



State Cybersecurity Workforce

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The State of the State IT Workforce

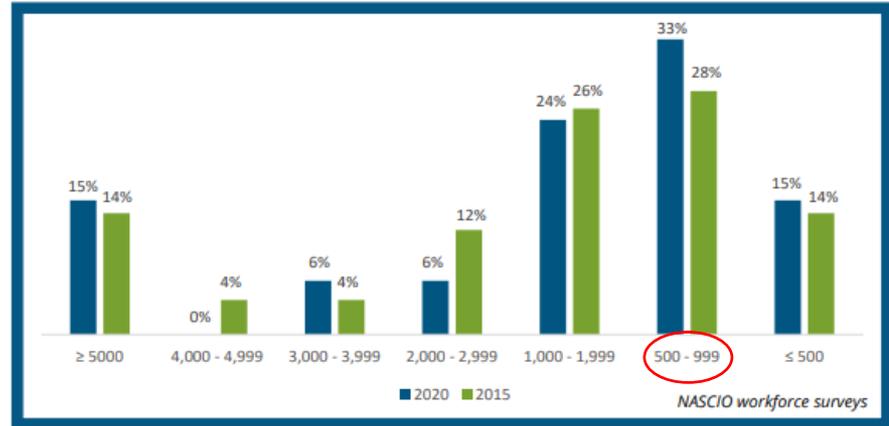


YESTERDAY,
TODAY AND
TOMORROW:

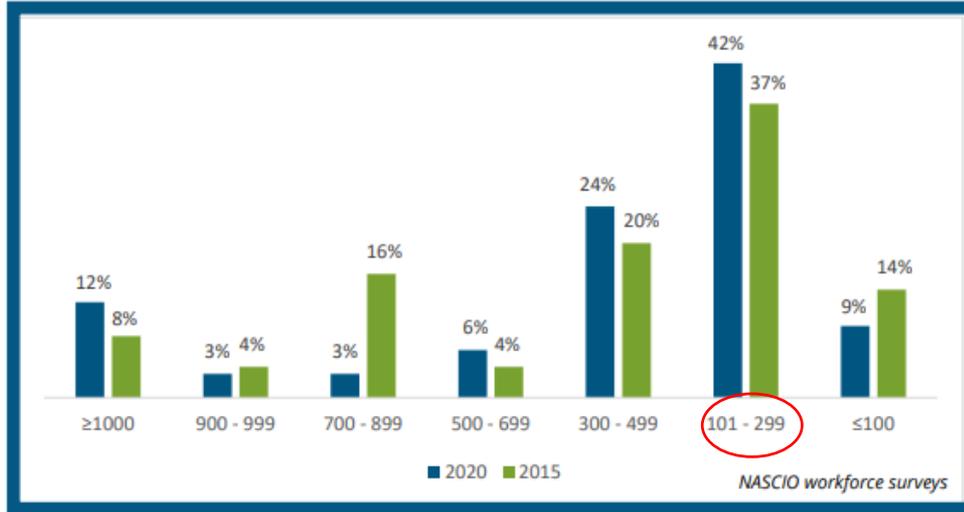
A Resilient and
Adaptable State IT
Workforce



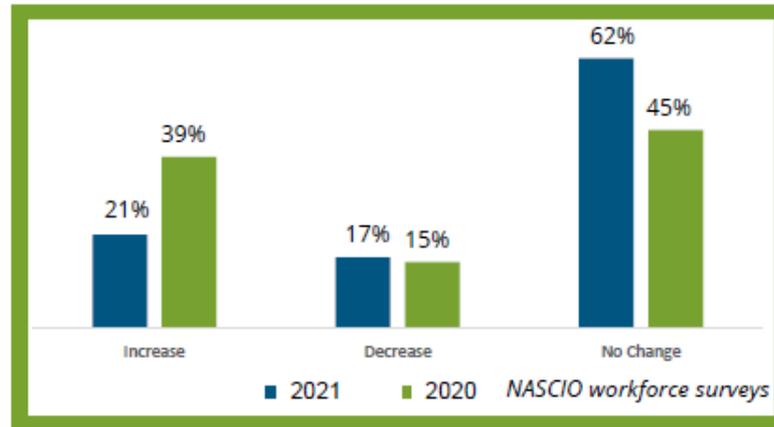
Approximately how many total full-time IT employees does your state have in the executive branch of government?



