than**: Select this option and then pick a RAM size from the list box adjacent to it to view the list of systems with RAM size lesser than the chosen RAM size.
- **Less than or equal to**: If you want to know which systems have been configured with RAM that is lesser than or equal to a chosen RAM size, select this option from the **RAM size** list and then pick a RAM size from the list box adjacent to it.
- **Greater than**: Select this option and then pick a RAM size from the list box adjacent to it to view the list of systems with RAM size greater than the chosen RAM size.
- **Greater than or equal to**: If you want to know which systems have been configured with RAM that is greater than or equal to a chosen RAM size, select this option from the **RAM size** list and then pick a RAM size from the list box adjacent to it.

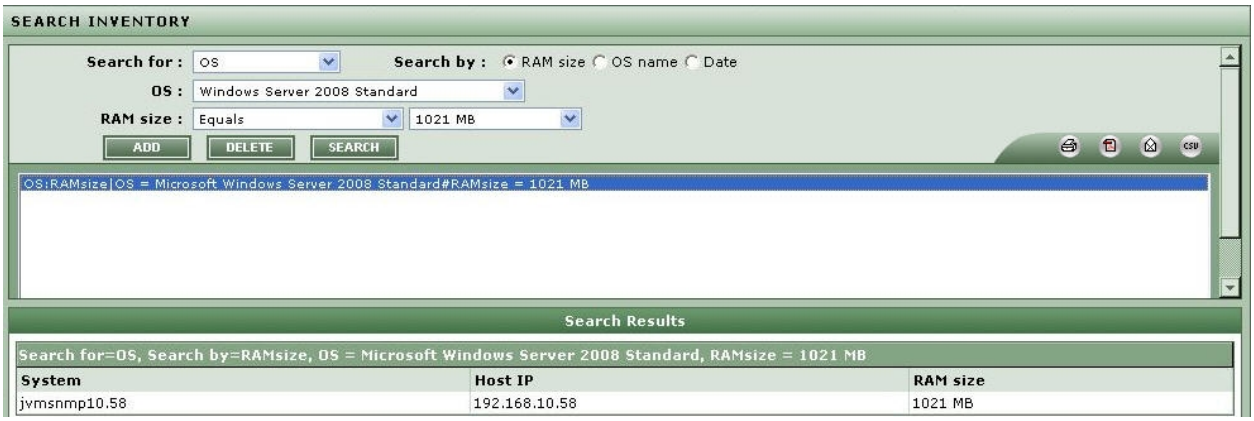


Figure 2.39: Inventory search of a operating system through RAM size wise

5. **OS name**: Select this option from **Search by** as depicted in Figure 2.40, if you want to view the details of systems that are running a particular OS. Once this option is chosen, pick an operating system to search for from the **OS** list. To view the details of systems regardless of OS, pick the *All* option from the **OS** list.

Figure 2.40: Inventory search of a operating system through OS name wise

6. **Date**: Select this option from **Search by** as depicted in Figure 2.41, if you want to view the details of systems that were installed during a specific time period. Once this option is chosen, specify the start date and end date of this time period using the **From** and **To** calendar controls against **Date**.

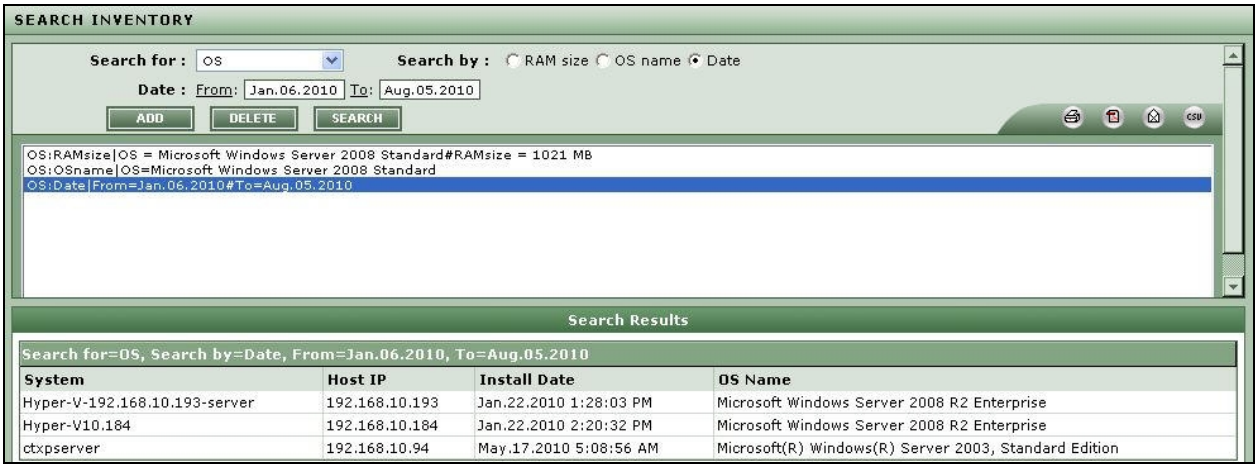


Figure 2.41: Inventory search of a operating system through date wise

7. Every time you pick a **Search by** option and build a search query, you can add that search query to the list box below by clicking on the **ADD** button in this page. This way, you can add multiple queries to the list. To remove a query from the list, select the query and click the **DELETE** button. To execute a single query, select it from the list box and click the **SEARCH** button. This page will then display the details of systems that fulfill the search criteria included in the chosen query. If multiple queries are to be executed simultaneously, select all the queries of interest to you from the list box, and click the **SEARCH** button. Each query will be executed independently, and the

results of each query will be displayed in separate sections in this page. To execute all the queries in the list box at one shot, just click on the **SEARCH** button.

2.5.5 Software

While attempting to uninstall/upgrade a software via say, an automation tool, the knowledge of the systems that host the software is essential. To identify the systems on which a particular software is available, pick the **Software** option from the **Search for** list.

Then, proceed as follows:

1. Pick an option from the **Search by** section as depicted in Figure 2.42, to indicate the basis for your search. The available options are as follows:
2. **Name**: Select this option if you want to search for a specific software (see Figure 2.42). When this option is chosen, you will be required to select the **OS** on which the software operates, and then choose the **Software** of interest to you. To view the list of systems on which the chosen software has been installed, set the **Installed** flag to **Yes**. This will invoke a **Display Columns** list from which you can select the installation details that you want displayed for the chosen software. To view the list of systems from which the chosen software has been uninstalled, set the **Installed** flag to **No**. To view the complete list of systems on which the chosen software was installed/uninstalled, set the **Installed** flag to **All**.

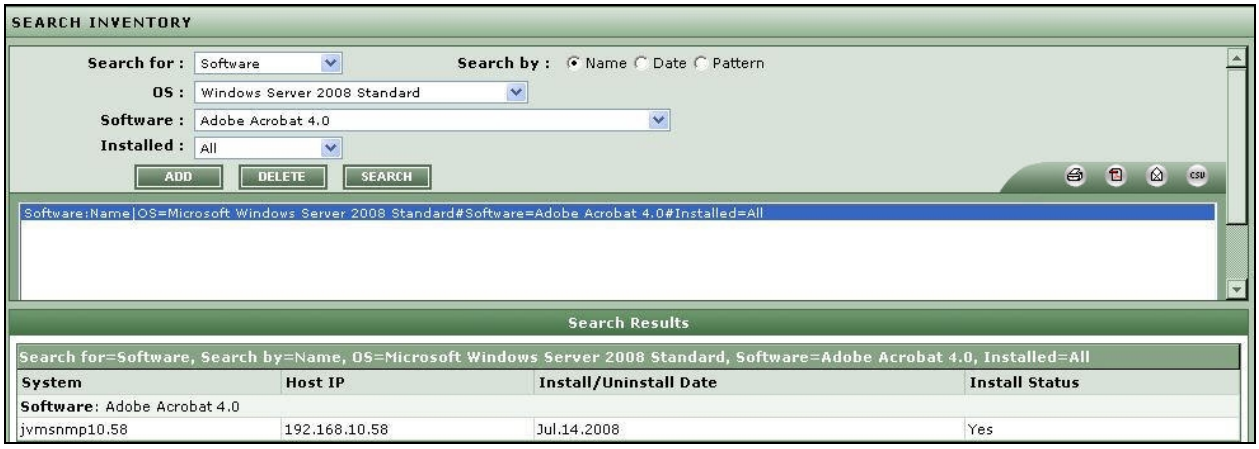


Figure 2.42: Inventory search of a software through name wise

3. **Date**: Select this option as shown in Figure 2.43, if you want to search for software that was installed and/or uninstalled during a specified period. If this option is chosen, then, you will be required to specify the time period for the search using the **From** and **To** calendar controls against **Date**. To search for software that was installed during the indicated period, set the

Installed flag to **Yes**. To search for software that was uninstalled during the indicated period, set the **Installed** flag to **No**. To search for all software, whether installed or uninstalled during the specified period, set the **Installed** flag to **All**.

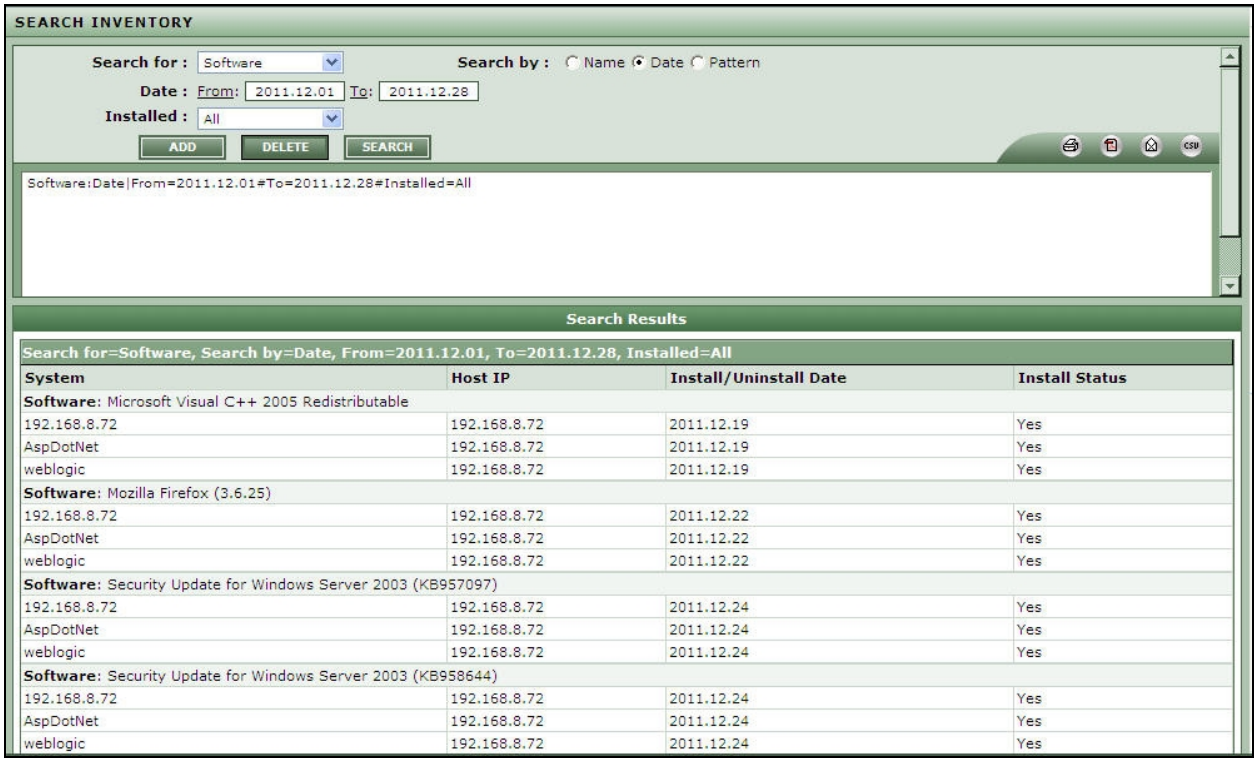


Figure 2.43: Inventory search of a software through date wise

4. **Pattern**: Select this option if you want to search for software with names that match a specified pattern as shown in Figure 2.44. Upon selecting this option, you will be required to provide a comma-separated list of *Pattern*s to search for. You can either provide the whole/part of the software names in the **Pattern** text box, or use wild card characters to indicate the patterns. For instance, to look for software with names that begin with the strings 'acro' and 'macro', your **Pattern** specification can be: *acro*,macro**. To search for all software, simply enter * in the **Pattern** text box. If you want to view the list of systems on which the software that matches the specified patterns is still available, set the **Installed** flag to **Yes**. This will invoke a **Display Columns** list from which you can select the installation details that you want displayed for the software. To view the list of systems from which the software that matches the configured patterns was uninstalled, set the **Installed** flag to **No**. To view the details of all the software that match the configured patterns, regardless of whether they were installed/uninstalled, set the **Installed** flag to *All*.

