Monitoring Adobe ColdFusion

eG Innovations Product Documentation

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Total Performance Visibility

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Chapter 1: Introduction

Adobe ColdFusion is an application server and software development framework used for the development of computer software in general. This application server is most often used for data-driven web sites or intranets, and can also be used to generate remote services such as SOAP web services or Flash remoting. Error-free functioning of the ColdFusion server is therefore a key requirement for the continuous availability of these critical end-user services. To ensure that the ColdFusion is always accessible and is performing to peak capacity, it is necessary to constantly watch over the performance of the server, spot error conditions before they actually occur, and resolve the errors with immediate effect.

eG Enterprise offers specialized monitoring model for each of the most popular Adobe ColdFusion. A plethora of metrics relating to the health of the application server can be monitored in real-time and alerts can be generated based on user-defined thresholds or auto-computed baselines. These metrics enable administrators to quickly and accurately determine server availability and responsiveness, resource usage at the host-level and at the application server level, how well the application server processes requests, how quickly the server completes transactions, overall server security, etc.

This document engages you in an elaborate discussion on how eG Enterprise monitors the ColdFusion server.

Chapter 2: How to Monitor Adobe ColdFusion Application Server Using eG Enterprise?

eG Enterprise is capable of monitoring the Adobe ColdFusion server in both agent-based and agentless manners. To enable the eG agent to connect to the ColdFusion server and collect metrics pertaining to its performance, first you have to configure the Adobe ColdFusion Server to work with the eG Agent. The procedure for achieving this has been explained in the following sections.

2.1 Configuring the Adobe ColdFusion Server on Windows Environments

To monitor the Adobe ColdFusion using eG enterprise suite, you need to configure it during the modification of the eG agent.

1. On a Windows server, during eG agent modification, click on **Yes** in the message box shown below to commence configuration of the Adobe ColdFusion.

Figure 2.1: A message box requesting your confirmation to monitor Adobe ColdFusion servers

2. Typically, a ColdFusion server acts as the middle tier for a front end web server. To monitor a Adobe ColdFusion server, the eG agent must be provided with the root sub directory of the web

server that is used in conjunction with the Adobe ColdFusion server.

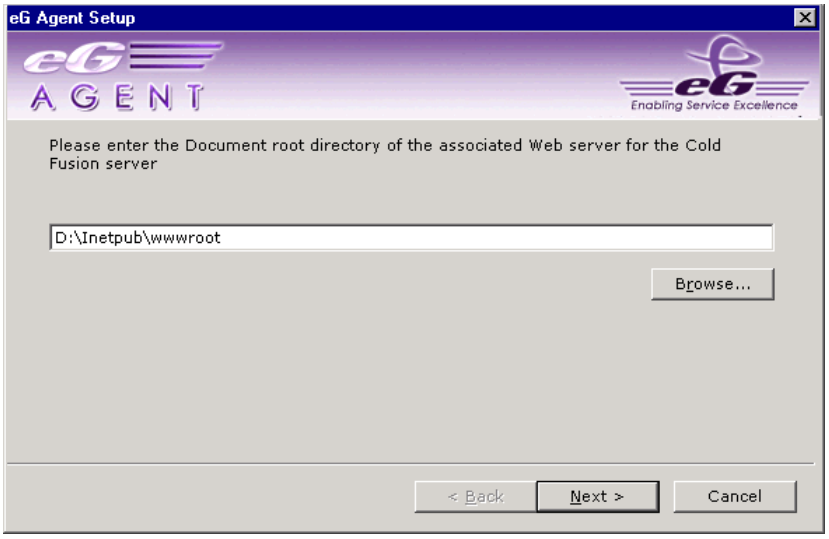

Figure 2.2: Specifying the root directory of the web server that works in conjunction with the Adobe ColdFusion server

2.2 Configuring the Adobe ColdFusion Server on Unix Environments

To manually configure the Adobe ColdFusion server, do the following:

1. Execute the following command

   /opt/egurkha/bin/setup_cf

   The *setup_agent* script executes this command automatically.