Approximately how many total full-time state IT employees are in your CIO organization?



In the next year, do you anticipate an increase, decrease or no change in the IT staff in the executive branch of your state?



Competencies Missing from State CIO Office or Impacted by COVID-19.

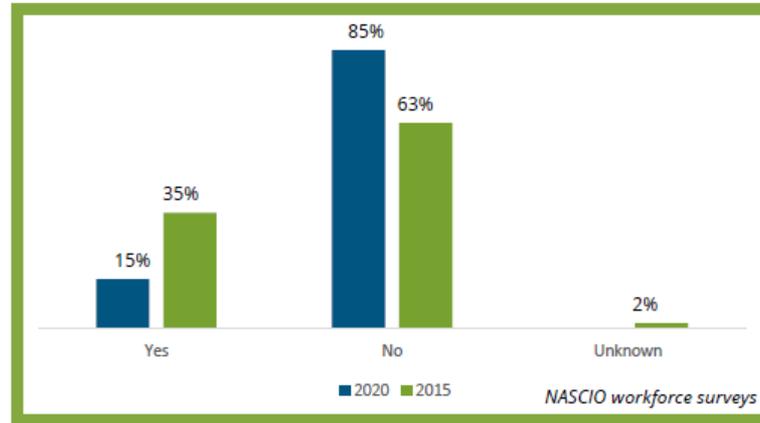
2021, impacted by COVID-19

1. Application development
2. Customer experience/relationship management
3. Security
4. Vendor relationship management
5. Cloud platforms and services

2020

1. Cloud platforms and services
2. AI/machine learning
3. Business intelligence/data analytics/big data
4. Security
5. DevOps

Does the CIO office perform regular IT workforce assessments?

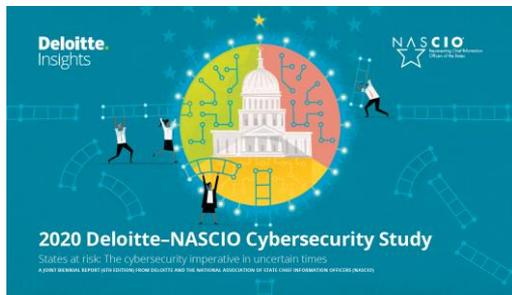




State CIO Workforce Priorities

- Continuing to recruit and retain qualified staff
- Training and career advancement/growth
- Workplace flexibility; culture; wellbeing of team
- Improving pay scales
- Increasing workforce bandwidth and competencies
- Succession planning
- DEI

Cyber Workforce



Dedicated cybersecurity professionals at the enterprise security office

Full-time equivalents	2010	2018	2020
1 to 5	47%	18%	16%
6 to 15	39%	49%	30%
16 to 25	4%	14%	18%
26 to 50	4%	14%	20%
>51	2%	4%	16%
Other	4%	0%	0%

Barriers impacting the development and support of cyber workforce

- 01 State salary rates and pay grades
- 02 Lack of qualified candidates
- 03 Workforce leaving for private sector

Top benefits to attract/retain cybersecurity talent

- 01 Opportunity to serve and contribute
- 02 Job stability
- 03 Workplace flexibility and predictable work hours

Top talent management practices to attract and retain cyber workforce

- 01 Promote nonsalary benefits
- 02 Highlight greater stability
- 03 Internship programs

States' plan to close the cybersecurity competency gap

94% Provide training to staff who are developing the required competencies

2020 vs.
2018

+31%

69% Use specialist augmentation (e.g., consultants and contractors)

