Monitoring REST Server

eG Innovations Product Documentation

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Total Performance Visibility

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Chapter 1: Introduction

REST server is a high performance HTTP server that implements restic's REST backend API. The REST backend API provides a secure and efficient way to backup and synchronize data remotely, using restic backup client via the target URL. The REST server implementation is really simple and can be installed on low-end devices without any complex procedure. The server transfers the data and receives responses from the web site through HTTP/S protocol. Therefore, both the availability of the REST server and web site that is being hit by the REST client and the response time for user accesses to the web site are critical to ensure peak performance. Any slowdown or problem in data transfer or response reception may directly impact the end user experience.

To ensure that end-user experience is always satisfactory, administrators should continuously track the availability and responsiveness of the REST server. For this purpose, eG Enterprise provides a REST server monitoring model to help the administrators to monitor the REST server continuously.

Chapter 2: How to Monitor REST Server Using eG Enterprise?

eG Enterprise employs an *agentless* approach to monitor the REST server. This approach requires that the eG agent be deployed on a remote Windows host in the target environment. To start monitoring, first, manage the REST component using eG administrative interface. The steps for managing the REST component have been discussed in following section.

2.1 Managing the REST Server

The eG Enterprise cannot automatically discover the REST 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 REST 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 **Components** page that appears next, select *REST* as the **Component type**. Then, click the **Add New Component** button. This will invoke the **Add Component** page (see Figure 2.1).

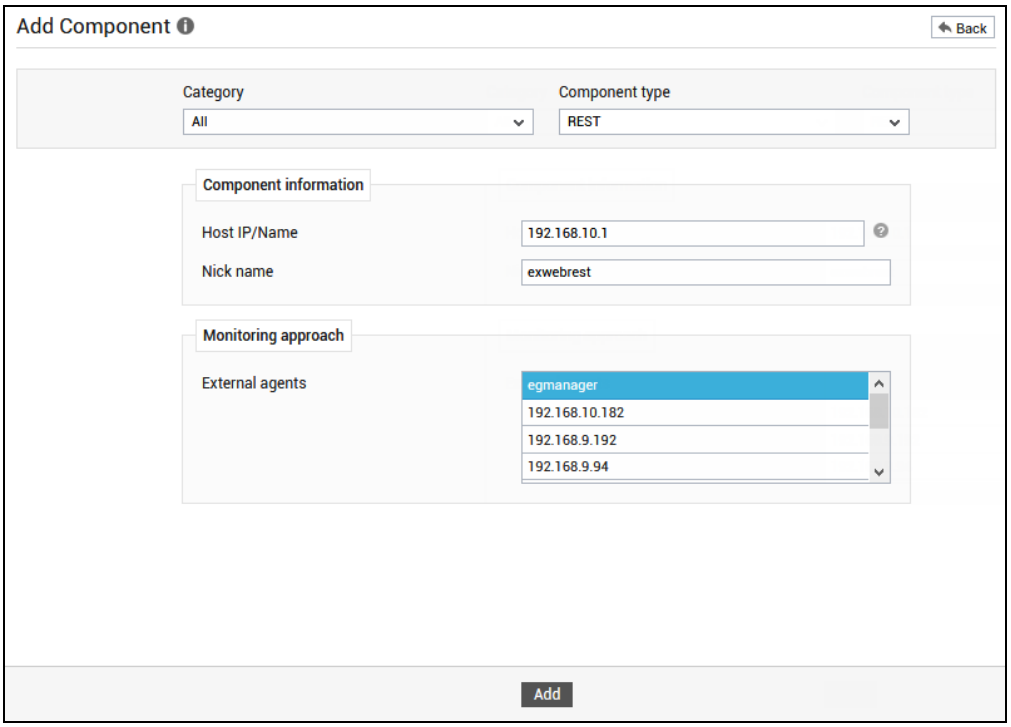

Figure 2.1: Adding the REST component

4. Specify the **Host IP/Name** and the **Nick name** for the REST component in Figure 2.1.
5. Next, choose an external agent from the **External agents** list box.
6. Finally, click the **Add** button to register the changes.
7. Once the REST component is added successfully, you will be redirected to the **Components** page (see Figure 2.2).

