# Monitoring FTP Server

eG Innovations Product Documentation

eG
Total Performance Visibility

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# Chapter 1: Introduction

Many IT infrastructures include one or more FTP servers from where users may download static content such as registration forms, product documentations, etc. Similarly, users may upload any document/file to the FTP server for sharing content across a wide area.

If the FTP servers in an environment play repository to critical information, then users are bound to be intolerant towards brief or prolonged delays in uploading data to or downloading data from the server. To ensure that users are always assured of swift FTP access, the FTP server's performance should be periodically monitored. This is where eG Enterprise helps administrators.

# Chapter 2: How to Monitor FTP Server Using eG Enterprise?

eG Enterprise monitors the FTP server in an agentless manner. In order to monitor the FTP server, deploy a single eG agent on any remote Windows host. This eG agent continuously monitors the FTP server and determines the critical measures pertaining to its performance. To start monitoring the FTP server, first manage the FTP server using eG administrative interface. The procedure for achieving this has been detailed in the following section.

## 2.1 Managing the FTP Server

eG Enterprise can automatically discover the FTP Server in the environment and also lets you to add the FTP Server component if the server is not auto-discovered. The following steps explain you how to manage the server that is auto-discovered using the eG administrative interface.

1. Log into the eG administrative interface.

2. If a FTP Server is already discovered, then directly proceed towards managing it using the **COMPONENTS – MANAGE/UNMANAGE** page.

3. However, if it is yet to be discovered, then run discovery (Infrastructure -> Components -> Discover) to get it discovered or add the component manually using the **COMPONENTS** page (Infrastructure -> Components -> Add/Modify). Remember that components manually added are managed automatically. Discovered components, however, are managed using the **COMPONENTS – MANAGE / UNMANAGE** page.

4. To manage the FTP Server component that is auto-discovered, follow the Infrastructure -> Components -> Manage/Unmanage in the **Infrastructure** tile of the **Admin** menu.

5. In the **COMPONENTS – MANAGE/UNMANAGE** page that appears next, select *FTP Server* as the **Component type**. Then, the auto-discovered components will be displayed under **Unmanaged Components** section.