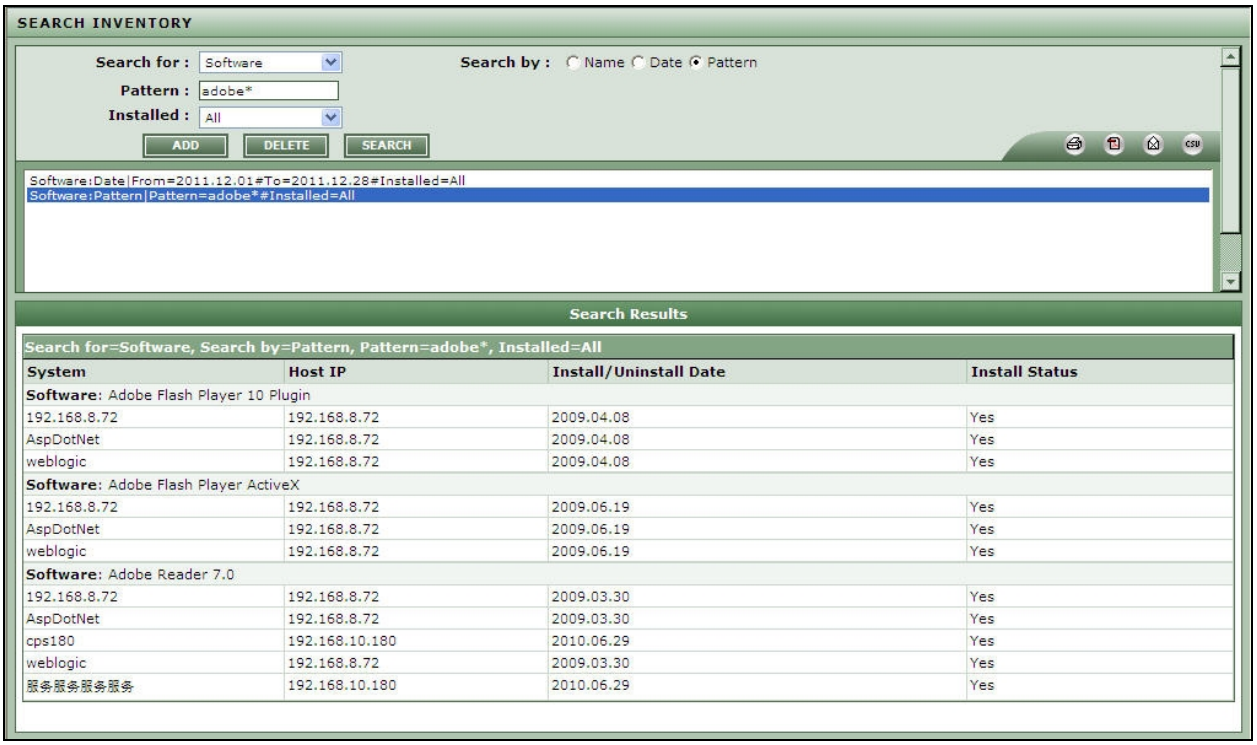


Figure 2.44: Inventory search of a software through pattern wise

5. Every time you pick a **Search by** option and build a search query, you can add that search query to the list box below by clicking on the **ADD** button in this page. This way, you can add multiple queries to the list. To execute a single query, select it from the list box and click the **SEARCH** button. This page will then display the details of systems that fulfill the search criteria included in the chosen query. If multiple queries are to be executed simultaneously, select all the queries of interest to you from the list box, and click the **SEARCH** button. Each query will be executed independently, and the results of each query will be displayed in separate sections in this page. To execute all the queries in the list box at one shot, just click on the **SEARCH** button.

Chapter 3: Configuration

Today's IT implementations are increasingly more complex. A single server can contain thousands of configuration elements, including system files, kernel parameters, registry keys, application settings, and firmware switches. Each of these elements may need to meet specific IT business requirements. Since a typical organization may have hundreds or even thousands of servers, the number of configurations to be tracked and managed can reach millions of parameters.

Traditional methods of managing and monitoring configuration settings are impeded by IT staffs, who simply do not have time or resources, to look at each element of a complex infrastructure individually.

This tedious process of tracking the configuration settings of individual components, is now made easier by this page. This page helps you to determine the basic configuration of chosen components.

This page can be accessed by clicking on the **Configuration** menu option, in the eG Configuration Management console.

To view the configuration details of a specific component of a particular type, do the following:

1. Select a specific component type from the **Component Type** list box as shown in Figure 3.1.
2. Next, select a component from the **Component** list box.
3. This will populate the **Information** list box with the configuration parameters associated with the chosen component. By default, all the options in the **Information** list box will be selected. If need be, you can choose specific options from this list box as depicted in Figure 3.1.
4. Finally, click the **SUBMIT** button.

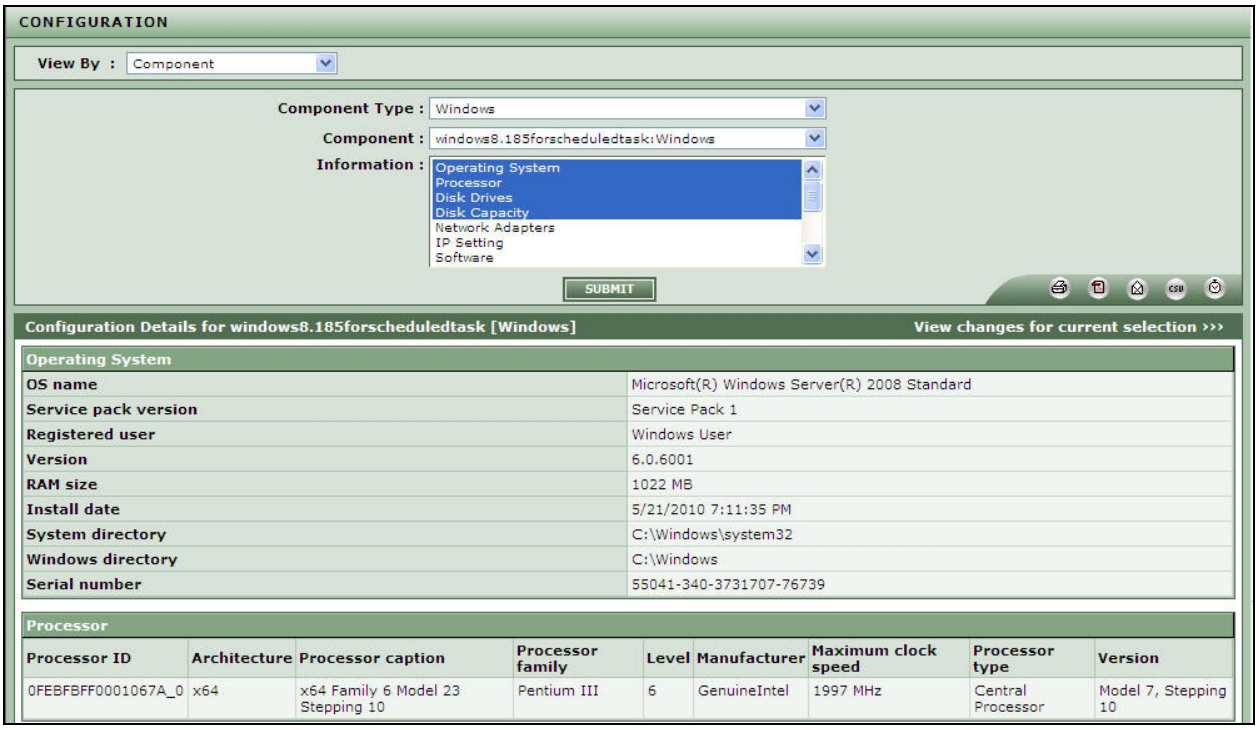


Figure 3.1: Viewing current configurations of specific component

5. Doing so will display the details pertaining to the chosen configuration information for the selected component as depicted in Figure 3.1.
6. Click on the to print this page and to save this report in pdf format click on this and to mail this page to specified recipient click on .
7. Clicking on the will take you to the **SAVE SCHEDULES** page, where you can define the schedule for automatically e-mailing this page to specified recipients.

   The eG Configuration management also provides a useful report scheduling capability that automates the process of printing and/or mailing specific reports (to specific individuals) at pre-defined intervals. You can configure schedules for the current and changed configuration reports by clicking on the that is available in the **CONFIGURATION** and in the **CONFIGURATION CHANGE:DETAILED** pages, respectively.

   Using this scheduling capability, you can ensure that key decision makers/managers can readily access critical configuration and change information.

To configure the schedule for a report do the following:

1. Provide a name against the **Schedule** Name as shown in Figure 3.2. The name will be validated only if the string ends with _cf.
2. Next, specify how frequently the report is to be e-mailed by by choosing the appropriate option from the **Mail** list box. The options provided therein include: Daily, Weekly, Monthly, WeekEnd, and MonthEnd. If you select the **Weekly** option, you even get to select the exact day of the week on which you want the report mailed/printed, from the **Mail On** list.
3. Then, provide the e-mail ids to which the reports have to be delivered in the **Mail Id** text box. A comma-separated list of e-mail ids can provided in this text box.
4. Then, indicate the **Schedule type**. You can indicate when report scheduling is to occur by picking an option from the **Schedule type** list. To generate schedule reports at the end of every day, pick the **Day end** option from this list. To generate schedule reports at a configured time every day, pick the **Any time** option from this list, and then indicate the exact time of generation using the **Schedule at** time controls that then appear.
5. Next, indicate the frequency with which the report is to be printed by selecting an option from the **Print** list box.

   This list box will be disabled by default. To enable it, set the **EnableSchedulePrint** option to **True** in the **MISC_ARGS** section of the **eg_configtests.ini** file (in the **<eg_install_dir>\manager\config** directory).
6. Finally, click on the **Save** button to schedule the report (see Figure 3.2).