2. Then, decide if you want to configure an agent to monitor a ColdFusion server. The default is **y**.
3. Next, the user needs to enter the document root of the web server with which the ColdFusion server is associated.
4. Next, the configuration process prompts the user to determine if the user is the administrator of the web server that is to be used for monitoring by the eG Enterprise suite. If the user is not the web server administrator, the configuration process prompts the user for the web server administrator's login name and password.
5. The following message comes up upon the termination of the configuration process.

```
**********************************************************************
If there were any errors in the above steps, you may not have
```

```
permissions to update the files in the web server's document root.
Please have the web server's administrator execute
this script, namely /opt/egurkha/bin/setup_cf  to configure
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If an eG agent has already been installed, and at a later time you need to configure a ColdFusion server for monitoring, refer to This section describes how to configuring an Adobe ColdFusion Server to work with the eG Agent for further details.

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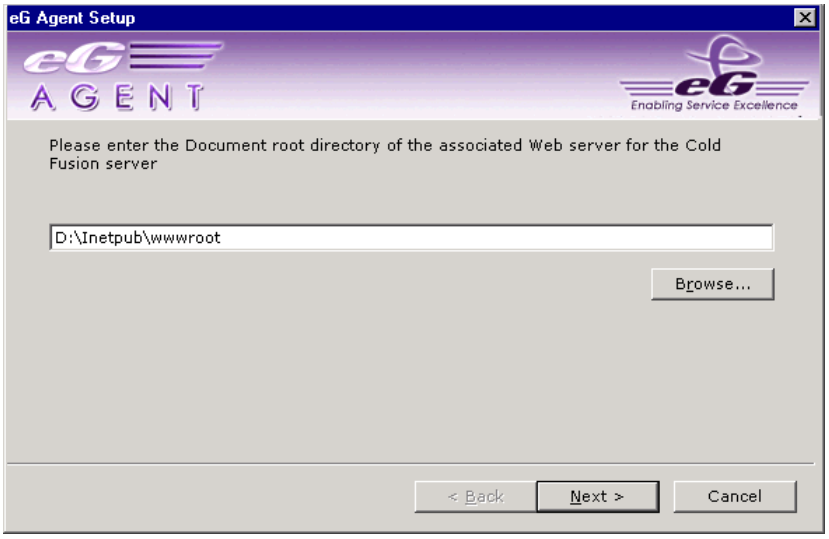

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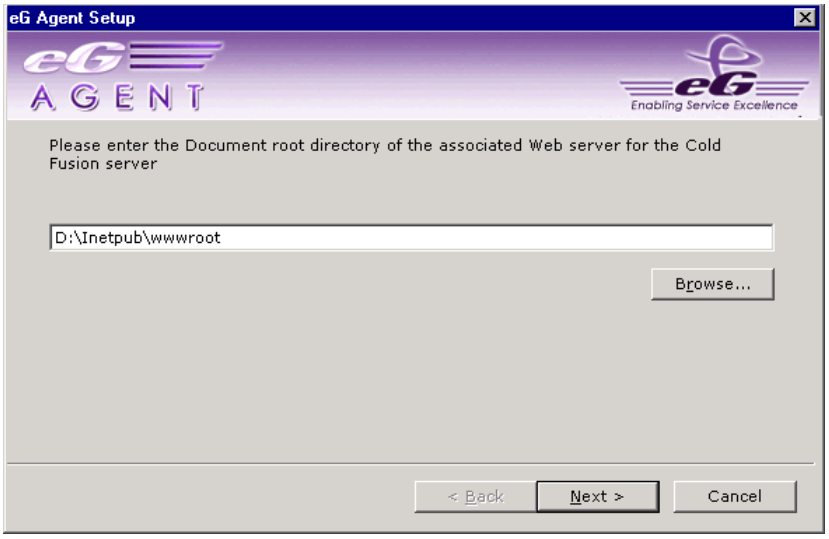

Figure 2.6: Specifying the root directory of the web server that works in conjunction with the Adobe ColdFusion server

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If an eG agent has already been installed, and at a later time you need to configure a ColdFusion server for monitoring, refer to This section describes how to configuring an Adobe ColdFusion Server to work with the eG Agent for further details.

2.7 Managing the Adobe ColdFusion Server

Adobe ColdFusion servers are not discovered automatically. Hence, to monitor an Adobe ColdFusion server, it has to be added manually to the eG Enterprise system. To manage a ColdFusion server component using the eG admin interface, do the following:

Please follow the following steps to configure eG to monitor a ColdFusion server.

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 *Adobe ColdFusion* as the **Component type**. Then, click the **Add New Component** button. This will invoke Figure 2.7:

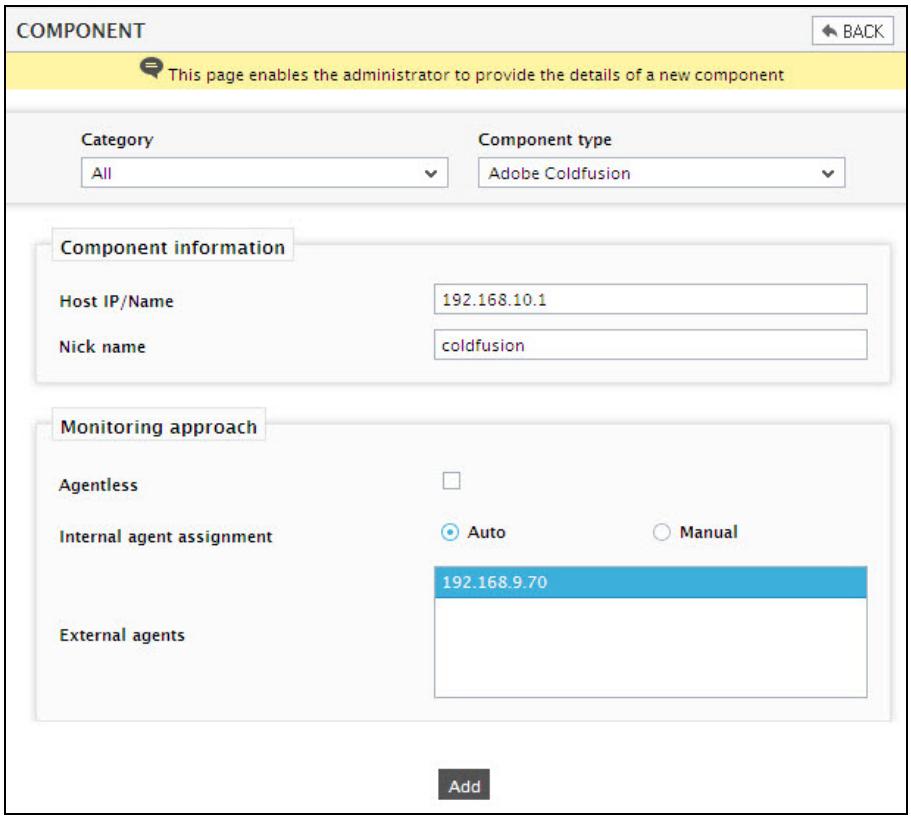

Figure 2.7: Adding the details of a new Adobe ColdFusion server

4. Specify the **Host IP/Name** and the **Nick name** of the Adobe ColdFusion server in 2.7. Then, click the **Add** button to register the changes.