6. Figure 2.1 and Figure 2.2 clearly illustrate the process of managing a FTP server.
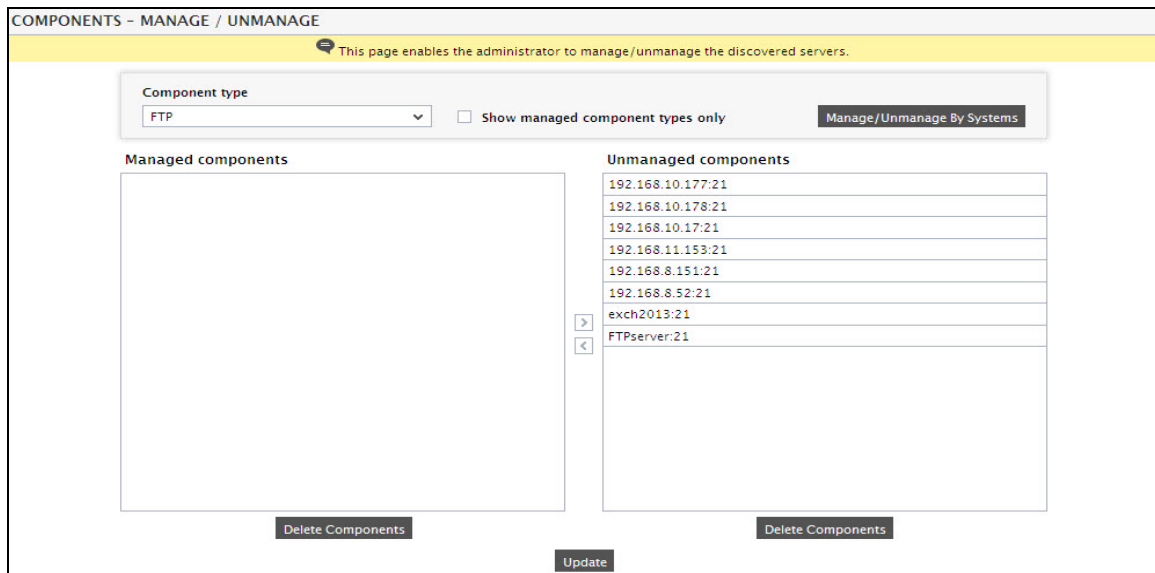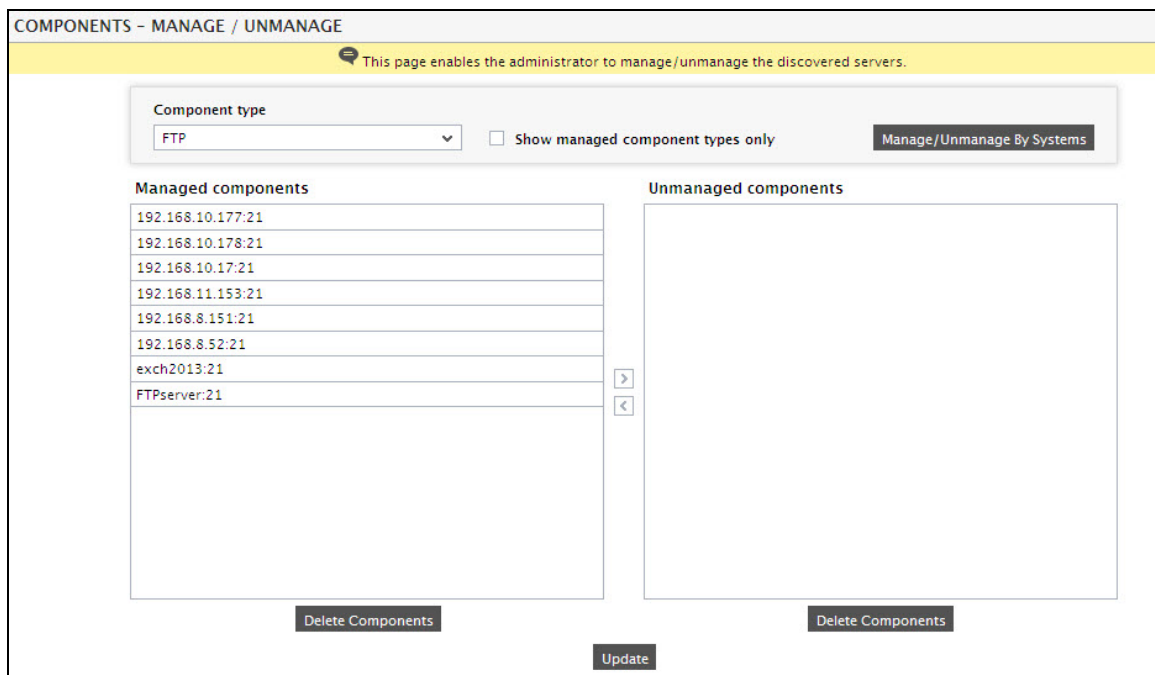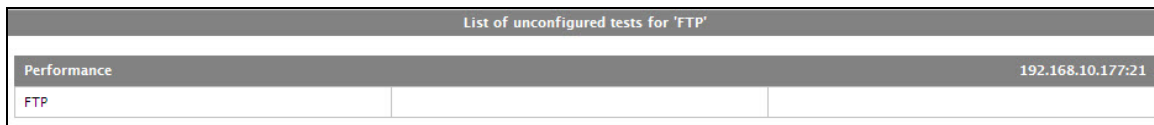
Figure 2.1: Viewing the unmanaged FTP servers