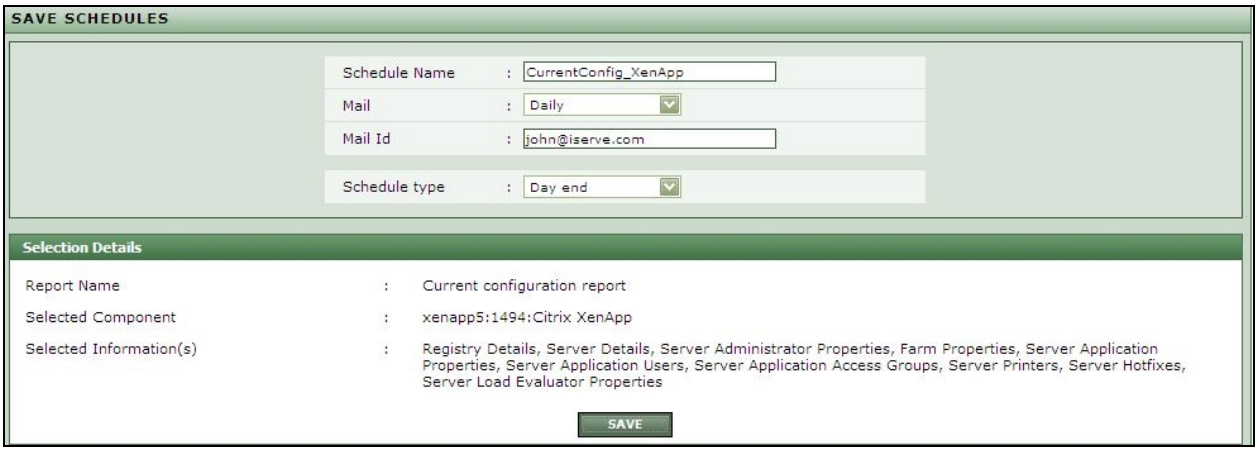


Figure 3.2: Configuring current configuration schedule

To view all the schedules that have been configured, use the **SCHEDULES** page, that can be accessed by clicking on the **Schedules** menu option. Figure 3.3 depicts the list of schedules that

have been configured. Using this page, you can view all the configured schedules or you can delete a single or multiple schedules.

Figure 3.3: Viewing list of schedules

If no schedules pre-exist, then a message to that effect will appear in this page as shown in the Figure 3.4.

Figure 3.4: Message stating no schedules pre-exist

To delete a particular schedule, do the following:

1. Provide a check mark against the schedule name in the **SCHEDULES** page as shown in Figure 3.5.

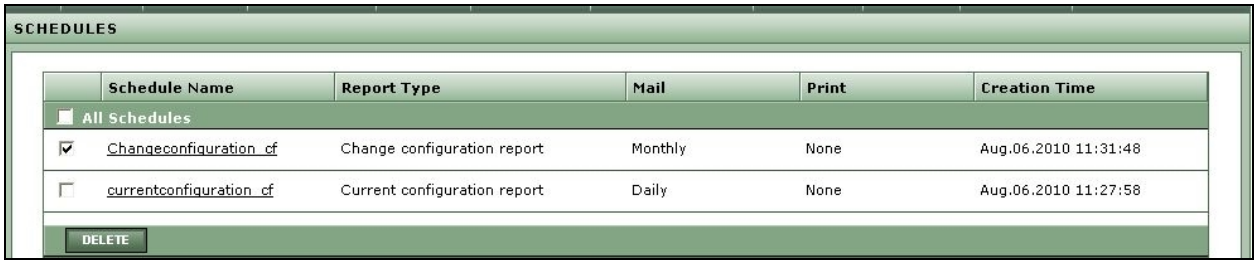


Figure 3.5: Selecting a specific schedule

2. Next click on the **DELETE** button provided at the bottom of this page. This will invoke a pop-up for the confirmation to delete the chosen schedule.
3. Clicking on the **Ok** button on the pop-up will delete the chosen schedule.
4. To delete all the schedules that have been configured, provide a check mark against the **All Schedules** option and click on the **DELETE** button provided at the bottom of this page.

Chapter 4: Change

4.1 Change by Time

Change management is an integral component of configuration management. In recent times, it has been observed that a majority of performance issues experienced by IT infrastructures are owing to improper / unauthorized changes to configuration. It is therefore essential for administrators to track the configuration changes effected in an IT environment on a regular basis so that, erroneous changes can be promptly identified and rolled back. To enable administrators to efficiently monitor configuration changes and easily view what was changed, when, and by whom, the eG Configuration Management console provides a variety of interfaces. The **CONFIGURATION CHANGE : DAYWISE DISTRIBUTION** page is one such interface. Using this page, you can view a quick summary of the configuration changes that were effected on a chosen component-type, every day during a specified timeline. If you are investigating the reason behind the abnormal behavior of one/more components of a type on a particular day in the past, then this page will help you determine whether the anomaly was owing to configuration changes that were made on the components of that type on that day.

To access this page, use the *Changes -> By Time* menu sequence.

By default, this page provides a bar graph indicating the count of configuration changes that were effected across all component types during every hour of the last 24 hours (1 day). Accordingly, the *All* and *1 day* options are chosen by default from the **Component Type** and **Timeline** drop-down lists, respectively.

To view the number of changes that were effected on the components of the chosen type for a specified timeperiod do the following:

1. Pick a particular component-type from the **Component Type** list as depicted in Figure 4.1.
2. Next, provide a different **Timeline** for the change summary.
3. Next click the **SUBMIT** button.

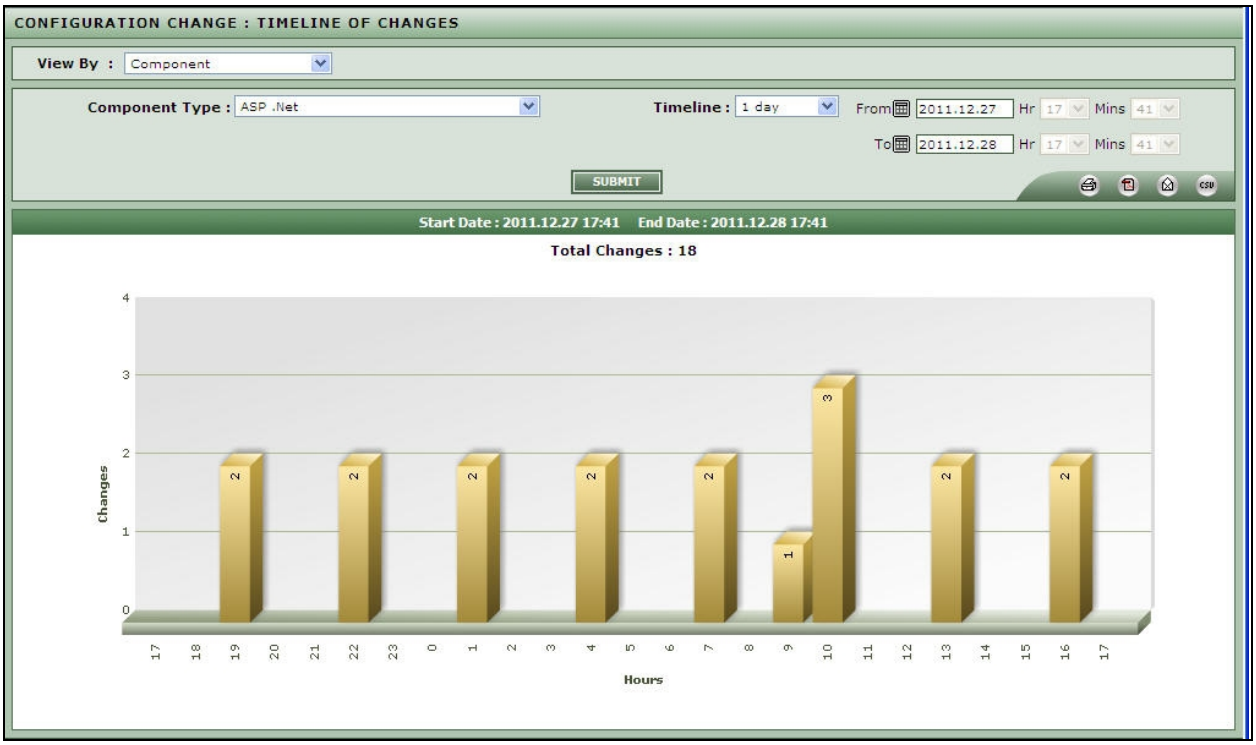


Figure 4.1: Viewing configuration changes for a specific component type for a specific time period

- When this is done, the resulting graph will indicate the number of changes that were effected on the components of the chosen type, every day of the specified timeline. Clicking on a bar that corresponds to a particular day/hour in this graph, will lead you to the **CONFIGURATION:DETAILED** page, using which, you can clearly identify the components (of the chosen type) that were impacted by the changes made on that day/hour, and also figure out what these changes were.

4.2 Change by Components

4.2.1 Change by Component Name

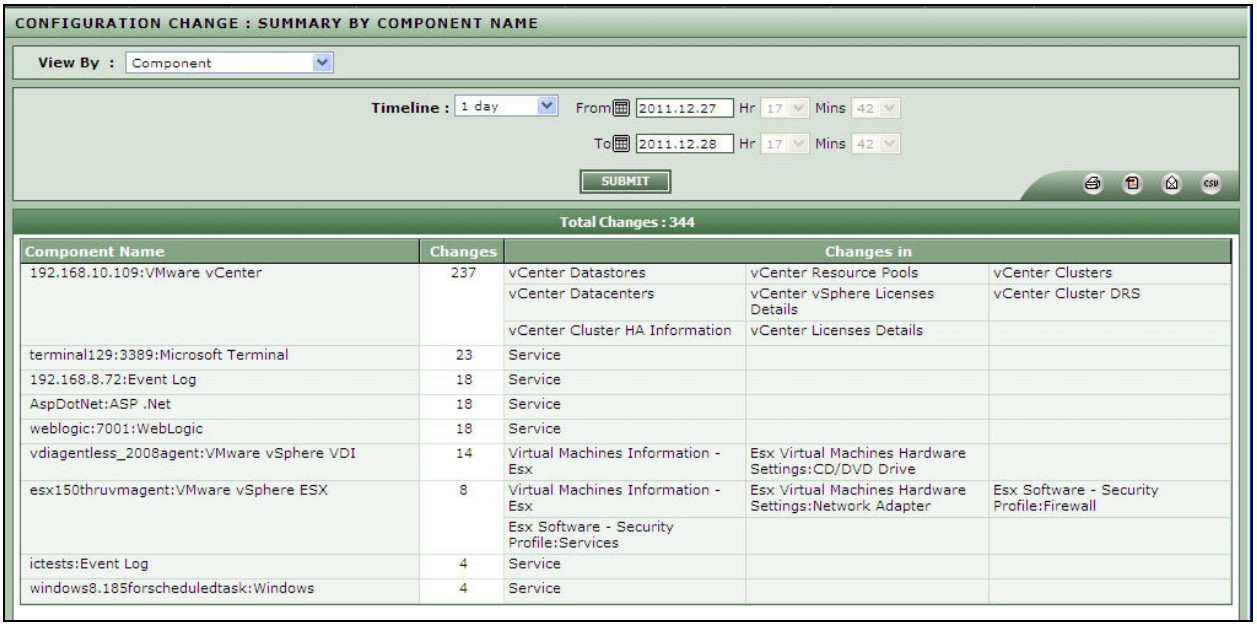
Change management is an integral component of configuration management. In recent times, it has been observed that a majority of performance issues experienced by IT infrastructures, are owing to improper / unauthorized changes to configuration. It is therefore essential for administrators to track the configuration changes effected in an IT environment on a regular basis so that, erroneous changes can be rolled back. To enable administrators to efficiently monitor configuration changes and easily view what was changed, when, and by whom, the eG Configuration Management console provides a variety of interfaces. For instance, using this page, you can view a quick summary of the configuration changes that were effected in the environment, across all managed components during a chosen time period. Since this information serves as a 'window' to the past,

you can review this information to identify configuration changes that may have caused a past problem with the component.

This page can be accessed by the following menu sequence: *Changes -> By Components -> Component Name*.

To view a change summary using this page, do the following:

1. Select a specific time period from the **Timeline** list box as depicted in Figure 4.2.
2. Click the **SUBMIT** button.
3. This will invoke a table that lists the components, that underwent configuration changes during the given period. Against each component name, the total number of configuration changes that were effected on that component during the given period and the specific configuration parameters that were changed will be listed.



