Monitoring Endeca Search

eG Innovations Product Documentation

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Total Performance Visibility

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Chapter 1: Introduction

Search is how people expect to find information, but enterprise search tools require different technology than the Web. Enterprise Search includes all the methods people employ for finding information, including navigation, analytics, visualizations, and text mining.

Search Applications built on the **Endeca Information Access Platform** (IAP) are designed specifically for enterprise requirements. They are different than one-size-fits-all approaches. Instead, they let IT departments partner with the business to tailor an experience to a specific set of user goals and data. They feature a unique interplay of search and browse, relevance-ranked results, guidance through those results, and business rules to control results.

The effectiveness of a search engine is typically measured by its speed - i.e., how quickly the search application executes the search queries and returns the output. Frequent slowdowns experienced by an enterprise search application can significantly delay even routine business transactions, thus causing users to lose faith in the capability of the application and compelling them to use it less and less. Therefore, it is imperative that the application should be continuously monitored to track performance lag, if any and ensure high speed business transactions. eG Enterprise lends helping hands to administrators in achieving this task.

Chapter 2: How to Monitor Endeca Search Server Using eG Enterprise?

eG Enterprise monitors the Endeca Serach server in an agent-based manner. All that is required is a single eG agent be deployed on the target host. To start monitoring the server, first you have to add the server for monitoring using the eG admin interface. The procedure to achieve this is explained in the following section.

2.1 Managing the Endeca Search

The eG Enterprise cannot automatically discover the Endeca Search server. This implies that you need to manually add the component for monitoring. Remember that the eG Enterprise automatically manages the components that are added manually. To manage a Endeca Search server, do the following:

1. Log into the eG administrative interface.
2. Follow the Components -> Add/Modify menu sequence in the **Infrastructure** tile of the **Admin** menu.
3. In the **COMPONENT** page that appears next, select *Endeca Search* as the **Component type**. Then, click the **Add New Component** button. This will invoke Figure 2.1.

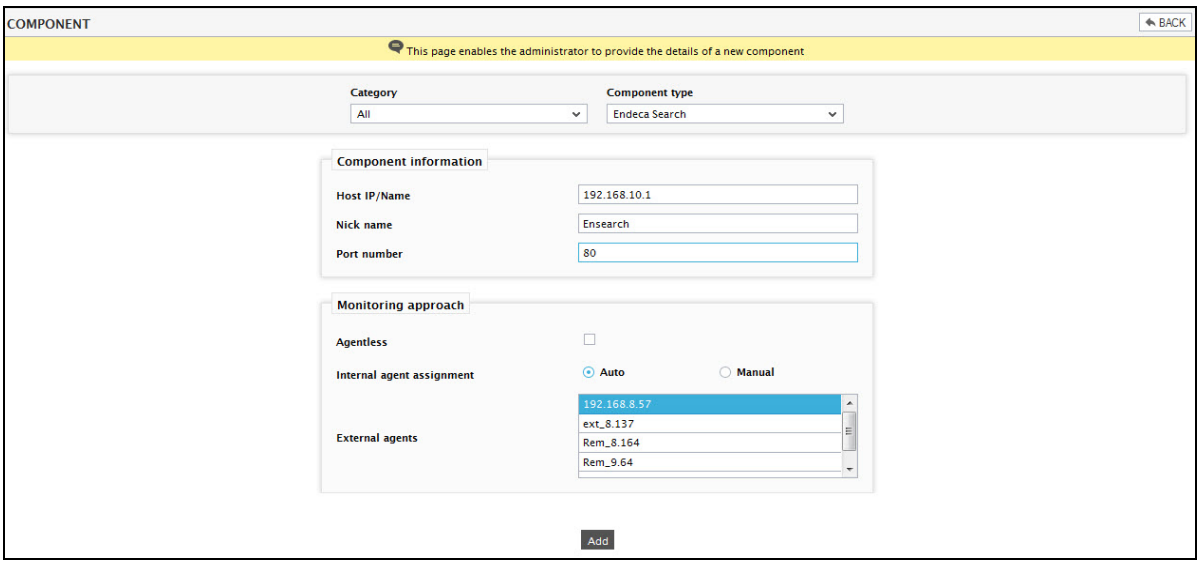

Figure 2.1: Adding an Endeca Search server

4. Specify the **Host IP/Name** and the **Nick name** of the Endeca Search server in Figure 2.1. Then, click the **Add** button to register the changes.
5. When you attempt to sign out, a list of unconfigured tests appears.

