

Mail Stop 4561

January 11, 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  
Form 10-Q for the Fiscal Quarter Ended September 30, 2009  
Filed November 6, 2009  
File No. 000-26251**

Dear Mr. Singhal:

We have reviewed your response letter dated December 21, 2009 in connection with the above-referenced filings 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 November 13, 2009.

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, page 18

1. In your response to prior comment 11, you state that Mr. Singhal had a brief discussion with the Chairman of the Compensation Committee about the potential equity grant to himself and indicated that he would prefer to forgo the grant. Please clarify whether and to what extent the Chief Executive Officer has a role in determining his own compensation.

Performance Incentives and Targets, page 25

2. We note your response to prior comment 13 indicating that you consider compensation paid by companies you consider to be your peers as part of the overall mix of information you use in determining compensation for your named executive officers and that you retained discretion to award compensation. Please note that where comparative compensation information is used, even in part, to determine compensation, and where the compensation committee retains discretion on how to use that information, disclosure of the nature and extent of that discretion and whether or how you exercised that discretion is warranted. Please tell us more specifically how the incentive and total compensation for the NEOs compared to the benchmarks to which you referred in your response and how discretion was used to benchmark to a different point or range. Please also confirm that you will include disclosure to this effect in future filings, as warranted. Refer to our guidance titled Staff Observations in the Review of Executive Compensation Disclosure and to Question 118.05 of our Regulation S-K Compliance and Disclosure Interpretations, both available on our website.

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

3. We note your response to prior comment 18 citing language in the proxy statement regarding the terms of any future transactions with executive officers, directors and affiliates and who will approve any such transactions. It appears that the language you have cited may not fully describe the material features of the company's policies and procedures with respect to related party transactions, such as, for example, the types of transactions covered by your policies, the standards to be applied in determining whether a transaction constitutes a reportable related party transaction pursuant to Item 404(a) of Regulation S-K or whether or not your policies and procedures are in writing. Please refer to Item 404(b)(1)(i),(ii) and (iv) of Regulation S-K and advise.

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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.

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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