

Linux System Administrator Occupation Report


CIP 11.1001

Cochise, Pima, SC






Network and System Administration/Administrator

CIP 2010: A program that prepares individuals to manage the computer operations and control the system configurations emanating from a specific site or network hub. Includes instruction in computer hardware and software and applications; local area (LAN) and wide area (WAN) networking; principles of information systems security; disk space and traffic load monitoring; data backup; resource allocation; and setup and takedown procedures. * *Program Description – Settings*

Occupation Gender Breakdown 2016

| | Gender | Jobs | Percent |
|---|---------|-------|---|
| • | Males | 4,298 | 74.8%  |
| • | Females | 1,452 | 25.2%  |

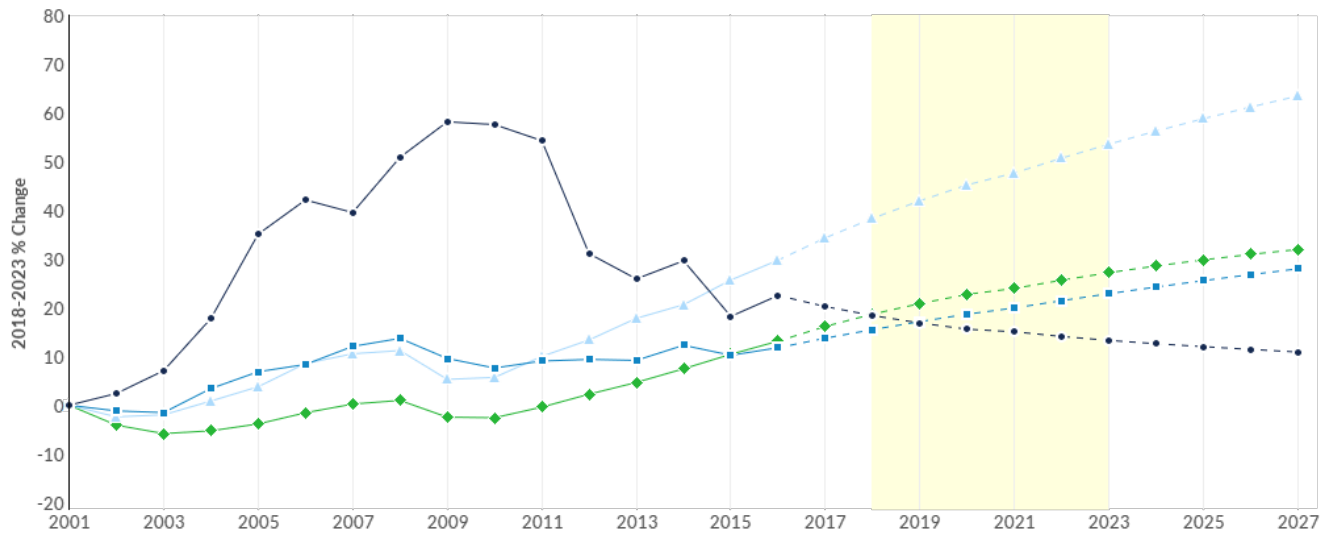
Occupation Age Breakdown 2016

| | Age | Jobs | Percent |
|---|-------|-------|---|
| • | 14-18 | 22 | 0.4%  |
| • | 19-24 | 381 | 6.6%  |
| • | 25-34 | 1,454 | 25.3%  |
| • | 35-44 | 1,646 | 28.6%  |
| • | 45-54 | 1,285 | 22.4%  |
| • | 55-64 | 823 | 14.3%  |
| • | 65+ | 137 | 2.4%  |

Occupation Summary for 11.1001

| | | |
|--|---|---|
| 5,749 Jobs (2016) 7% below National average | 6.4% % Change (2018-2023) Nation: 7.2% | \$28.04/hr Median Hourly Earnings Nation: \$34.35/hr |
|--|---|---|

