

Mail Stop 4561

February 22, 2010

Mr. Anil K. Singhal  
Chief Executive Officer  
NetScout Systems, Inc.  
310 Littleton Road  
Westford, MA 01886

**Re: NetScout Systems, Inc.  
Form 10-K for the Fiscal Year Ended March 31, 2009  
Filed June 1, 2009  
File No. 000-26251**

Dear Mr. Singhal:

We have reviewed your response letter dated February 5, 2010 in connection with the above-referenced filing and have the following comments. If indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with supplemental information so we may better understand your disclosure. After reviewing this information, we may raise additional comments. References to prior comments in this letter relate to comments in our letter dated January 11, 2010.

Form 10-K for the Fiscal Year Ended March 31, 2009

Item 11. Executive Compensation (Incorporated by Reference from Definitive Proxy Statement on Schedule 14A, filed July 27, 2009)

Executive Compensation Summary

Performance Incentives and Targets, page 25

1. In response to prior comment 2, you indicate that peer data was reviewed to confirm compensation practices of your peers and as a way to confirm that your named executive officers are being paid competitively, although the committee exercises full discretion in determining compensation. You further state that your compensation committee compared individual base salaries to the median level of the smaller company peer group and that the comparison was “informative but not determinative” of your base salary compensation decisions. Because the peer data

Mr. Anil K. Singhal  
NetScout Systems, Inc.  
February 22, 2010  
Page 2

comparison was material to the decision making process, it appears that a discussion of how it informed the compensation committee's decision making is appropriate. For instance, to the extent a named executive officer's base salary was adjusted, even in part, as a result of the peer data analysis, this should be discussed. Alternatively, if the compensation committee concluded that the peer data analysis fully supported its base salary determinations, a discussion to that effect would also provide investors with a clearer understanding of how the compensation committee determined the amount of base salary to pay. This comment applies to your discussion of any other elements of compensation where peer data informed the compensation committee's decision making.

Item 13. Certain Relationships and Related Transactions (Incorporated by Reference from Definitive Proxy Statement on Schedule 14A, filed July 27, 2009)

2. We note your response to prior comment 3. Please tell us whether or not your policies and procedures regarding related person transactions are in writing. Refer to Item 404(b)(1)(iv) of Regulation S-K.

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Please respond to these comments within 10 business days or tell us when you will provide us with a response. Please submit all correspondence and supplemental materials on EDGAR as required by Rule 101 of Regulation S-T. If you amend your filing(s), you may wish to provide us with marked copies of any amendment to expedite our review. Please furnish a cover letter that keys your response to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing any amendment and your response to our comments.

If you have any questions, please contact Stephani Bouvet at (202) 551-3545, or in her absence, Maryse Mills-Apenteng, Special Counsel, at (202) 551-3457. If you need further assistance, you may contact Barbara C. Jacobs, Assistant Director, at (202) 551-3735, or me at (202) 551-3406.

Sincerely,

Patrick Gilmore  
Accounting Branch Chief