



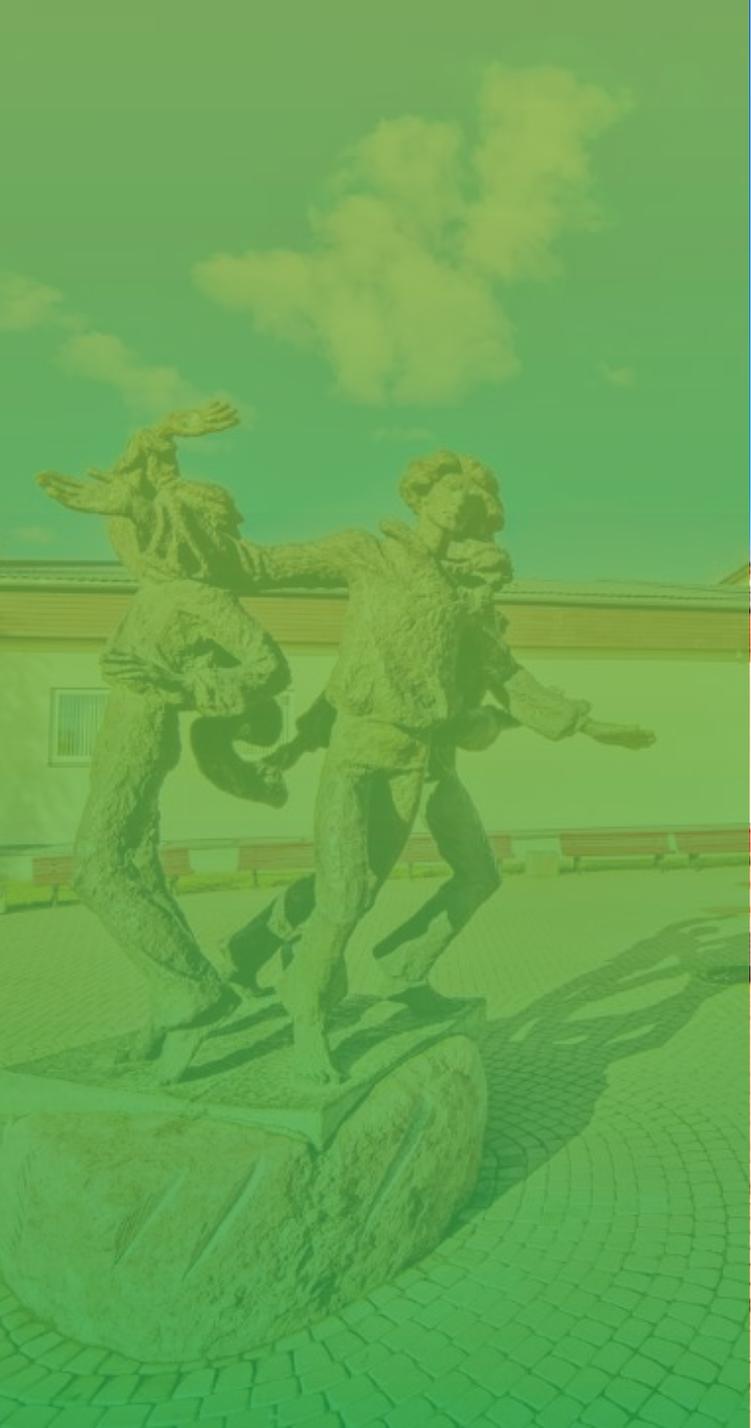
Cybersecurity is an integral part of society security

Dr. Kaspars Osis, Vidzeme University of Applied Sciences,
Director of Knowledge and Technology center
Cyberchess 2017



Cybersecurity

- fuzzy concept
- be an important tool in protecting privacy
- preventing unauthorized surveillance



Fundamental to effective cybersecurity

- threats (who is attacking)
- vulnerabilities (the weaknesses they are attacking)
- impacts (what the attack does)



Security of society

Cyber risk could have significant effects on

- national security
- the economy
- the livelihood and safety of individual citizens



CYBERSECURITY NEXUS

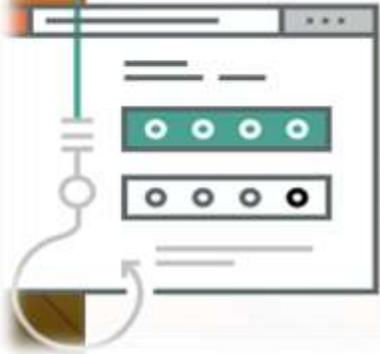
State of Cyber Security

Cyber Security Threats



4 IN 5

Think it is likely or very likely that their enterprise will experience a cyber attack this year



