BIG-IP® Global Traffic Manager™: Monitors Reference

Version 11.5

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Chapter

1

Monitors Concepts

Purpose of monitors

Monitors determine the availability and performance of devices, links, and services on a network. Health monitors check the availability. Performance monitors check the performance and load. If a monitored device, link, or service does not respond within a specified timeout period, or the status indicates that performance is degraded or that the load is excessive, the BIG-IP® system can redirect the traffic to another resource.

Benefits of monitors

Monitors gather information about your network. The information that monitors gather is available for you to view. You can use this information to troubleshoot problems and determine what resources in your network are in need of maintenance or reconfiguration.

Methods of monitoring

The BIG-IP® Local Traffic Manager™, Global Traffic Manager™, and Link Controller™ provide three methods of monitoring: simple monitoring, active monitoring, and passive monitoring.

Simple monitoring

Simple monitoring determines whether the status of a resource is up or down. The system contains three simple monitors, **Gateway ICMP**, **ICMP**, and **TCP_ECHO**.

Simple monitors work well when you only need to determine the up or down status of the following:

- A Local Traffic Manager node
- A Global Traffic Manager or Link Controller server, virtual server, pool, pool member, or link

Active monitoring

Active monitoring checks the status of a pool member or node on an ongoing basis as specified. If a pool member or node does not respond within a specified timeout period, or the status of a node indicates that performance is degraded, the BIG-IP system can redirect the traffic to another pool member or node. There are many active monitors. Each active monitor checks the status of a particular protocol, service, or application. For example, one active monitor is **HTTP**. An **HTTP** monitor allows you to monitor the availability of the HTTP service on a pool, pool member, or node. A **WMI** monitor allows you to monitor the performance of a node that is running the Windows® Management Instrumentation (WMI) software. Active monitors fall into two categories: Extended Content Verification (ECV) monitors for content checks, and Extended Application Verification (EAV) monitors for service checks, path checks, and application checks.

An active monitor can check for specific responses, and run with or without client traffic.

Note: An active monitor also creates additional network traffic beyond the client request and server response and can be slow to mark a pool member as down.

Passive monitoring

Passive monitoring occurs as part of a client request. This kind of monitoring checks the health of a pool member based on a specified number of connection attempts or data request attempts that occur within a specified time period. If, after the specified number of attempts within the defined interval, the system cannot connect to the server or receive a response, or if the system receives a bad response, the system marks the pool member as down. There is only one passive monitor, called an **Inband** monitor.

A passive monitor creates no additional network traffic beyond the client request and server response. It can mark a pool member as down quickly, as long as there is some amount of network traffic.

Note: A passive monitor cannot check for specific responses and can potentially be slow to mark a pool member as up.

About health and performance monitors

BIG-IP® systems use two categories of monitors: health monitors and performance monitors. You can associate monitors with the following resources:

- In Local Traffic Manager™: nodes, pools, and pool members
- In Global Traffic Manager™: links, servers, virtual servers, pools, and pool members
- In Link Controller™: links, pools, and pool members

Category	Description
Health	Checks resources to determine if they are up and functioning for a given service.
Performance	Gathers information about resources that the system uses to dynamically load balance traffic.

Example:

When a virtual server that is being monitored by a health monitor does not respond to a probe from the BIG-IP system within a specified timeout period, the system marks the virtual server down and no longer load balances traffic to that virtual server. When the health monitor determines that the virtual server is once again responsive, the system again begins to load balance traffic to that virtual server. To illustrate, a Gateway Internet Control Message Protocol (ICMP) monitor pings a virtual server. If the monitor does not receive a response from the virtual server, the BIG-IP system marks that virtual server down. When the ping is successful, the system marks the virtual server up.

When a server that is being monitored by a performance monitor displays a degradation in performance, the BIG-IP system redirects traffic to other resources until the performance of the server returns to normal. To illustrate, an SNMP Link monitor checks the current CPU, memory, and disk usage of a server that is running an SNMP data collection agent, and then dynamically load balances traffic based on the performance of the server.

About address check monitors

An *address check monitor* provides a simple verification of an address on a network. This type of monitor sends a request to an IP address. When a response is received, the test is successful.

With Global Traffic Manager™ , you can use an address check monitor to monitor a virtual server, a server (which includes all of the virtual servers on a specified server), a pool member, a pool (which includes all of the pool members of a specified pool), or a link. This monitor uses the Internet Control Message Protocol (ICMP) to perform a simple resource check. The check is successful if the monitor receives a response to an ICMP_ECHO datagram.

The following illustration depicts a Global Traffic Manager™ using a **Gateway ICMP** monitor to verify an IP address for a virtual server.
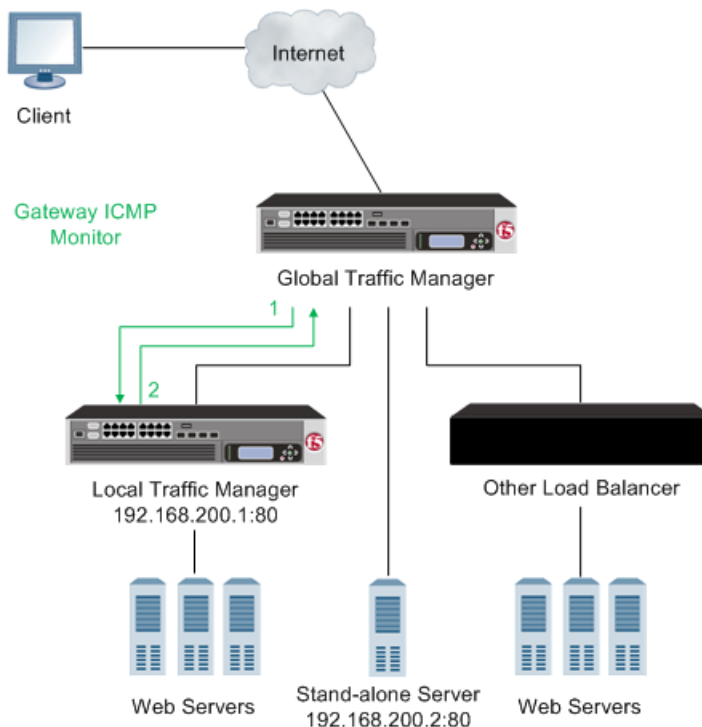
Figure 1: Global Traffic Manager using a Gateway ICMP monitor

1. Global Traffic Manager sends an ICMP echo request to a virtual server.
2. An ICMP echo response is received.

About application check monitors

An *application check monitor* interacts with servers by sending multiple commands and processing multiple responses.

An FTP monitor, for example, connects to a server, logs in by using a user ID and password, navigates to a specific directory, and then downloads a specific file to the /var/tmp directory. If the file is retrieved, the check is successful.
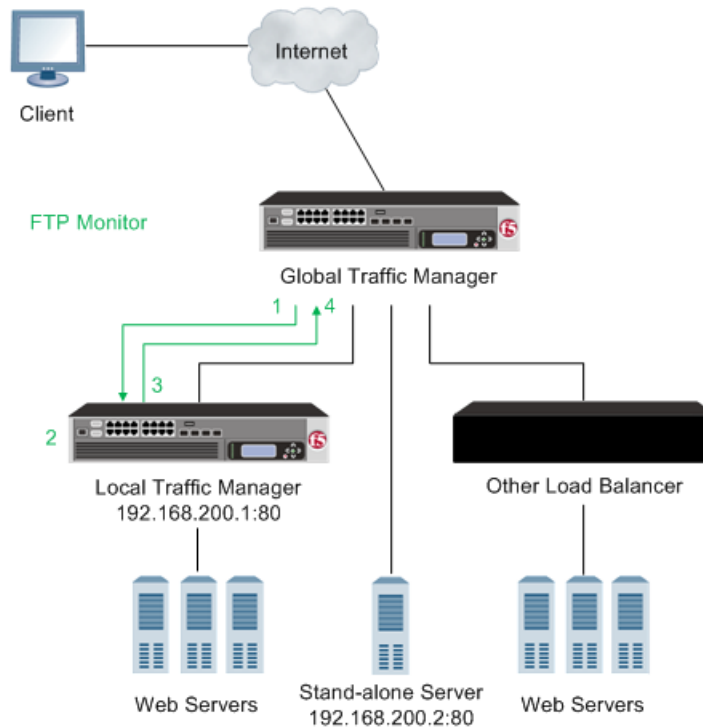
Figure 2: An application check monitor

1. Global Traffic Manager opens a TCP connection to an IP address and port, and logs in to the server.
2. A specified directory is located and a specific file is requested.
3. The server sends the file to Global Traffic Manager.
4. Global Traffic Manager receives the file and closes the TCP connection.

About content check monitors

A *content check monitor* determines whether a service is available and whether the server is serving the appropriate content. This type of monitor opens a connection to an IP address and port, and then issues a command to the server. The response is compared to the monitor's receive rule. When a portion of the server's response matches the receive rule, the test is successful.
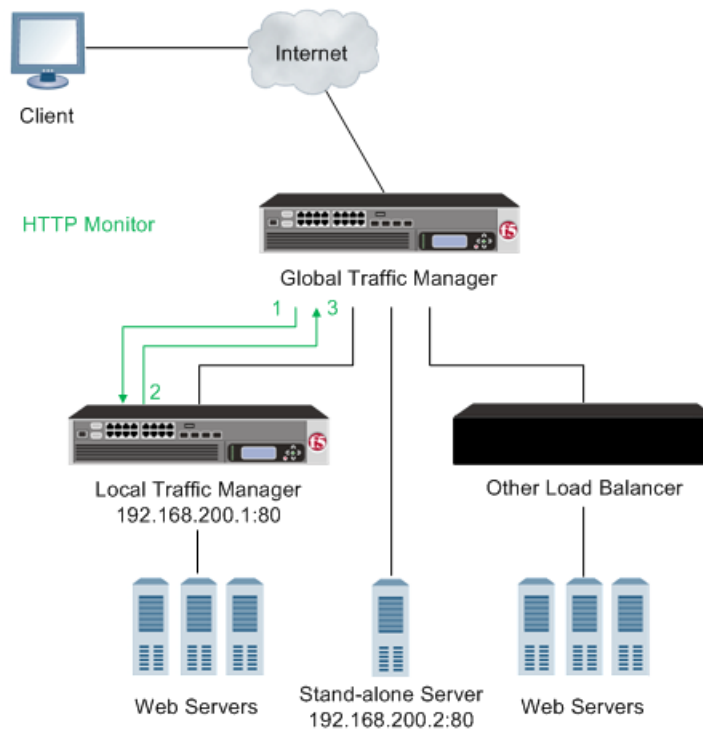
Figure 3: A content check monitor

1. Global Traffic Manager™ opens a TCP connection to an IP address and port, and issues a command to the server.
2. The server sends a response.
3. Global Traffic Manager compares the response to the monitor's receive rule and closes the connection.

About path check monitors

A *path check monitor* determines whether traffic can flow through a device to an endpoint. A path check monitor is successful when network paths through firewalls or routers are available.

The following illustration depicts a Global Traffic Manager™ using a **Gateway ICMP** monitor to verify a path to a virtual server.
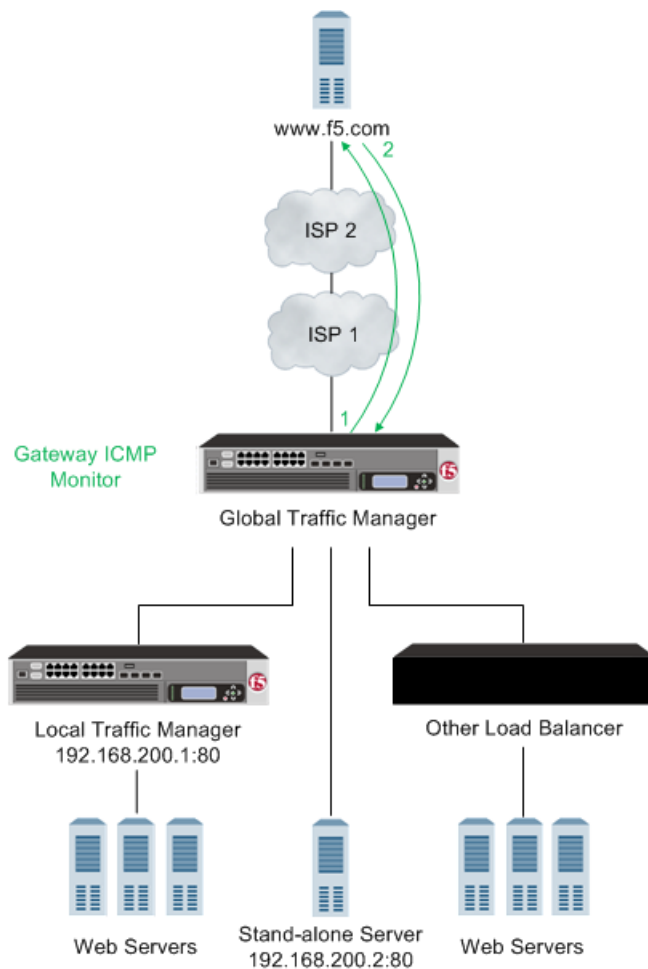
Figure 4: Global Traffic Manager using a Gateway ICMP monitor

1. With the **Gateway ICMP** monitor **Transparent** option set to **Yes**, Global Traffic Manager sends an ICMP echo request to a virtual server.
2. An ICMP echo response is received.

About performance check monitors

A *performance check monitor* interacts with a link or server to acquire information about the resource load and the condition of the virtual servers on the server.

On Global Traffic Manager™, you assign the BIG-IP Link monitor to link entries. This monitor gathers data from the gateway pool about the flow of the outbound traffic passing through the links.
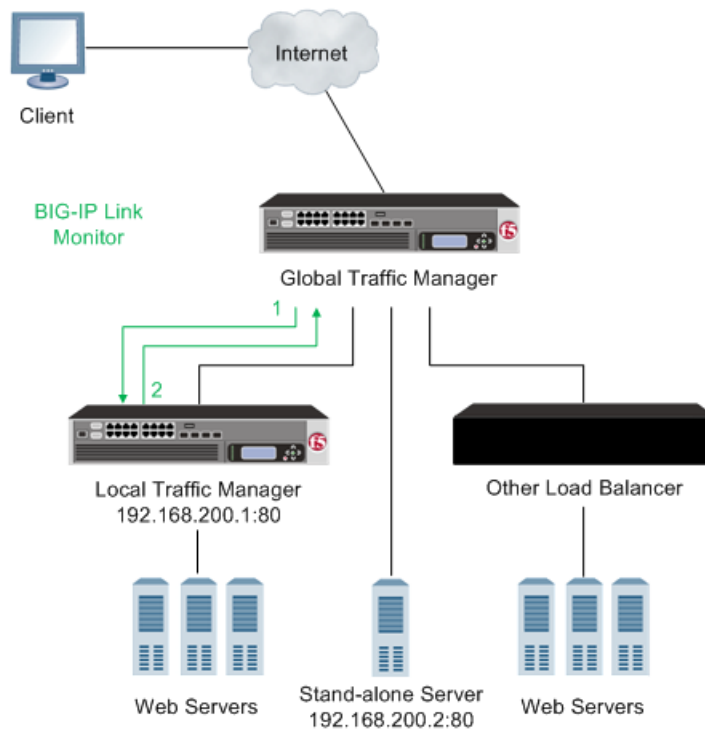
Figure 5: A performance check monitor

1. The BIG-IP Link monitor gathers data from the gateway pool.
2. Global Traffic Manager evaluates the health of the link and makes a determination about load balancing traffic to the link.

