

Limit Maximum Compressible File Size

Technical Note

UPDATED: 27 July 2023

Table of Contents

1 Introduction 4

2 Limit the Maximum Compressible File Size 5

Last Updated Date 7

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

These materials and all Progress® software products are copyrighted and all rights are reserved by Progress Software Corporation. The information in these materials is subject to change without notice, and Progress Software Corporation assumes no responsibility for any errors that may appear therein. The references in these materials to specific platforms supported are subject to change.

#1 Load Balancer in Price/Performance, 360 Central, 360 Vision, Chef, Chef (and design), Chef Habitat, Chef Infra, Code Can (and design), Compliance at Velocity, Corticon, Corticon.js, DataDirect (and design), DataDirect Cloud, DataDirect Connect, DataDirect Connect64, DataDirect XML Converters, DataDirect XQuery, DataRPM, Defrag This, Deliver More Than Expected, DevReach (and design), Driving Network Visibility, Flowmon, Inspec, Ipswitch, iMacros, K (stylized), Kemp, Kemp (and design), Kendo UI, Kinvey, LoadMaster, MessageWay, MOVEit, NativeChat, OpenEdge, Powered by Chef, Powered by Progress, Progress, Progress Software Developers Network, SequeLink, Sitefinity (and Design), Sitefinity, Sitefinity (and design), Sitefinity Insight, SpeedScript, Stylized Design (Arrow/3D Box logo), Stylized Design (C Chef logo), Stylized Design of Samurai, TeamPulse, Telerik, Telerik (and design), Test Studio, WebSpeed, WhatsConfigured, WhatsConnected, WhatsUp, and WS_FTP are registered trademarks of Progress Software Corporation or one of its affiliates or subsidiaries in the U.S. and/or other countries.

Analytics360, AppServer, BusinessEdge, Chef Automate, Chef Compliance, Chef Desktop, Chef Workstation, Corticon Rules, Data Access, DataDirect Autonomous REST Connector, DataDirect Spy, DevCraft, Fiddler, Fiddler Classic, Fiddler Everywhere, Fiddler Jam, FiddlerCap, FiddlerCore, FiddlerScript, Hybrid Data Pipeline, iMail, InstaRelinker, JustAssembly, JustDecompile, JustMock, KendoReact, OpenAccess, PASOE, Pro2, ProDataSet, Progress Results, Progress Software, ProVision, PSE Pro, Push Jobs, SafeSpaceVR, Sitefinity Cloud, Sitefinity CMS, Sitefinity Digital Experience Cloud, Sitefinity Feather, Sitefinity Thunder, SmartBrowser, SmartComponent, SmartDataBrowser, SmartDataObjects, SmartDataView, SmartDialog, SmartFolder, SmartFrame, SmartObjects, SmartPanel, SmartQuery, SmartViewer, SmartWindow, Supermarket, SupportLink, Unite UX, and WebClient are trademarks or service marks of Progress Software Corporation and/or its subsidiaries or affiliates in the U.S. and other countries. Java is a registered trademark of Oracle and/or its affiliates. Any other marks contained herein may be trademarks of their respective owners.

Please refer to the NOTICE.txt or Release Notes – Third-Party Acknowledgements file applicable to a particular Progress product/hosted service offering release for any related required third-party acknowledgements.

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

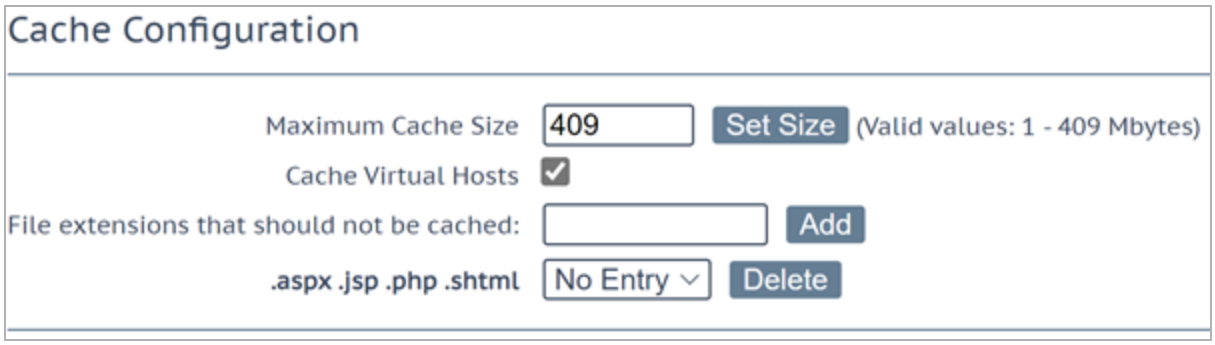
1 Introduction

There are no specific controls in the LoadMaster Web User Interface (WUI) to limit the maximum file size that will be considered for compression when compression is enabled. This can, however, be accomplished by limiting the maximum size of the cache, which determines the maximum file size that can be compressed. This is because any file that is compressed is first cached, so the cache size necessarily limits the maximum compressible file size.

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

2 Limit the Maximum Compressible File Size

The maximum amount of memory available is 1/5 (one fifth) of the physical memory. The general rule of thumb is that, if there is nothing in the cache, the maximum file size that can be cached and compressed at any given time is equal to 2/3 (two thirds) of the configured maximum cache size minus the amount of space in the cache already allocated to cached files. It allows any files up to 2/3 (two thirds) of the memory. If there are other files in the cache, the limit goes down. Therefore, the actual file size that can be compressed varies according to how much cacheable traffic is flowing through the LoadMaster. Obviously, this can be much lower than the absolute cacheable maximum file size.



This is best illustrated by an example. The default cache size is located under **Virtual Services > Cache Configuration** in the WUI, and is set to 409 Mbytes. Therefore:

1. The amount of space available for the first file that is cached is equal to **409 * 2/3** (since the cache is empty at this time), or about **270 Mbytes**.

2. If a file comes into the cache nanoseconds after the first file, the space available for caching the second file is equal to 270 Mbytes - (minus) [The size of first file remaining in the cache].

3. The reduction of available space in the cache continues as more files are received and enter the cache; space is returned to the available pool as files are compressed and leave the cache, or are aged and removed from the cache as a normal part of cache maintenance.

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

Careful analysis of the traffic patterns on your LoadMaster is necessary to find the right balance between cache size, compression, and the availability of resources for other resource-intensive operations (such as SSL Offloading and Content Rules).

When a file is rejected for caching or compression, an entry is written in the log that follows this format:

```
Out of memory for cacheing – connection dropped (file size X total size Y)
Out of memory for compressing – connection dropped (file size X total size Y)
```

X is the size of the file that was rejected, and **Y** is the amount of free space in the cache at that time.

Looking for lines like this in the log at varying levels of system performance will help determine how to set the cache size optimally for typical traffic patterns in your environment. To get an accurate picture, this should be done using light to heavy traffic loads with a typical mix of cacheable, compressible, and other resource-intensive traffic that is typical in your configuration.

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.

Last Updated Date

This document was last updated on 27 July 2023.

© 2022 Progress Software Corporation and/or one of its subsidiaries or affiliates. All rights reserved.