Component Name	Changes	Changes in		
192.168.10.109:VMware vCenter	237	vCenter Datastores	vCenter Resource Pools	vCenter Clusters
		vCenter Datacenters	vCenter vSphere Licenses Details	vCenter Cluster DRS
		vCenter Cluster HA Information	vCenter Licenses Details	
terminal129:3389:Microsoft Terminal	23	Service		
192.168.8.72:Event Log	18	Service		
AspDotNet:ASP .Net	18	Service		
weblogic:7001:WebLogic	18	Service		
vdiagentless_2008agent:VMware vSphere VDI	14	Virtual Machines Information - Esx	Esx Virtual Machines Hardware Settings:CD/DVD Drive	
esx150thruvmagent:VMware vSphere ESX	8	Virtual Machines Information - Esx	Esx Virtual Machines Hardware Settings:Network Adapter	Esx Software - Security Profile:Firewall
		Esx Software - Security Profile:Services		
ictests:Event Log	4	Service		
windows8.185forscheduledtask:Windows	4	Service		

Figure 4.2: Viewing configuration changes component wise for a specific timeline

4. Clicking on a component name / change count here will lead you to the **CONFIGURATION CHANGE : DETAILED** page, that both graphically and otherwise details the configuration changes that were made on that component during the said period. On the other hand, if you click on a configuration parameter in the **Changes in** column, you will automatically switch to the **CONFIGURATION CHANGE : DETAILED** page again, but this time, the page will provide

details of the changes that were effected on that configuration parameter alone, during the said period.

4.2.2 Change by Component type

Change management is an integral component of configuration management. In recent times, it has been observed that a majority of performance issues experienced by IT infrastructures are owing to improper / unauthorized changes to configuration. It is therefore essential for administrators to track the configuration changes effected in an IT environment on a regular basis so that, erroneous changes can be rolled back. To enable administrators to efficiently monitor configuration changes and easily view what was changed, when, and by whom, the eG Configuration Management console provides a variety of interfaces. For instance, using this page, you can view a quick summary of the configuration changes that were effected in the environment across all managed component types during a chosen time period. While troubleshooting a performance issue that was experienced by one/more components of a type in the recent past, you can use the details provided by this page to first figure out whether any configuration changes were made during the said period, and if so, have they contributed to the problem.

This page can be accessed by the following menu sequence: Change -> By Components -> Component Type.

To view the change summary using this page, do the following:

1. From the **Timeline** list box, select the time period for which a summary of changes done across component-types is to be viewed (see Figure 4.3).
2. Click the **SUBMIT** button.
3. This will invoke a table listing the component-types on which configuration changes were effected during the chosen period. Against a component-type in this page, you will find the following:
   - the total number of configuration changes that were effected on that component-type during the given period;
   - specific components of that type that were impacted by the changes
   - the number of configuration changes made on each component of that type (in brackets)

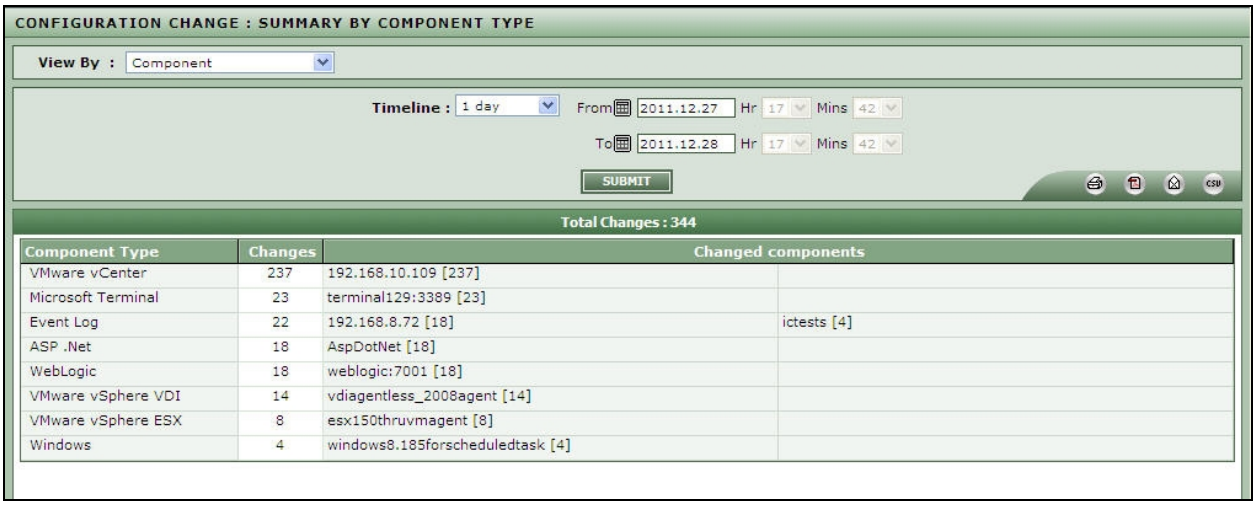


Figure 4.3: Viewing configuration changes component type wise for a specific timeline

4. Clicking on a component type / change count here will lead you to the **CONFIGURATION CHANGE : DETAILED** page, where the complete details of the configuration changes made on each component of that type during the given period will be displayed. On the other hand, if you click on a particular component in this page, you will once again switch to the **CONFIGURATION CHANGE : DETAILED** page only, but this time, the page will provide details of the changes that were effected on that component alone, during the said period.

4.3 Change by Criteria

4.3.1 Change by Component name/type/all components

Change management is an integral component of configuration management. In recent times, it has been observed that a majority of performance issues experienced by IT infrastructures are owing to improper / unauthorized changes to configuration. It is therefore essential for administrators to track the configuration changes effected in an IT environment on a regular basis so that, erroneous changes can be promptly identified and rolled back. To enable administrators to efficiently monitor configuration changes and easily view what was changed, when, and by whom, the eG Configuration Management console provides a variety of interfaces. One such page is the **CONFIGURATION CHANGE : DETAILED** page. This page enables you to query on the configuration management database and retrieve change information that fulfills specified criteria.

This page helps the administrator to understand at a glance the overall configuration changes, that were being effected for a chosen time period across the environment. The vision of this page is broadly classified according to the below listed categories:

- Component Name
- Component Type
- All components

The following implies the significance of each category:

- By choosing component name, you will know what are the changes that were effected for a specific component.
- By choosing component type, you will know what are the changes that were effected across the components of a specific component type.
- By choosing all components, you will know what are the changes effected across the environment.

This page provides a graphical representation and as well as table, illustrating the list of changes that were effected either to a specific component or across the environment according to your preference of choice.

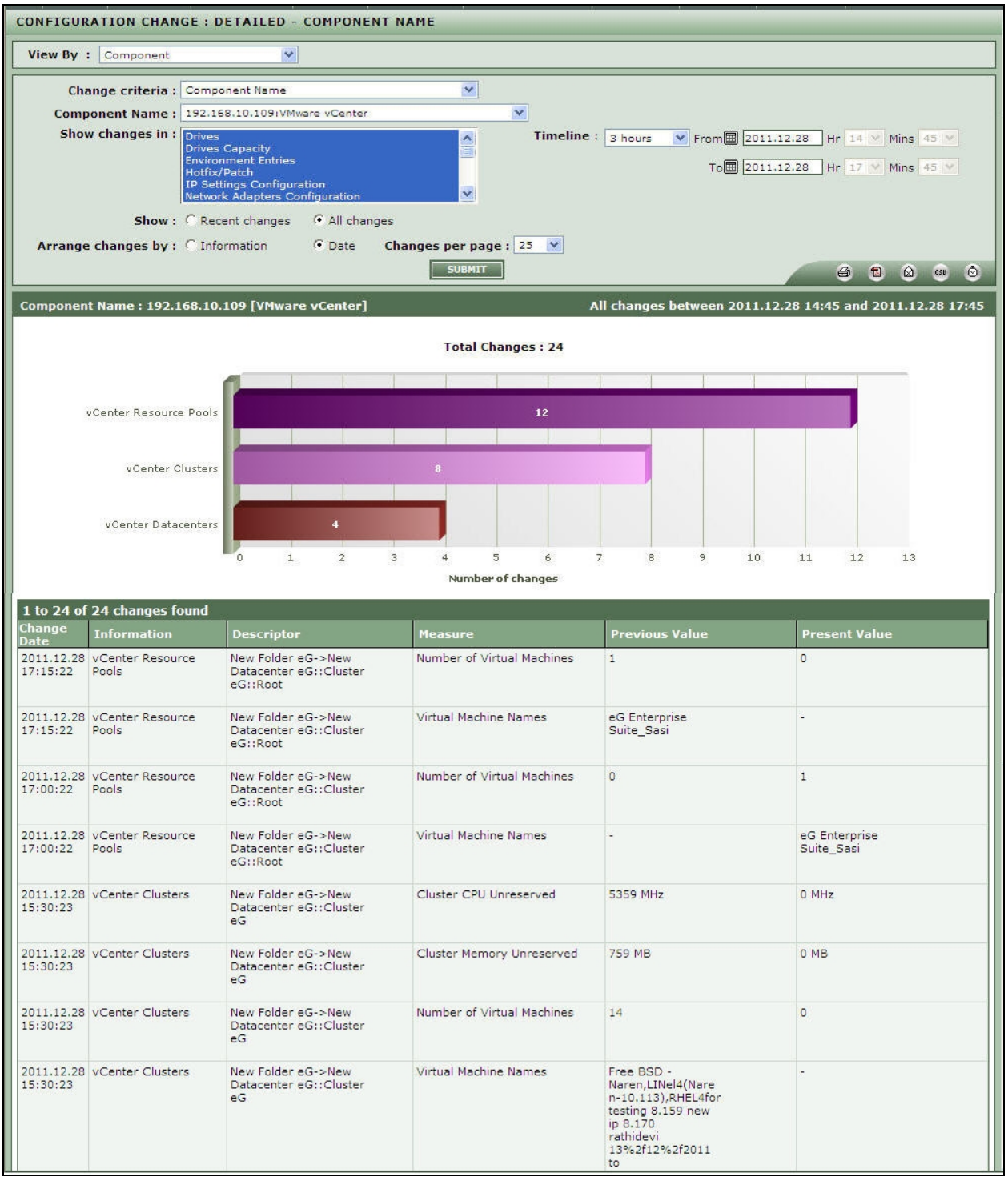
This page can be accessed by the following menu sequence, *Changes ->By Criteria -> All Components* field.

To view the changes effected on a particular component during a specified timeline using this page, do the following:

1. First, select a **Component Name** from the **Change Criteria** list box as depicted in Figure 4.4 . This will invoke **Component Name** list box. Select a component from the **Component Name** list box, for which you would like to view the configuration changes.
2. For instance, to view the configuration changes for a windows component, select **Component Name** from the **Change criteria** list box and select a specific windows based component from the **Component Name** list box.
3. This will invoke a list box called **Show changes in**, providing a list of options appropriate to the chosen windows component such as software,processor,network adapters etc, for which you would like to view the configuration changes. All the options listed in this list box will be selected by default. You can even choose a specific option from the **Show changes in** list box, for which you can view the configuration changes for the chosen entry alone.
4. Next select a timeperiod from the **Timeline** list box as depicted in Figure 4.4. Using this option you can view the configuration changes that were effected on the basis of days, weeks and hours. The maximum duration of period available in this list box is 1 month. If your requirement is

not available in this list box, then select **Any** option from the **Timeline** list box. This will invoke the calender capability, to which you can select choice of your date using the **From** and **To** fields, that are available.