5. When you attempt to sign out, a list of unconfigured tests appears (see Figure 2.8).

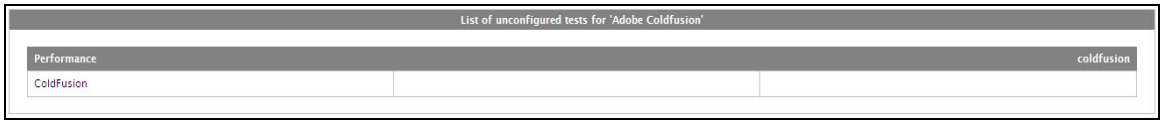

Figure 2.8: List of Unconfigured tests for the Adobe ColdFusion server

6. Click on the the **ColdFusion** test to configure it. To know how to configure the test, refer to Section **3.1.1**.
7. Finally, signout of the eG administrative interface.

Chapter 3: Monitoring Adobe ColdFusion Application Server

eG Enterprise provides an exclusive ColdFusion monitoring model that facilitates 24x7 monitoring of the ColdFusion server, and proactive alerting of probable problem conditions with the server. This model is shown in Figure 3.1.

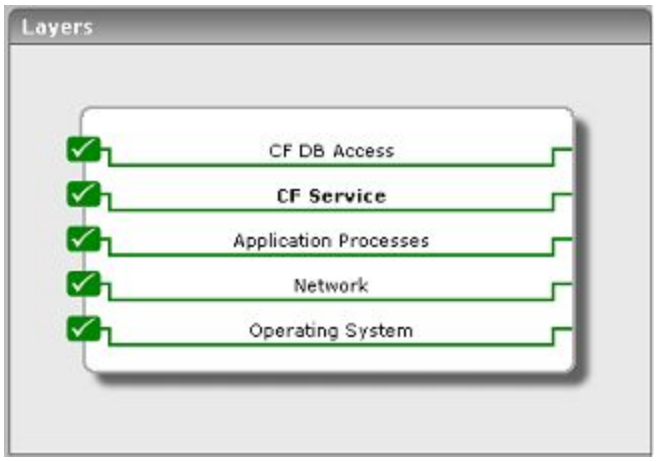

Figure 3.1: Layer model for an Adobe ColdFusion server

Every layer of this hierarchical model is mapped to one/more tests that collectively enable administrators to determine the following:

- Is the ColdFusion server overloaded with requests?
- Are the applications hosted on ColdFusion able to obtain quick access to the database?
- Is there an unusual increase in the data traffic to and from the server?
- Is the server processing requests quickly, or is the request queue growing steadily?
- Is the server sending out timely responses for the requests, or is the responsiveness of the server too slow?

The sections to come discuss each of the top 2 layers of the above figure. The remaining layers have been dealt with extensively in the *Monitoring Unix and Windows Servers* document.

3.1 The CF Service Layer

This layer represents the different services offered by the Coldfusion application server. To monitor Coldfusion servers, the eG Enterprise suite uses monitoring capabilities supported by the Coldfusion servers. A special test page installed on the Coldfusion server interfaces with the Coldfusion server's

monitoring interface to extract a variety of statistics pertaining to the Coldfusion server. The status of this layer is determined by the results of a Coldfusion test (see Figure 3.2). The details about the Coldfusion test have been provided in the following sections.

Figure 3.2: The ColdfusionTest that maps to the CF Service layer of a Coldfusion application server

3.1.1 ColdFusion Test

This tests measures statistics pertaining to a ColdFusion server. The outputs of this test are described below.

Target of the test : A ColdFusion server

Agent deploying the test : An internal agent

Outputs of the test : One set of results for each ColdFusion application server.

Configurable parameters for the test

Parameter	Description
Test period	How often should the test be executed.
Host	The IP address of the host to which this test is to be configured.
Port	The port to which the specified Host listens to.
