**Exhibit 4.1**

**FIRST SUPPLEMENTAL INDENTURE**

This First Supplemental Indenture (this “First Supplemental Indenture”), dated as of January 12, 2010, is made by and between PAETEC Holding Corp., a Delaware corporation (the “Company”), and The Bank of New York Mellon, as trustee (the “Trustee”) under the Indenture referred to below.

**RECITALS**

**WHEREAS**, the Company and the Trustee are currently parties to that certain indenture, dated as of June 29, 2009 (the “Indenture”), by and among the Company, the Subsidiary Guarantors (as defined in the Indenture) parties thereto and the Trustee, which Indenture provides for the issuance from time to time by the Company of Notes (as defined in the Indenture) (including, without limitation, the $350,000,000 aggregate principal amount of Exchange Notes (as defined in the Indenture) that were issued in exchange for the $350,000,000 aggregate principal amount of Notes that were previously issued on June 29, 2009);

**WHEREAS**, the Company is issuing pursuant to the Indenture $300,000,000 aggregate principal amount of Additional Notes (as defined in the Indenture) on the date hereof;

**WHEREAS**, in connection with the issuance of the Additional Notes, the Company wishes to amend Section 3.01(c) of the Indenture and the second paragraph set forth under Section 5 of Exhibit A attached to the Indenture to provide that upon any redemption of Notes referred to therein, at least 65% of the aggregate principal amount of Notes originally issued under the Indenture shall remain outstanding immediately after such redemption, rather than at least 65% of the aggregate principal amount of Notes originally issued on the Closing Date (as defined in the Indenture);

**WHEREAS**, Section 9.01(9) of the Indenture authorizes the Company and the Trustee, in accordance with the terms thereof, to amend or supplement the Indenture as set forth in this First Supplemental Indenture without the consent of any Holder in connection with the issuance of Additional Notes; and

**WHEREAS**, all actions necessary to make this First Supplemental Indenture the legal, valid and binding obligation of the Company have been taken;

**NOW THEREFORE**, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the Company and the Trustee mutually covenant and agree for the equal and ratable benefit of the Holders of the Notes as follows:

1.    Capitalized Terms. Capitalized terms used herein without definition shall have the meanings assigned to them in the Indenture.

2.    Amendment to Indenture. Section 3.01(c) of the Indenture and the second paragraph set forth under Section 5 of Exhibit A attached to the Indenture are hereby amended and restated in their entirety to read as follows:

“In addition, prior to June 30, 2012, the Company may, at its option, at any time or from time to time, redeem up to 35% of the aggregate principal amount of the Notes with the net proceeds from one or more Equity Offerings at a Redemption Price (expressed as a percentage of principal amount) of 108.875% of their principal amount, plus accrued and unpaid interest, if any, to, but excluding, the Redemption Date (subject to the rights of Holders of record on the relevant Regular Record Date that is on or prior to the Redemption Date to receive interest due on an Interest Payment Date); provided, however, that (i) at least 65% of the aggregate principal amount of Notes originally issued under the Indenture remains outstanding immediately after each such redemption and (ii) notice of such redemption is mailed within 90 days after the closing of the related Equity Offering.”

3.    Effect of First Supplemental Indenture. Other than as specifically provided herein, this First Supplemental Indenture shall not operate as a waiver or amendment of any right, power or privilege of any Holder or the Trustee under the Indenture or any other First Lien Document or of any other term or condition of the Indenture or any other First Lien Document. All references to the Indenture in any First Lien Document from and after the date hereof will be deemed to refer to the Indenture as amended hereby.

4.    Trustee’s Disclaimer. The Trustee makes no representation or warranty as to the validity or sufficiency of this First Supplemental Indenture. The recitals and the statements herein are deemed to be those of the Company and not of the Trustee.

5.    GOVERNING LAW. THIS FIRST SUPPLEMENTAL INDENTURE SHALL BE GOVERNED BY THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO PRINCIPLES OF CONFLICT OF LAWS. EACH OF THE PARTIES HERETO AGREES TO SUBMIT TO THE JURISDICTION OF THE COURTS OF THE STATE OF NEW YORK IN ANY ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS FIRST SUPPLEMENTAL INDENTURE.

6.    Counterparts. The parties may sign any number of copies of this First Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

7.    Effect of Headings. The Section headings herein are for convenience only and shall not affect the construction hereof.

[*signature page follows*]

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IN WITNESS WHEREOF, the parties hereto have caused this First Supplemental Indenture to be duly executed as of the day and year first written above.

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| PAETEC HOLDING CORP. | | | | |
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| By: |  | /s/ Keith M. Wilson | | |
|  |  | Name: |  | Keith M. Wilson |
|  |  | Title: |  | Executive Vice President and |
|  |  |  |  | Chief Financial Officer |

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|  |  |  |  |  |
| THE BANK OF NEW YORK MELLON, as Trustee | | | | |
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| By: |  | /s/ Cheryl L. Clarke | | |
|  |  | Name: |  | Cheryl L. Clarke |
|  |  | Title: |  | Vice President |

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