Medidata Solutions, Inc. Form S-8 June 22, 2018 As filed with the Securities and Exchange Commission on June 22, 2018

Registration No. 333-

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

FORM S-8 REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

Medidata Solutions, Inc. (Exact name of registrant as specified in its charter)

Delaware 13-4066508 (State or other jurisdiction of (I.R.S. Employer incorporation or organization) Identification No.) 350 Hudson Street, 9th Floor 10014 New York, New York (Address of Principal Executive Offices) (Zip Code) Medidata Solutions, Inc. Third Amended and Restated 2014 Employee Stock Purchase Plan (Full title of the plan) Michael I. Otner Executive Vice President, General Counsel and Secretary 350 Hudson Street, 9th Floor, New York, NY 10014 (Name and address of agent for service) (212) 918-1800 (Telephone number, including area code, of agent for service)

Copies to: Warren J. Nimetz, Esq. Norton Rose Fulbright US LLP 1301 Avenue of the Americas, New York, NY 10019 Telephone: (212) 318-3000, Facsimile: (212) 318-3400

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act. Large accelerated filer x Accelerated filer

Non-accelerated filer "Smaller reporting company"

Emerging growth company "

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. "

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered (1)	Proposed Maximum Offering Price per Share (2)	Aggregate ()ttering	Amount of Registration Fee
Common Stock \$0.01 par value per share	1,000,000	\$70.27	\$70,270,000	\$8,748.62

This Registration Statement on Form S-8 covers 1,000,000 shares of common stock, par value \$0.01 per share (the "Common Stock"), of Medidata Solutions, Inc. reserved for issuance under the Medidata Solutions, Inc. Third Amended and Restated 2014 Employee Stock Purchase Plan (the "Plan"). Pursuant to Rule 416 under the Securities

(1) Act of 1933, as amended (the "Securities Act"), this Registration Statement also covers an additional indeterminable number of shares as may be necessary to adjust the number of shares being offered or issued pursuant to the Plan as a result of any future stock splits, stock dividends, recapitalizations or similar transactions effected without the receipt of consideration which results in an increase in the number of outstanding shares.

Estimated in accordance with Rules 457(c) and (h) under the Securities Act solely for the purpose of calculating the registration fee. The computation is based upon 85% (see explanation in following sentence) of the average of the high and low prices of the Common Stock as reported on the Nasdag Global Select Market on June 18, 2018

(2) the high and low prices of the Common Stock as reported on the Nasdaq Global Select Market on June 18, 2018.
(2) Pursuant to the Plan, the purchase price of a share of Common Stock is an amount equal to 85% of the Fair Market Value of a share of Common Stock on the first day of the Offering Period or the Purchase Date (as such terms are defined in the Plan), whichever is lower.

EXPLANATORY NOTE

This Registration Statement on Form S-8 relates to the registration of an additional 1,000,000 shares of common stock, par value \$0.01 per share ("Common Stock") of Medidata Solutions, Inc., or the Registrant, for future issuance under the Medidata Solutions, Inc. Third Amended and Restated 2014 Employee Stock Purchase Plan (the "Plan"). In accordance with General Instruction E to Form S-8, the contents of the previous Registration Statements on Form S-8 related to the Plan (Commission File Nos. 333-211946, filed on June 9, 2016, 333-198262, filed on August 20, 2014, and 333-192861, filed on December 13, 2013 with the Securities and Exchange Commission) are incorporated herein by reference and made part of this Registration Statement, except as amended hereby. At the Annual Meeting held on May 30, 2018, the Registrant's stockholders voted to approve the Plan, which amends and restates the Registrant's 2014 Second Amended and Restated Employee Stock Purchase Plan to increase the number of shares of Common Stock that may be issued thereunder from 800,000 to 1,800,000.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The Registrant hereby incorporates by reference into this Registration Statement the following documents and information previously filed with the Commission:

i. the Registrant's annual report on Form 10-K for the fiscal year ended December 31, 2017 filed on February 28, 2018; ii. the Registrant's quarterly report on Form 10-Q for the quarter ended March 31, 2018 filed on May 4, 2018;