WebServerPort	The port number of a web server that is configured with the ColdFusion monitoring capability. This web server has to be one that is already configured to work with a ColdFusion application server.
SSL	Select **Yes** if SSL (Secure Socket Layer) has been enabled, and **No** if it is not.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
Request rate	Rate of requests to the ColdFusion server.	Reqs/Sec	A high request rate is an indicator of server overload. By comparing the request rates across application servers, an operator can gauge the effectiveness of load balancers (if any) that are in use.
Database access rate	Rate of database accesses issued by applications executing on the ColdFusion server.	Reqs/Sec	An unusually low or high rate of database accesses from one or more applications hosted on the ColdFusion application server may provide hints on anomalies with the applications.
Data transmit rate	Rate at which the data is transferred by the application server in response to incoming requests.	KB/Sec	A sudden change in data transmit rate can be indicative of a change in the characteristics of key applications hosted on the engine.
Data receive rate	Rate at which the data is received by the application server.	KB/Sec	A sudden increase or decrease in data rate to the application server is indicative of either an increase or decrease in popularity of applications hosted on the ColdFusion application server.
Requests queued	Number of requests queued waiting for service from the ColdFusion application server.	Number	An increase in requests queued can indicate a bottleneck at the application server. The problem may be caused either because of an application server problem, a problem with specific applications hosted on the ColdFusion server, or because of backend problems (e.g., with the database server, payment gateway, etc.).
Requests running	Number of requests currently being processed by the application server.	Number	An increase in requests running may indicate an increase in user workload (to be sure, correlate this value with the data transmit and receive rates).

Measurement	Description	Measurement Unit	Interpretation
			Alternatively, a slowdown at the application server may also cause the requests that are simultaneously executing to increase.
Requests timeout rate	Rate at which requests are timing out while waiting for service from the ColdFusion server.	Reqs/Sec	An increase in the time out rate of requests is a clear indication of a problem with one or more applications executing on a ColdFusion server. Requests may time out because of an application problem, because of failure to access external servers (e.g., databases, payment gateways), or because of server overload. By determining whether all of the web transactions that use the ColdFusion server are experiencing problems, an operator can determine if the problem is related to the application server or with specific applications.