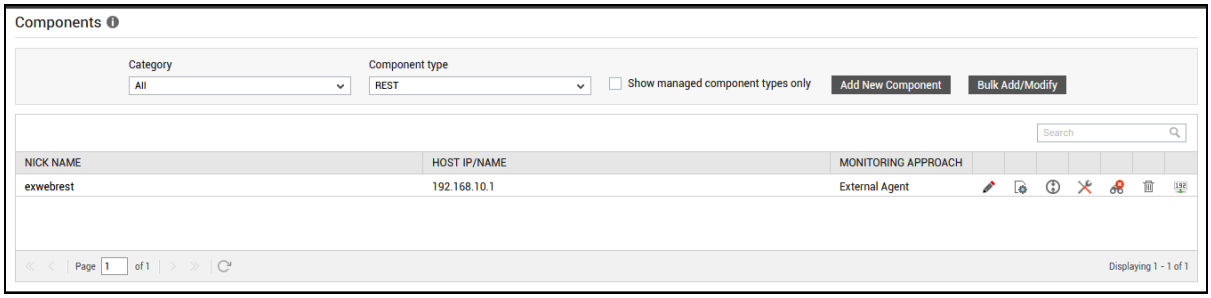

Figure 2.2: Components page

8. To collect the performance metrics, you may need to configure the tests that are mapped to the REST component. To configure the tests that need manual configuration, click on the  icon in

Figure 2.2. This will lead you to the **Specific Test Configuration** page where the unconfigured tests will be listed in the **UNCONFIGURED TESTS** list box.

9. Now, click on the test name to configure it. To know how to configure the test, refer to the Section **3.1**.
10. Once the test is configured, navigate to the monitor interface by clicking on the **Monitor** tab to view the performance metrics reported by the test .

Chapter 3: Monitoring the REST Server

eG Enterprise offers a specialized monitoring model for the REST server (see Figure 3.1), using which the availability and responsiveness of the server can be tracked.

Figure 3.1: The layer model of the REST server

The **REST** layer is associated with the **HTTP Response** test which will answer the following questions:

- Is the web server available? What is its response time?
- Is the configured web site reachable?
- How long the server is taking to transfer data?
- How many response codes are received?
- How quickly the response are received from the server?

3.1 HTTP Response Test

REST server is the perfect and simple option for backing up and synchronizing your data in a secure way. The REST server performs backend operations using REST backend API via the target URL. The backup and sync operations performed by the target server should be seamless and fast enough to ensure peak performance. If any slowdown is detected due to server/web site unavailability and slow responses from the web site, then the data integrity will become questionable. This will adversely impact the user productivity and experience. Therefore, administrators should continuously track the availability and responsiveness of the server so as to ensure uninterrupted operations. This is what the **HTTP Response** test exactly does!

Using this test, administrators can check the server availability and responsiveness of the REST URL that is being configured for monitoring.

Target of the test : A REST server

Agent deploying the test : An external Agent

Outputs of the test : One set of results for the REST server 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	Refers to the port at which the specified host listens to. By default, this is NULL.
Rest URL	This test helps you to determine the availability and responsiveness of a specific web site on the web server. To enable this, you need to configure the test with the URL of the web page that it should access. Specify this URL against the Rest URL parameter. For example: *http://192.168.58.78/isearch-admin/api/leap_sync/leap_sync_switch*.
KeyValueMapping	eG Enterprise generates alerts based on the response received from the URL specified against the Rest URL field. For this purpose, the response from the URL should be mapped to a number value so that eG would apply the thresholds to send the alerts to the user. Lets say, the responses received from the URL are SYNC_OFF and SYNC_ON, these values may be mapped to 100 and 50, respectively. Now, you should configure the KeyValueMapping field in the following format: *SYNC_ON:100,SYNC_OFF:50,default:0*
ProduceDebugLog	By default, this parameter is set to false indicating that this test will not create log files that contain information required for troubleshooting. However, if you want to generate the log files for troubleshooting purpose, then, set this parameter to true.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
Web site availability	Indicates whether the web site is available or not.	Percent	The value 100% for this measure indicates that the site is available, and the value 0 indicates that it is not.
Web server availability	Indicates whether the web server is reachable or not.	Percent	The value 100% for this measure indicates that the web server is reachable, and the value 0 indicates that connection to the web server failed.

Measurement	Description	Measurement Unit	Interpretation
Response received	Indicates the number of responses received from the Rest URL.	Number	
Response code	Indicates the response code that the server returned when the Rest URL was accessed.	Number	Typically, 2xx codes indicate success. The 4xx codes are intended for cases in which the client may have erred, and the 5xx codes for the cases in which the server is aware that it has erred. 3xx codes indicate action to be taken (normally automatically) by the client in order to fulfill the request.
Connection time	Indicates the time taken to establish a connection to the web server.	Milliseconds	A low value is preferred for this measure.
Data transfer time	Indicates the time taken for a data transfer between the web site and the web server.	Milliseconds	A high value for this measure denotes an issue in data transmission.
Total response time	Indicates the total time taken by the Rest URL to respond.	Milliseconds	The value of this measure is should be low.

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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