+66%

51% Contracting with a managed security services provider

+44%

40% Outsource certain functional areas

+27%

Leading outsourced cyber functions

60% Cyberthreat risk assessments

2020 vs.
2018

+17%

42% Security operations center

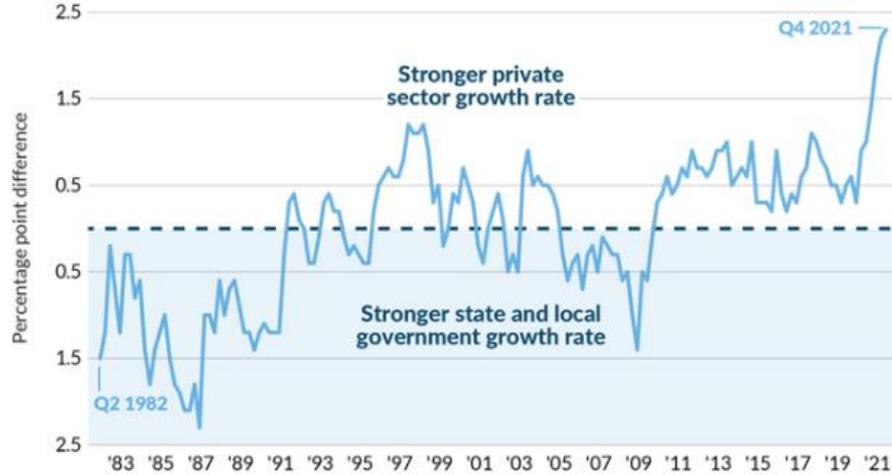
+4%

40% Forensics/legal support

+8%

Private Pay Growth Exceeds State and Local Government Increases by the Largest Margin on Record

Difference between quarterly year-over-year wage cost growth rates for private and public sector workers



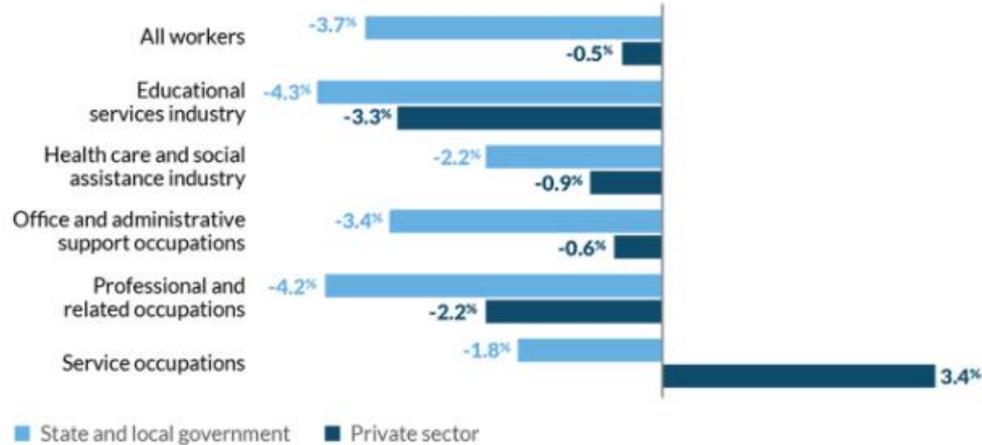
Note: The types of jobs and mix of industries that make up the two sectors are different.

Source: Pew calculations of U.S. Bureau of Labor Statistics Employment Cost Index quarterly wage and salary data. Data before 2001 is based on the Standard Industrial Classification data series.

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Private Sector Workers Have Fared Better Than Public Counterparts Since Pandemic's Start

Change in inflation-adjusted wage and salary costs per hour worked between Q4 2019 and Q4 2021



Note: The mix of private sector jobs differs from government positions in the same industry or occupation.

Source: Pew calculations of U.S. Bureau of Labor Statistics Employment Cost Index wage and salary data in constant dollars

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Recommendations

- Consider hiring from out of state/remote workers. Review policies and laws to make sure they are compatible with remote work and possibility of out of state workers.
- Ignore diversity, equity and inclusion at your peril. Figure out what that means for the cyber division.
- Look at job classifications/titles. The lack of modernization in state IT job titles and classification continues to be the change that CIOs say could be the most impactful in reforming the state IT workforce. California was able to successfully consolidate **36** different IT job titles into **9** in early 2018.

- Perform regular (yearly or every other year) IT workforce assessments. It's impossible to plan for the future if you don't know which skills you have.
- Develop plans to reskill workers whose work becomes obsolete because of automation, modernization, etc. TN is a great example of this.
- Don't ignore looming retirements. A lot of state workers have retired because of COVID-19 and others have delayed retirements because of it. This is where the assessment is key and succession planning is a must.



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