About service check monitors

A *service check monitor* determines whether a service is available. This type of monitor opens a connection to an IP address and port, and then closes the connection. When the TCP connection is established, the test is successful.
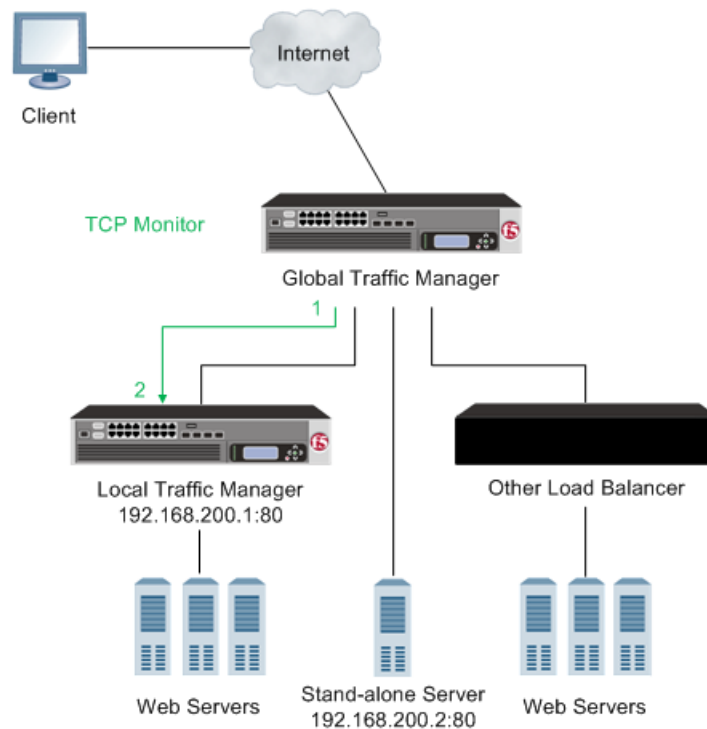
Figure 6: A service check monitor

1. Global Traffic Manager™ opens a TCP connection to an IP address and port.
2. The TCP connection is closed.

About resources and monitor queries

Network resources often perform different functions at the same time. Therefore, it is likely that multiple monitors are checking the availability of a single resource in different ways.

Example:

A BIG-IP® system may monitor a single resource to verify that the connection to the resource is available, that a specific HTML page on the resource can be reached, and that a database query returns an expected result.

About the Virtual Location monitor

The **Virtual Location** monitor optimizes the way that the BIG-IP® system manages connections to pool members by assigning priority groups to local and remote pool members.

The monitor determines whether a pool member is local (residing in the same data center as the BIG-IP system) or remote (residing in a different data center). If a pool member is local, the monitor sets the priority

group of the pool member to a higher priority. If a pool member is remote, the monitor sets the priority group of the pool member to a lower priority.

Important: *You must configure Priority Group Activation to specify the minimum number of available members, before the BIG-IP system begins directing traffic to members in a lower priority group.*

Chapter

2

Monitors Tasks

- *Creating an SNMP monitor*
- *Creating a custom monitor*
- *Deleting a monitor*
- *Disabling a monitor*
- *Displaying a monitor*
- *Enabling a monitor*
- *Creating a custom HTTP monitor*
- *Creating an HTTPS monitor*

Creating an SNMP monitor

Create an SNMP monitor that GTM™ can use to monitor a third-party server running SNMP.

1. On the Main tab, click **DNS** > **GSLB** > **Monitors**.
   The Monitor List screen opens.
2. Click **Create**.
   The New Monitor screen opens.
3. Type a name for the monitor.

   Important: Monitor names are limited to 63 characters.

   ---

4. From the **Type** list, select **SNMP**.
5. Click **Finished**.

Creating a custom monitor

Before creating a custom monitor, you must decide on a monitor type.

You can create a custom monitor when the values defined in a pre-configured monitor do not meet your needs, or no pre-configured monitor exists for the type of monitor you are creating.

Important: When defining values for custom monitors, make sure you avoid using any values that are on the list of reserved keywords. For more information, see solution number 3653 (for version 9.0 systems and later) on the AskF5™ technical support web site.

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1. On the Main tab, click **DNS** > **GSLB** > **Monitors**.
   The Monitor List screen opens.
2. Click **Create**.
   The New Monitor screen opens.
3. Type a name for the monitor in the **Name** field.
4. From the **Type** list, select the type of monitor.
   The screen refreshes, and displays the configuration options for the monitor type.
5. From the **Import Settings** list, select an existing monitor.

   The new monitor inherits initial configuration values from the existing monitor.

6. From the Configuration list, select **Advanced**.

   This selection makes it possible for you to modify additional default settings.

7. Configure all settings shown.
8. Click **Finished**.

Deleting a monitor

Prior to deleting a monitor, you must remove all existing monitor associations.

You can delete obsolete or unused monitors.

Note: You can manage only those monitors that you have permission to manage, based on your user role and partition access assignment.

1. On the Main tab, click **DNS** > **GSLB** > **Monitors**.
   The Monitor List screen opens.
2. Select the **Select** check box for the monitor that you want to delete.
3. Click **Delete**.
   A confirmation message appears.
4. Click **Delete**.

The monitor is deleted.

Disabling a monitor

You can disable a monitor to discontinue monitoring a server.

Note: Because instances of monitors are not partitioned objects, a user can enable or disable an instance of a monitor without having permission to manage the associated pool or pool member. For example, a user with the Manager role, who can access partition AppA only, can enable or disable monitor instances for a pool that resides in partition Common. However, that user cannot perform operations on the pool or pool members that are associated with the monitor. Although this is correct functionality, the user might not expect this behavior. You can prevent this unexpected behavior by ensuring that all pools and pool members associated with monitor instances reside in the same partition.

1. On the Main tab, click **DNS** > **GSLB** > **Monitors**.
   The Monitor List screen opens.
2. Click a monitor name in the list.
   The monitor settings and values appear.
3. Click **Instances** on the menu bar.
   Any existing monitor instances appear.
4. Select the **Select** check box for the instance you want to manage.
5. Click **Disable**.
6. Click **Update**.

The monitor is disabled and no longer monitoring the server.

Displaying a monitor

You can display a monitor and view the settings and values.

Note: *You can manage only those monitors that you have permission to manage, based on your user role and partition access assignment.*

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1. On the Main tab, click **DNS** > **GSLB** > **Monitors**.
   The Monitor List screen opens.
2. Click a monitor name in the list.
   The monitor settings and values appear.

You can view the settings and values for the monitor.

Enabling a monitor

You can enable a monitor to begin or resume monitoring a server.

Note: *Because instances of monitors are not partitioned objects, a user can enable or disable an instance of a monitor without having permission to manage the associated pool or pool member. For example, a user with the Manager role, who can access partition AppA only, can enable or disable monitor instances for a pool that resides in partition Common. However, that user cannot perform operations on the pool or pool members that are associated with the monitor. Although this is correct functionality, the user might not expect this behavior. You can prevent this unexpected behavior by ensuring that all pools and pool members associated with monitor instances reside in the same partition.*

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1. On the Main tab, click **DNS** > **GSLB** > **Monitors**.
   The Monitor List screen opens.
2. Click a monitor name in the list.
   The monitor settings and values appear.
3. Click **Instances** on the menu bar.
   Any existing monitor instances appear.
4. Select the **Select** check box for the instance you want to manage.
5. Click **Enable**.
6. Click **Update**.

The monitor is enabled to begin or resume monitoring a server.

Creating a custom HTTP monitor

Before creating a monitor, you must decide on a monitor type.

A custom HTTP monitor enables you to send a command to a server and examine that server's response, thus ensuring that it is serving appropriate content.

1. On the Main tab, click **DNS** > **GSLB** > **Monitors**.
   The Monitor List screen opens.
2. Type a name for the monitor in the **Name** field.
3. From the **Type** list, select **HTTP**.
   The screen refreshes, and displays the configuration options for the **HTTP** monitor type.
4. From the **Import Settings** list, select **http**.

The new monitor inherits initial configuration values from the existing monitor.

5. From the Configuration list, select **Advanced**.

This selection makes it possible for you to modify additional default settings.

6. Type a number in the **Interval** field that indicates, in seconds, how frequently the system issues the monitor check. The default is 30 seconds.

The frequency of a monitor check must be greater than the value of the global-level **Heartbeat Interval** setting. Otherwise, the monitor can acquire out-of-date data.

7. Type a number in the **Timeout** field that indicates, in seconds, how much time the target has to respond to the monitor check. The default is 120 seconds.

If the target responds within the allotted time period, it is considered up. If the target does not respond within the time period, it is considered down.

8. Type a number in the **Probe Timeout** field that indicates the number of seconds after which the system times out the probe request to the system. The default is 5 seconds.

9. For the **Ignore Down Response** setting, do one of the following:

- Accept the **No** default option.
- Select the **Yes** option to specify that the monitor accepts more than one probe attempt per interval.

10. Type a text string in the **Send String** field that the monitor sends to the target resource.

The default string is GET /. This string retrieves a default file from the web site.

Type a fully qualified path name, for example, GET /www/example/index.html, if you want to retrieve a specific web site page.

11. Type a regular expression in the **Receive String** field that represents the text string that the monitor looks for in the returned resource.

The most common receive expressions contain a text string that is included in an HTML file on your site. The text string can be regular text, HTML tags, or image names.

Note: If you do not specify both a send string and a receive string, the monitor performs a simple service check and connect only.

---

12. Type a name in the **User Name** field.

13. Type a password in the **Password** field.

14. For the **Reverse** setting, do one of the following:

- Accept the **No** default option.
- Select the **Yes** option to make the **Receive Disable String** option unavailable and mark the pool, pool member, or node **Down** when the test is successful.

15. For the **Transparent** setting, do one of the following:

- Accept the **No** default option.
- Select the **Yes** option to use a path through the associated pool members or nodes to monitor the aliased destination.

16. For the **Alias Address** setting, do one of the following:

- Accept the ***All Addresses** default option.
- Type an alias IP address for the monitor to verify, on behalf of the pools or pool members with which the monitor is associated.

If the health check for the alias address is successful, the system marks all associated objects up. If the health check for the alias address is not successful, then the system marks all associated objects down.

17. For the **Alias Service Port** setting, do one of the following:

- Accept the ***All Ports** default option.
- Select an alias port or service for the monitor to check, on behalf of the pools or pool members with which the monitor is associated.

If the health check for the alias port or service is successful, the system marks all associated objects up. If the health check for the alias port or service is not successful, then the system marks all associated objects down.

The HTTP monitor is configured to monitor HTTP traffic.

Creating an HTTPS monitor

Before creating a monitor, you must decide on a monitor type.

A custom HTTPS monitor enables you to verify the Hypertext Transfer Protocol Secure (HTTPS) service by attempting to receive specific content from a web page protected by Secure Socket Layer (SSL) security.

1. On the Main tab, click **DNS** > **GSLB** > **Monitors**.
   The Monitor List screen opens.
2. From the **Type** list, select the type of monitor.
   The screen refreshes, and displays the configuration options for the monitor type.
3. From the **Import Settings** list, select an existing monitor.

   The new monitor inherits initial configuration values from the existing monitor.
4. Type a number in the **Interval** field that indicates, in seconds, how frequently the system issues the monitor check. The default is `30` seconds.

   The frequency of a monitor check must be greater than the value of the global-level **Heartbeat Interval** setting. Otherwise, the monitor can acquire out-of-date data.
5. Type a number in the **Timeout** field that indicates, in seconds, how much time the target has to respond to the monitor check. The default is `120` seconds.

   If the target responds within the allotted time period, it is considered up. If the target does not respond within the time period, it is considered down.
6. Type a number in the **Probe Timeout** field that indicates the number of seconds after which the system times out the probe request to the system. The default is `5` seconds.
7. For the **Ignore Down Response** setting, do one of the following:

   - Accept the **No** default option.
   - Select the **Yes** option to specify that the monitor accepts more than one probe attempt per interval.

8. Type a text string in the **Send String** field that the monitor sends to the target resource.

   The default string is `GET /`. This string retrieves a default file from the web site.

   Type a fully qualified path name, for example, `GET /www/example/index.html`, if you want to retrieve a specific web site page.
9. Type a regular expression in the **Receive String** field that represents the text string that the monitor looks for in the returned resource.

   The most common receive expressions contain a text string that is included in an HTML file on your site. The text string can be regular text, HTML tags, or image names.

   Note: If you do not specify both a send string and a receive string, the monitor performs a simple service check and connect only.

10. Type a list of ciphers in the **Cipher List** field that match those of the client sending a request, or of the server sending a response.

    The default string is DEFAULT:+SHA:+3DES:+kEDH.

11. Type a name in the **User Name** field.

12. Type a password in the **Password** field.

13. From the **Client Certificate** list, do one of the following:

    - Accept the default, **None**, to specify no client certificate.
    - Select **ca-bundle** to use the ca-bundle client certificate.
    - Select **default** to use a default client certificate.

14. For the **Reverse** setting, do one of the following:

    - Accept the **No** default option.
    - Select the **Yes** option to make the **Receive Disable String** option unavailable and mark the pool, pool member, or node **Down** when the test is successful.

15. For the **Transparent** setting, do one of the following:

    - Accept the **No** default option.
    - Select the **Yes** option to use a path through the associated pool members or nodes to monitor the aliased destination.

16. For the **Alias Address** setting, do one of the following:

    - Accept the ***All Addresses** default option.
    - Type an alias IP address for the monitor to verify, on behalf of the pools or pool members with which the monitor is associated.

    If the health check for the alias address is successful, the system marks all associated objects up. If the health check for the alias address is not successful, then the system marks all associated objects down.

17. For the **Alias Service Port** setting, do one of the following:

    - Accept the ***All Ports** default option.
    - Select an alias port or service for the monitor to check, on behalf of the pools or pool members with which the monitor is associated.

    If the health check for the alias port or service is successful, the system marks all associated objects up. If the health check for the alias port or service is not successful, then the system marks all associated objects down.

