

Mail Stop 4561

April 14, 2008

Kendall Larsen
Chief Executive Officer
VirnetX, Inc.
5615 Scotts Valley Drive, Suite 110
Scotts Valley, CA 95066

**Re: VirnetX Holding Corporation
Post-Effective Amendment No. 1 to Form SB-2 on Form S-3
Filed March 25, 2008
File No. 333-145765**

**Registration Statement on Form S-3
Filed March 25, 2008
File No. 333-149884**

Dear Mr. Larsen:

We have limited our review of the filings noted above to those issues addressed in our comments below. Where indicated, we think you should revise your filings 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 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 filings. 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.

Post-Effective Amendment No. 1 to Form SB-2 on Form S-3

1. Because of the late filing of the Form 8-K filed on July 12, 2008, you are ineligible to use the Form S-3. See General Instruction I.A.3(b) of the Form S-3. Please file a new post-effective amendment on a registration form that you currently are eligible to use.

Form S-3

General

2. As noted in the previous comment, you are ineligible to use the Form S-3. Please file your amendment on a registration form that you currently are eligible to use.
3. You currently have numerous outstanding effective registration statements. In the interest of simplified disclosure, please consider the application of Securities Act Rule 429. You may wish to rely upon this rule by filing an amendment that contains a single prospectus relating to the shares in this offering and in your other outstanding offerings. Absent the use of Rule 429, please revise the cover pages of File Nos. 333-145765 and 333-149884 to reference concisely your concurrent offerings.
4. We note that the registration statement covers the resale of a large amount of VirnetX Holding Corporation's outstanding common shares. We also note that the registration statement covers the resale of common shares that are being offered in large amounts by major shareholders, such as Mr. Larson. Generally, we view transactions of this nature, particularly resale transactions by affiliated parties in this amount, as offerings "by or on behalf of the issuer" for purposes of Rule 415(a)(4) of Regulation C. Under the rule, equity securities offered by or on behalf of the registrant cannot be sold "at the market" price unless the offering satisfies the requirements set forth in the rule. Your offering does not appear to meet the requirements. Please provide us with a detailed legal analysis setting forth your view as to why the subject transaction is eligible to be made under Rule 415(a)(1)(i). Provide a similar analysis as it relates to the proposed resale of common shares by your affiliates.

Selling Security Holders, page 36

5. Please provide a materially complete discussion of how the selling shareholders acquired the securities that you are registering on their behalf for resale. The background of the issuances to the selling shareholders and the nature of the arrangements, agreements, and relationships with the company does not appear to be complete and should include, for each selling security holder, a discussion of the date of the transaction in which the securities were sold, the amount of securities sold, the agreement(s) that evidence the sale, the instrument(s) that define the rights of the security holders, and the private placement agent, if any. Your disclosure should also include a description of the material terms of the warrants held by the relevant selling security holder.
6. For each selling security holder that is a legal entity, please ensure that your document discloses the natural person or persons who exercise the sole or shared voting and/or dispositive powers with respect to the shares to be offered by that shareholder.

Liquidity and Capital Resources, page 18

7. The disclosure in this section indicates that the registrant expects its net proceeds from this offering to be approximately \$10 million. However, elsewhere in the prospectus, the registrant indicates that it will not receive any proceeds from the sale of the securities being registered in this registration statement. Please revise your disclosure as appropriate.

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As appropriate, please amend your registration statements in response to these comments. Your responsive amendments should also include marked copies of the amended filings that conform with the provisions of Rule 310 of Regulation S-T. Marked copies such as those in HTML format that show changes within paragraphs help us to expedite our review. Please furnish a cover letter with your amendments that keys your responses 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 your amendments and responses 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 Act of 1933 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 the facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Notwithstanding our comments, in the event the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

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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 connection with our review of your filing or in response to our comments on your filing.

We will consider a written request for acceleration of the effective date of the registration statement as a confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

We direct your attention to Rule 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

You may contact Matt Crispino at (202) 551-3456 or Jay Ingram at (202) 551-3397 if you have questions. If you require further assistance, please contact me at (202) 551-3735.

Sincerely,

Barbara C. Jacobs
Assistant Director

cc: Via Facsimile: (650) 614-7401
Lowell D. Ness
Orrick, Herrington & Sutcliffe LLP
Telephone: (650) 614-7455