Occupation Change Summary



| | Region | 2018 Jobs | 2023 Jobs | Change | % Change | Median Hourly Earnings |
|---|--------------------|-----------|-----------|---------|----------|------------------------|
| ● | Cochise County, AZ | 691 | 662 | -29 | -4% | \$31.77 |
| ● | Cochise, Pima, SC | 5,940 | 6,319 | 379 | 6% | \$28.04 |
| ● | Arizona (AZ) | 47,757 | 53,010 | 5,253 | 11% | \$30.92 |
| ● | United States | 2,174,225 | 2,329,937 | 155,712 | 7% | \$34.35 |

| SOC | Description | Typical Entry Level Education | Work Experience Required | Typical On-The-Job Training |
|---------|---|-------------------------------|--------------------------|-----------------------------|
| 11-3021 | Computer and Information Systems Managers | Bachelor's degree | 5 years or more | None |
| 15-1122 | Information Security Analysts | Bachelor's degree | Less than 5 years | None |
| 15-1134 | Web Developers | Associate's degree | None | None |
| 15-1142 | Network and Computer Systems Administrators | Bachelor's degree | None | None |
| 15-1143 | Computer Network Architects | Bachelor's degree | 5 years or more | None |
| 15-1151 | Computer User Support Specialists | Some college, no degree | None | None |
| 15-1152 | Computer Network Support Specialists | Associate's degree | None | None |

Occupation Breakdown - 2018 Jobs

| Occupation | Description | Cochise County, AZ | Cochise, Pima, SC | Arizona (AZ) | United States |
|------------|---|--------------------|-------------------|--------------|---------------|
| 15-1142 | Network and Computer Systems Administrators | 178 | 935 | 7,657 | 402,630 |
| 15-1151 | Computer User Support Specialists | 167 | 2,473 | 16,158 | 716,167 |
| 11-3021 | Computer and Information Systems Managers | 90 | 873 | 7,411 | 386,267 |
| 15-1152 | Computer Network Support Specialists | 90 | 695 | 6,157 | 217,041 |
| 15-1122 | Information Security Analysts | 78 | 274 | 2,825 | 104,218 |
| 15-1143 | Computer Network Architects | 57 | 208 | 3,447 | 167,827 |
| 15-1134 | Web Developers | 33 | 482 | 4,102 | 180,076 |
| | Total | 691 | 5,940 | 47,757 | 2,174,225 |

Occupation Breakdown - 2023 Jobs

| Occupation | Description | Cochise County, AZ | Cochise, Pima, SC | Arizona (AZ) | United States |
|------------|---|--------------------|-------------------|--------------|---------------|
| 15-1142 | Network and Computer Systems Administrators | 168 | 980 | 8,419 | 423,454 |
| 15-1151 | Computer User Support Specialists | 167 | 2,643 | 17,877 | 768,760 |
| 11-3021 | Computer and Information Systems Managers | 87 | 929 | 8,344 | 418,244 |
| 15-1152 | Computer Network Support Specialists | 84 | 736 | 6,671 | 228,105 |
| 15-1122 | Information Security Analysts | 69 | 281 | 3,159 | 113,286 |
| 15-1143 | Computer Network Architects | 53 | 228 | 3,807 | 176,397 |
| 15-1134 | Web Developers | 33 | 523 | 4,733 | 201,690 |
| | Total | 662 | 6,319 | 53,010 | 2,329,937 |

Occupation Breakdown - Change

| Occupation | Description | Cochise County, AZ | Cochise, Pima, SC | Arizona (AZ) | United States |
|------------|---|--------------------|-------------------|--------------|---------------|
| 15-1151 | Computer User Support Specialists | 0 | 170 | 1,719 | 52,593 |
| 15-1134 | Web Developers | 0 | 41 | 631 | 21,614 |
| 11-3021 | Computer and Information Systems Managers | -3 | 56 | 933 | 31,977 |
| 15-1143 | Computer Network Architects | -4 | 20 | 360 | 8,570 |
| 15-1152 | Computer Network Support Specialists | -6 | 41 | 514 | 11,064 |
| 15-1122 | Information Security Analysts | -9 | 7 | 334 | 9,068 |
| 15-1142 | Network and Computer Systems Administrators | -10 | 45 | 762 | 20,824 |
| | Total | -29 | 379 | 5,253 | 155,712 |