The HTTPS monitor is configured to monitor HTTPS traffic.

Associate the HTTPS monitor with a server, pool, pool member, or node.

Chapter

3

Monitors Settings Reference

Health monitor functional categories

The following tables describe the functional categories of health monitors, and list the available BIG-IP®
monitors within each category. Unless otherwise specified, each monitor is used by Local Traffic Manager™,
Global Traffic Manager™, and Link Controller™.

Address-check monitors

An *address-check monitor* is a simple monitor that pings an IP address to verify that the address can be
reached on a network.

Address-check monitor	Description
Gateway ICMP	Uses Internet Control Message Protocol (ICMP) to make a simple resource check. The check is successful if the monitor receives a response to an `ICMP_ECHO` datagram.
ICMP	Makes a simple node check. The check is successful if the monitor receives a response to an `ICMP_ECHO` datagram.
TCP Echo	Verifies Transmission Control Protocol (TCP) connections. The check is successful if the BIG-IP system receives a response to a TCP Echo message.

Service-check monitors

A *service-check monitor* determines whether a service is available by opening a connection to an IP address
and port.

Service-check monitor	Description
Diameter	Monitors servers running the Diameter authentication service. After configuring a Diameter monitor, associate the monitor with a load balancing pool. The BIG-IP system then attempts to establish a TCP connection with a server in the pool. After successfully establishing a connection, the Diameter monitor sends a Capabilities-Exchanging-Request (CER) message to the server. The monitor then waits to receive a Capabilities-Exchanging-Answer (CEA) message, as well as a result code of `DIAMETER_SUCCESS (2001)`.
FirePass	Checks the health of FirePass® systems.
Inband	Performs passive monitoring as part of client requests. This monitor, when acting as a client, attempts to connect to a pool member. If the pool member does not respond to a connection request after a user-specified number of tries within a user-specified period, the monitor marks the pool member as down. After the monitor has marked the pool member as down, and after a user-specified period has passed, the monitor again tries to connect to the pool member (if so configured).

Service-check monitor	Description
NNTP	Checks the status of Usenet News traffic. The check is successful if the monitor retrieves a newsgroup identification line from the server. An **NNTP** monitor requires a newsgroup name (for example, `alt.cars.mercedes`) and, if necessary, a user name and password.
MSSQL	Performs service checks on Microsoft® SQL Server-based services such as Microsoft® SQL Server versions 6.5 and 7.0.
MySQL	Checks the status of a MySQL™ database server. The check is successful if the monitor is able to connect to the server, log in as the indicated user, and log out.
Oracle	Checks the status of an Oracle® database server. The check is successful if the monitor is able to connect to the server, log in as the indicated user, and log out.
POP3	Checks the status of Post Office Protocol (POP) traffic. The check is successful if the monitor is able to connect to the server, log in as the indicated user, and log out. A **POP3** monitor requires a user name and password.
PostgreSQL	Checks the status of a PostgreSQL database server. The check is successful if the monitor is able to connect to the server, log in as the indicated user, and log out.
RADIUS	Checks the status of Remote Access Dial-in User Service (RADIUS) servers. The check is successful if the server authenticates the requesting user. A RADIUS monitor requires a user name, a password, and a shared secret string for the code number.
RADIUS Accounting	Checks the status of Remote Access Dial-in User Service (RADIUS) accounting servers. A RADIUS Accounting monitor requires a user name and a shared secret string for the code number.
RPC	Checks the availability of specific programs that reside on a remote procedure call (RPC) server. This monitor uses the `rpcinfo` command to query the RPC server and verify the availability of a given program.
SASP	Verifies the availability of a IBM® Group Workload Manager. This monitor uses the Server/Application State Protocol (SASP) to communicate with the Group Workload Manager. The monitor queries the Group Workload Manager for information on the current weights of each managed resource. These weights determine which resource currently provides the best response time. When the monitor receives this information from the Group Workload Manager (GWM), it configures the dynamic ratio option for

Service-check monitor	Description
	the resources, allowing the BIG-IP system to select the most appropriate resource to respond to a connection request.
	Note: *When you assign an* **SASP** *monitor, the monitor initially marks the resources as down. This change in status occurs because the GWM might not yet have information pertaining to its resources. As soon as the monitor receives the results of its query, it changes the status as needed. In most configurations, the monitor receives these results within a few seconds.*
SIP	Checks the status of SIP Call-ID services. By default, this monitor type issues an `SIP OPTIONS` request to a server device. However, you can use alternative protocols instead: **TCP**, **UDP**, **TLS**, and **SIPS** (that is, Secure SIP).
SMB	Verifies the availability of a Server Message Block/Common Internet File System (SMB/CIFS) server. Use this monitor to check the availability of the server as a whole, the availability of a specific service on the server, or the availability of a specific file used by a service.
SOAP	Tests a web service based on the Simple Object Access Protocol (SOAP). The monitor submits a request to a SOAP-based web service, and optionally, verifies a return value or fault.
TCP Half Open	Monitors the associated service by sending a `TCP SYN` packet to the service. As soon as the monitor receives the `SYN-ACK` packet, the monitor marks the service as up.
UDP	Verifies the User Datagram Protocol (UDP) service by attempting to send UDP packets to a pool, pool member, or virtual server and receiving a reply.

Content-check monitors

A *content-check monitor* sends a command to a server and examines that server's response to ensure that it is serving appropriate content.

Content-check monitor	Description
HTTP	Checks the status of Hypertext Transfer Protocol (HTTP) traffic. Like a TCP monitor, an HTTP monitor attempts to receive specific content from a web page, and unlike a TCP monitor, might send a user name and password.
HTTPS	Checks the status of Hypertext Transfer Protocol Secure (HTTPS) traffic. An HTTPS monitor attempts to receive specific content from a web page protected

Content-check monitor	Description
	by SSL security. The check is successful when the content matches the **Receive String** value.
https_443	Checks the status of Hypertext Transfer Protocol Secure (HTTPS) traffic, by using port 443.
LDAP	Checks the status of Lightweight Directory Access Protocol (LDAP) servers. A check is successful if entries are returned for the base and filter specified. An LDAP monitor requires a user name, a password, and base and filter strings.
Scripted	Generates a simple script that reads a file that you create. The file contains send and expect strings to specify lines that you want to send or that you expect to receive.
SMTP	Checks the status of Simple Mail Transport Protocol (SMTP) servers. This monitor type checks only that the server is up and responding to commands. The check is successful if the mail server responds to the standard SMTP HELO and QUIT commands.
TCP	Verifies the Transmission Control Protocol (TCP) service by attempting to receive specific content from a resource. The check is successful when the content matches the **Receive String** value.
WAP	Monitors Wireless Application Protocol (WAP) servers. The common usage for the **WAP** monitor is to specify the **Send String** and **Receive String** settings only. The **WAP** monitor functions by requesting a URL and finding the string in the **Receive String** setting in the data returned by the URL response.

Path-check monitors

A *path-check monitor* determines whether traffic can flow through a given device to an arbitrary endpoint. The monitor sends a packet through the network device, or to a remote server, to verify that the traffic can actually pass through the network device, and not just to the device.

Path-check monitor	Description
Gateway ICMP	Uses Internet Control Message Protocol (ICMP) to make a simple resource check. The check is successful if the monitor receives a response to an ICMP_ECHO datagram.
ICMP	Makes a simple node check. The check is successful if the monitor receives a response to an ICMP_ECHO datagram.
TCP Echo	Verifies Transmission Control Protocol (TCP) connections. The check is successful if the BIG-IP system receives a response to a TCP Echo message.

Application-check monitors

An *application-check monitor* is typically a custom monitor or external monitor that tests a specific application. For example, an FTP monitor connects, logs in by using a user ID and password, changes to a specified directory, and requests a specific file. This monitor succeeds when the file is received.

Application-check monitor	Description
BIG-IP	Gathers metrics and statistics information that the Local Traffic Manager acquires through the monitoring of its own resources. Typically, it is sufficient to assign only the BIG-IP monitor to a Local Traffic Manager. When you want to verify the availability of a specific resource managed by the Local Traffic Manager, F5 Networks recommends that you first assign the appropriate monitor to the resource through the Local Traffic Manager, and then assign a BIG-IP monitor to the Local Traffic Manager through the Global Traffic Manager. This configuration provides the most efficient means of tracking resources managed by a BIG-IP system.
BIG-IP Link	Gathers metrics and statistics information that the Link Controller™ acquires through the monitoring of its own resources. When you use the Global Traffic Manager in a network that contains a Link Controller, you must assign a BIG-IP Link monitor to the Link Controller. This monitor is automatically assigned to the Link Controller if you do not manually assign it.
External	Enables you to create your own monitor type.
FTP	Attempts to download a specified file to the /var/tmp directory, and if the file is retrieved, the check is successful. Note that once the file has been successfully downloaded, the BIG-IP system does not save it.
IMAP	Checks the status of Internet Message Access Protocol (IMAP) traffic. An IMAP monitor is essentially a POP3 type of monitor with the addition of the Folder setting. The check is successful if the monitor is able to log into a server and open the specified mail folder.
Module Score	Enables global and local traffic management systems to load balance in a proportional manner to local traffic management virtual servers associated with the BIG-IP® Application Acceleration Manager and Application Security Manager™. When you configure a **Module Score** monitor, the local traffic management system uses SNMP to pull the gtm_score values from the downstream virtual servers and set the dynamic ratios on the associated upstream local traffic management pool members or nodes. The **Module Score** monitor retrieves the gtm_score values from the virtual server and the

Application-check monitor	Description
	gtm_vs_score values associated with the virtual server. Then, if a pool name is not specified, this monitor sets the dynamic ratio on the node that is associated with the virtual server.
	The BIG-IP system uses the lowest non-zero value of the gtm_vs_score values to set the dynamic ratio. If all gtm_vs_score values are zero, then the gtm_score value is used to set the dynamic ratios. If you specify a pool name in the monitor definition, then the dynamic ratio is set on the pool member.
Virtual Location	Optimizes end-user response time in environments with dynamic distribution of application resources across multiple data centers. When using the **Virtual Location** monitor, the BIG-IP sets the **Priority Group** value of all local pool members to 2 (a higher priority). When a member of a load balancing pool migrates to a remote data center the **Virtual Location** monitor lowers the members **Priority Group** value to 1 (a lower priority). This value adjustment results in subsequent connections being sent to local pool members only if available. If no local pool members are available, connections are sent to the remote pool member.

Performance monitor functional category

This information describes the functional category of performance monitors, and lists the available BIG-IP® monitors. Unless otherwise specified, each type is used by Local Traffic Manager™, Global Traffic Manager™, and Link Controller™.

Performance monitors

A *performance monitor* interacts with the server (as opposed to virtual server) to examine the server load and to acquire information about the condition of virtual servers.

Performance monitor	Description
BIG-IP	Collects data from Global Traffic Manager and Local Traffic Manager. Typically, the Local Traffic Manager probes local pool members and provides the results to Global Traffic Manager.
	***Note:** When the BIG-IP monitor fails, all virtual servers for that Local Traffic Manager system are marked unavailable, regardless of the results of individual virtual server probes.*
BIG-IP Link	Gathers metrics and statistics information acquired through the monitoring of Global Traffic Manager or Link Controller resources.

Performance monitor	Description
SNMP	Checks the performance of a server that runs an SNMP agent to load balance to that server. A custom **snmp_gtm** import setting is assigned to servers that are not developed by F5 Networks.
SNMP DCA	Checks the performance of a server running an SNMP agent such as UC Davis, for the purpose of load balancing traffic to that server. With this monitor you can define ratio weights for CPU, memory, and disk use.
SNMP DCA Base	Checks the performance of servers that are running an SNMP agent, such as UC Davis. However, you should use this monitor only when you want the load balancing destination to be based solely on user data, and not CPU, memory, or disk use.
Real Server	Checks the performance of a node that is running the RealSystem Server data collection agent. The monitor then dynamically load balances traffic accordingly.
WMI	Checks the performance of a node that is running the Windows Management Infrastructure (WMI) data collection agent, and then dynamically load balances traffic accordingly. Generally, you would use a WMI monitor with dynamic ratio load balancing.
	Note: When using the `GetWinMediaInfo` *command with a WMI monitor, Microsoft® Windows Server® 2003 and Microsoft® Windows Server® 2008 require the applicable version of Windows Media® Services to be installed on each server.*

BIG-IP Link monitor settings

This table describes the BIG-IP Link monitor configuration settings and default values.

Setting	Value	Description
Name	No default	Provides a name for the monitor.
Description	No default	Provides a description of the monitor.
Type	Selected monitor type	Specifies the type of monitor you are creating.
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.
Interval	10	Specifies, in seconds, the frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. The default value is 10 seconds.

Setting	Value	Description
Timeout	`30`	Specifies the number of seconds in which the target must respond to the monitor request. The default is `30` seconds. If the target responds within the set time period, the target is considered to be up. If the target does not respond within the set time period, the target is considered to be down.
Ignore Down Response	**No**	Specifies that the monitor allows more than one probe attempt per interval. The default is **No**.
Alias Address	`*All Addresses`	Specifies an alias IP address for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Addresses`. If the health check for the alias address is successful, the system marks all associated objects up. If the health check for the alias address is not successful, then the system marks all associated objects down.

BIG-IP monitor settings

This table describes the BIG-IP monitor configuration settings and default values.

Important: *Use the BIG-IP monitor to monitor a BIG-IP virtual server with a virtual address that overlaps a non-floating IPv6 or IPv4 self IP address. Do not use any other GTM monitor to monitor a virtual server with a virtual address that overlaps a non-floating self IP address.*

Setting	Value	Description
Name	No default	Provides a name for the monitor.
Description	No default	Provides a description of the monitor.
Type	Selected monitor type	Specifies the type of monitor you are creating.
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.
Interval	`30`	Specifies, in seconds, the frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. The default value is `30` seconds.
Timeout	`90`	Specifies the number of seconds in which the target must respond to the monitor request. The default is `90` seconds. If the target responds within the set time period, the target is considered to be up. If the target does not respond within the set time period, the target is considered to be down. The Timeout value should be three times the Interval value.
Ignore Down Response	**No**	Specifies that the monitor allows more than one probe attempt per interval. The default is **No**.
Alias Address	`*All Addresses`	Specifies an alias IP address for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Addresses`. If the health check for the alias

Setting	Value	Description
		address is successful, the system marks all associated objects up. If the health check for the alias address is not successful, then the system marks all associated objects down.
Alias Service Port	`*All Ports`	Specifies an alias port or service for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Ports.` If the health check for the alias port or service is successful, the system marks all associated objects up. If the health check for the alias port or service is not successful, then the system marks all associated objects down.
Aggregate Dynamic Ratios	**None**	Specifies how the system combines the module values to create the proportion (score) for the load balancing operation. The score represents the module's estimated capacity for handing traffic. Averaged values are appropriate for downstream Web Accelerator or Application Security Manager virtual servers. The default is **None**, meaning that the system does not use the scores in the load balancing operation.