5. To view the recent changes alone, select **Recent changes** from the **Show** field. To view all the changes appropriate to the chosen time period, select **All changes** from the **Show** field.
6. To view the output of the configuration changes on the basis of dates appropriate to the chosen time period, select **Date** option from the **Arrange changes by** field. This will invoke **Changes per page** list box, which allows you to choose the number of changes to be displayed per page.
7. Selecting **Information** option from the **Arrange changes by** field, will provide configuration change details arranged explicitly according to the chosen options from the **Show changes in** list box.
8. Finally, click the **SUBMIT** button (see Figure 4.4).



Change Date	Information	Descriptor	Measure	Previous Value	Present Value
2011.12.28 17:15:22	vCenter Resource Pools	New Folder eG->New Datacenter eG::Cluster eG::Root	Number of Virtual Machines	1	0
2011.12.28 17:15:22	vCenter Resource Pools	New Folder eG->New Datacenter eG::Cluster eG::Root	Virtual Machine Names	eG Enterprise Suite_Sasi	-
2011.12.28 17:00:22	vCenter Resource Pools	New Folder eG->New Datacenter eG::Cluster eG::Root	Number of Virtual Machines	0	1
2011.12.28 17:00:22	vCenter Resource Pools	New Folder eG->New Datacenter eG::Cluster eG::Root	Virtual Machine Names	-	eG Enterprise Suite_Sasi
2011.12.28 15:30:23	vCenter Clusters	New Folder eG->New Datacenter eG::Cluster eG	Cluster CPU Unreserved	5359 MHz	0 MHz
2011.12.28 15:30:23	vCenter Clusters	New Folder eG->New Datacenter eG::Cluster eG	Cluster Memory Unreserved	759 MB	0 MB
2011.12.28 15:30:23	vCenter Clusters	New Folder eG->New Datacenter eG::Cluster eG	Number of Virtual Machines	14	0
2011.12.28 15:30:23	vCenter Clusters	New Folder eG->New Datacenter eG::Cluster eG	Virtual Machine Names	Free BSD - Naren,LINel4(Naren-10.113),RHEL4for testing 8.159 new ip 8.170 rathidevi 13%2f12%2f2011 to	-

Figure 4.4: Viewing configuration changes for a specific component

9. This will provide a graph, depicting the number of changes that were effected for each available options, selected from the **Show changes in** list box specific to a component.

10. Besides, it also provides a table which concisely explain the configuration changes, that were effected for the chosen component, for which the output of the table is displayed according to the option chosen from the **Arrange changes by** field. This table will indicate the **Descriptor** that has changed, the **Measure** for which the value changed, the **Previous Value** of the measure, the **Present Value** of the measure, and the **Change Date**.

To view the configuration changes for a specific component type for a specified time period, do the following:

1. Select **Component Type** from the **Change criteria** list box as depicted in Figure 4.5. This will invoke **Component Type** list box. Select a component type from the **Component Type** list box, for which you would like to view the configuration changes.
2. For instance to view the configuration changes for a specific component type say as Linux, select **Component Type** from the **Change criteria** list box and select **Linux** from the **Component Type** list box.
3. This will invoke a list box called **Show changes in**, providing a list of options appropriate to the chosen Linux component type such as software, processor, network adapters, IPC shared memory, stream tunable etc for which you would like to view the configuration changes. All the options listed in this list box will be selected by default. You can even choose a specific option from the **Show changes in** list box, for which you can view the configuration changes for the chosen entry alone.
4. Next select a timeperiod from the **Timeline** list box as depicted in Figure 4.5. Using this option, you can view the configuration changes that were effected on the basis of days, weeks and hours. The maximum duration of period available in this list box is 1 month. If your requirement is not available in this list box, then select **Any** option from the **Timeline** list box. This will invoke the calender capability to which, you can select choice of your date using the **From** and **To** fields that are available.
5. To view the recent changes alone, select **Recent changes** from the **Show** field. To view all the changes appropriate to the chosen time period, select **All changes** from the **Show** field.
6. To view the output of the configuration changes on the basis of dates appropriate to the chosen time period, select **Date** option from the **Arrange changes by** field. This will invoke **Changes per page** list box, which allows you to choose the number of changes to be displayed per page.
7. Selecting **Information** option from the **Arrange changes by** field, will provide configuration change details arranged explicitly according to the chosen options from the **Show changes in** list box.

8. Finally, click the **SUBMIT** button (see Figure 4.5).

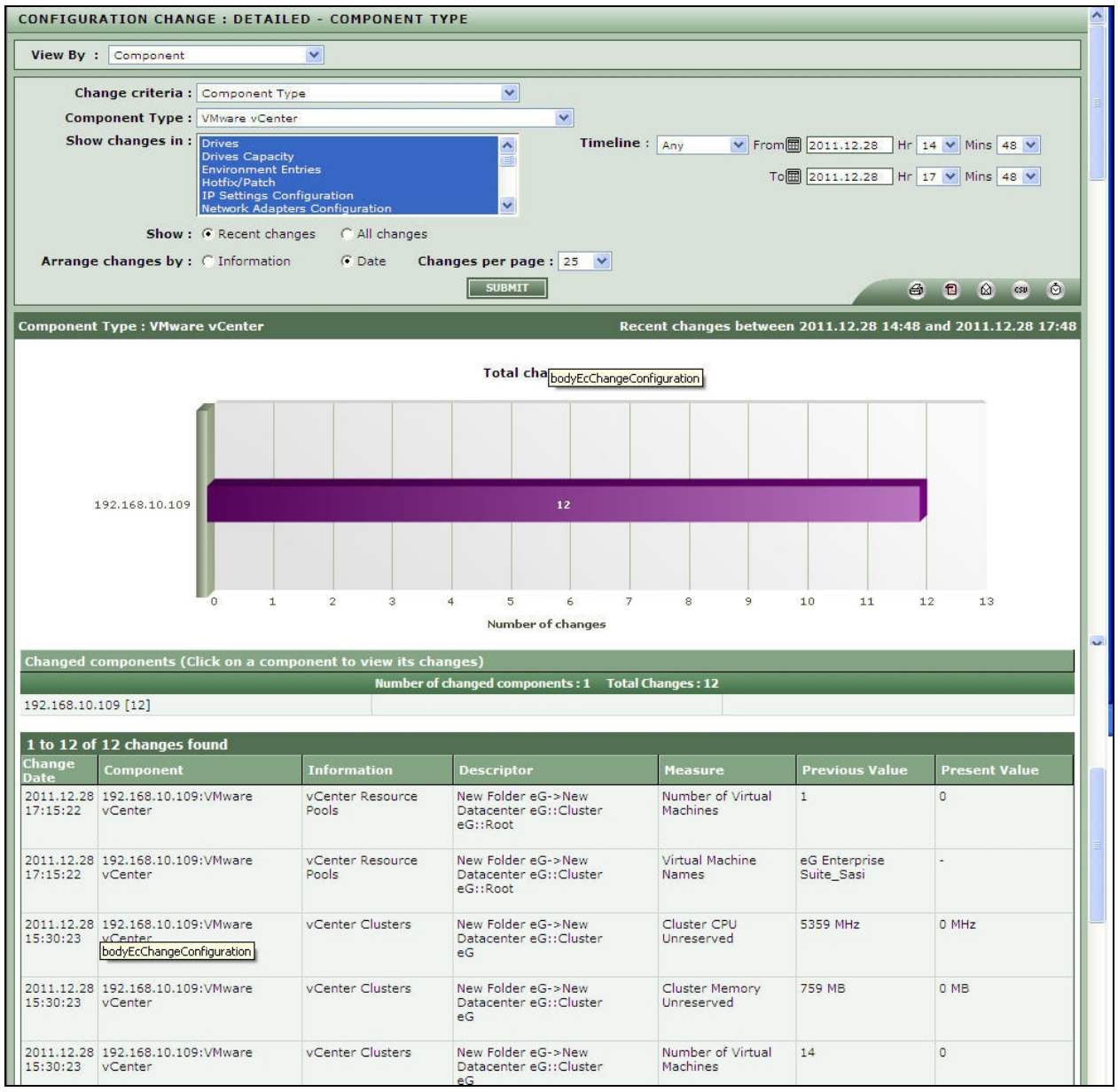


Figure 4.5: Viewing configuration changes for a specific component type

9. A graph depicting the top-5 (by default) components of the chosen type, which have undergone the maximum number of changes during the specified timeline and a table listing the components that were effected with number of changes specific to a component type. Clicking on any of the listed components, will take you to a page, which specifically depicts with a graph and a table listing the configuration changes that were effected for the chosen component alone.

10. Besides, it also provides a table in the **CONFIGURATION CHANGE : DETAILED** page, which

concisely explain the configuration changes that were effected for a specific component type for which the output of the table is displayed according to the option chosen from the **Arrange changes by** field.

In this page you will find the following sections:

- a **Changed components** section that simply lists the changed components of the chosen type and the number of changes made per component; clicking on a component here will lead you to a page that provides detailed change information pertaining to that component, in a graphical and a tabular format;
- a separate section for each of the changed components; this section will provide a graph revealing the top-5 configuration parameters of that component, in terms of the number of changes effected on them during the defined timeline; this will be followed by a series of tables - one each for every changed configuration parameter - that reveals the **Descriptor** that has changed, the **Measure** for which the value changed, the **Previous Value** of the measure, the **Present Value** of the measure, and the **Change Date**.

To view the configuration changes that were effected across the environment:

1. Select **All Components** from the **Change criteria** list box as depicted in Figure 4.6.
2. This will invoke a list box called **Show changes in**, providing a list of options that are appropriate across the environment such as software, processor, network adapters etc for which you would like to view the configuration changes. All the options listed in this list box will be selected by default. You can even choose a specific option from the **Show changes in** list box, for which you can view the configuration changes for the chosen entry alone.
3. Next select a timeperiod from the **Timeline** list box as depicted in Figure 4.6. Using this option, you can view the configuration changes that were effected on the basis of days, weeks and hours. The maximum duration of period available in this list box is 1 month. If your requirement is not available in this list box, then select **Any** option from the **Timeline** list box. This will invoke the calender capability, to which you can select choice of your date using the **From** and **To** fields that are available.
4. To view the recent changes alone, select **Recent changes** from the **Show** field. To view all the changes appropriate to the chosen time period, select **All changes** from the **Show** field.
5. To view the output of the configuration changes on the basis of dates appropriate to the chosen time period, select **Date** option from the **Arrange changes by** field. This will invoke **Changes per page** list box, which allows you to choose the number of changes to be displayed per page.

6. Selecting **Information** option from the **Arrange changes by** field will provide configuration change details arranged explicitly according to the chosen options from the **Show changes in** list box.

