



## ***Monitoring Endeca Search***

***eG Enterprise v6***

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# Chapter

# 1

# Monitoring Endeca Search

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.

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

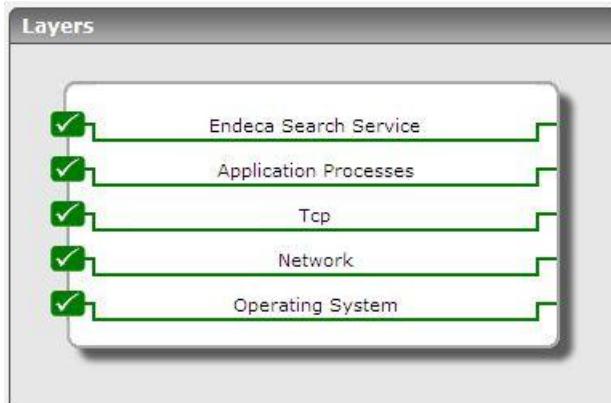


Figure 1.1: Layer model of the Endeca Search application

While the bottom 4 layers of Figure 1.1 report on the health of the operating system on which the Endeca search application executes, the topmost layer of Figure 1.1 focuses on the speed and efficiency of the search application in its entirety. This document will discuss the **Endeca Search Service** layer only.

## 1.1 The Endeca Search Service Layer

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

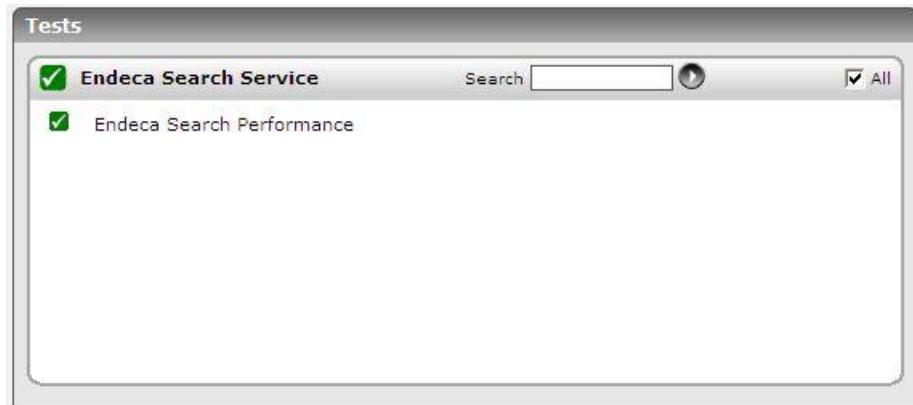


Figure 1.2 : The test mapped to the Endeca Search Service layer

### 1.1.1 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.

Purpose	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	Endeca Search Application			
Agent deploying the test	An internal agent			
Configurable parameters for the test	<ol style="list-style-type: none"> <li><b>TEST PERIOD</b> - How often should the test be executed</li> <li><b>Host</b> - The host for which the test is to be configured</li> <li><b>port</b> - The port at which the <b>host</b> listens</li> <li><b>perfstaturl</b> - 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: <i>http://{Endeca_Server_IP}:8000/admin?op=stats</i></li> </ol>			
Outputs of the test	One set of results the Endeca search application being monitored			
Measurements made by the	<table border="1"> <thead> <tr> <th>Measurement</th> <th>Measurement Unit</th> <th>Interpretation</th> </tr> </thead> </table>	Measurement	Measurement Unit	Interpretation
Measurement	Measurement Unit	Interpretation		

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test	<b>Throughput:</b> Indicates the number of search requests successfully completed by the Endeca search engine.	Number	A high value is desired for this measure.
	<b>Queue length - Avg:</b> 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.
	<b>Threads busy - Avg:</b> 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.
	<b>Total processing time - Avg:</b> 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.
	<b>Time in queue:</b> 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.
	<b>Time in dgraph:</b> Indicates the average time that queries spent in the dgraph.	Ms	
	<b>Time sending data:</b> 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 <i>Time_in_dgraph_avg</i> 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?

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	<b>Records in results - Avg:</b> Indicaes the average number of records found in the resultset of search query responses	Number	
	<b>Response size - Avg:</b> Indicates the average size of query response datas		

# Chapter

# 2

## Conclusion

This document has described in detail the monitoring paradigm used and the measurement capabilities of the eG Enterprise suite of products with respect to the **Endeca Search Application**. For details of how to administer and use the eG Enterprise suite of products, refer to the user manuals.

We will be adding new measurement capabilities into the future versions of the eG Enterprise suite. If you can identify new capabilities that you would like us to incorporate in the eG Enterprise suite of products, please contact [support@eginnovations.com](mailto:support@eginnovations.com). We look forward to your support and cooperation. Any feedback regarding this manual or any other aspects of the eG Enterprise suite can be forwarded to [feedback@eginnovations.com](mailto:feedback@eginnovations.com).