... the Registrant's current reports on Form 8-K filed on February 8, 2018, February 23, 2018, April 19, 2018, May 31, ¹¹¹. 2018, June 12, 2018, and June 20, 2018; and

the description of the Registrant's Common Stock contained in its Registration Statement on Form 8-A (File No. iv.001-34387) filed with the Commission on June 19, 2009, pursuant to Section 12(b) of the Securities Exchange Act

of 1934, as amended, including any amendment or report filed for the purpose of updating such description. All documents filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Securities Exchange Act of 1934, as amended (other than Current Reports on Form 8-K furnished pursuant to Item 2.02 or Item 7.01 of Form 8-K, including any exhibits included with such information, unless otherwise indicated therein), subsequent to the date of this Registration Statement and prior to the filing of a post-effective amendment that indicates that all securities offered have been sold or that deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference herein and to be a part hereof from the date of filing of such documents. Any statement contained in this Registration Statement or in a document incorporated or deemed to be incorporated

herein by reference shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein or in any subsequently filed document which also is, or is deemed to be, incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

Item 8. E	Exhibits.				
Exhibit	Exhibit Title	Filed	Incorp	orated by Ret	ference
Number Exhibit The		Herewith	Form	File No.	Date Filed
<u>4.1</u>	Fifth Amended and Restated Certificate of Incorporation		10-Q	001-34387	8/7/14
<u>4.2</u>	<u>Certificate of Amendment of Fifth Amended and Restated</u> <u>Certificate of Incorporation, dated June 2, 2016</u>		8-K	001-34387	6/7/16
<u>4.3</u>	Amended and Restated Bylaws		8-K	001-34387	2/16/16
<u>4.4</u>	Specimen Stock Certificate		S-1/A	333-156935	6/3/09
<u>5.1</u>	Opinion of Norton Rose Fulbright US LLP regarding legality of securities being registered	Х			
<u>23.1</u>	Consent of Deloitte & Touche LLP, independent registered public accounting firm	Х			
<u>23.2</u>	Consent of Norton Rose Fulbright US LLP (filed as part of Exhibit 5.1)	Х			
<u>24.1</u>	Powers of Attorney (included on signature page)	Х			
<u>99.1</u>	Third Amended and Restated 2014 Employee Stock Purchase Plan	Х			

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of New York, State of New York, on June 22, 2018.

MEDIDATA SOLUTIONS, INC.

By:/s/ MICHAEL I. OTNER Michael I. Otner Executive Vice President— General Counsel and Secretary

POWER OF ATTORNEY

We, the undersigned officers and directors of Medidata Solutions, Inc., hereby severally constitute and appoint Tarek A. Sherif, Rouven Bergmann and Michael I. Otner, and each of them singly (with full power to each of them to act alone), our true and lawful attorneys-in-fact and agents, with full power of substitution and re-substitution in each of them for him and in his name, place and stead, and in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement, and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as full to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or their or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date	
/s/ TAREK A. SHERIF Tarek A. Sherif	Chairman, Chief Executive Officer (Principal Executive Officer) and Director	June 22, 2018	
/s/ ROUVEN BERGMANN	Chief Financial Officer		
Rouven Bergmann	(Principal Financial and Principal Accounting Officer)	June 22, 2018	
/s/ GLEN M. DE VRIES Glen M. de Vries /s/ CARLOS DOMINGUEZ Carlos Dominguez /s/ NEIL M. KURTZ , M.D. Neil M. Kurtz, M.D. /s/ GEORGE W. MCCULLOCH George W. McCulloch /s/ LEE A. SHAPIRO Lee A. Shapiro /s/ ROBERT B. TAYLOR Robert B. Taylor	President and Director	June 22, 2018	
	Director	June 22, 2018	
	Director	June 22, 2018	
	Director	June 22, 2018	
	Director	June 22, 2018	
	Director	June 22, 2018	