7. Finally, click the **SUBMIT** button(see Figure 4.6).

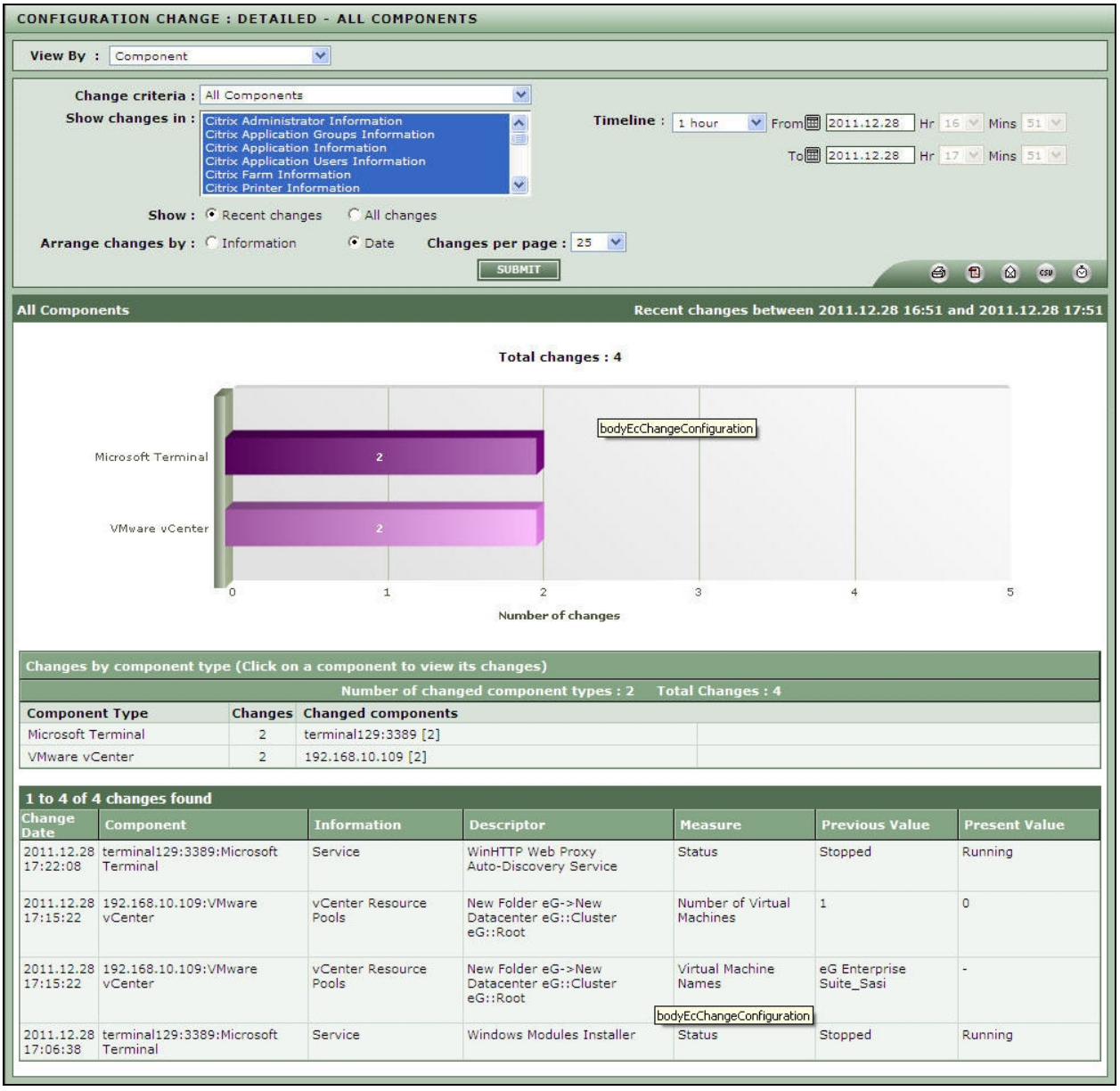


Figure 4.6: Viewing configuration changes across the components

8. A graph depicting the top-5 (by default) component-types, which have undergone the maximum number of changes during the specified timeline and a table listing the component types with its respective components that were effected with configuration changes for the chosen time period.

Clicking on any of the listed components, will take you to a page, which specifically depicts with a graph and a table listing the configuration changes that were effected for the chosen component alone.

9. Besides, it also provides a table in the **CONFIGURATION CHANGE : DETAILED** page, which concisely explain the configuration changes that were effected across the environment for which the output of the table is displayed according to the option chosen from the **Arrange changes by** field.

   In this page you will find the following sections:

   - a **Changes by component-type** section that simply lists all the changed component-types, the changed components per type, and the number of changes made per component; clicking on a component here will lead you to a page that provides detailed change information pertaining to that component, in a graphical and a tabular format;
   - a separate section for each of the changed components; this section will provide a graph revealing the top-5 configuration parameters of that component, in terms of the number of changes effected on them during the defined timeline; this will be followed by a series of tables - one each for every changed configuration parameter - that reveals the **Descriptor** that has changed, the **Measure** for which the value changed, the **Previous Value** of the measure, the **Present Value** of the measure, and the **Change Date**.

   Note:
   By default, all the graphs displayed in this page reveal the top-5 components / component-types / configuration parameters (as the case may be), in terms of the number of changes that were effected on them during the given timeline. If need be, you can override this default setting so that, the graph reveals more or less number of elements - for instance, you can configure the graph to display the top-10 components / component-types / configuration parameters, instead of top-5. To achieve this, do the following:

   - Edit the **eg_configtests.ini** file in the {EG_INSTALL_DIR}\manager\config directory.
   - In the **[CONFIGURATION_CHANGE]** section of this file, change the default value of the **TopN** parameter to reflect any value of your preference; in the case of the above example, change the default value '5' to '10'.
   - Finally, save the file.

Chapter 5: Comparison

5.1 Comparison - By Component Type

Sometimes, in the real world, you will find that while one component of a particular type is performing well, sporadic/consistent slowdowns are observed in another component of the same type. Such discrepancies, may not always be owing to common factors such as an overload or a resource contention on the problem component; sometimes, even an improper configuration could lead to performance anomalies - for instance, if one component has been configured with a processor that is more powerful than that of another component, a difference in performance is bound to creep in. To diagnose the root cause of such performance issues, you should typically compare the configuration of the problem component with that of the healthy component. To facilitate such a comparison, the eG Configuration Management console provides the **CONFIGURATION COMPARISON** page. This page allows you to instantly compare the configuration of a component, typically a 'model' component, with that of other components of the same type so that, dissimilar components can be isolated, and the differences in configuration highlighted. This way, you can quickly get to the source of the performance problems experienced by a component.

This page can be accessed by clicking on the **Comparison** menu option.

To compare the configuration of components, do the following:

1. Select a component type from the **Component Type** list box as depicted in Figure 5.1.
2. All the configuration parameters that correspond to the chosen type will then populate the **Information** list box. To compare the value of a particular parameter across components, select that parameter alone from the **Information** list box; to compare the complete configuration of a component with that of the others, select all the options listed in the **Information** text box. By default, all options will be selected from this list box.
3. Next, select a reference component from the **Reference Component** list box as depicted in Figure 5.1; the configuration of this component will be compared with that of one/more other components of the chosen type.
4. All other components of the chosen type will then be listed in the **Other Components** list. From this list, pick the components to be compared with the reference component.
5. Then, click the **SUBMIT** button (see Figure 5.1).

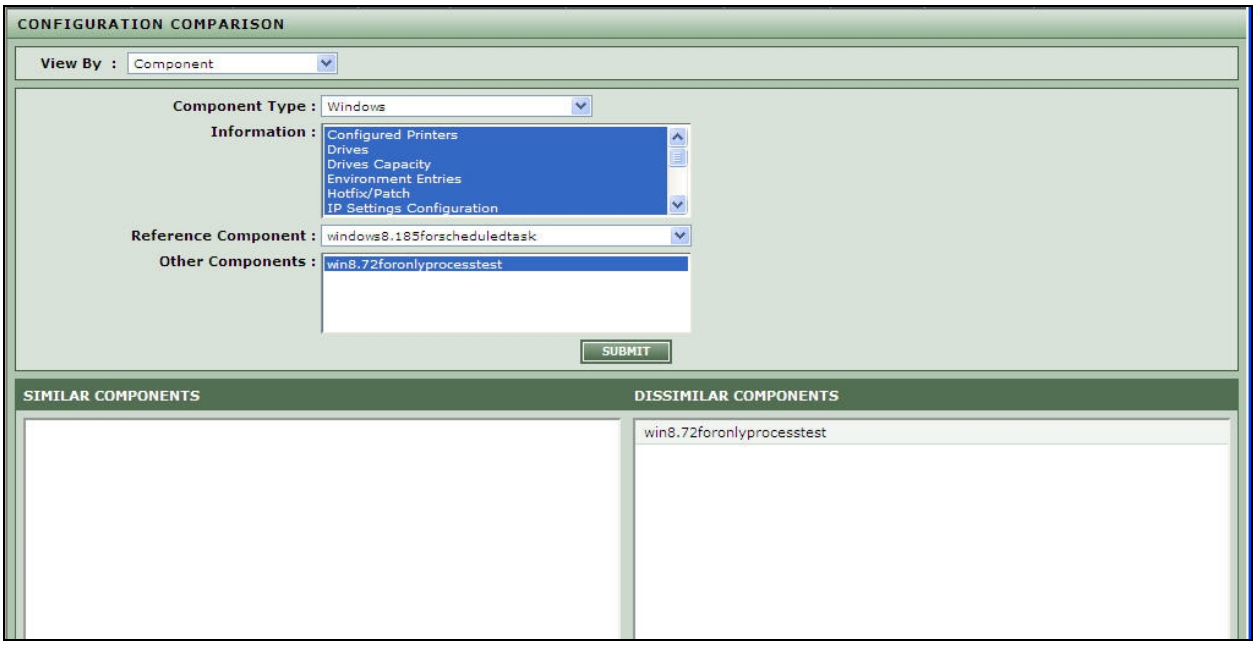


Figure 5.1: Selecting reference component to which it has to be compared

6. This will invoke a table comprising of a **SIMILAR COMPONENTS** column and a **DISSIMILAR COMPONENTS** column. While the **SIMILAR COMPONENTS** column will display the list of components that are similar in configuration to the reference component, **DISSIMILAR COMPONENTS** column will display those components (of the chosen type) that are dissimilar to the reference component, in terms of configuration. Also, alongside each component in the **DISSIMILAR COMPONENTS** column, the number of differences noticed in configuration will also be indicated, within brackets.

7. Clicking on any component listed in the **DISSIMILAR COMPONENTS** column, will take you to the **COMPARISON OF CURRENT CONFIGURATION BETWEEN COMPONENTS** page as depicted in Figure 5.2.

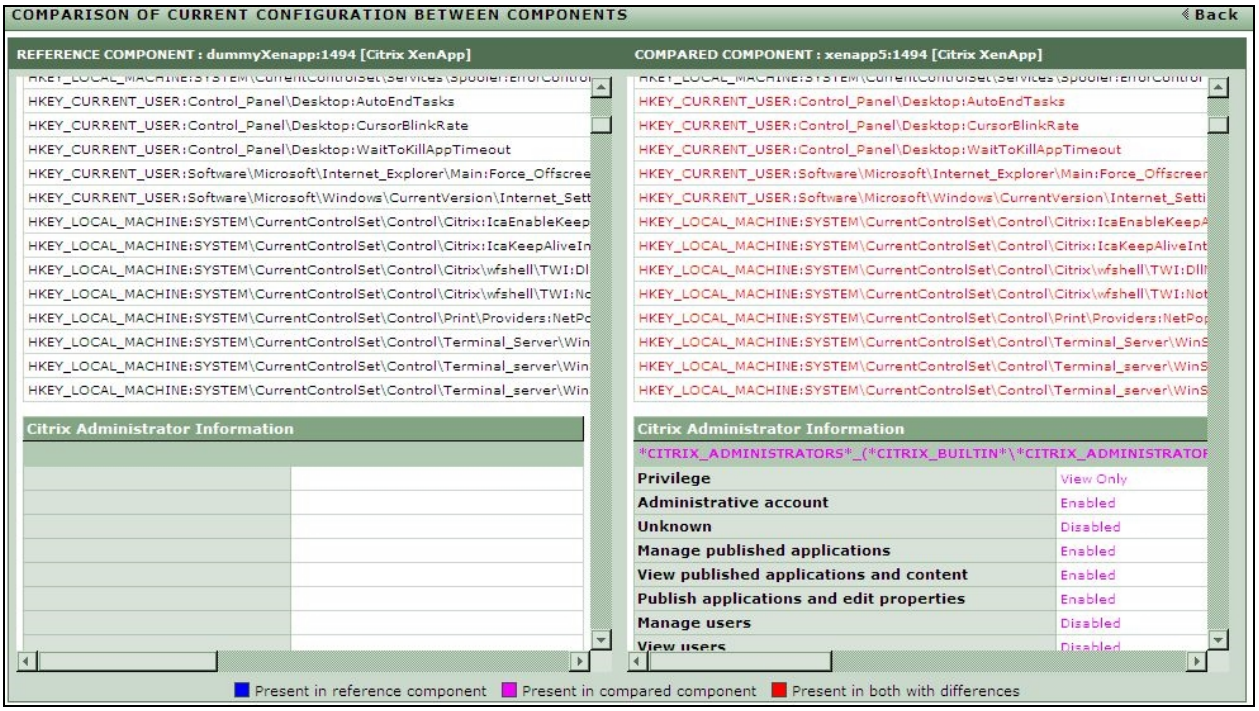


Figure 5.2: Comparing the current configuration between components

8. Using this page you can easily compare the values of each chosen **Information** between the reference component and the component clicked on. To enable you to accurately identify the discrepancies in configuration between the components in question, the following color coding is used across this module:

    - **Black**: If the configuration parameters and their values are provided in the color Black, it denotes that no dissimilarities exist between the reference component and the other component.
    - **Blue**: Values displayed in blue indicate those configuration entries that are available in the reference component, but not in the other component.
    - **Pink**: Values displayed in pink indicate those configuration entries that are not available in the reference component, but exist in the other component.
    - **Red** : Text in red are indicative of configuration parameters that exist in both the components, but the values of which have changed in one of the components.