Occupation Breakdown - Median Hourly Earnings

| Occupation | Description | Cochise County, AZ | Cochise, Pima, SC | Arizona (AZ) | United States |
|------------|---|--------------------|-------------------|--------------|---------------|
| 11-3021 | Computer and Information Systems Managers | \$41.63 | \$48.59 | \$61.47 | \$65.29 |
| 15-1143 | Computer Network Architects | \$40.74 | \$37.25 | \$44.49 | \$48.66 |
| 15-1122 | Information Security Analysts | \$36.77 | \$35.83 | \$37.04 | \$44.52 |
| 15-1134 | Web Developers | \$34.16 | \$22.36 | \$29.29 | \$31.79 |
| 15-1142 | Network and Computer Systems Administrators | \$32.66 | \$31.13 | \$36.15 | \$38.32 |
| 15-1152 | Computer Network Support Specialists | \$32.06 | \$25.99 | \$28.50 | \$30.22 |
| 15-1151 | Computer User Support Specialists | \$21.21 | \$22.58 | \$22.27 | \$23.81 |
| | Total | \$32.30 | \$29.27 | \$34.41 | \$38.06 |








Top Industries – Change from 2018 - 2023

| NAICS Code | Description | Cochise County, AZ | Cochise, Pima, SC | Arizona (AZ) | United States |
|------------|--|--------------------|-------------------|--------------|---------------|
| 541330 | Engineering Services | 7 | -2 | -1 | 1,301 |
| 611430 | Professional and Management Development Training | 2 | 1 | 1 | -223 |
| 541513 | Computer Facilities Management Services | -1 | -1 | 266 | 2,305 |
| 541512 | Computer Systems Design Services | -8 | 72 | 645 | 33,196 |
| 541511 | Custom Computer Programming Services | -37 | -21 | 619 | 28,323 |
| | Total | -37 | 49 | 1,528 | 64,902 |

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2017.3 Class of Worker

National Educational Attainment

Computer User Support Specialists (15-1151)

| Education Level | 2016 Percent |
|-----------------------------------|---|
| Less than high school diploma | 0.7%  |
| High school diploma or equivalent | 11.1%  |
| Some college, no degree | 28.0%  |
| Associate's degree | 17.2%  |
| Bachelor's degree | 34.2%  |
| Master's degree | 8.0%  |
| Doctoral or professional degree | 0.8%  |

* National Educational Attainment – Settings

National Educational Attainment

Computer and Information Systems Managers (11-3021)

| | Education Level | 2016 Percent |
|---|-----------------------------------|--------------|
| ● | Less than high school diploma | 0.4% |
| ● | High school diploma or equivalent | 4.1% ■ |
| ● | Some college, no degree | 14.8% ■■ |
| ● | Associate's degree | 7.8% ■ |
| ● | Bachelor's degree | 46.6% ■■■■■ |
| ● | Master's degree | 24.1% ■■■■ |
| ● | Doctoral or professional degree | 2.2% |

* National Educational Attainment – Settings

National Educational Attainment

Network and Computer Systems Administrators (15-1142)

| | Education Level | 2016 Percent |
|---|-----------------------------------|--------------|
| ● | Less than high school diploma | 0.7% |
| ● | High school diploma or equivalent | 7.5% ■ |
| ● | Some college, no degree | 23.2% ■■■ |
| ● | Associate's degree | 16.3% ■■ |
| ● | Bachelor's degree | 40.0% ■■■■■ |
| ● | Master's degree | 11.1% ■■ |
| ● | Doctoral or professional degree | 1.2% |

* National Educational Attainment – Settings

National Educational Attainment

Computer Network Support Specialists (15-1152)

| | Education Level | 2016 Percent |
|---|-----------------------------------|--------------|
| ● | Less than high school diploma | 0.7% |
| ● | High school diploma or equivalent | 11.1% ■ |
| ● | Some college, no degree | 28.0% ■■■ |
| ● | Associate's degree | 17.2% ■■ |
| ● | Bachelor's degree | 34.2% ■■■■■ |
| ● | Master's degree | 8.0% ■■ |
| ● | Doctoral or professional degree | 0.8% |