External monitor settings

This table describes the External monitor configuration settings and default values.

Setting	Value	Description
Name	No default	Provides a name for the monitor.
Description	No default	Provides a description of the monitor.
Type	Selected monitor type	Specifies the type of monitor you are creating.
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.
Interval	`30`	Specifies, in seconds, the frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. The default value is `30` seconds.
Timeout	`120`	Specifies the number of seconds in which the target must respond to the monitor request. The default is `120` seconds. If the target responds within the set time period, the target is considered to be up. If the target does not respond within the set time period, the target is considered to be down. The Timeout value should be three times the Interval value.
Probe Timeout	`5`	Specifies the number of seconds after which the system times out the probe request to the system. The default is `5` seconds.
Ignore Down Response	**No**	Specifies that the monitor allows more than one probe attempt per interval. The default is **No**.
External Program	No default	Specifies the name of the file for the monitor to use. In order to reference a file, you must first import it using options on the

Setting	Value	Description
		System > **File Management** > **External Monitor Program File List** > **Import** screen. The BIG-IP system automatically places the file in the proper location on the file system.
Arguments	No default	Specifies any command-line arguments that the script requires.
Variables	No default	Specifies any variables that the script requires.
Alias Address	`*All Addresses`	Specifies an alias IP address for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Addresses`. If the health check for the alias address is successful, the system marks all associated objects up. If the health check for the alias address is not successful, then the system marks all associated objects down.
Alias Service Port	***All Ports**	Specifies an alias port or service for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is ***All Ports**. If the health check for the alias port or service is successful, the system marks all associated objects up. If the health check for the alias port or service is not successful, then the system marks all associated objects down.

FirePass monitor settings

This table describes the FirePass monitor configuration settings and default values.

Setting	Value	Description
Name	No default	Provides a name for the monitor.
Description	No default	Provides a description of the monitor.
Type	Selected monitor type	Specifies the type of monitor you are creating.
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.
Interval	`30`	Specifies, in seconds, the frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. The default value is `30` seconds.
Timeout	`30`	Specifies the number of seconds in which the target must respond to the monitor request. The default is `30` seconds. If the target responds within the set time period, the target is considered to be up. If the target does not respond within the set time period, the target is considered to be down.
Probe Timeout	`5`	Specifies the number of seconds after which the system times out the probe request to the system. The default is `5` seconds.
Ignore Down Response	**No**	Specifies that the monitor allows more than one probe attempt per interval. The default is **No**.

Setting	Value	Description
Cipher List	HIGH:!ADH	Specifies the list of ciphers for this monitor. The default list is HIGH:!ADH.
Max Load Average	12.0	Specifies the number that the monitor uses to mark the FirePass system up or down. The system compares the **Max Load Average** setting against a one-minute average of the FirePass system load. When the FirePass system-load average falls within the specified Max Load Average, the monitor marks the FirePass system up. When the average exceeds the setting, the monitor marks the system down. The default is 12.0.
Concurrency Limit	95	Specifies the maximum percentage of licensed connections currently in use under which the monitor marks the **Secure Access Manager** system up. As an example, a setting of 95 percent means that the monitor marks the FirePass system up until 95 percent of licensed connections are in use. When the number of in-use licensed connections exceeds 95 percent, the monitor marks the FirePass system down The default is 95.
User Name	gtmuser	Specifies the user name, if the monitored target requires authentication. *Important: If there is no password security, you must use blank strings [""] for the **Username** and **Password** settings.*
Password	No default	Specifies the password, if the monitored target requires authentication. *Important: If there is no password security, you must use blank strings [""] for the **User Name** and **Password** settings.*
Alias Address	*All Addresses	Specifies an alias IP address for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is *All Addresses. If the health check for the alias address is successful, the system marks all associated objects up. If the health check for the alias address is not successful, then the system marks all associated objects down.
Alias Service Port	*All Ports	Specifies an alias port or service for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is *All Ports. If the health check for the alias port or service is successful, the system marks all associated objects up. If the health check for the alias port or service is not successful, then the system marks all associated objects down.

FTP monitor settings

This table describes the FTP monitor configuration settings and default values.

Setting	Value	Description
Name	No default	Provides a name for the monitor.
Description	No default	Provides a description of the monitor.

Setting	Value	Description
Type	Selected monitor type	Specifies the type of monitor you are creating.
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.
Interval	`10`	Specifies, in seconds, the frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. The default value is `10` seconds.
Timeout	`31`	Specifies the number of seconds in which the target must respond to the monitor request. The default is `31` seconds. If the target responds within the set time period, the target is considered to be up. If the target does not respond within the set time period, the target is considered to be down. The Timeout value should be three times the Interval value, plus one second.
Probe Timeout	`5`	Specifies the number of seconds after which the system times out the probe request to the system. The default is `5` seconds.
Ignore Down Response	**No**	Specifies that the monitor allows more than one probe attempt per interval. The default is **No**.
User Name	No default	Specifies the user name, if the monitored target requires authentication. ***Important:*** *If there is no password security, you must use blank strings [""] for the* ***User Name*** *and* ***Password*** *settings.*
Password	No default	Specifies the password, if the monitored target requires authentication. ***Important:*** *If there is no password security, you must use blank strings [""] for the* ***User Name*** *and* ***Password*** *settings.*
Path/Filename	No default	Specifies the full path and file name of the file that the system attempts to download. The health check is successful if the system can download the file.
Mode	**Passive**	• **Passive**. Specifies the data transfer process (DTP) mode. The default is **Passive**. • **Port**. Specifies that the monitor initiates and establishes the data connection with the FTP server.
Alias Address	`*All Addresses`	Specifies an alias IP address for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Addresses`. If the health check for the alias address is successful, the system marks all associated objects up. If the health check for the alias address is not successful, then the system marks all associated objects down.
Alias Service Port	`*All Ports`	Specifies an alias port or service for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Ports`. If the health check for the alias port or service is successful, the system marks all associated objects up. If the health check for the alias port or service is not successful, then the system marks all associated objects down.

Setting	Value	Description
Debug	No	Specifies whether the monitor sends error messages and additional information to a log file created and labeled specifically for this monitor. The default setting is **No**, which specifies that the system does not redirect error messages and additional information related to this monitor. The **Yes** setting specifies that the system redirects error messages and additional information to the `/var/log/<monitor_type>_<ip_address>.<port>.log` file.

Gateway ICMP monitor settings

This table describes the Gateway ICMP monitor configuration settings and default values.

Important:

Use the BIG-IP monitor to monitor a BIG-IP virtual server with a virtual address that overlaps a non-floating IPv6 or IPv4 self IP address. Do not use any other GTM monitor to monitor a virtual server with a virtual address that overlaps a non-floating self IP address.

Setting	Value	Description
Name	No default	Provides a name for the monitor.
Description	No default	Provides a description of the monitor.
Type	Selected monitor type	Specifies the type of monitor you are creating.
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.
Interval	30	Specifies, in seconds, the frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. The default value is 30 seconds.
Timeout	120	Specifies the number of seconds in which the target must respond to the monitor request. The default is 120 seconds. If the target responds within the set time period, the target is considered to be up. If the target does not respond within the set time period, the target is considered to be down. The Timeout value should be three times the Interval value.
Probe Interval	1	Specifies, in seconds, the frequency at which the system probes the host server. The default is 1 second.
Probe Timeout	5	Specifies the number of seconds after which the system times out the probe request to the system. The default is 5 seconds.
Probe Attempts	3	Specifies the number of times that the system attempts to probe the host server, after which the system considers the host server down or unavailable. The default value is 3.
Ignore Down Response	No	Specifies that the monitor allows more than one probe attempt per interval. The default is **No**.

Setting	Value	Description
Transparent	**No**	Specifies whether the monitor operates in transparent mode. A monitor in transparent mode uses a path through the associated pool members or nodes to monitor the aliased destination (that is, it monitors the **Alias Address**-**Alias Service Port** combination specified in the monitor). The default is **No**.
Alias Address	`*All Addresses`	Specifies an alias IP address for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Addresses`. If the health check for the alias address is successful, the system marks all associated objects up. If the health check for the alias address is not successful, then the system marks all associated objects down.
Alias Service Port	`*All Ports`	Specifies an alias port or service for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Ports.` If the health check for the alias port or service is successful, the system marks all associated objects up. If the health check for the alias port or service is not successful, then the system marks all associated objects down.

GTP monitor settings

This table describes the GTP (GPRS Tunneling protocol) monitor configuration settings and default values.

Important:

Use the BIG-IP® monitor to monitor a BIG-IP virtual server with a virtual address that overlaps a non-floating IPv6 or IPv4 self IP address. Do not use any other GTM™ monitor to monitor a virtual server with a virtual address that overlaps a non-floating self IP address.

Setting	Value	Description
Name	No default	Provides a name for the monitor.
Description	No default	Provides a description of the monitor.
Type	Selected monitor type	Specifies the type of monitor you are creating.
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.
Interval	`30`	Specifies, in seconds, the frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. The default value is `30` seconds.
Timeout	`120`	Specifies the number of seconds in which the target must respond to the monitor request. The default is `120` seconds. If the target responds within the set time period, the target is considered to be up. If the target does not respond within the set time period, the target is considered to be down. The Timeout value should be four times the Interval value.

Setting	Value	Description
Probe Interval	1	Specifies, in seconds, the frequency at which the system probes the host server. The default is 1 second.
Probe Timeout	5	Specifies the number of seconds after which the system times out the probe request to the system. The default is 5 seconds.
Probe Attempts	3	Specifies the number of times that the system attempts to probe the host server, after which the system considers the host server down or unavailable. The default value is 3.
Ignore Down Response	No	Specifies that the monitor allows more than one probe attempt per interval. The default is **No**.
Protocol Version	1	Specifies which version of the GPRS Tunneling protocol the monitor uses.
Alias Address	*All Addresses	Specifies an alias IP address for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is *All Addresses. If the health check for the alias address is successful, the system marks all associated objects up. If the health check for the alias address is not successful, then the system marks all associated objects down.
Alias Service Port	*All Ports	Specifies an alias port or service for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is *All Ports. If the health check for the alias port or service is successful, the system marks all associated objects up. If the health check for the alias port or service is not successful, then the system marks all associated objects down.

HTTP monitor settings

This table describes the HTTP monitor configuration settings and default values.

Setting	Value	Description
Name	No default	Provides a name for the monitor.
Description	No default	Provides a description of the monitor.
Type	Selected monitor type	Specifies the type of monitor you are creating.
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.
Interval	30	Specifies, in seconds, the frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. The default value is 30 seconds.
Timeout	120	Specifies the number of seconds in which the target must respond to the monitor request. The default is 120 seconds. If the target responds within the set time period, the target is considered to be up. If the target does not

Setting	Value	Description
		respond within the set time period, the target is considered to be down. The Timeout value should be three times the Interval value.
Probe Timeout	5	Specifies the number of seconds after which the system times out the probe request to the system. The default is 5 seconds.
Ignore Down Response	No	Specifies that the monitor allows more than one probe attempt per interval. The default is **No**.
Send String	GET /	Specifies the text string that the monitor sends to the target object. You must include \r\n at the end of a non-empty send string. The default setting is GET /\r\n, which retrieves a default HTML file for a web site. To retrieve a specific page from a web site, specify a fully-qualified path name, for example: GET /www/siterequest/index.html\r\n. *Note:* When the send string specifies HTTP/1.0 or HTTP/1.1, the monitor checks the result code before indicating the monitor as up. Additionally, the server response code must include a 200 status code, regardless of the receive-string content, in order for the monitor to mark the server as up. The monitor marks the server as down for any other response, without further processing. When the send string does not specify HTTP/1.0 or HTTP/1.1, the monitor uses HTTP/0.9 and makes no response code checks. Search string matches on the received reply can further affect the result. *Important: When you create a new TCP, HTTP, or HTTPS monitor in version 10.2.0 and later, you must include a return and new-line entry (\r\n) at the end of a non-empty send string, for example GET /\r\n instead of GET /. If you do not include \r\n at the end of the send string, the TCP, HTTP, or HTTPS monitor fails. When you include a host in a send string, you must duplicate the return and new-line entries (\r\n\r\n), for example, "GET / HTTP/1.1\r\nHost: server.com\r\n\r\n" or "GET / HTTP/1.1\r\nHost: server.com\r\nConnection: close\r\n\r\n".*
Receive String	No default	Specifies the regular expression representing the text string that the monitor looks for in the returned resource. The most common receive expressions contain a text string that is included in an HTML file on your site. The text string can be regular text, HTML tags, or image names, and the associated operation is not case-sensitive. The only monitors that support regular expression matching are HTTP, HTTPS, TCP, and UDP monitors. *Note: If you do not specify both a **Send String** and a **Receive String**, the monitor performs a simple service check and connect only.*
User Name	No default	Specifies the user name, if the monitored target requires authentication. *Important: If there is no password security, you must use blank strings [""] for the **User Name** and **Password** settings.*

Setting	Value	Description
Password	No default	Specifies the password, if the monitored target requires authentication. ***Important:*** *If there is no password security, you must use blank strings [""] for the **User Name** and **Password** settings.*
Reverse	No	Instructs the system to mark the target resource down when the test is successful. This setting is useful, for example, if the content on your web site home page is dynamic and changes frequently, you might want to set up a reverse ECV service check that looks for the string `Error`. A match for this string means that the web server was down. You can use **Reverse** only if you configure both **Send String** and **Receive String**.
Transparent	No	Specifies whether the monitor operates in transparent mode. A monitor in transparent mode uses a path through the associated pool members or nodes to monitor the aliased destination (that is, it monitors the **Alias Address**-**Alias Service Port** combination specified in the monitor). The default is **No**.
Alias Address	`*All Addresses`	Specifies an alias IP address for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Addresses`. If the health check for the alias address is successful, the system marks all associated objects up. If the health check for the alias address is not successful, then the system marks all associated objects down.
Alias Service Port	`*All Ports`	Specifies an alias port or service for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Ports`. If the health check for the alias port or service is successful, the system marks all associated objects up. If the health check for the alias port or service is not successful, then the system marks all associated objects down.

HTTPS monitor settings

This table describes the HTTPS monitor configuration settings and default values.