    Note:

    You can also configure the tests/measures that you want to exclude from the purview of the comparison. For this, follow the steps given below:

1. Edit the **eg_configtests.ini** file in the **<eg_install_dir>\manager\config** directory.
2. In the **[exclude_test_measures]** section of the file, you can configure entries of the following format to indicate which measures need to be excluded from the comparison:

   TestName=<Comma-separated list of measures>

3. Finally, save the file.

5.2 Comparison - By Measure

Though eG Enterprise is capable of comparing a component to figure out which configuration change really impacted the performance of the component, the exact measure that caused down slide of the performance and the exact time during which the performance impact started could not be figured out at a single glance. To address this issue, the **COMPARE MEASURE CONFIGURATION** page is introduced in the eG Configuration management module. Using this page, the two most recent configuration snapshots of a component in a given period of time is taken and the config details are compared side-by-side and line-by-line.

This page can be accessed by using the *Configuration -> Compare -> Measure Configuration* menu sequence.

To compare the configuration of measures, do the following:

1. Select a component type from the **Component Type** list box as depicted in Figure 5.3.
2. All the components corresponding to the chosen Component Type will be listed in the Component list. Pick a component from this list.
3. All the configuration parameters that correspond to the chosen component will then be populated in the **Information** list box. To compare the value of a particular parameter across components, select that parameter alone from the **Information** list box; to compare the complete configuration of a component with that of the others, select all the options listed in the **Information** text box.
4. Next, select a measure from the **Measure** list box as depicted in Figure 5.3; the current configuration of this measure will be compared with that of the last known configuration.
5. Next, choose a **Timeline** during which the configuration should be compared.
6. Then, click the **SUBMIT** button (see Figure 5.3).

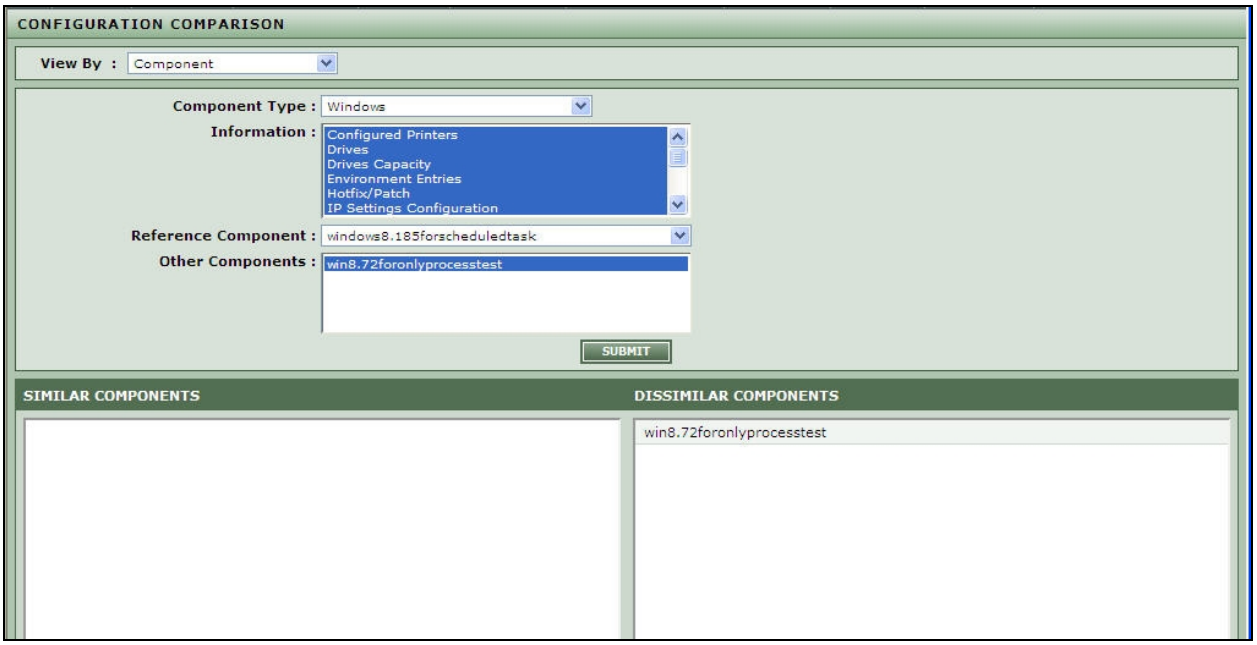


Figure 5.3: Selecting the measure for which configuration is to be compared

7. This will invoke a **Previous Value** column and a **Present Value** column using which the values of the measure can be compared easily and the discrepancies in the measure can be identified at ease!

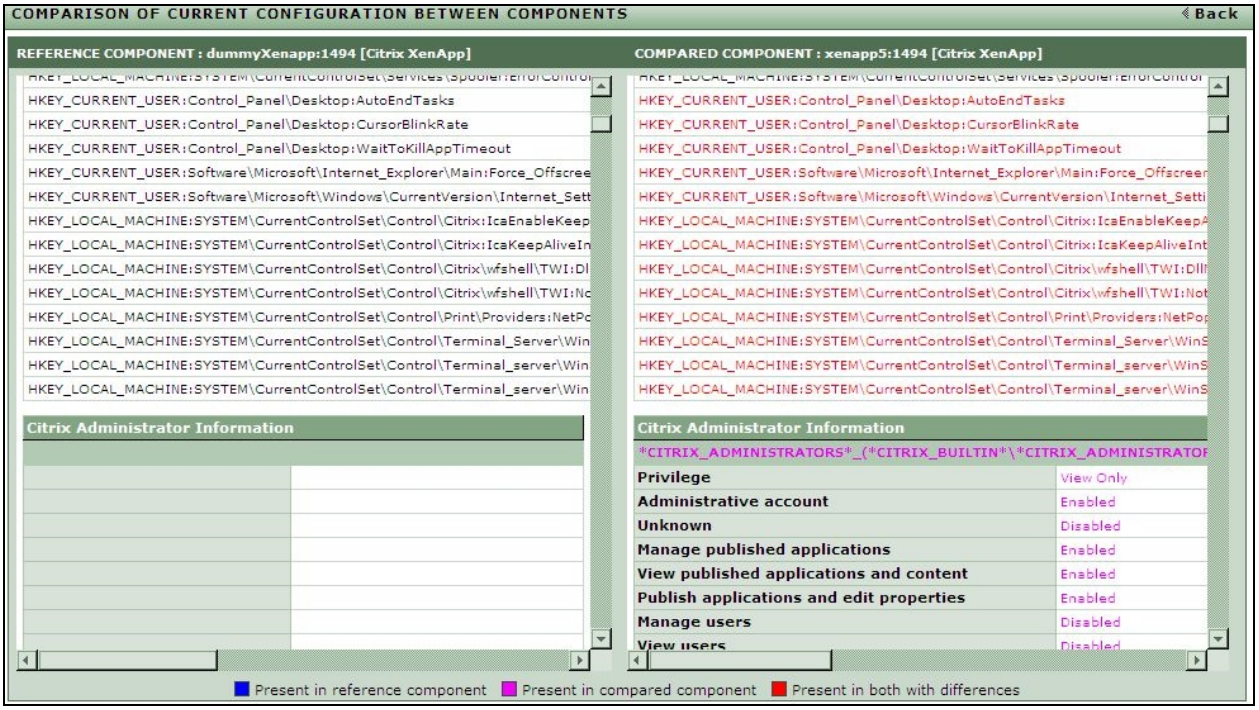


Figure 5.4: Comparing the current configuration of the measure with the last known configuration

8. The following color coding is used across this module to pinpoint the differences:

    - **Black**: If the configuration parameters and their values are provided in the color Black, it denotes that no dissimilarities exist between the current configuration and the previous configuration of the measure.
    - **Blue**: Values displayed in blue indicate those configuration entries that are available in the previous configuration, but not in the current configuration.
    - **Pink**: Values displayed in pink indicate those configuration entries that are not available in the previous configuration, but exist in the current configuration.
    - **Red** : Text in red are indicative of configuration parameters that exist in both the configurations, but the values have changed in one of the configuration.

5.3 Comparison - By Files

By default, in the real world, changes to the configuration of a component are stored in text files or XML files from time to time. If in any case, the performance of the component takes a plunge, then, administrators should figure out what exactly caused performance degradation of the component and when exactly the degradation started? To analyze this issue, it is essential for the administrators to compare the configuration files of the component before and after the performance issue was noticed. To facilitate such a comparison, the eG Configuration Management console provides the **COMPARE FILES** page.

This page allows you to instantly compare the configuration of a component, typically the file that was stored for the component before a configuration change and the file that was stored after the configuration change. This way, the differences in configuration can be highlighted and the problematic configuration can be isolated and the source of the performance degradation be detected at the earliest.

This page can be accessed by clicking on the menu sequence: *Configuration -> Compare -> Files*.

To compare the configuration of files, do the following:

1. Select a **Base File** (reference file) that is used to compare the current configuration change using the **Browse** button as shown in Figure 5.5.
2. Next, select the file that should be compared using the **Browse** button against the **New File**.
3. Then, click the **Diff** button (see Figure 5.5).

Figure 5.5: Selecting reference file to which the new file with changes has to be compared

4. This will invoke a table comprising of two columns - the first column is your reference file and the second column is your new file.