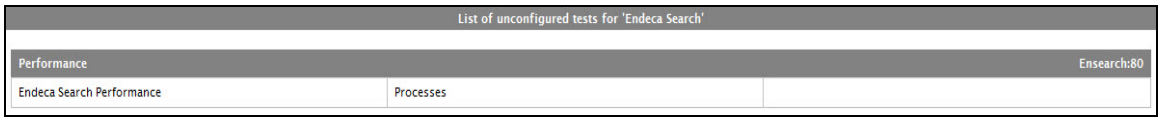

Figure 2.2: List of Unconfigured tests to be configured for the Endeca Search server

6. Click on the **Endeca Search Performance** test to configure it. In the page that appears, specify the parameters as shown in Figure 2.3.

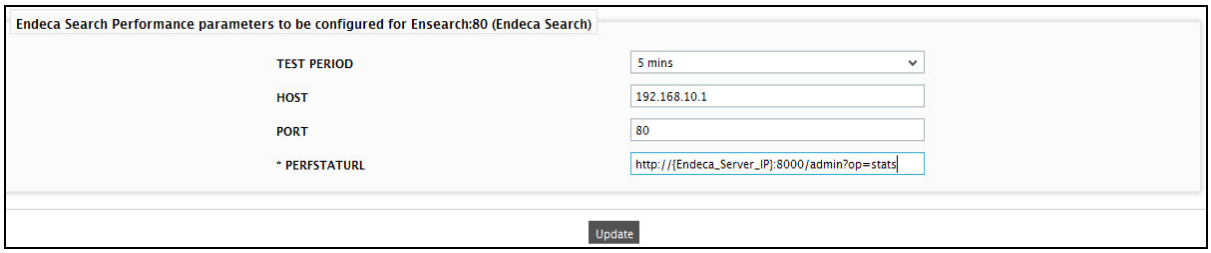

Figure 2.3: Configuring the Endeca Search Performance test

7. To know how to configure parameters, refer to **Monitoring Endeca Search**.
8. Next, try to signout of the eG administrative interface, now you will be prompted to configure the **Processes** test. To know details on configuring this test, refer to *Monitoring Unix and Windows Servers* document.
9. Finally, signout of the eG administrative interface.

Chapter 3: Monitoring Endeca Search

To make sure that the Endeca search application performs at peak capacity at all times, eG Enterprise provides a dedicated Endeca Search monitoring model.

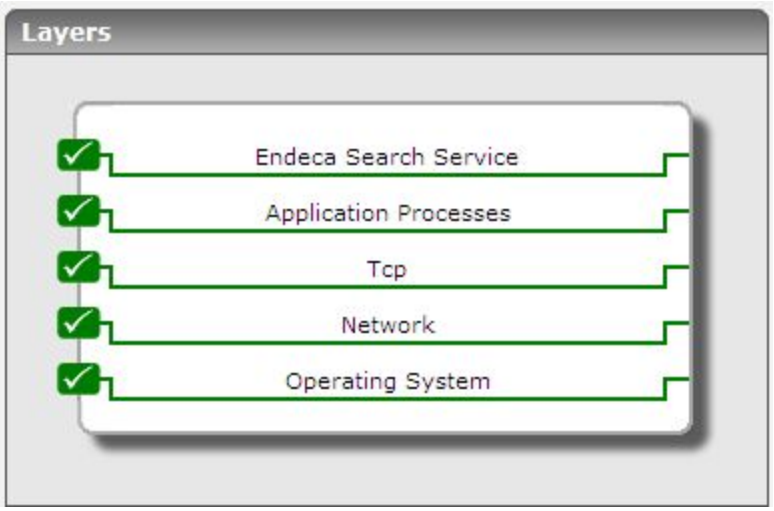

Figure 3.1: Layer model of the Endeca Search application

While the bottom 4 layers the of layer model report on the health of the operating system on which the Endeca search application executes, the topmost layer focuses on the speed and efficiency of the search application in its entirety. This document will discuss the **Endeca Search Service** layer only.