* National Educational Attainment – Settings

October 10, 2017

National Educational Attainment

Web Developers (15-1134)

| | Education Level | 2016 Percent |
|---|-----------------------------------|--------------|
| ● | Less than high school diploma | 0.5% |
| ● | High school diploma or equivalent | 4.3% ■ |
| ● | Some college, no degree | 17.3% ■■ |
| ● | Associate's degree | 9.9% ■■ |
| ● | Bachelor's degree | 52.2% ■■■■■ |
| ● | Master's degree | 14.6% ■■ |
| ● | Doctoral or professional degree | 1.2% |

* National Educational Attainment – Settings

National Educational Attainment

Computer Network Architects (15-1143)

| | Education Level | 2016 Percent |
|---|-----------------------------------|--------------|
| ● | Less than high school diploma | 0.2% |
| ● | High school diploma or equivalent | 5.4% ■ |
| ● | Some college, no degree | 23.3% ■■ |
| ● | Associate's degree | 13.7% ■■ |
| ● | Bachelor's degree | 40.4% ■■■■ |
| ● | Master's degree | 15.8% ■■ |
| ● | Doctoral or professional degree | 1.2% |

* National Educational Attainment – Settings

National Educational Attainment

Information Security Analysts (15-1122)

| | Education Level | 2016 Percent |
|---|-----------------------------------|--------------|
| ● | Less than high school diploma | 0.8% |
| ● | High school diploma or equivalent | 5.5% ■ |
| ● | Some college, no degree | 18.7% ■■ |
| ● | Associate's degree | 8.9% ■■ |
| ● | Bachelor's degree | 44.6% ■■■■ |
| ● | Master's degree | 20.2% ■■ |
| ● | Doctoral or professional degree | 1.4% |

* National Educational Attainment – Settings

October 10, 2017

Appendix A - Data Sources and Calculations

Location Quotient

Location quotient (LQ) is a way of quantifying how concentrated a particular industry, cluster, occupation, or demographic group is in a region as compared to the nation. It can reveal what makes a particular region unique in comparison to the national average.

Occupation Data

EMSI occupation employment data are based on final EMSI industry data and final EMSI staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates also affected by county-level EMSI earnings by industry.

Completers Data

The completers data in this report is taken directly from the national IPEDS database published by the U.S. Department of Education's National Center for Education Statistics.

Institution Data

The institution data in this report is taken directly from the national IPEDS database published by the U.S. Department of Education's National Center for Education Statistics.

Industry Data

EMSI industry data have various sources depending on the class of worker. (1) For QCEW Employees, EMSI primarily uses the QCEW (Quarterly Census of Employment and Wages), with supplemental estimates from County Business Patterns and Current Employment Statistics. (2) Non-QCEW employees data are based on a number of sources including QCEW, Current Employment Statistics, County Business Patterns, BEA State and Local Personal Income reports, the National Industry-Occupation Employment Matrix (NIOEM), the American Community Survey, and Railroad Retirement Board statistics. (3) Self-Employed and Extended Proprietor classes of worker data are primarily based on the American Community Survey, Nonemployer Statistics, and BEA State and Local Personal Income Reports. Projections for QCEW and Non-QCEW Employees are informed by NIOEM and long-term industry projections published by individual states.

Staffing Patterns Data

The staffing pattern data in this report are compiled from several sources using a specialized process. For QCEW and Non-QCEW Employees classes of worker, sources include Occupational Employment Statistics, the National Industry-Occupation Employment Matrix, and the American Community Survey. For the Self-Employed and Extended Proprietors classes of worker, the primary source is the American Community Survey, with a small amount of information from Occupational Employment Statistics.

State Data Sources

This report uses state data from the following agencies: Arizona Department of Administration, Office of Employment and Population Statistics