Setting	Value	Description
Name	No default	Provides a name for the monitor.
Description	No default	Provides a description of the monitor.
Type	Selected monitor type	Specifies the type of monitor you are creating.
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.
Interval	`30`	Specifies, in seconds, the frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. The default value is `30` seconds.
Timeout	`120`	Specifies the number of seconds in which the target must respond to the monitor request. The default is `120` seconds. If the target responds within the set time period, the target is considered to be up. If the target does not respond within

Setting	Value	Description
		the set time period, the target is considered to be down. The Timeout value should be three times the Interval value.
Probe Timeout	`5`	Specifies the number of seconds after which the system times out the probe request to the system. The default is `5` seconds.
Ignore Down Response	No	Specifies that the monitor allows more than one probe attempt per interval. The default is **No**.
Send String	`GET /`	Specifies the text string that the monitor sends to the target object. You must include `\r\n` at the end of a non-empty send string. The default setting is `GET /\r\n`, which retrieves a default HTML file for a web site. To retrieve a specific page from a web site, specify a fully-qualified path name, for example: `GET /www/siterequest/index.html\r\n`. --- *Note:* When the send string specifies `HTTP/1.0` or `HTTP/1.1`, the monitor checks the result code before indicating the monitor as up. Additionally, the server response code must include a `200` status code, regardless of the receive-string content, in order for the monitor to mark the server as up. The monitor marks the server as down for any other response, without further processing. When the send string does not specify `HTTP/1.0` or `HTTP/1.1`, the monitor uses `HTTP/0.9` and makes no response code checks. Search string matches on the received reply can further affect the result. --- ***Important:*** *When you create a new TCP, HTTP, or HTTPS monitor in version 10.2.0 and later, you must include a return and new-line entry (`\r\n`) at the end of a non-empty send string, for example `GET /\r\n` instead of `GET /`. If you do not include `\r\n` at the end of the send string, the TCP, HTTP, or HTTPS monitor fails. When you include a host in a send string, you must duplicate the return and new-line entries (`\r\n\r\n`), for example, `"GET / HTTP/1.1\r\nHost: server.com\r\n\r\n"` or `"GET / HTTP/1.1\r\nHost: server.com\r\nConnection: close\r\n\r\n"`.*
Receive String	No default	Specifies the regular expression representing the text string that the monitor looks for in the returned resource. The most common receive expressions contain a text string that is included in an HTML file on your site. The text string can be regular text, HTML tags, or image names, and the associated operation is not case-sensitive. The only monitors that support regular expression matching are HTTP, HTTPS, TCP, and UDP monitors.

Setting	Value	Description
		*Note: If you do not specify both a **Send String** and a **Receive String**, the monitor performs a simple service check and connect only.*
Cipher List	`DEFAULT:+SHA:+3DES:+kEDH`	Specifies the list of ciphers for this monitor. The default list is `DEFAULT:+SHA:+3DES:+kEDH`.
User Name	No default	Specifies the user name, if the monitored target requires authentication. *Important: If there is no password security, you must use blank strings [""] for the **User Name** and **Password** settings.*
Password	No default	Specifies the password, if the monitored target requires authentication. *Important: If there is no password security, you must use blank strings [""] for the **User Name** and **Password** settings.*
Compatibility	**Enabled**	Specifies, when enabled, that the SSL options setting (in OpenSSL) is set to **ALL**. The default is **Enabled**.
Client Certificate	**None**	For **TLS** and **SIPS** modes only, specifies a client certificate that the monitor sends to the target SSL server. The default is **None**.
Client Key	**None**	For **TLS** and **SIPS** modes only, specifies a key for a client certificate that the monitor sends to the target SSL server. The default is **None**.
Reverse	**No**	Instructs the system to mark the target resource down when the test is successful. This setting is useful, for example, if the content on your web site home page is dynamic and changes frequently, you might want to set up a reverse ECV service check that looks for the string `Error`. A match for this string means that the web server was down. You can use **Reverse** only if you configure both **Send String** and **Receive String**.
Transparent	**No**	Specifies whether the monitor operates in transparent mode. A monitor in transparent mode uses a path through the associated pool members or nodes to monitor the aliased destination (that is, it monitors the **Alias Address**-**Alias Service Port** combination specified in the monitor). The default is **No**.
Alias Address	`*All Addresses`	Specifies an alias IP address for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Addresses`. If the health check for the alias address is successful, the system marks all associated objects up. If the health check for the alias address is not successful, then the system marks all associated objects down.

Setting	Value	Description
Alias Service Port	`*All Ports`	Specifies an alias port or service for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Ports`. If the health check for the alias port or service is successful, the system marks all associated objects up. If the health check for the alias port or service is not successful, then the system marks all associated objects down.

IMAP monitor settings

This table describes the IMAP monitor configuration settings and default values.

Setting	Value	Description
Name	No default	Provides a name for the monitor.
Description	No default	Provides a description of the monitor.
Type	Selected monitor type	Specifies the type of monitor you are creating.
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.
Interval	`10`	Specifies, in seconds, the frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. The default value is `10` seconds.
Timeout	`31`	Specifies the number of seconds in which the target must respond to the monitor request. The default is `31` seconds. If the target responds within the set time period, the target is considered to be up. If the target does not respond within the set time period, the target is considered to be down. The Timeout value should be three times the Interval value, plus one second.
Probe Timeout	`5`	Specifies the number of seconds after which the system times out the probe request to the system. The default is `5` seconds.
Ignore Down Response	**No**	Specifies that the monitor allows more than one probe attempt per interval. The default is **No**.
User Name	No default	Specifies the user name, if the monitored target requires authentication. *Important: If there is no password security, you must use blank strings [""] for the **User Name** and **Password** settings.*
Password	No default	Specifies the password, if the monitored target requires authentication. *Important: If there is no password security, you must use blank strings [""] for the **User Name** and **Password** settings.*
Folder	INBOX	Specifies the name of the folder on the IMAP server that the monitor tries to open.

Setting	Value	Description
Alias Address	`*All Addresses`	Specifies an alias IP address for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Addresses`. If the health check for the alias address is successful, the system marks all associated objects up. If the health check for the alias address is not successful, then the system marks all associated objects down.
Alias Service Port	`*All Ports`	Specifies an alias port or service for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Ports`. If the health check for the alias port or service is successful, the system marks all associated objects up. If the health check for the alias port or service is not successful, then the system marks all associated objects down.
Debug	**No**	Specifies whether the monitor sends error messages and additional information to a log file created and labeled specifically for this monitor. The default setting is **No**, which specifies that the system does not redirect error messages and additional information related to this monitor. The **Yes** setting specifies that the system redirects error messages and additional information to the `/var/log/<monitor_type>_<ip_address>.<port>.log` file.

LDAP monitor settings

This table describes the LDAP monitor configuration settings and default values.

Setting	Value	Description
Name	No default	Provides a name for the monitor.
Description	No default	Provides a description of the monitor.
Type	Selected monitor type	Specifies the type of monitor you are creating.
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.
Interval	`10`	Specifies, in seconds, the frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. The default value is `10` seconds.
Timeout	`31`	Specifies the number of seconds in which the target must respond to the monitor request. The default is `31` seconds. If the target responds within the set time period, the target is considered to be up. If the target does not respond within the set time period, the target is considered to be down. The Timeout value should be three times the Interval value, plus one second.
Probe Timeout	`5`	Specifies the number of seconds after which the system times out the probe request to the system. The default is `5` seconds.
Ignore Down Response	**No**	Specifies that the monitor allows more than one probe attempt per interval. The default is **No**.

Setting	Value	Description
User Name	No default	Specifies the user name, if the monitored target requires authentication. *Important: If there is no password security, you must use blank strings [""] for the **User Name** and **Password** settings.*
Password	No default	Specifies the password, if the monitored target requires authentication. *Important: If there is no password security, you must use blank strings [""] for the **User Name** and **Password** settings.*
Base	No default	Specifies the location in the LDAP tree from which the monitor starts the health check. A sample value is: `dc=bigip-test,dc=net`
Filter	No default	Specifies an LDAP key for which the monitor searches. A sample value is: `objectclass=*`.
Security	**None**	Specifies the secure protocol type for communications with the target. The default is **None**.
Mandatory Attributes	**No**	Specifies whether the target must include attributes in its response to be considered up. The default is **No**.
Chase Referrals	**Yes**	Specifies whether, upon receipt of an LDAP referral entry, the target follows (or chases) that referral. The default is **Yes**.
Alias Address	`*All Addresses`	Specifies an alias IP address for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Addresses`. If the health check for the alias address is successful, the system marks all associated objects up. If the health check for the alias address is not successful, then the system marks all associated objects down.
Alias Service Port	`*All Ports`	Specifies an alias port or service for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Ports`. If the health check for the alias port or service is successful, the system marks all associated objects up. If the health check for the alias port or service is not successful, then the system marks all associated objects down.
Debug	**No**	Specifies whether the monitor sends error messages and additional information to a log file created and labeled specifically for this monitor. The default setting is **No**, which specifies that the system does not redirect error messages and additional information related to this monitor. The **Yes** setting specifies that the system redirects error messages and additional information to the `/var/log/<monitor_type>_<ip_address>.<port>.log` file.

MSSQL monitor settings

This table describes the MSSQL monitor configuration settings and default values.

Setting	Value	Description
Name	No default	Provides a name for the monitor.

Setting	Value	Description
Description	No default	Provides a description of the monitor.
Type	Selected monitor type	Specifies the type of monitor you are creating.
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.
Interval	30	Specifies, in seconds, the frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. The default value is 30 seconds.
Timeout	91	Specifies the number of seconds in which the target must respond to the monitor request. The default is 91 seconds. If the target responds within the set time period, the target is considered to be up. If the target does not respond within the set time period, the target is considered to be down. The Timeout value should be three times the Interval value, plus one second.
Probe Timeout	5	Specifies the number of seconds after which the system times out the probe request to the system. The default is 5 seconds.
Ignore Down Response	**No**	Specifies that the monitor allows more than one probe attempt per interval. The default is **No**.
Send String	No default	Specifies the SQL statement that the monitor runs on the target. A sample is: SELECT * FROM <db_name>. This is an optional setting. If you do not specify a send string, the monitor simply tries to establish a connection with the target. If the monitor is successful, the system marks the target up. If the system cannot establish the connection, then it marks the target down.
Receive String	No default	Specifies the response the monitor expects from the target, when the target receives the send string. This is an optional setting, and is applicable only if you configure the **Send String** setting.
User Name	No default	Specifies the user name, if the monitored target requires authentication. *Important: If there is no password security, you must use blank strings [""] for the **User Name** and **Password** settings.*
Password	No default	Specifies the password, if the monitored target requires authentication. *Important: If there is no password security, you must use blank strings [""] for the **User Name** and **Password** settings.*
Database	No default	Specifies the name of the database that the monitor tries to access, for example, sales or hr.
Receive Row	No default	Specifies the row in the database where the specified **Receive String** should be located. This is an optional setting, and is applicable only if you configure the **Send String** and the **Receive String** settings.
Receive Column	No default	Specifies the column in the database where the specified **Receive String** should be located. This is an optional setting, and is applicable only if you configure the **Send String** and the **Receive String** settings.

Setting	Value	Description
Count	`0`	Specifies how the system handles open connections for monitor instances. The default is `0` (zero). By default, when you assign instances of this monitor to a resource, the system keeps the connection to the database open. This functionality allows you to assign multiple instances to the database while reducing the overhead that multiple open connections could cause. The **Count** option allows you to determine the number of instances for which the system keeps a connection open.
Alias Address	`*All Addresses`	Specifies an alias IP address for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Addresses`. If the health check for the alias address is successful, the system marks all associated objects up. If the health check for the alias address is not successful, then the system marks all associated objects down.
Alias Service Port	`*All Ports`	Specifies an alias port or service for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Ports`. If the health check for the alias port or service is successful, the system marks all associated objects up. If the health check for the alias port or service is not successful, then the system marks all associated objects down.
Debug	**No**	Specifies whether the monitor sends error messages and additional information to a log file created and labeled specifically for this monitor. The default setting is **No**, which specifies that the system does not redirect error messages and additional information related to this monitor. The **Yes** setting specifies that the system redirects error messages and additional information to the `/var/log/<monitor_type>_<ip_address>.<port>.log` file.

MySQL monitor settings

This table describes the MySQL monitor configuration settings and default values.

Setting	Value	Description
Name	No default	Provides a name for the monitor.
Description	No default	Provides a description of the monitor.
Type	Selected monitor type	Specifies the type of monitor you are creating.
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.
Interval	`30`	Specifies, in seconds, the frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. The default value is `30` seconds. *Important: F5 Networks recommends that when you configure this option and the **Up Interval** option, whichever value is greater should be a multiple*

Setting	Value	Description
		of the lesser value to allow for an even distribution of monitor checks among all monitors.
Time Until Up	0	Delays the marking of a pool member or node as up for the specified number of seconds after receiving the first correct response. When this attribute is set to 0 (the default value), the BIG-IP system marks the resource as up immediately after receiving the first correct response.
Timeout	91	Specifies the number of seconds in which the target must respond to the monitor request. The default is 91 seconds. If the target responds within the set time period, the target is considered to be up. If the target does not respond within the set time period, the target is considered to be down. The Timeout value should be three times the Interval value, plus one second.
Manual Resume	**No**	Specifies whether the system automatically changes the status of a resource to Enabled at the next successful monitor check. The default is **No**. *Note: If you set this option to **Yes**, you must manually re-enable the resource before the system can use it for load balancing connections.*
Send String	No default	Specifies the SQL statement that the monitor runs on the target. A sample is: SELECT * FROM <db_name>. This is an optional setting. If you do not specify a send string, the monitor simply tries to establish a connection with the target. If the monitor is successful, the system marks the target up. If the system cannot establish the connection, then it marks the target down.
Receive String	No default	Specifies the response the monitor expects from the target, when the target receives the send string. This is an optional setting, and is applicable only if you configure the Send String setting. *Note: If you do not specify both a **Send String** and a **Receive String**, the monitor performs a simple service check and connect only.*
User Name	No default	Specifies the user name, if the monitored target requires authentication. *Important: If there is no password security, you must use blank strings [""] for the **User Name** and **Password** settings.*
Password	No default	Specifies the password, if the monitored target requires authentication. *Important: If there is no password security, you must use blank strings [""] for the **User Name** and **Password** settings.*
Database	No default	Specifies the name of the database that the monitor tries to access, for example, sales or hr.
Receive Row	No default	Specifies the row in the database where the specified **Receive String** should be located. This is an optional setting, and is applicable only if you configure the **Send String** and the **Receive String** settings.
Receive Column	No default	Specifies the column in the database where the specified **Receive String** should be located. This is an optional setting, and is applicable only if you configure the **Send String** and the **Receive String** settings.

