

Mail Stop 4561

November 13, 2009

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 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.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

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

General

1. We note from disclosure on pages 32 and F-36 that you conduct operations in the Middle East and Africa. Iran and Syria, located in the Middle East and Sudan, located in Africa, are identified by the State Department as state sponsors of terrorism, and are subject to U.S. economic sanctions and export controls. We note that your Form 10-K does not include disclosure regarding contacts with,

Iran, Syria or Sudan. Please describe to us the nature and extent of your past, current, and anticipated contacts with the referenced countries, whether through subsidiaries, resellers, or other direct or indirect arrangements. In this regard, we note specifically that several pull-down menus on your website allow nationals of Iran to receive information and product demos from you. Your response should describe any services, products, equipment, components and technology you have provided to the referenced countries and any agreements, commercial arrangements, or other contacts you have had with the governments of those countries or entities controlled by those governments.

Item 1. Business, page 4

2. We note your apparently significant business relationships with government entities. Please tell us why you have not included in your Business section disclosure regarding the portion of your business that may be subject to renegotiation or termination at the election of the government. See Item 101(c)(1)(ix) of Regulation S-K.

Customers, page 12

3. In his 2009 letter to shareholders, your chief executive officer discusses your plan to continue to grow and to focus on “major vertical markets.” Please tell us what consideration you gave to describing in greater detail your focus on major vertical markets and to quantifying the percentage of your revenues attributable to each such market.

Backlog, page 12

4. Please provide the dollar amount of backlog as of a date comparable to that used to determine your backlog for fiscal year 2010. Clarify whether you believe the entire \$10.0 million is expected to be filled within the current fiscal year. Refer to Item 101(c)(1)(viii) of Regulation S-K.

Channels, page 12

5. We note that sales to your indirect distribution channels accounted for 59% of your total revenue for the fiscal year ended March 31, 2009. Elsewhere, you state that your success depends, in part, on your ability to manage your distribution channels. Please expand your disclosure to provide a more detailed narrative discussion of the reseller-specific programs aimed at improving revenue fulfillment.

Item 1A. Risk Factors

“Our reliance on sole source suppliers....,” page 18

6. You state that specific components that are necessary for the assembly of your probes and appliances, including computer network interface cards, are obtained from separate sole source suppliers or a limited group of suppliers, and that the inability to obtain, or an inadequate supply of these required components could adversely affect your business. We note also the general disclosure on page 12 to this effect. Please elaborate on the nature of your dependence on, and the material terms of your agreements with, these suppliers and advise what consideration you gave to identifying in your filing any material suppliers to the company. In addition, please provide us with your analysis as to how you concluded you are not required by Item 601(b)(10)(ii)(B) of Regulation S-K to file your agreements with any limited-source suppliers of key components of your products.

Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations, page 27

7. Your results of operations discussion for fiscal years 2009 and 2008 should address the extent to which the changes in revenues from one period to the next were attributable to changes in volumes sold, to changes in prices charged or to new product innovations. Please tell us what consideration you gave to addressing the impact of these factors on your results of operations. In this regard, we note your statement on page 28 that your operating results were influenced in part by pricing and your discussion of new product releases on pages 28 and 29. We also note your discussion of the impact of pricing and volume on your results of operations for fiscal years 2008 and 2007. Please refer to Item 303(a)(3)(iii) of Regulation S-K. This comment also applies to your disclosure in your subsequent Forms 10-Q.

Results of Operations

Fiscal Years Ended March 31, 2009 and 2008

Revenue, page 35

8. Your discussion of revenues does not appear to fully explain the 58% increase over the prior period. You indicate that product and service revenue increases are primarily attributable to the Network General acquisition, however, you have not identified other factors contributing to the increase or quantified the impact of revenues contributed by Network General and other factors. For example, we note that during fiscal year 2009 you released several new products as well as significant upgrades and enhancements to your existing products although it is not

clear how these releases affected revenue. Explain how you considered Section to III.D of SEC Release 33-6835 in discussing each factor, and quantifying the extent of the contribution of each factor, underlying material changes in revenues. This comment also applies to your discussion of expenses.

Part III, page 52

General

9. Each Item in Part III of your Form 10-K states that you are incorporating by reference from your definitive proxy statement the required disclosure, but you have not clearly identified, by caption or otherwise, the material incorporated by reference as required by Securities Exchange Act Rule 12b-23(b). In future filings, please ensure that the Part III disclosure identifies by title the section of your definitive proxy statement from which you are incorporating by reference the required disclosure, or otherwise clearly identify the material incorporated by reference.

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

Compensation and Other Information Concerning Directors and Executive Officers, page 18

General

10. As you may be aware, the Division of Corporation Finance has made available Staff interpretations of Item 402 of Regulation S-K on the SEC website. Please see “Staff Observations in the Review of Executive Compensation Disclosure” at <http://www.sec.gov/divisions/corpfin/guidance/execcompdisclosure.htm> and “Executive Compensation Disclosure: Observations on Year Two and a Look Forward to the Changing Landscape for 2009” at <http://sec.gov/news/speech/2008/spch102108jww.htm>. This guidance may be helpful as you review the comments set forth below, which should be given appropriate consideration when drafting future versions of your executive compensation and other related disclosure.