3.1 The Endeca Search Service Layer

This layer monitors the performance of the Endeca Search application, and reports bottlenecks (if any) in query processing

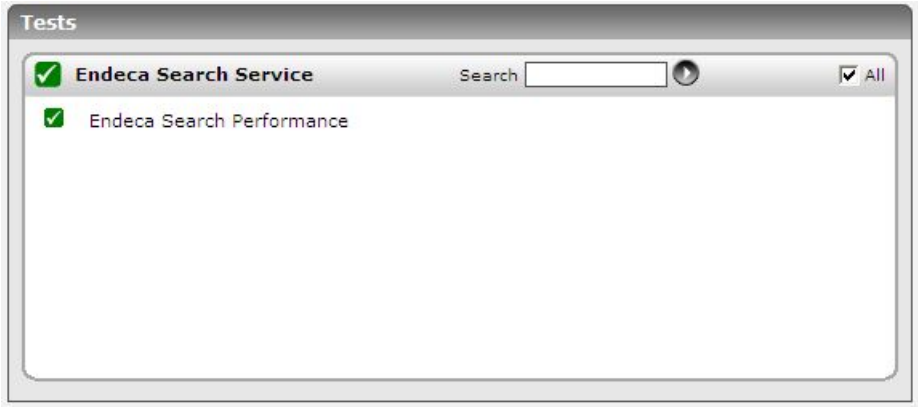

Figure 3.2: The test mapped to the Endeca Search Service layer

3.1.1 Endeca Search Performance Test

This test monitors the request servicing capacity of the Endeca Navigation Engine, and reveals how well the engine is able to service search queries.

Target of the test : An Endeca Search Application

Agent deploying the test : An internal agent

Outputs of the test : One set of results the Endeca search application being monitored.

Configurable parameters for the test

Parameter	Description
Test period	How often should the test be executed
Host	The IP address of the host for which this test is to be configured.
Port	The port at which the specified host listens to.
PerfStatURL	Specify the URL to access the **Endeca performance status** page from which this test will be collecting the required statistics. The default URL will be in the format: *http://{Endeca_Server_IP}:8000/admin?op=stats*

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
Throughput	Indicates the number of search requests	Number	A high value is desired for this measure.

Measurement	Description	Measurement Unit	Interpretation
	successfully completed by the Endeca search engine.		
Queue length - Avg	Indicates the average number of search queries waiting in the queue to be processed by the Endeca.	Number	Ideally, this value of this measure should be low. A high value could indicate a processing bottleneck on the server.
Threads busy - Avg	Indicates the average number of threads that are busy processing search queries.	Number	This measure is a good indicator of the workload on the server.
Total processing time - Avg	Indicates the average time taken by the Endeca to process the search queries.	Ms	Ideally, the value of this measure should be low. A high value indicates that the engine is taking too long a time to process the search queries. Further investigation is required to isolate the root-cause of the processing bottleneck.
Time in queue	Indicates the average time that search queries spent in the queue before being processed by the Endeca server.	Ms	Ideally, the value of this measure should be low. A high value indicates that requests are being processed too slowly by the server, thus forcing requests to remain in the queue for too long a time. The bottleneck should be identified quickly and cleared.
Time in dgraph	Indicates the average time that queries spent in the dgraph.	Ms	
Time sending data	Indicates the average time spent by the Endeca in sending the result data.	Ms	Whenever a slowdown is noticed in the Endeca, you may want to compare the value of the Time_in_dgraph_avg measure with that of this measure to determine where exactly the query spent too much time - in the dgraph? or in sending the result set?
Records in results - Avg	Indicates the average number of records found in the result set of search	Number	

Measurement	Description	Measurement Unit	Interpretation
	query responses		
Response size - Avg	Indicates the average size of query response data.		

About eG Innovations

eG Innovations provides intelligent performance management solutions that automate and dramatically accelerate the discovery, diagnosis, and resolution of IT performance issues in on-premises, cloud and hybrid environments. Where traditional monitoring tools often fail to provide insight into the performance drivers of business services and user experience, eG Innovations provides total performance visibility across every layer and every tier of the IT infrastructure that supports the business service chain. From desktops to applications, from servers to network and storage, from virtualization to cloud, eG Innovations helps companies proactively discover, instantly diagnose, and rapidly resolve even the most challenging performance and user experience issues.

eG Innovations is dedicated to helping businesses across the globe transform IT service delivery into a competitive advantage and a center for productivity, growth and profit. Many of the world's largest businesses use eG Enterprise to enhance IT service performance, increase operational efficiency, ensure IT effectiveness and deliver on the ROI promise of transformational IT investments across physical, virtual and cloud environments.

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