

Load Warnings

AND HOW TO IMPROVE THE PERFORMANCE OF THE COMSIFTER

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SCENARIO

Comsift Support receives multiple support calls per week related to “Load Warnings” and why the ComSifter may slow down when a large group of users get online at the same time.

Network administrators may receive emails from the ComSifter (if this has been setup on the ComSifter: Maintenance > Utilities > Email Notification Parameters > Second email recipient). These emails may look similar to the following:

The first message is:

- Out of spec, System load is 100 % over the past 5 minutes (<90% normal)

A follow-up message states:

- In spec, System load is 59 % over the past 5 minutes (<90% normal)

Note: It can be normal to receive these messages multiple times throughout a given day. Concern arises, and the following advice should be followed, when the messages repeat frequently, or there is 30 or more minutes between an out-of-spec message and an in-spec message.

Environment

- The school has a computer lab with 25 computers.
- The instructor says to the students, “Let’s open to the Internet, and do the following...”
- 25 students open the default browser and wait for the default homepage to open.
- The students complain that the Internet is slow.

ComSifter Process

- Since the majority of users are using Microsoft operating systems, and using the default browser (Internet Explorer 7 or newer) the default homepage is `msn.com`.
- `msn.com` is a content-rich site that requires over 100 individual connects to the MSN website and the downloading of 8,000,000 bits of data to load the first page.
- The ComSifter sees 25 requests for the homepage and immediately starts retrieving and filtering the 25 requests. Since there are over 100 connects per user, the ComSifter must retrieve and filter over 2,500 requests to the website simultaneously. This is a tremendous load on the ComSifter, and it may result in a “Load Warning” and a slow down in response time as the ComSifter processes and clears out the 2,500 requests to the Internet.

ComSifter Caching

“But doesn’t the Comsifter cache these requests to the same website?” Yes, the ComSifter will try to cache the requests but since `msn.com` is a dynamic site with content changing every minute the website tells ComSifter—“do not cache the data.” Therefore, the ComSifter must dutifully retrieve and filter each of the 2,500 requests.

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WHAT TO DO

1. The single biggest thing that you can do as a network administrator is to change the default homepage of the browser. Instead of using the default `msn.com`, change the homepage to a site that has less data. Using the ComSifter's Access Log (Admin > System Logs > Access Log), look at the amount of data that must be retrieved for the website you are considering as the homepage. Many schools use their school website as the default. Other schools open to a blank page. Whatever you do, get the default homepage off `msn.com`, or other content-rich websites such as `aol.com` or `yahoo.com`.
2. The next thing you can do is add the default homepage to the Master Filter's Full Exception Domain List. When a site is excepted, the ComSifter will retrieve the page but will not filter it. This will greatly reduce the load on the ComSifter.
3. Make sure your Internet connection is properly sized for your environment. In the above example with `msn.com`, the ComSifter must retrieve approx 200 million bits of data. If you have a 1.5Mbps connection, then it would take the ComSifter over 3 minutes just to download all the data. Compare that with a 50Mbps connection, which would only take four (4) seconds.

By implementing the above suggestions, you will greatly reduce the load on the ComSifter and improve your user's Internet experience.

Note: This scenario is not only an issue with the initial/default homepage that a user loads. We have encountered many support calls for other sites that are poorly designed-and face a similar issue with the `msn.com` example used above.

Following the recommendations to provide an exception for the site in question, increase bandwidth to the school, or use an alternate site that has less connects per page will help alleviate the issue.