Executive Compensation Summary, page 18

11. We note from the summary compensation table that Mr. Singhal declined restricted stock unit grants in fiscal years 2007, 2008, and 2009. Please disclose the amount forgone at the election of Mr. Singhal for each respective year. See Instructions to Item 402(c)(2)(iii) and (iv) of Regulation S-K.
12. It appears that the bonuses paid to your named executive officers for the years covered in the summary compensation table were based upon achievement of undisclosed corporate performance targets and therefore appear to have been awarded pursuant to an "incentive plan," as such term is defined in Item 402(a)(6)(iii) of Regulation S-K. Accordingly, it appears that the amounts of such performance-based incentive cash bonuses should be included in the Non-Equity Incentive Plan Compensation column of the Summary Compensation Table, which you have omitted, instead of in the Bonus column, and that the Grants of Plan-Based Awards table, which you have also omitted, should reflect your performance-based cash incentive bonus plan. Please confirm that you will revise your disclosure accordingly in future filings, or explain to us why you believe you have provided appropriate disclosure of the performance-based incentive cash bonuses awarded to your named executive officers for fiscal 2008. See Question 119.02 of our Regulation S-K Compliance and Disclosure Interpretations, available on our website at <http://www.sec.gov/divisions/corpfin/guidance/regs-kinterp.htm>.

Performance Incentives and Targets, page 25

13. You state on page 25 that you benchmark compensation for executive officers and consider such information as part of a range of factors in determining appropriate compensation levels but have not identified the benchmark. You further state on page 27 that base salary levels generally are set within the range of salaries paid for comparable positions. Your disclosure should address how you determined total compensation or the elements thereof in light of the benchmarks used. For instance, if the compensation committee set the benchmark at a certain range or percentile of the compensation opportunity provided by the component companies, the range or percentile should be disclosed. If compensation for a particular executive is above or below the benchmark, this should also be disclosed and discussed. Refer to Item 402(b)(2)(xiv) of Regulation S-K.

Base Salary, page 27

14. With respect to base salaries paid to your executive officers, please ensure that you address on an individualized basis how the compensation committee determined the specific amounts paid to each named executive officer, including

how the determination to increase base salaries for all of the named executive officers in the amounts reflected in the summary compensation table was made.

15. Please clarify whether and to what extent the Chief Operating Officer, who “makes his own recommendations to the Chief Executive Office for the Chief Executive Officer’s consideration,” has a role in determining his own compensation.

Incentive Compensation, page 28

16. We note that you have omitted not only the target levels with respect to specific quantitative performance-related factors considered in setting compensation, which is permitted under the circumstances outlined in Instruction 4 to Item 402(b) of Regulation S-K, but you have also omitted the performance metrics upon which incentive compensation is based. Given your statements that your cash incentive plan is based on the achievement of company-wide goals, individual goals and other criteria, the performance metrics appear to be material to your compensation of the named executive officers and should be discussed. Refer to Item 402(b)(2)(vi) and (vii) of Regulation S-K. Please provide a description of the elements of corporate and individual performance that were taken into account with respect to each named executive officer in awarding cash incentives. In addition, disclose whether the corporate and individual targets were met in each instance, state whether discretion was exercised to reduce or increase the size of any award or payout and describe in material detail how achievement of the various corporate performance objectives resulted in the specific payouts reflected in the summary compensation table.

Stock-Based Awards and Executive Officer Stock-Based Awards, page 29

17. Although you provide general information regarding policies relating to your long-term equity compensation, your disclosure should also provide substantive analysis and insight into how the compensation committee determined the actual award amounts. With a view toward providing expanded disclosure in future filings, please tell us how the compensation committee determined the specific equity awards made to your named executive officers in fiscal 2009.

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

18. We note that you have incorporated by reference the information required by this Item from your definitive proxy statement; however, you have not disclosed in the definitive proxy statement whether you had any reportable transactions with related persons since the beginning of your last fiscal year nor have you disclosed what your related party transaction approval policy is. If no related party

transactions occurred during this period, please provide us with a representation to this effect and confirm that you will provide the disclosure required pursuant to paragraphs (a) and (b) of Item 404 of Regulation S-K in future filings.

Consolidated Financial Statements

Consolidated Statements of Operations, page F-4

19. We note your additional disclosure of share-based compensation on the face of the Consolidated Statements of Operations which includes a total of share-based compensation. Pursuant to paragraph F of SAB 107, the Staff believes that disclosure regarding the amount of expense related to share-based payment arrangements might be appropriate in a parenthetical note to the appropriate income statement line items, on the cash flow statement, in the footnotes to the financial statements, or within MD&A. The guidance in SAB 107, however, does not provide for a reconciliation of the share-based compensation expense on the face of the income statement that includes a total of the share-based compensation. Tell us how you considered the guidance in SAB 107 in your current disclosures and tell us how you intend to comply with such guidance in your future filings. In addition, see the Division of Corporation Finance's "Current Accounting and Disclosure Issues" (Updated 11/30/06), Section I.B.2.

Form 10-Q for the Fiscal Quarter Ended September 30, 2009

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

Results of Operations

Three Months Ended September 30, 2009 and 2008

Revenue, page 20

20. We note that your increase in service revenue was partially due to "a lower purchase accounting adjustment associated with the Network General acquisition." Please clarify this statement to explain how the purchase accounting adjustment results in an increase in your service revenues. Please consider clarifying your disclosure in future filings.

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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.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In connection with responding to our comments, please provide, in writing, a statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comments on your filing.

You may contact David Edgar, Staff Accountant, at (202) 551-3459 if you have any questions regarding comments on the financial statements and related matters. Please address questions regarding all other comments to Stephani Bouvet at (202) 551-3545 or Maryse Mills-Apenteng, Special Counsel at (202) 551-3457. If you need further assistance, you may contact me at (202) 551-3406.

Sincerely,

Patrick Gilmore
Accounting Branch Chief