Avg queue time	Average time in seconds spent by a request waiting for service by the ColdFusion server.	Secs	An increase in queuing delay reflects a server bottleneck.
Avg response time	Average time (in seconds) for processing a request at the server.	Secs	An increase in response time can occur because there are too many simultaneous requests or because of a bottleneck with any of the applications executing on the server.
Avg database access time	Average time (in seconds) for database accesses from applications executing on the ColdFusion server.	Secs	A large value of DB access time can be caused by poor query construction, bottlenecks at the database server(s), etc.

3.1.2 Coldfusion Log Test

This test monitors a ColdFusion log file for warnings. This test is disabled by default. To enable the test, go to the **ENABLE / DISABLE TESTS** page using the menu sequence : Agents -> Tests ->

Enable/Disable, pick the *ColdFusion* as the **Component type**, set *Performance* as the **Test type**, choose the test from the **DISABLED TESTS** list, and click on the **<** button to move the test to the **ENABLED TESTS** list. Finally, click the **Update** button.

Target of the test : A ColdFusion server

Agent deploying the test : An internal agent

Outputs of the test : One set of results for every ColdFusion server.

Configurable parameters for the test

Parameter	Description
Test period	How often should the test be executed.
Host	The IP address of the host to which this test is to be configured.
Port	The port to which the specified Host listens to.
LogFile	The path to the ColdFusion log file to be monitored.
Detailed Diagnosis	To make diagnosis more efficient and accurate, the eG Enterprise suite embeds an optional detailed diagnostic capability. With this capability, the eG agents can be configured to run detailed, more elaborate tests as and when specific problems are detected. To enable the detailed diagnosis capability of this test for a particular server, choose the **On** option. To disable the capability, click on the **Off** option. The option to selectively enable/disable the detailed diagnosis capability will be available only if the following conditions are fulfilled: • The eG manager license should allow the detailed diagnosis capability • Both the normal and abnormal frequencies configured for the detailed diagnosis measures should not be 0.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