Setting	Value	Description
Count	`0`	Specifies how the system handles open connections for monitor instances. The default is `0` (zero). By default, when you assign instances of this monitor to a resource, the system keeps the connection to the database open. This functionality allows you to assign multiple instances to the database while reducing the overhead that multiple open connections could cause. The **Count** option allows you to determine the number of instances for which the system keeps a connection open.
Alias Address	`*All Addresses`	Specifies an alias IP address for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Addresses`. If the health check for the alias address is successful, the system marks all associated objects up. If the health check for the alias address is not successful, then the system marks all associated objects down.
Alias Service Port	`*All Ports`	Specifies an alias port or service for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Ports`. If the health check for the alias port or service is successful, the system marks all associated objects up. If the health check for the alias port or service is not successful, then the system marks all associated objects down.
Debug	**No**	Specifies whether the monitor sends error messages and additional information to a log file created and labeled specifically for this monitor. The default setting is **No**, which specifies that the system does not redirect error messages and additional information related to this monitor. The **Yes** setting specifies that the system redirects error messages and additional information to the `/var/log/<monitor_type>_<ip_address>.<port>.log` file.

NNTP monitor settings

This table describes the NNTP monitor configuration settings and default values.

Setting	Value	Description
Name	No default	Provides a name for the monitor.
Description	No default	Provides a description of the monitor.
Type	Selected monitor type	Specifies the type of monitor you are creating.
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.
Interval	`30`	Specifies, in seconds, the frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. The default value is `30` seconds.
Timeout	`120`	Specifies the number of seconds in which the target must respond to the monitor request. The default is `120` seconds. If the target responds within the set time period, the target is considered to be up. If the target

Setting	Value	Description
		does not respond within the set time period, the target is considered to be down. The Timeout value should be three times the Interval value.
Probe Timeout	5	Specifies the number of seconds after which the system times out the probe request to the system. The default is 5 seconds.
Ignore Down Response	**No**	Specifies that the monitor allows more than one probe attempt per interval. The default is **No**.
User Name	No default	Specifies the user name, if the monitored target requires authentication. *Important: If there is no password security, you must use blank strings [""] for the **User Name** and **Password** settings.*
Password	No default	Specifies the password, if the monitored target requires authentication. *Important: If there is no password security, you must use blank strings [""] for the **User Name** and **Password** settings.*
Newsgroup	No default	Specifies the name of the newsgroup that you are monitoring, for example alt.car.mercedes.
Alias Address	*All Addresses	Specifies an alias IP address for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is *All Addresses. If the health check for the alias address is successful, the system marks all associated objects up. If the health check for the alias address is not successful, then the system marks all associated objects down.
Alias Service Port	*All Ports	Specifies an alias port or service for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is *All Ports. If the health check for the alias port or service is successful, the system marks all associated objects up. If the health check for the alias port or service is not successful, then the system marks all associated objects down.
Debug	**No**	Specifies whether the monitor sends error messages and additional information to a log file created and labeled specifically for this monitor. The default setting is **No**, which specifies that the system does not redirect error messages and additional information related to this monitor. The **Yes** setting specifies that the system redirects error messages and additional information to the /var/log/<monitor_type>_<ip_address>.<port>.log file.

Oracle monitor settings

This table describes the Oracle monitor configuration settings and default values.

Setting	Value	Description
Name	No default	Provides a name for the monitor.
Description	No default	Provides a description of the monitor.

Setting	Value	Description
Type	Selected monitor type	Specifies the type of monitor you are creating.
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.
Interval	30	Specifies, in seconds, the frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. The default value is 30 seconds. ***Important:*** *F5 Networks recommends that when you configure this option and the **Up Interval** option, whichever value is greater should be a multiple of the lesser value to allow for an even distribution of monitor checks among all monitors.*
Timeout	91	Specifies the number of seconds in which the target must respond to the monitor request. The default is 91 seconds. If the target responds within the set time period, the target is considered to be up. If the target does not respond within the set time period, the target is considered to be down. The Timeout value should be three times the Interval value, plus one second.
Probe Timeout	5	Specifies the number of seconds after which the system times out the probe request to the system. The default is 5 seconds.
Ignore Down Response	**No**	Specifies that the monitor allows more than one probe attempt per interval. The default is **No**.
Send String	No default	Specifies the SQL statement that the monitor runs on the target. A sample is: SELECT * FROM <db_name>. This is an optional setting. If you do not specify a send string, the monitor simply tries to establish a connection with the target. If the monitor is successful, the system marks the target up. If the system cannot establish the connection, then it marks the target down.
Receive String	No default	Specifies the response the monitor expects from the target, when the target receives the send string. This is an optional setting, and is applicable only if you configure the Send String setting. ***Note:*** *If you do not specify both a **Send String** and a **Receive String**, the monitor performs a simple service check and connect only.*
User Name	No default	Specifies the user name, if the monitored target requires authentication. ***Important:*** *If there is no password security, you must use blank strings [""] for the **User Name** and **Password** settings.*
Password	No default	Specifies the password, if the monitored target requires authentication. ***Important:*** *If there is no password security, you must use blank strings [""] for the **User Name** and **Password** settings.*

Setting	Value	Description

Connection String	No default	Specifies the name of the database that the monitor tries to access, for example, `sales` or `hr`.
		
		An example for this entry is as follows, where you specify the IP address for the node being monitored, the port for the node being monitored, and the name for the database:
		
		`(DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=%node_ip%)`
		`(PORT=%node_port%)) (CONNECT_DATA=(SID=<db name>))`
		`(SERVER=dedicated))`

Receive Row	No default	Specifies the row in the database where the specified **Receive String** should be located. This is an optional setting, and is applicable only if you configure the **Send String** and the **Receive String** settings.
Receive Column	No default	Specifies the column in the database where the specified **Receive String** should be located. This is an optional setting, and is applicable only if you configure the **Send String** and the **Receive String** settings.
Count	`0`	Specifies how the system handles open connections for monitor instances. The default is `0` (zero). By default, when you assign instances of this monitor to a resource, the system keeps the connection to the database open. This functionality allows you to assign multiple instances to the database while reducing the overhead that multiple open connections could cause. The **Count** option allows you to determine the number of instances for which the system keeps a connection open.
Alias Address	`*All Addresses`	Specifies an alias IP address for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Addresses`. If the health check for the alias address is successful, the system marks all associated objects up. If the health check for the alias address is not successful, then the system marks all associated objects down.
Alias Service Port	`*All Ports`	Specifies an alias port or service for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Ports`. If the health check for the alias port or service is successful, the system marks all associated objects up. If the health check for the alias port or service is not successful, then the system marks all associated objects down.
Debug	**No**	Specifies whether the monitor sends error messages and additional information to a log file created and labeled specifically for this monitor. The default setting is **No**, which specifies that the system does not redirect error messages and additional information related to this monitor. The **Yes** setting specifies that the system redirects error messages and additional information to the `/var/log/<monitor_type>_<ip_address>.<port>.log` file.

POP3 monitor settings

This table describes the POP3 monitor configuration settings and default values.

Setting	Value	Description
Name	No default	Provides a name for the monitor.
Description	No default	Provides a description of the monitor.
Type	Selected monitor type	Specifies the type of monitor you are creating.
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.
Interval	30	Specifies, in seconds, the frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. The default value is 30 seconds.
Timeout	120	Specifies the number of seconds in which the target must respond to the monitor request. The default is 120 seconds. If the target responds within the set time period, the target is considered to be up. If the target does not respond within the set time period, the target is considered to be down. The Timeout value should be three times the Interval value.
Probe Timeout	5	Specifies the number of seconds after which the system times out the probe request to the system. The default is 5 seconds.
Ignore Down Response	No	Specifies that the monitor allows more than one probe attempt per interval. The default is No.
User Name	No default	Specifies the user name, if the monitored target requires authentication. *Important: If there is no password security, you must use blank strings [""] for the User Name and Password settings.*
Password	No default	Specifies the password, if the monitored target requires authentication. *Important: If there is no password security, you must use blank strings [""] for the User Name and Password settings.*
Alias Address	*All Addresses	Specifies an alias IP address for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is *All Addresses. If the health check for the alias address is successful, the system marks all associated objects up. If the health check for the alias address is not successful, then the system marks all associated objects down.
Alias Service Port	*All Ports	Specifies an alias port or service for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is *All Ports. If the health check for the alias port or service is successful, the system marks all associated objects up. If the health check for the alias port or service is not successful, then the system marks all associated objects down.
Debug	No	Specifies whether the monitor sends error messages and additional information to a log file created and labeled specifically for this monitor. The default setting is No, which specifies that the system does not redirect error messages and additional information related to this monitor. The Yes setting specifies that the system redirects error messages and additional information to the /var/log/<monitor_type>_<ip_address>.<port>.log file.

PostgreSQL monitor settings

This table describes the PostgreSQL monitor configuration settings and default values.

Setting	Value	Description
Name	No default	Provides a name for the monitor.
Description	No default	Provides a description of the monitor.
Type	Selected monitor type	Specifies the type of monitor you are creating.
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.
Interval	30	Specifies, in seconds, the frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. The default value is 30 seconds.
Timeout	91	Specifies the number of seconds in which the target must respond to the monitor request. The default is 91 seconds. If the target responds within the set time period, the target is considered to be up. If the target does not respond within the set time period, the target is considered to be down. The Timeout value should be three times the Interval value, plus one second.
Probe Timeout	5	Specifies the number of seconds after which the system times out the probe request to the system. The default is 5 seconds.
Ignore Down Response	**No**	Specifies that the monitor allows more than one probe attempt per interval. The default is **No**.
Send String	No default	Specifies the text string that the monitor sends to the target object.
Receive String	No default	Specifies the response the monitor expects from the target, when the target receives the send string. This is an optional setting, and is applicable only if you configure the Send String setting. *Note: If you do not specify both a **Send String** and a **Receive String**, the monitor performs a simple service check and connect only.*
User Name	No default	Specifies the user name, if the monitored target requires authentication. *Important: If there is no password security, you must use blank strings [""] for the **User Name** and **Password** settings.*
Password	No default	Specifies the password, if the monitored target requires authentication. *Important: If there is no password security, you must use blank strings [""] for the **User Name** and **Password** settings.*
Database	No default	Specifies the name of the database that the monitor tries to access, for example, sales or hr.

Setting	Value	Description
Receive Row	No default	Specifies the row in the database where the specified **Receive String** should be located. This is an optional setting, and is applicable only if you configure the **Send String** and the **Receive String** settings.
Receive Column	No default	Specifies the column in the database where the specified **Receive String** should be located. This is an optional setting, and is applicable only if you configure the **Send String** and the **Receive String** settings.
Count	`0`	Specifies how the system handles open connections for monitor instances. The default is `0` (zero). By default, when you assign instances of this monitor to a resource, the system keeps the connection to the database open. This functionality allows you to assign multiple instances to the database while reducing the overhead that multiple open connections could cause. The **Count** option allows you to determine the number of instances for which the system keeps a connection open.
Alias Address	`*All Addresses`	Specifies an alias IP address for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Addresses`. If the health check for the alias address is successful, the system marks all associated objects up. If the health check for the alias address is not successful, then the system marks all associated objects down.
Alias Service Port	`*All Ports`	Specifies an alias port or service for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Ports`. If the health check for the alias port or service is successful, the system marks all associated objects up. If the health check for the alias port or service is not successful, then the system marks all associated objects down.
Debug	**No**	Specifies whether the monitor sends error messages and additional information to a log file created and labeled specifically for this monitor. The default setting is **No**, which specifies that the system does not redirect error messages and additional information related to this monitor. The **Yes** setting specifies that the system redirects error messages and additional information to the `/var/log/<monitor_type>_<ip_address>.<port>.log` file.

RADIUS monitor settings

This table describes the RADIUS monitor configuration settings and default values.

Setting	Value	Description
Name	No default	Provides a name for the monitor.
Description	No default	Provides a description of the monitor.
Type	Selected monitor type	Specifies the type of monitor you are creating.
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.

Setting	Value	Description
Interval	`10`	Specifies, in seconds, the frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. The default value is `10` seconds.
Timeout	`31`	Specifies the number of seconds in which the target must respond to the monitor request. The default is `31` seconds. If the target responds within the set time period, the target is considered to be up. If the target does not respond within the set time period, the target is considered to be down. The Timeout value should be three times the Interval value, plus one second.
Probe Timeout	`5`	Specifies the number of seconds after which the system times out the probe request to the system. The default is `5` seconds.
Ignore Down Response	**No**	Specifies that the monitor allows more than one probe attempt per interval. The default is **No**.
User Name	No default	Specifies the user name, if the monitored target requires authentication. *Important: If there is no password security, you must use blank strings [""] for the **User Name** and **Password** settings.*
Password	No default	Specifies the password, if the monitored target requires authentication. *Important: If there is no password security, you must use blank strings [""] for the **User Name** and **Password** settings.*
Secret	No default	Specifies the secret the monitor needs to access the resource.
NAS IP Address	No default	Specifies the network access server's IP address (NAS IP address) for a RADIUS monitor.
Alias Address	`*All Addresses`	Specifies an alias IP address for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Addresses`. If the health check for the alias address is successful, the system marks all associated objects up. If the health check for the alias address is not successful, then the system marks all associated objects down.
Alias Service Port	`*All Ports`	Specifies an alias port or service for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Ports`. If the health check for the alias port or service is successful, the system marks all associated objects up. If the health check for the alias port or service is not successful, then the system marks all associated objects down.
Debug	**No**	Specifies whether the monitor sends error messages and additional information to a log file created and labeled specifically for this monitor. The default setting is **No**, which specifies that the system does not redirect error messages and additional information related to this monitor. The **Yes** setting specifies that the system redirects error messages and additional information to the `/var/log/<monitor_type>_<ip_address>.<port>.log` file.

RADIUS Accounting monitor settings

This table describes the RADIUS Accounting monitor configuration settings and default values.

Setting	Value	Description
Name	No default	Provides a name for the monitor.
Description	No default	Provides a description of the monitor.
Type	Selected monitor type	Specifies the type of monitor you are creating.
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.
Interval	10	Specifies, in seconds, the frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. The default value is 10 seconds.
Timeout	31	Specifies the number of seconds in which the target must respond to the monitor request. The default is 31 seconds. If the target responds within the set time period, the target is considered to be up. If the target does not respond within the set time period, the target is considered to be down. The Timeout value should be three times the Interval value, plus one second.
Probe Timeout	5	Specifies the number of seconds after which the system times out the probe request to the system. The default is 5 seconds.
Ignore Down Response	**No**	Specifies that the monitor allows more than one probe attempt per interval. The default is **No**.
User Name	No default	Specifies the user name, if the monitored target requires authentication. *Important: If there is no password security, you must use blank strings [""] for the **User Name** and **Password** settings.*
Secret	No default	Specifies the secret the monitor needs to access the resource.
NAS IP Address	No default	Specifies the network access server's IP address (NAS IP address) for a RADIUS monitor.
Alias Address	*All Addresses	Specifies an alias IP address for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is *All Addresses. If the health check for the alias address is successful, the system marks all associated objects up. If the health check for the alias address is not successful, then the system marks all associated objects down.
Alias Service Port	*All Ports	Specifies an alias port or service for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is *All Ports. If the health check for the alias port or service is successful, the system marks all associated objects up. If the health check for the alias port or service is not successful, then the system marks all associated objects down.

