

Symptoms

When you download dynamic content that is generated through ASP pages or through a Common Gateway Interface (CGI), Internet Explorer may stop responding (hang) for up to five minutes, and you may receive the following error message:
2147012894 Internet Client Error: Request Timeout

Cause

This behavior occurs because Internet Explorer is limited to two open connections in HTTP 1.1. If an application thread starts to download two content pages and then starts a synchronous download of an object, Wininet.dll tries to obtain a socket for this third download request. However, Wininet.dll has already hit the connection limit because of the previous requests. Therefore, Wininet.dll blocks the application thread with a call to the WaitForSingleObject function. Meanwhile, the first content page is downloaded by using one of the first two download requests and tries to indicate a completion status. However, the application thread is blocked in WaitForSingleObject. The thread resumes after 5 minutes and finishes its execution. The synchronous download request is canceled because it could not obtain a socket during the WaitForSingleObject call. Because the object was not downloaded, the content of the Web page may not appear as the author intended.

Workaround

To work around this issue on the client computer, you can modify the registry to increase the connection limit as follows:

Summary

Wininet limits the number of simultaneous connections that it makes to a single HTTP server. If you exceed this limit, the requests block until one of the current connections has completed. This is by design and is in agreement with the HTTP specification and industry standards.

Additional Information

Wininet limits connections to a single HTTP 1.0 server to four simultaneous connections. Connections to a single HTTP 1.1 server are limited to two simultaneous connections. The HTTP 1.1 specification (RFC2616) mandates the two-connection limit. The four-connection limit for HTTP 1.0 is a self-imposed restriction that coincides with the standard that is used by a number of popular Web browsers.

The only evidence of this limitation to your application is that calls such as HttpSendRequest and InternetOpenURL appear to take longer to complete because they wait for previous connections to be freed up before their requests are sent.

You can configure WinInet to exceed this limit by creating and setting the following registry entries:

Note By changing these settings, you cause WinInet to go against the HTTP protocol specification recommendation. You should only do this if absolutely necessary and then you should avoid doing standard Web browsing while these settings are in effect:

HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\Internet Settings

MaxConnectionsPerServer REG_DWORD (Default 2)

This entry sets the number of simultaneous requests to a single HTTP 1.1 Server.

Change the value to 6 in order to resolve the timeout error that occurs when performing a search by employee name within HRIS.

MaxConnectionsPer1_0Server REG_DWORD (Default 4)

This entry sets the number of simultaneous requests to a single HTTP 1.0 Server

These settings are made for a particular user and will have no affect on other users who log on to the computer.