Warnings	The number of warnings reported by the ColdFusion server during the last measurement period.	Number	The detailed diagnosis for this metric provides more details on the warnings reported in the Coldfusion logs. Information about the URLs that are providing slow response, the number

Measurement	Description	Measurement Unit	Interpretation
			of slow responses, and the average response time for these accesses can also be received.

3.2 The CF DB Access Layer

This layer tracks the statistics of the database access of the applications hosted on a Coldfusion server with the help of the Coldfusion test (see Figure 3.3).

Figure 3.3: The ColdfusionTest that maps to the CF DB Access layer of a Coldfusion application server

Chapter 4: Troubleshooting

- If the **Network** test alone reports measures, then make sure that the internal agent for the ColdFusion server is running.
- If the **Network** test alone does not report measures, then ensure that the external agent is running.
- If the ColdFusion test does not report measures, verify the following:
- Was the web server's port provided correctly? Access the ColdFusion server Administration Console using the URL: http://<WebSphereIP>:<WebSpherePort>, (if this page does not show up, try replacing "Administrator" with "administrator"). If the console does not open, then it denotes that the specified **<webserver:port>** is incorrect.
- Was the web server's root directory specified properly?
- Was performance monitoring enabled for the ColdFusion server? If not, do the following:

  1. Access the ColdFusion server Administration Console using the URL: http://<WebSphereIP>:<WebSpherePort>/(if this page does not show up, try replacing "Administrator" with "administrator"). If the console does not open, then it denotes that the specified **<webserver:port>** is incorrect. A link to the **webdocroot** points to the web server associated to the ColdFusion server. This link is present in the <COLDFUSION_ INSTALL_DIR>/uninstall/private directory.
  2. Alternatively, you can use the menu sequence Start -> Programs --> Coldfusion Server 5 --> Coldfusion Administrator on Windows environments to navigate to the console.
  3. On the left panel of the console, look for **Debug options**. Under this, make sure that the **Enable Performance Monitoring** option is checked (see Figure 4.1). Then, click the **Submit Changes** button to save the changes. Finally, restart the ColdFusion server.

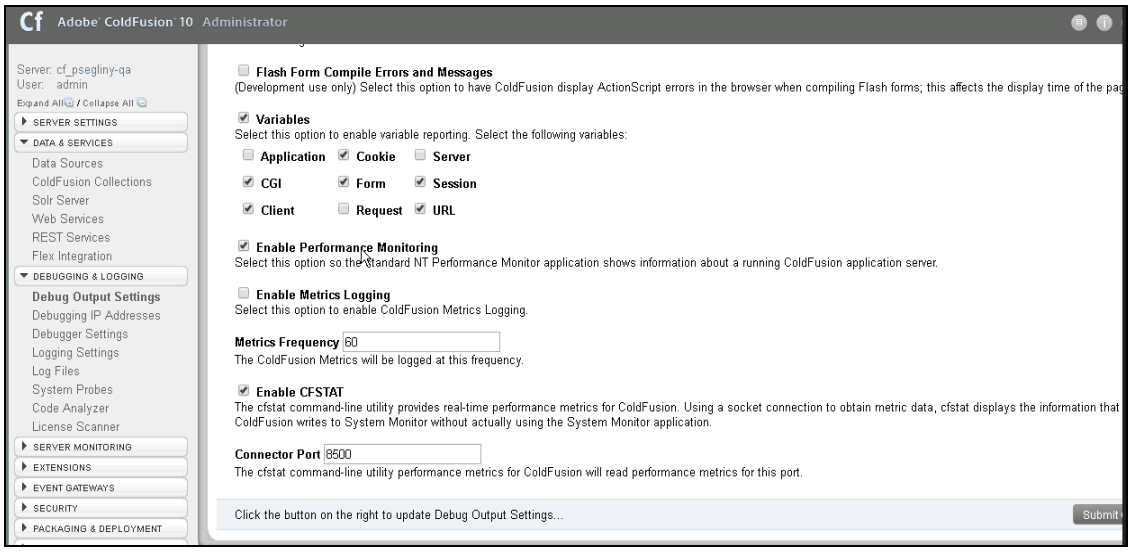

Figure 4.1: Configuring a Coldfusion server for performance monitoring

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.

To learn more visit www.eginnovations.com.

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