

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-A

**FOR REGISTRATION OF CERTAIN CLASSES OF SECURITIES
PURSUANT TO SECTION 12(b) OR (g) OF THE
SECURITIES EXCHANGE ACT OF 1934**

Medidata Solutions, Inc.

(Exact Name of Registrant as Specified in Its Charter)

Delaware
(State of Incorporation or Organization)

13-4066508
(I.R.S. Employer Identification No.)

79 Fifth Avenue, 8th Floor
New York, New York
(Address of Principal Executive Offices)

10003
(Zip Code)

Securities to be registered pursuant to Section 12(b) of the Act:

Title of each class
to be so registered
Common Stock, par value \$0.01 per share

Name of each exchange on which
each class is to be registered
The NASDAQ Stock Market LLC

If this form relates to the registration of a class of securities pursuant to Section 12(b) of the Exchange Act and is effective pursuant to General Instruction A. (c), check the following box.

If this form relates to the registration of a class of securities pursuant to Section 12(g) of the Exchange Act and is effective pursuant to General Instruction A. (d), check the following box.

Securities Act registration statement file number to which this form relates: 333-156935

Securities to be registered pursuant to Section 12(g) of the Act: None

Item 1. Description of Registrant's Securities to be Registered

A description of the Common Stock, par value \$0.01 per share (the "Common Stock"), of Medidata Solutions, Inc., a Delaware corporation (the "Registrant"), is set forth under the caption "Description of Capital Stock" in the prospectus constituting a part of the Registrant's Registration Statement on Form S-1 (Registration No. 333-156935), initially filed with the Securities and Exchange Commission on January 26, 2009, as amended by any amendments to such Registration Statement, which description is incorporated herein by reference. The description of the Common Stock included in any form of prospectus subsequently filed by the Registrant pursuant to Section 424(b) of the Securities Act of 1933, as amended, shall also be deemed to be incorporated herein by reference.

Item 2. Exhibits

Pursuant to the Instructions as to Exhibits with respect to Form 8-A, no exhibits are required to be filed because no other securities of the Registrant are registered on The NASDAQ Stock Market LLC, and the securities registered hereby are not being registered pursuant to Section 12(g) of the Securities Exchange Act of 1934.

SIGNATURE

Pursuant to the requirements of Section 12 of the Securities Exchange Act of 1934, the Registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereto duly authorized.

MEDIDATA SOLUTIONS, INC.

By: /s/ Michael I. Otner

Name: Michael I. Otner

Title: General Counsel and Secretary

Dated: June 18, 2009