

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

| OMB APPROVAL | |
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|--|--|---|
| 1. Name and Address of Reporting Person* <u>HEFFERNAN EDWARD J</u> (Last) (First) (Middle) 7500 DALLAS PARKWAY, SUITE 700 (Street) PLANO TX 75024 (City) (State) (Zip) | 2. Issuer Name and Ticker or Trading Symbol <u>ALLIANCE DATA SYSTEMS CORP [ADS]</u> | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input checked="" type="checkbox"/> Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) <u>President and CEO</u> |
| | 3. Date of Earliest Transaction (Month/Day/Year) <u>02/17/2017</u> | |
| | | 6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person <input type="checkbox"/> Form filed by More than One Reporting Person |

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

| 1. Title of Security (Instr. 3) | 2. Transaction Date (Month/Day/Year) | 2A. Deemed Execution Date, if any (Month/Day/Year) | 3. Transaction Code (Instr. 8) | | 4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5) | | | 5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4) | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 7. Nature of Indirect Beneficial Ownership (Instr. 4) |
|---------------------------------|--------------------------------------|--|--------------------------------|---|---|------------|----------|---|--|---|
| | | | Code | V | Amount | (A) or (D) | Price | | | |
| Common Stock | 02/17/2017 | | F ⁽¹⁾ | | 2,642 | D | \$232.69 | 248,396 | D | |
| Common Stock | 02/21/2017 | | F ⁽¹⁾ | | 3,437 | D | \$235.4 | 244,959 ⁽²⁾ | D | |

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | 3A. Deemed Execution Date, if any (Month/Day/Year) | 4. Transaction Code (Instr. 8) | | 5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) | | 6. Date Exercisable and Expiration Date (Month/Day/Year) | | 7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4) | 8. Price of Derivative Security (Instr. 5) | 9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4) | 10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 11. Nature of Indirect Beneficial Ownership (Instr. 4) |
|--|--|--------------------------------------|--|--------------------------------|---|--|-----|--|-----------------|---|--|--|---|--|
| | | | | Code | V | (A) | (D) | Date Exercisable | Expiration Date | | | | | |

Explanation of Responses:

- Shares withheld by the Company to satisfy the Reporting Person's tax withholding obligation upon the vesting of restricted stock units.
- The total number of securities beneficially owned includes: (a) 195,261 unrestricted shares; (b) 1,297 unvested units from an award of 3,814 time-based restricted stock units granted 2/17/15; (c) 5,188 unvested units from an award of 15,257 performance-based restricted stock units granted 2/17/15; (d) 3,367 unvested units from an award of 5,026 time-based restricted stock units granted 2/16/16; (e) 5,994 unvested units from an award of 8,947 performance-based restricted stock units granted 2/16/16; (f) 5,578 unvested time-based restricted stock units granted 2/15/17; (g) 11,155 unvested performance-based restricted stock units granted 2/15/17; (h) 11,155 unvested performance-based restricted stock units granted 2/15/17; and (i) 5,964 unvested performance-based restricted stock units granted 2/15/17.

Remarks:

Cynthia L. Hageman, Attorney 02/22/2017
in Fact

** Signature of Reporting Person Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

* If the form is filed by more than one reporting person, see Instruction 4 (b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.