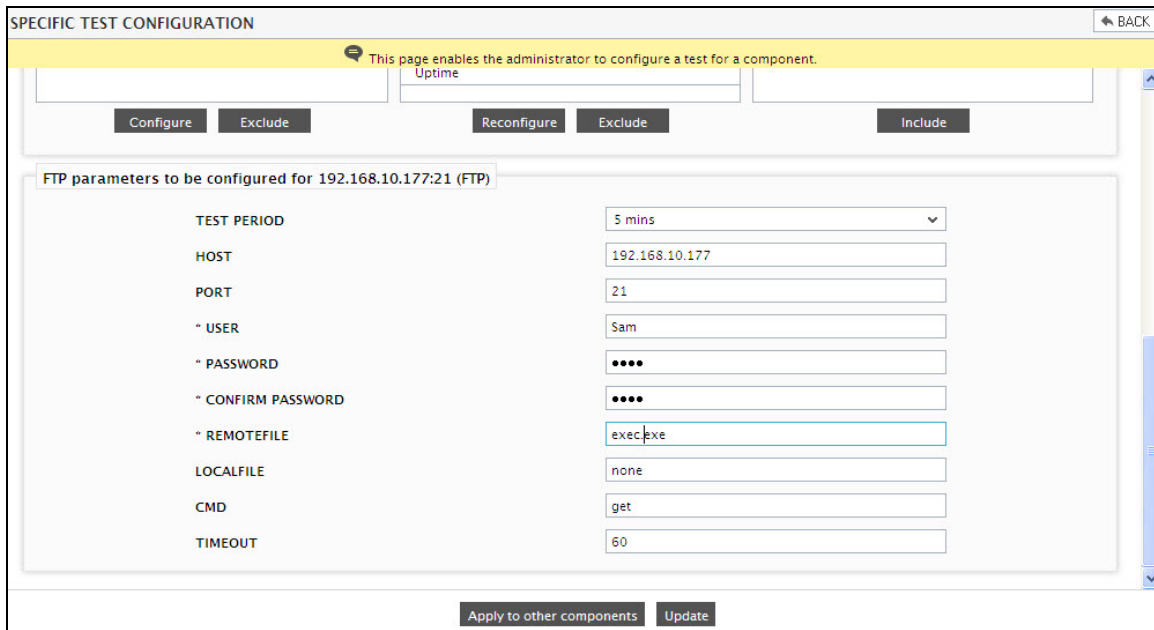Figure 2.2: Managing an FTP server

7. Now when you try to sign out of the eG administrative interface, the **FTP** test which is an external test will show up as unconfigured (see Figure 2.3).

| List of unconfigured tests for 'FTP' | |
|---|---|
| **Performance** | 192.168.10.177:21 |
| FTP | |

Figure 2.3: Viewing the list of tests to be configured for an FTP server

8.  Clicking on the **FTP** test will open a page (see Figure 2.4) wherein the test parameters can be configured. Refer to Section **3.1.1** to know how to configure the test.



Figure 2.4: Configuring the parameters of the FTP test

9.  On completing configuration, click on the **Update** button to save the changes and signout of the eG administrative interface.

10. With that, test configuration is complete and FTP Server is finally ready to be monitored.

# Chapter 3: Monitoring FTP Servers

eG Enterprise prescribes an FTP monitoring model (see Figure 3.1), that verifies the availability and response time of the FTP service at frequent intervals.
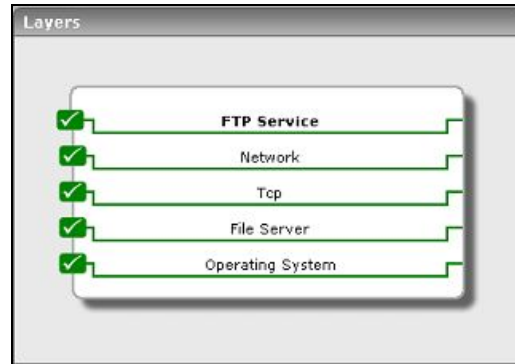


Figure 3.1: Layer model for a FTP server

The sections to come discuss the **FTP Service** layer only, as the remaining layers have been discussed elaborately

## 3.1 The FTP Service Layer

In the above figure, the **FTP Service** layer tracks the health of the FTP server. The status of the layer is determined by the results of an Ftp test that is shown in Figure 3.2. The The details of this test are provided below:



Figure 3.2: The Ftp test tracks the health of the FTP Service layer

## 3.1.1 FTP Test

This test emulates a user connecting to an FTP server and performing an operation on the server. The operation may either be a GET or a PUT. For the specified operation, this test measures the availability of the FTP server and its response time.

**Target of the test :** An FTP server

**Agent deploying the test :** An external agent

**Outputs of the test :** One set of results for each FTP server monitored.

**Configurable parameters for the test**

| Parameters | Description |
|---|---|
| Test Period | How often should the test be executed. |
| Host | The hostname (or IP address) of the FTP server. |
| Port | The port number on which the FTP server is listening. |
| User | The user name used for connecting to the FTP server. |
| Password | Password corresponding to the user. |
| Confirm Password | Confirm the password by retyping it here. |
| RemoteFile | The remote file that is downloaded in the case of GET operation; In the case of a PUT operation, the remote file represents the file to which data is uploaded. |
| LocalFile | The local file that is written to in the case of a GET operation. In the case of a PUT operation, this string represents the name of the file that is uploaded to the FTP server. This value can be "none" if the test is not required to write the downloaded data to a local file. |
| CMD | Signifies the command to be executed by the test whether GET or PUT . |
| Timeout | The maximum time (in seconds) that the client will wait for a response from the FTP server. |