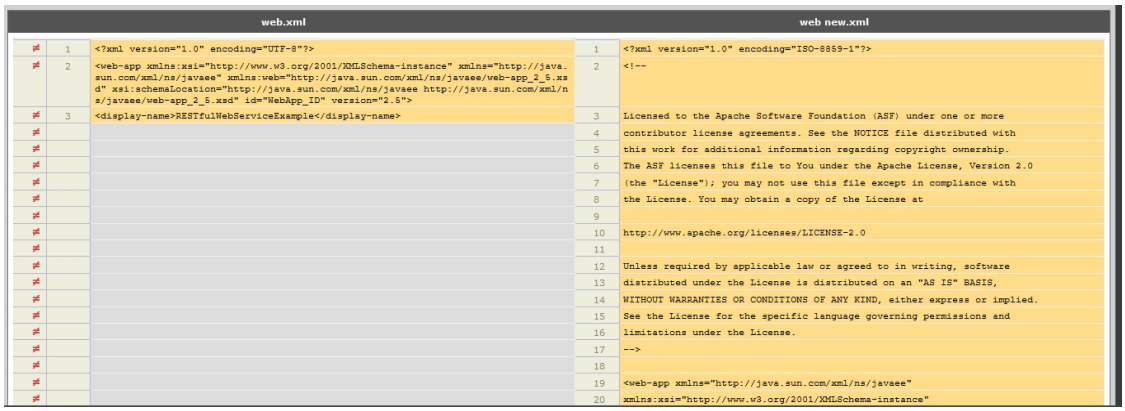


Figure 5.6: Comparing the files

5. Using this page you can easily compare the values of each information between the reference file and the file that is to be compared.

   To enable you to accurately identify the discrepancies in configuration between the components in question, the following color coding is used across this module:

   - **Black**: If the configuration parameters and their values are provided in the color Black, it denotes that no dissimilarities exist between the files in comparison.
   - **Blue**: Values displayed in blue indicate those configuration entries that are available in the base file, but not in the file after configuration change.
   - **Pink**: Values displayed in pink indicate those configuration entries that are not available in the base file, but exist in the new file.
   - **Red**: Text in red are indicative of configuration parameters that exist in both the files, but the values of which have changed in one of the files.

Chapter 6: Consolidated View

In order to identify the component that meets a specific configuration requirement, administrators of IT environments often have to manually check the configuration of each system in their environment. For instance, if administrators need a Windows 2000 server with service pack 2, deployed on it for the purpose of installing a specific software, then, they will have to manually verify the OS details of each server in the environment, to identify the server that is ideal for the installation. In large IT environments, this could prove to be a herculean task. Therefore, to ease the pain of such administrators, the eG Configuration Management console offers the **CONSOLIDATED VIEW** page. This page serves as a central interface, in which specific configuration details collated from multiple components (of a type) are published, so that administrators can quickly compare the displayed information across components, and can thus identify the components that meet their requirements.

This page can be accessed by clicking on the **Consolidated View** menu option.

To view the consolidated configuration information related to multiple components of a type, do the following:

1. Select a component type from the **Component Type** list box as depicted in Figure 6.1.
2. Doing so, will list all the components of the chosen type in the **Components** list box. All components will be selected from this list box by default. If requred, you can select one/more components.
3. All the configuration parameters that are supported by the components of the chosen type, will then be displayed in the **Report Type** drop-down list. From this list, pick the configuration parameter that is to be compared across the chosen components.
4. If the chosen parameter supports descriptors, then, you can comparatively analyze configuration across descriptors as well, by picking two/more descriptors from the **Descriptors** list.
5. Finally, click the **SUBMIT** button (see Figure 6.1).

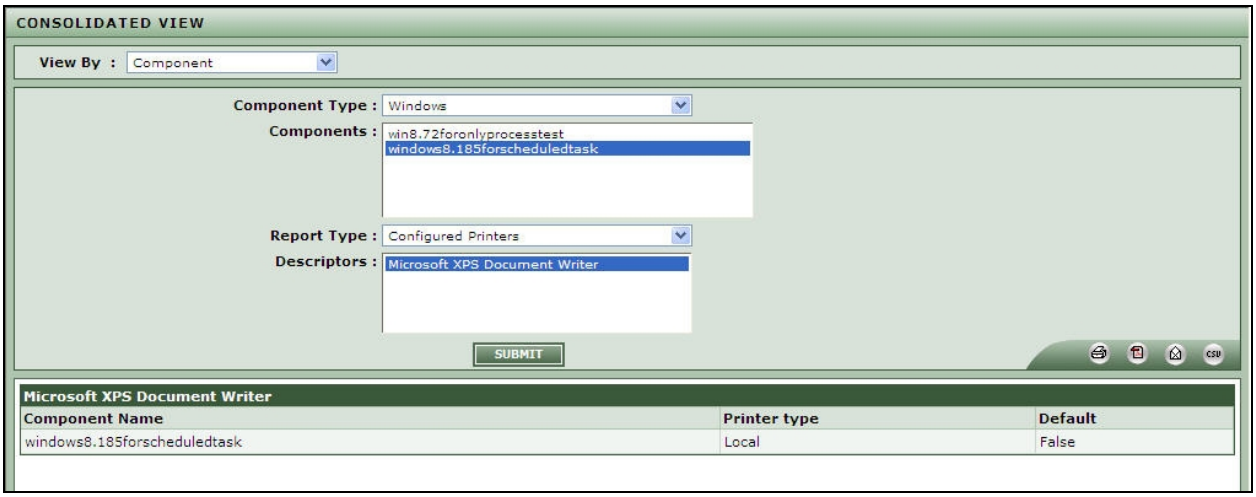


Figure 6.1: Viewing consolidated reports of a specific component type

6. This will invoke a table that is split into multiple sections - one each for every descriptor chosen. For each descriptor of every selected component, the values reported by the chosen configuration parameter will be displayed, so as to facilitate an effective comparison.

Chapter 7: Settings

7.1 Settings for Dashboard

7.1.1 Dashboard settings: Other Panels

This page enables you to customize the Configuration Management Dashboard according to your preferences.

This page can be accessed by following the menu sequence: *Settings->Dashboard->Other Panels.*

To customize the dashboard, do the following:

1. By default, the dashboard provides you with an overview of the software, service, hotfix, and operating system configuration of the managed components in the target environment, and also provides a quick summary of the configuration changes that were effected on these components in the recent past. Owing to this component-focus, the **Component** option is chosen by default from the **View By** list in the dashboard as depicted in Figure 7.1. You can override this default behavior by selecting a different **View By** option from this page.
2. In the **Machines** section of the home page, the **By OS** option is chosen by default from the drop-down list, indicating that, by default, the **Machines** section reveals how machines are distributed across the environment based on operating system. To ensure that the **Machines** section in the home page depicts machine distribution based on the OS version by default, select the **By OS Version** option from the **Machine Distribution** section in this page.
3. By default, the home page indicates the **Top-5 Software** in the environment, in terms of the number of installs. This display is governed by the **Availability status** flag in this page; this flag is by default set to **Show** the availability status of the **Top-5 Software** only. To override this default setting, select a different Top-N option from the **Show** list in the **Availability status** section, and then pick the **Software**,**Services**, or **Hotfixes** option from the drop-down list next to it.
4. By default, the home page displays the **Daywise Change Distribution** for the last 1 day only. This is because, the **Daywise Change Distribution** flag in this page is set to **1 day** by default. To override this default setting, pick a different option from the **Daywise Change Distribution** list in this page.
5. To override the default duration for the **Changes At-A-Glance** section of the dashboard, select the desired option from the **Changes At-A-Glance** list in this page.

6. To change the default duration for the **Change Summary** section of the home page, select the desired option from the **Change Summary** list in this page.
7. You can personalize your dashboard further by picking a color of your choice for the bar graphs, that are displayed in the **Daywise Change Distribution** section of the dashboard. For this, select the color from the **Bar Chart Color** list box. If your choice of color is not available in this list box, you can specify a color code in the text box which is provided followed by #. To specify the code, make sure the **Other** option is selected from the **Bar Chart Color** list box. Clicking on the **View** button will allow you to view the color that you have chosen, or the color that corresponds to the code you have specified.
8. Finally, click the **UPDATE** button to implement the changes (see Figure 7.1).

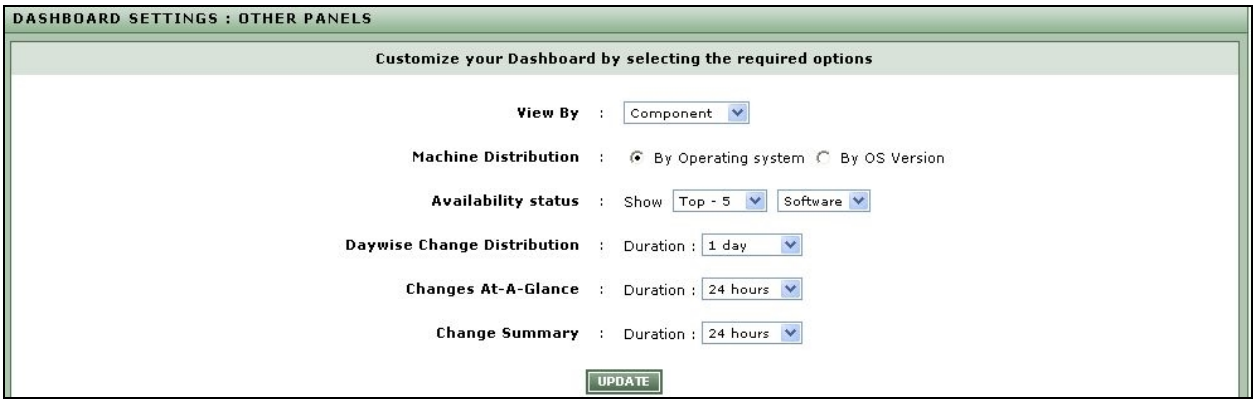


Figure 7.1: Customizing the dashboard

7.2 Configuring Display settings

This page, which can be accessed by following the menu sequence *Settings->Display*, allows you to override the settings that govern the default behavior of certain key aspects of the Configuration Management module. The settings that can be defined using this page are as follows:

1. To set the color for the bar chart across the configuration management console, select the desired color from the **Bar chart** color list box. If you choose the **Other** option from the **Bar chart** color, specify the code of the color in the text box provided next to the **Color Code** and view the color of the specified code by clicking on the **View** button provided next to the text box. By default **Other** option will be selected from this list box as depicted in Figure 7.2.
2. To set which page in the eG Configuration Management console should open first when he/she logs in, select an appropriate option from the **Homepage** list.

3. To set the default operating system for the **Service Status** section of the dashboard and for the exclusive **Service Status** page offered by the eG Configuration Management module, select an OS of your choice from the **Operating System for Service status page** list in this page.
4. To set the default operating system for the **Top-N softwares/services/hotfixes** section of the dashboard, and for the Software/Service/Hotfix Availability pages provided by the eG Configuration Management console, select an option from the **Operating System for Software/Service/Hotfix availability page** list box.
5. Finally, click the **UPDATE** button to implement the changes (see Figure 7.2).

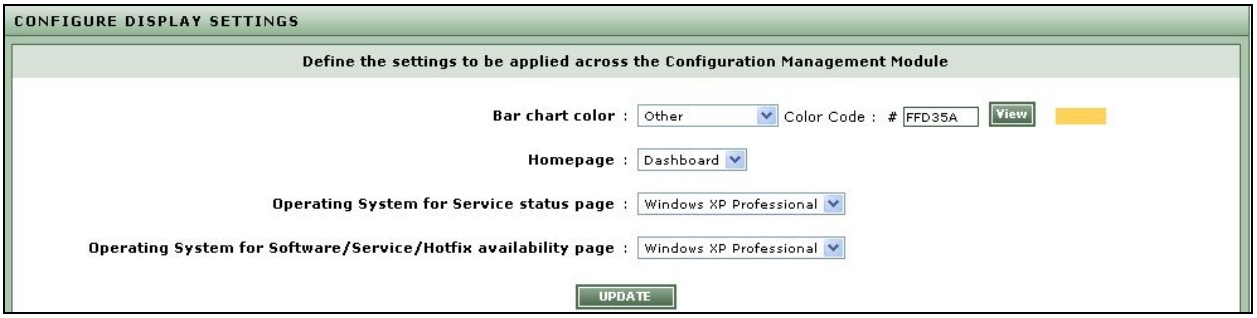


Figure 7.2: Configuring the display settings