Setting	Value	Description
Debug	**No**	Specifies whether the monitor sends error messages and additional information to a log file created and labeled specifically for this monitor. The default setting is **No**, which specifies that the system does not redirect error messages and additional information related to this monitor. The **Yes** setting specifies that the system redirects error messages and additional information to the `/var/log/<monitor_type>_<ip_address>.<port>.log` file.

Real Server monitor settings

This table describes the Real Server monitor configuration settings and default values.

Setting	Value	Description
Name	No default	Provides a name for the monitor.
Description	No default	Provides a description of the monitor.
Type	Selected monitor type	Specifies the type of monitor you are creating.
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.
Interval	`30`	Specifies, in seconds, the frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. The default value is `30` seconds.
Timeout	`120`	Specifies the number of seconds in which the target must respond to the monitor request. The default is `120` seconds. If the target responds within the set time period, the target is considered to be up. If the target does not respond within the set time period, the target is considered to be down. The Timeout value should be three times the Interval value.
Probe Timeout	`5`	Specifies the number of seconds after which the system times out the probe request to the system. The default is `5` seconds.
Ignore Down Response	**No**	Specifies that the monitor allows more than one probe attempt per interval. The default is **No**.
Method	**GET**	Displays the method the monitor uses to contact the server. The setting is **GET**. You cannot modify the method.
Command	**GetServerStats**	Specifies the command that the system uses to obtain the metrics from the resource.
Metrics	`ServerBandwidth:1.5, CPUPercentUsage, MemoryUsage, TotalClientCount`	Specifies the performance metrics that the commands collect from the target. The default is `ServerBandwidth:1.5, CPUPercentUsage, MemoryUsage, TotalClientCount`.
Agent	**Mozilla/4.0 (compatible: MSIE 5.0; Windows NT)**	Displays the agent for the monitor. The default agent is **Mozilla/4.0 (compatible: MSIE 5.0; Windows NT)**. You cannot modify the agent.

SASP monitor settings

This table describes the SASP monitor configuration settings and default values.

Setting	Value	Description
Name	No default	Provides a name for the monitor.
Description	No default	Provides a description of the monitor.
Type	Selected monitor type	Specifies the type of monitor you are creating.
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.
GWM Interval	**Automatic**	Specifies the frequency at which the system queries Group Workload Manager (GWM). The default is **Automatic**.
Mode	**Pull**	Specifies whether the load balancer should send Get Weight Request messages (Pull) or receive Send Weights messages (Push) from the GWM server. The default is **Pull**. When configured in the **Pull** mode, the monitor polls the pool member weights by periodically sending a Get Weights Request message to the GWM server. When configured in the **Push** mode, the monitor waits indefinitely to receive pool member weights by means of Send Weights messages from the GWM server. The SASP monitor updates the dynamic ratio for the pool members once it receives the weights.
GWM Primary Address	No default	Specifies the IP address of the primary GWM server.
GWM Secondary Address	No default	Specifies the IP address of the secondary GWM server. When both the GWM primary address and GWM secondary address are configured, but the GWM primary address or GWM secondary address is unreachable, the monitor attempts to reconnect to the unreachable address every 30 seconds. When both the GWM primary address and GWM secondary address are available, only the weights reported by the primary address are used to update the pool-member dynamic ratio. When the GWM primary address is unavailable, the monitor uses the weights reported by the GWM secondary address to update the pool-member dynamic ratio. If the primary address again becomes available, then the monitor uses the weights reported by the primary address to update the pool-member dynamic ratio. When both the GWM primary address and GWM secondary address are unavailable, the monitor uses the weights reported by the first GWM address that becomes available.
GWM Service Port		Specifies the port through which the SASP monitor communicates with the Group Workload Manager. The default is 3860.

Setting	Value	Description
GWM Protocol	TCP	Specifies the communications protocol the monitor uses. You can specify **TCP** or **UDP**. The default is **TCP**.

Scripted monitor settings

This table describes the Scripted monitor configuration settings and default values.

When using scripts for monitor settings, you will want to observe the following conditions.

- Scripts must use hard-return line endings (`LF`), not soft-return line endings (`CR-LF`).
- Exactly one character space must be used to separate the `send` or `expect` instruction keywords from the text to send or match.
- The text to send or match extends to the end of the line, even when using quotation marks. Any characters that follow a closing quotation mark will break the match.
- Matching text can match the prefix of a response, but cannot match a substring that is not a prefix, that is, a substring that starts other than at the beginning of the response.

Additionally, within scripts, the following escape sequences apply.

Name	Escape Sequence
Bell	`\a`
Backspace	`\b`
Form feed	`\f`
New line	`\n`
Return	`\r`
Tab	`\t`
Vertical tab	`\v`
Backslash	`\\`
Single quotation mark	`\'`

For example, the following script specifies a simple SMTP sequence. Note that the lines of the file are always read in the sequence specified.

```
expect 220
send "HELO bigip1.somecompany.net\r\n"
expect "250"
send "quit\r\n"
```

Setting	Value	Description
Name	No default	Provides a name for the monitor.
Description	No default	Provides a description of the monitor.
Type	Selected monitor type	Specifies the type of monitor you are creating.

Setting	Value	Description
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.
Interval	`10`	Specifies, in seconds, the frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. The default value is `10` seconds.
Timeout	`31`	Specifies the number of seconds in which the target must respond to the monitor request. The default is `31` seconds. If the target responds within the set time period, the target is considered to be up. If the target does not respond within the set time period, the target is considered to be down. The Timeout value should be three times the Interval value, plus one second.
Probe Timeout	`5`	Specifies the number of seconds after which the system times out the probe request to the system. The default is `5` seconds.
Ignore Down Response	**No**	Specifies that the monitor allows more than one probe attempt per interval. The default is **No**.
File Name	No default	Specifies the name of a file in the `/config/eav/` directory on the system. The user-created file contains the and data that the monitor uses for the monitor check.
Alias Address	`*All Addresses`	Specifies an alias IP address for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Addresses`. If the health check for the alias address is successful, the system marks all associated objects up. If the health check for the alias address is not successful, then the system marks all associated objects down.
Alias Service Port	`*All Ports`	Specifies an alias port or service for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Ports`. If the health check for the alias port or service is successful, the system marks all associated objects up. If the health check for the alias port or service is not successful, then the system marks all associated objects down.
Debug	**No**	Specifies whether the monitor sends error messages and additional information to a log file created and labeled specifically for this monitor. The default setting is **No**, which specifies that the system does not redirect error messages and additional information related to this monitor. The **Yes** setting specifies that the system redirects error messages and additional information to the `/var/log/<monitor_type>_<ip_address>.<port>.log` file.

SIP monitor settings

This table describes the SIP monitor configuration settings and default values.

Setting	Value	Description
Name	No default	Provides a name for the monitor.

Setting	Value	Description
Description	No default	Provides a description of the monitor.
Type	Selected monitor type	Specifies the type of monitor you are creating.
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.
Interval	30	Specifies, in seconds, the frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. The default value is 30 seconds.
Timeout	120	Specifies the number of seconds in which the target must respond to the monitor request. The default is 120 seconds. If the target responds within the set time period, the target is considered to be up. If the target does not respond within the set time period, the target is considered to be down. The Timeout value should be three times the Interval value.
Probe Timeout	5	Specifies the number of seconds after which the system times out the probe request to the system. The default is 5 seconds.
Ignore Down Response	No	Specifies that the monitor allows more than one probe attempt per interval. The default is **No**.
Mode	UDP	Specifies the protocol that the monitor uses to communicate with the target object. The default is **UDP**.
Client Certificate	None	For **TLS** and **SIPS** modes only, specifies a client certificate that the monitor sends to the target SSL server. The default is **None**.
Client Key	None	For **TLS** and **SIPS** modes only, specifies a key for a client certificate that the monitor sends to the target SSL server. The default is **None**.
Additional Accepted Status Codes	None	Specifies the additional SIP status codes that the monitor uses to determine target status. The default is **None**. *Note: The monitor always marks the target up in response to status code 200 OK.*
Additional Rejected Status Codes	Status Code List	This list functions identically to the **Additional Accepted Status Codes** list, except that the monitor treats the list items as error codes, rather than success codes, and so marks the target down.
Header List	No default	Specifies one or more headers that the monitor recognizes.
SIP Request	No default	Type the request line of the SIP message, specifying a complete SIP request line minus the trailing \r\n characters. The system uses the response code to determine whether the server is up or down. The monitor performs a simple, customized query to a SIP server. The monitor does not establish connections, perform hand-shaking, or process SIP traffic or requests. It only sends a request to a server and looks at the response code and (aside from matching the response to the request) ignores the rest of the response. As a result, this monitor does not support requests such as INVITE, because the monitor does not enter into a dialog.

Setting	Value	Description
Alias Address	`*All Addresses`	Specifies an alias IP address for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Addresses`. If the health check for the alias address is successful, the system marks all associated objects up. If the health check for the alias address is not successful, then the system marks all associated objects down.
Alias Service Port	`*All Ports`	Specifies an alias port or service for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Ports`. If the health check for the alias port or service is successful, the system marks all associated objects up. If the health check for the alias port or service is not successful, then the system marks all associated objects down.
Debug	**No**	Specifies whether the monitor sends error messages and additional information to a log file created and labeled specifically for this monitor. The default setting is **No**, which specifies that the system does not redirect error messages and additional information related to this monitor. The **Yes** setting specifies that the system redirects error messages and additional information to the `/var/log/<monitor_type>_<ip_address>.<port>.log` file.

SMTP monitor settings

This table describes the SMTP monitor configuration settings and default values.

Setting	Value	Description
Name	No default	Provides a name for the monitor.
Description	No default	Provides a description of the monitor.
Type	Selected monitor type	Specifies the type of monitor you are creating.
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.
Interval	`30`	Specifies, in seconds, the frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. The default value is `30` seconds.
Timeout	`120`	Specifies the number of seconds in which the target must respond to the monitor request. The default is `120` seconds. If the target responds within the set time period, the target is considered to be up. If the target does not respond within the set time period, the target is considered to be down. The Timeout value should be three times the Interval value.
Probe Timeout	`5`	Specifies the number of seconds after which the system times out the probe request to the system. The default is `5` seconds.
Ignore Down Response	**No**	Specifies that the monitor allows more than one probe attempt per interval. The default is **No**.

Setting	Value	Description
Domain	No default	Specifies the domain name to check, for example, bigipinternal.com.
Alias Address	`*All Addresses`	Specifies an alias IP address for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Addresses`. If the health check for the alias address is successful, the system marks all associated objects up. If the health check for the alias address is not successful, then the system marks all associated objects down.
Alias Service Port	`*All Ports`	Specifies an alias port or service for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Ports`. If the health check for the alias port or service is successful, the system marks all associated objects up. If the health check for the alias port or service is not successful, then the system marks all associated objects down.
Debug	**No**	Specifies whether the monitor sends error messages and additional information to a log file created and labeled specifically for this monitor. The default setting is **No**, which specifies that the system does not redirect error messages and additional information related to this monitor. The **Yes** setting specifies that the system redirects error messages and additional information to the `/var/log/<monitor_type>_<ip_address>.<port>.log` file.

SNMP monitor settings

This table describes the SNMP monitor configuration settings and default values.

Setting	Value	Description
Name	No default	Provides a name for the monitor.
Description	No default	Provides a description of the monitor.
Type	Selected monitor type	Specifies the type of monitor you are creating.
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.
Interval	`90`	Specifies, in seconds, the frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. The default value is `90` seconds.
Timeout	`180`	Specifies the number of seconds in which the target must respond to the monitor request. The default is `180` seconds. If the target responds within the set time period, the target is considered to be up. If the target does not respond within the set time period, the target is considered to be down. The Timeout value should be three times the Interval value.
Probe Interval	`1`	Specifies, in seconds, the frequency at which the system probes the host server. The default is `1` second.

Setting	Value	Description
Probe Timeout	5	Specifies the number of seconds after which the system times out the probe request to the system. The default is 5 seconds.
Probe Attempts	3	Specifies the number of times that the system attempts to probe the host server, after which the system considers the host server down or unavailable. The default value is 3.
Ignore Down Response	No	Specifies that the monitor allows more than one probe attempt per interval. The default is **No**.
Community	Public	Specifies the community name that the system must use to authenticate with the host server through SNMP. The default value is **public**. Note that this value is case sensitive.
Version	v1	Specifies the version of SNMP that the host server uses. The default is **V1**.
Port	161	Specifies the port number to which this monitor sends SNMP traps.
Alias Address	*All Addresses	Specifies an alias IP address for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is *All Addresses. If the health check for the alias address is successful, the system marks all associated objects up. If the health check for the alias address is not successful, then the system marks all associated objects down.
Alias Service Port	*All Ports	Specifies an alias port or service for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is *All Ports. If the health check for the alias port or service is successful, the system marks all associated objects up. If the health check for the alias port or service is not successful, then the system marks all associated objects down.

SNMP Link monitor settings

This table describes the SNMP DCA Base monitor configuration settings and default values.

Setting	Value	Description
Name	No default	Provides a name for the monitor.
Description	No default	Provides a description of the monitor.
Type	Selected monitor type	Specifies the type of monitor you are creating.
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.
Interval	10	Specifies, in seconds, the frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. The default value is 10 seconds.
Timeout	30	Specifies the number of seconds in which the target must respond to the monitor request. The default is 30 seconds. If the target

Setting	Value	Description
		responds within the set time period, the target is considered to be up. If the target does not respond within the set time period, the target is considered to be down.
Probe Interval	1	Specifies, in seconds, the frequency at which the system probes the host server. The default is 1 second.
Probe Timeout	5	Specifies the number of seconds after which the system times out the probe request to the system. The default is 5 seconds.
Probe Attempts	3	Specifies the number of times that the system attempts to probe the host server, after which the system considers the host server down or unavailable. The default value is 3.
Ignore Down Response	**No**	Specifies that the monitor allows more than one probe attempt per interval. The default is **No**.
Community	**Public**	Specifies the community name that the system must use to authenticate with the host server through SNMP. The default value is **public**. Note that this value is case sensitive.
Version	**v1**	Specifies the version of SNMP that the host server uses. The default is **V1**.
Port	161	Specifies the port number to which this monitor sends SNMP traps.
Alias Address	*All Addresses	Specifies an alias IP address for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is *All Addresses. If the health check for the alias address is successful, the system marks all associated objects up. If the health check for the alias address is not successful, then the system marks all associated objects down.

SOAP monitor settings

This table describes the SOAP monitor configuration settings and default values.