**Measurements made by the test**

| Measurement | Description | Measurement Unit | Interpretation |
|---|---|---|---|
| Availability | This measurement | Percent | Availability failures could be caused |

| Measurement | Description | Measurement Unit | Interpretation |
|---|---|---|---|
| | indicates whether the server was able to respond successfully to the query made by the test. | | by several factors such as the FTP server being down, the FTP server being misconfigured, authentication problems, file access permission problems, network failures, etc. Temporary unavailability may also occur if the FTP server is overloaded. |
| Total FTP response time | This measurement indicates the total time taken by the server to respond to the requests it receives. This time includes the TCP connection time, user authentication time and the data transfer time. | Secs | An increase in the total 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. |
| Tcp connection availability to FTP port | This measure indicates whether the test was able to successfully establish a TCP connection to the FTP server. | Percent | Availability failures could be caused due to a network failure. Another possibility is that the FTP application server is not running. |
| Tcp connection time to FTP port | The time taken for the TCP connection establishment to complete. | Secs | A high value indicates a bottleneck and could be due to the reasons that the server is being overloaded or there has been a network performance degradation. |
| FTP authentication status | Indicates whether the test was able to successfully log in to the FTP server using the specified user account. | Percent | A low value indicates a problem logging in to the server. |
| FTP authentication time | Time taken for user authentication. | Secs | This value gives an idea of where the performance bottleneck with the FTP server could be. |

## 3.1.2 Secure FTP Test

In computing, the SSH File Transfer Protocol (also Secret File Transfer Protocol, Secure FTP, or SFTP) is a network protocol that provides file access, file transfer, and file management functionalities over any reliable data stream. This protocol assumes that it is run over a secure channel, such as SSH, that the server has already authenticated the client, and that the identity of the client user is available to the protocol.

This test emulates a user connecting to an SFTP server (on Windows/Unix) and performing an operation on the server. The operation may either be a GET or a PUT. For the specified operation, this test measures the availability of the SFTP server and its response time.

**Target of the test :** An SFTP server

**Agent deploying the test :** An external agent

**Outputs of the test :** One set of results for each SFTP server monitored.

**Configurable parameters for the test**

| Parameters | Description |
| --- | --- |
| Test Period | How often should the test be executed. |
| Host | The hostname (or IP address) of the FTP server. |
| Port | The port number on which the FTP server is listening. |
| User | The user name used for connecting to the FTP server. |
| Password | Password corresponding to the user. |
| Confirm Password | Confirm the password by retyping it here. |
| RemoteFile | The remote file that is downloaded in the case of GET operation; In the case of a PUT operation, the remote file represents the file to which data is uploaded. |
| RemoteFolder | The RemoteFolder indicates the remote SFTP folder where the specified RemoteFileexists. For example, this can be */* or */sftpRoot* or */mysftpFolder*, in the case of a GET operation. In the case of a PUT operation, the RemoteFolder represents the remote destination folder. |
| LocalFile | The local folder that is written to in the case of a GET operation. In the case of a PUT operation, this string represents the name of the file that is uploaded to the SFTP server. If this value is "*none*", then the test will write the downloaded data to the eG agent's **logs** folder. |

| Parameters | Description |
|---|---|
| CMD | Signifies the command to be executed by the test whether GET or PUT . |
| Timeout | The maximum time (in seconds) that the client will wait for a response from the FTP server. |

**Measurements made by the test**

| Measurement | Description | Measurement Unit | Interpretation |
|---|---|---|---|
| Availability | This measurement indicates whether the server was able to respond successfully to the query made by the test. | Percent | Availability failures could be caused by several factors such as the SFTP server being down, the SFTP server being misconfigured, authentication problems, file access permission problems, network failures, etc. Temporary unavailability may also occur if the SFTP server is overloaded. |
| Total response time | This measurement indicates the total time taken by the server to respond to the requests it receives, including the data transfer time. | Secs | An increase in the total 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. |

## 3.2 Troubleshooting

➢ If the layers below the **FTP Service** layer are in *Unknown* state, the internal agent may not be executing on the system where the FTP server is running.

➢ If the FTP test is in an **Unknown** state, check:

    a. Is the external agent running?

    b. Has the FTP test been configured via the administrative interface?

    c. Have the parameters of the Ftp test been configured correctly?

➢ If the Network test is reporting results but many of the other tests are not, check if the internal agent is executing.

➢ If the System test, Disk test etc., are reporting measures, but the Network test is not reporting measures, check if the external agent is running.

➢ If the Ftp test is reporting an availability of 0, but the server is actually running, the user name / password on the file names specified for the FTP test may not be correct / valid.

# 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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