Setting	Value	Description
Name	No default	Provides a name for the monitor.
Description	No default	Provides a description of the monitor.
Type	Selected monitor type	Specifies the type of monitor you are creating.
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.
Interval	30	Specifies, in seconds, the frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. The default value is 30 seconds.
Timeout	120	Specifies the number of seconds in which the target must respond to the monitor request. The default is 120 seconds. If the target responds within the set time period, the target is considered to be

Setting	Value	Description
		up. If the target does not respond within the set time period, the target is considered to be down. The Timeout value should be three times the Interval value.
Probe Timeout	5	Specifies the number of seconds after which the system times out the probe request to the system. The default is 5 seconds.
Ignore Down Response	**No**	Specifies that the monitor allows more than one probe attempt per interval. The default is **No**.
User Name	No default	Specifies the user name, if the monitored target requires authentication.<hr>***Important:*** *If there is no password security, you must use blank strings [""] for the* ***User Name*** *and* ***Password*** *settings.*
Password	No default	Specifies the password, if the monitored target requires authentication.<hr>***Important:*** *If there is no password security, you must use blank strings [""] for the* ***User Name*** *and* ***Password*** *settings.*
Protocol	**HTTP**	Specifies the protocol that the monitor uses for communications with the target. The default is **HTTP**.
URL Path	No default	Specifies the URL for the web service that you are monitoring, for example, /services/myservice.aspx.
Namespace	No default	Specifies the name space for the web service you are monitoring, for example, http://example.com/.
Method	No default	Specified the method by which the monitor contacts the resource.
Parameter Name	No default	Specifies, if the method has parameters, the parameter name.
Parameter Type	**Bool**	Specifies the parameter type. The default is **bool** (boolean).
Parameter Value	No default	Specifies the value for the parameter.
Return Type	**Bool**	Specifies the type for the returned parameter. The default is **bool** (boolean).
Return Value	No default	Specifies the value for the returned parameter.
Expect Fault	**No**	Specifies whether the method causes the monitor to expect a SOAP fault message. The default is **No**.
Alias Address	*All Addresses	Specifies an alias IP address for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is *All Addresses. If the health check for the alias address is successful, the system marks all associated objects up. If the health check for the alias address is not successful, then the system marks all associated objects down.
Alias Service Port	*All Ports	Specifies an alias port or service for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is *All Ports. If the health check for the alias port or service is successful, the system marks all associated objects up. If the health check for the alias port or service is not successful, then the system marks all associated objects down.

Setting	Value	Description
Debug	**No**	Specifies whether the monitor sends error messages and additional information to a log file created and labeled specifically for this monitor. The default setting is **No**, which specifies that the system does not redirect error messages and additional information related to this monitor. The **Yes** setting specifies that the system redirects error messages and additional information to the `/var/log/<monitor_type>_<ip_address>.<port>.log` file.

TCP monitor settings

This table describes the TCP monitor configuration settings and default values.

Setting	Value	Description
Name	No default	Provides a name for the monitor.
Description	No default	Provides a description of the monitor.
Type	Selected monitor type	Specifies the type of monitor you are creating.
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.
Interval	`30`	Specifies, in seconds, the frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. The default value is `30` seconds.
Timeout	`120`	Specifies the number of seconds in which the target must respond to the monitor request. The default is `120` seconds. If the target responds within the set time period, the target is considered to be up. If the target does not respond within the set time period, the target is considered to be down. The Timeout value should be three times the Interval value.
Probe Timeout	`5`	Specifies the number of seconds after which the system times out the probe request to the system. The default is `5` seconds.
Ignore Down Response	**No**	Specifies that the monitor allows more than one probe attempt per interval. The default is **No**.
Send String	No default	Specifies the text string that the monitor sends to the target object.
Receive String	No default	Specifies the regular expression representing the text string that the monitor looks for in the returned resource. The most common receive expressions contain a text string that is included in an HTML file on your site. The text string can be regular text, HTML tags, or image names, and the associated operation is not case-sensitive. The only monitors that support regular expression matching are HTTP, HTTPS, TCP, and UDP monitors. *Note: If you do not specify both a **Send String** and a **Receive String**, the monitor performs a simple service check and connect only.*

Setting	Value	Description
Reverse	**No**	Instructs the system to mark the target resource down when the test is successful. This setting is useful, for example, if the content on your web site home page is dynamic and changes frequently, you might want to set up a reverse ECV service check that looks for the string `Error`. A match for this string means that the web server was down. You can use **Reverse** only if you configure both **Send String** and **Receive String**.
Transparent	**No**	Specifies whether the monitor operates in transparent mode. A monitor in transparent mode uses a path through the associated pool members or nodes to monitor the aliased destination (that is, it monitors the **Alias Address-Alias Service Port** combination specified in the monitor). The default is **No**.
Alias Address	`*All Addresses`	Specifies an alias IP address for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Addresses`. If the health check for the alias address is successful, the system marks all associated objects up. If the health check for the alias address is not successful, then the system marks all associated objects down.
Alias Service Port	`*All Ports`	Specifies an alias port or service for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Ports`. If the health check for the alias port or service is successful, the system marks all associated objects up. If the health check for the alias port or service is not successful, then the system marks all associated objects down.

TCP Half Open monitor settings

This table describes the TCP Half Open monitor configuration settings and default values.

Setting	Value	Description
Name	No default	Provides a name for the monitor.
Description	No default	Provides a description of the monitor.
Type	Selected monitor type	Specifies the type of monitor you are creating.
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.
Interval	`30`	Specifies, in seconds, the frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. The default value is `30` seconds.
Timeout	`120`	Specifies the number of seconds in which the target must respond to the monitor request. The default is `120` seconds. If the target responds within the set time period, the target is considered to be up. If the target does not respond within the set time period, the target is considered to be down. The Timeout value should be three times the Interval value.

Setting	Value	Description
Probe Interval	1	Specifies, in seconds, the frequency at which the system probes the host server. The default is 1 second.
Probe Timeout	5	Specifies the number of seconds after which the system times out the probe request to the system. The default is 5 seconds.
Probe Attempts	3	Specifies the number of times that the system attempts to probe the host server, after which the system considers the host server down or unavailable. The default value is 3.
Ignore Down Response	No	Specifies that the monitor allows more than one probe attempt per interval. The default is **No**.
Transparent	No	Specifies whether the monitor operates in transparent mode. A monitor in transparent mode uses a path through the associated pool members or nodes to monitor the aliased destination (that is, it monitors the **Alias Address-Alias Service Port** combination specified in the monitor). The default is **No**.
Alias Address	*All Addresses	Specifies an alias IP address for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is *All Addresses. If the health check for the alias address is successful, the system marks all associated objects up. If the health check for the alias address is not successful, then the system marks all associated objects down.
Alias Service Port	*All Ports	Specifies an alias port or service for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is *All Ports. If the health check for the alias port or service is successful, the system marks all associated objects up. If the health check for the alias port or service is not successful, then the system marks all associated objects down.

UDP monitor settings

This table describes the UDP monitor configuration settings and default values.

Setting	Value	Description
Name	No default	Provides a name for the monitor.
Description	No default	Provides a description of the monitor.
Type	Selected monitor type	Specifies the type of monitor you are creating.
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.
Interval	30	Specifies, in seconds, the frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. The default value is 30 seconds.
Timeout	120	Specifies the number of seconds in which the target must respond to the monitor request. The default is 120 seconds. If the target responds

Setting	Value	Description
		within the set time period, the target is considered to be up. If the target does not respond within the set time period, the target is considered to be down. The Timeout value should be three times the Interval value.
Probe Interval	1	Specifies, in seconds, the frequency at which the system probes the host server. The default is 1 second.
Probe Timeout	5	Specifies the number of seconds after which the system times out the probe request to the system. The default is 5 seconds.
Probe Attempts	3	Specifies the number of times that the system attempts to probe the host server, after which the system considers the host server down or unavailable. The default value is 3.
Ignore Down Response	**No**	Specifies that the monitor allows more than one probe attempt per interval. The default is **No**.
Up Interval	Disabled	Specifies, in seconds, the frequency at which the system issues the monitor check when the resource is up. The enabled default value is 0 (zero), which specifies that the system uses the value of the interval option whether the resource is up or down. ***Important:*** *F5 Networks recommends that when you configure this option and the **Interval** option, whichever value is greater should be a multiple of the lesser value to allow for an even distribution of monitor checks among all monitors.*
Send String	default send string	Specifies the text string that the monitor sends to the target object. The default is default send string.
Transparent	**No**	Specifies whether the monitor operates in transparent mode. A monitor in transparent mode uses a path through the associated pool members or nodes to monitor the aliased destination (that is, it monitors the **Alias Address**-**Alias Service Port** combination specified in the monitor). The default is **No**.
Alias Address	*All Addresses	Specifies an alias IP address for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is *All Addresses. If the health check for the alias address is successful, the system marks all associated objects up. If the health check for the alias address is not successful, then the system marks all associated objects down.
Alias Service Port	*All Ports	Specifies an alias port or service for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is *All Ports. If the health check for the alias port or service is successful, the system marks all associated objects up. If the health check for the alias port or service is not successful, then the system marks all associated objects down.
Debug	**No**	Specifies whether the monitor sends error messages and additional information to a log file created and labeled specifically for this monitor. The default setting is **No**, which specifies that the system does not redirect error messages and additional information related to this monitor. The **Yes** setting specifies that the system redirects error messages and additional information to the /var/log/<monitor_type>_<ip_address>.<port>.log file.

WAP monitor settings

This table describes the WAP monitor configuration settings and default values.

Setting	Value	Description
Name	No default	Provides a name for the monitor.
Description	No default	Provides a description of the monitor.
Type	Selected monitor type	Specifies the type of monitor you are creating.
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.
Interval	10	Specifies, in seconds, the frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. The default value is 10 seconds.
Timeout	31	Specifies the number of seconds in which the target must respond to the monitor request. The default is 31 seconds. If the target responds within the set time period, the target is considered to be up. If the target does not respond within the set time period, the target is considered to be down. The Timeout value should be three times the Interval value, plus one second.
Probe Timeout	5	Specifies the number of seconds after which the system times out the probe request to the system. The default is 5 seconds.
Ignore Down Response	**No**	Specifies that the monitor allows more than one probe attempt per interval. The default is **No**.
Send String	No default	Specifies the text string that the monitor sends to the target object.
Receive String	No default	Specifies the response the monitor expects from the target, when the target receives the send string. This is an optional setting, and is applicable only if you configure the Send String setting. *Note: If you do not specify both a **Send String** and a **Receive String**, the monitor performs a simple service check and connect only.*
Secret	No default	Specifies the secret the monitor needs to access the resource.
Accounting Node	No default	Specifies the RADIUS server that provides authentication for the WAP target. This setting is optional. Note that if you configure the Accounting Port, but you do not configure the Accounting Node, the system assumes that the RADIUS server and the WAP server are the same system.
Accounting Port	No default	Specifies the port that the monitor uses for RADIUS accounting. The default is 0, which disables RADIUS accounting.
Server ID	No default	Specifies the RADIUS NAS-ID for this system, in the RADIUS server's configuration.
Call ID	No default	Specifies the 11-digit phone number for the RADIUS server. This setting is optional.

Setting	Value	Description
Session ID	No default	Specifies the RADIUS session identification number. This setting is optional.
Framed Address	No default	Specifies the RADIUS framed IP address. This setting is optional.
Alias Address	`*All Addresses`	Specifies an alias IP address for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Addresses`. If the health check for the alias address is successful, the system marks all associated objects up. If the health check for the alias address is not successful, then the system marks all associated objects down.
Alias Service Port	`*All Ports`	Specifies an alias port or service for the monitor to check, on behalf of the pools or pool members with which the monitor is associated. The default setting is `*All Ports.` If the health check for the alias port or service is successful, the system marks all associated objects up. If the health check for the alias port or service is not successful, then the system marks all associated objects down.
Debug	**No**	Specifies whether the monitor sends error messages and additional information to a log file created and labeled specifically for this monitor. The default setting is **No**, which specifies that the system does not redirect error messages and additional information related to this monitor. The **Yes** setting specifies that the system redirects error messages and additional information to the `/var/log/<monitor_type>_<ip_address>.<port>.log` file.

WMI monitor settings

This table describes the WMI monitor configuration settings and default values.

Setting	Value	Description
Name	No default	Provides a name for the monitor.
Description	No default	Provides a description of the monitor.
Type	Selected monitor type	Specifies the type of monitor you are creating.
Import Settings	Selected predefined or user-defined monitor	Specifies the selected predefined or user-defined monitor.
Interval	`30`	Specifies, in seconds, the frequency at which the system issues the monitor check when either the resource is down or the status of the resource is unknown. The default value is `30` seconds.
Timeout	`120`	Specifies the number of seconds in which the target must respond to the monitor request. The default is `120` seconds. If the target responds within the set time period, the target is considered to be up. If the target does not respond within the set time period, the target is considered to be down. The Timeout value should be three times the Interval value.

Setting	Value	Description
Probe Timeout	5	Specifies the number of seconds after which the system times out the probe request to the system. The default is 5 seconds.
Ignore Down Response	**No**	Specifies that the monitor allows more than one probe attempt per interval. The default is **No**.
User Name	No default	Specifies the user name, if the monitored target requires authentication. *Important: If there is no password security, you must use blank strings [""] for the **User Name** and **Password** settings.*
Password	No default	Specifies the password, if the monitored target requires authentication. *Important: If there is no password security, you must use blank strings [""] for the **User Name** and **Password** settings.*
Method	**POST**	Displays the method the monitor uses to contact the server. The setting is **POST**. You cannot modify the method.
URL	/scripts/F5Isapi.dll	Specifies the URL that the monitor uses. The default is /scripts/f5Isapi.dll.
Command	GetCPUInfo, GetDiskInfo, GetOSInfo	Specifies the command that the system uses to obtain the metrics from the resource. See the documentation for the resource for information on available commands. The default is GetCPUInfo, GetDiskInfo, GetOSInfo. *Note: When using the GetWinMediaInfo command with a WMI monitor, Microsoft® Windows Server® 2003 and Microsoft® Windows Server® 2008 require the applicable version of Windows Media® Services to be installed on each server.*
Metrics	LoadPercentage, DiskUsage, PhysicalMemoryUsage:1.5, VirtualMemoryUsage:2.0	Specifies the performance metrics that the commands collect from the target. The default is LoadPercentage, DiskUsage, PhysicalMemoryUsage:1.5, VirtualMemoryUsage:2.0.
Agent	Mozilla/4.0 (compatible: MSIE 5.0; Windows NT)	Displays the agent for the monitor. The default agent is Mozilla/4.0 (compatible: MSIE 5.0; Windows NT). You cannot modify the agent.
Post	RespFormat=HTML	Displays the mechanism that the monitor uses for posting. The default is RespFormat=HTML. You cannot change the post format for WMI monitors.

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