53% OF ENTERPRISES
EXPERIENCED MORE ATTACKS
this year than in the year prior



Of enterprises are concerned with **INTERNET OF THINGS IN THE WORKPLACE**

53% OF ENTERPRISES
Have a formal process to deal with
RANSOMWARE ATTACKS



LEADERSHIP



BUDGET



ORGANIZATIONS WITH A CISO



ORGANIZATIONS INCREASING SECURITY BUDGETS



TRAINING

What organizations spend on **CONTINUING EDUCATION** for security professionals



LESS THAN US \$1,000 per person

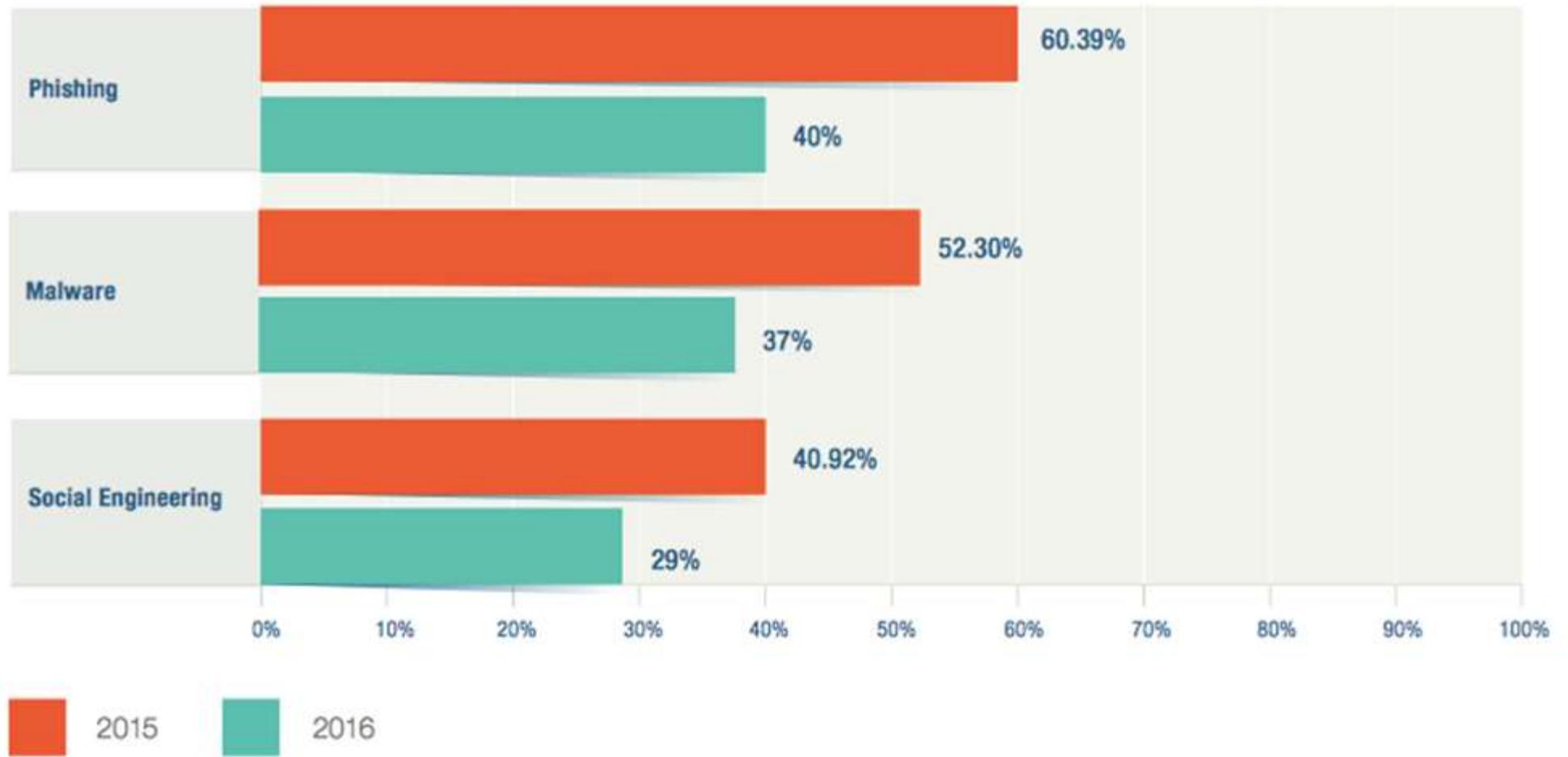


US \$1,000-\$2,500 per person



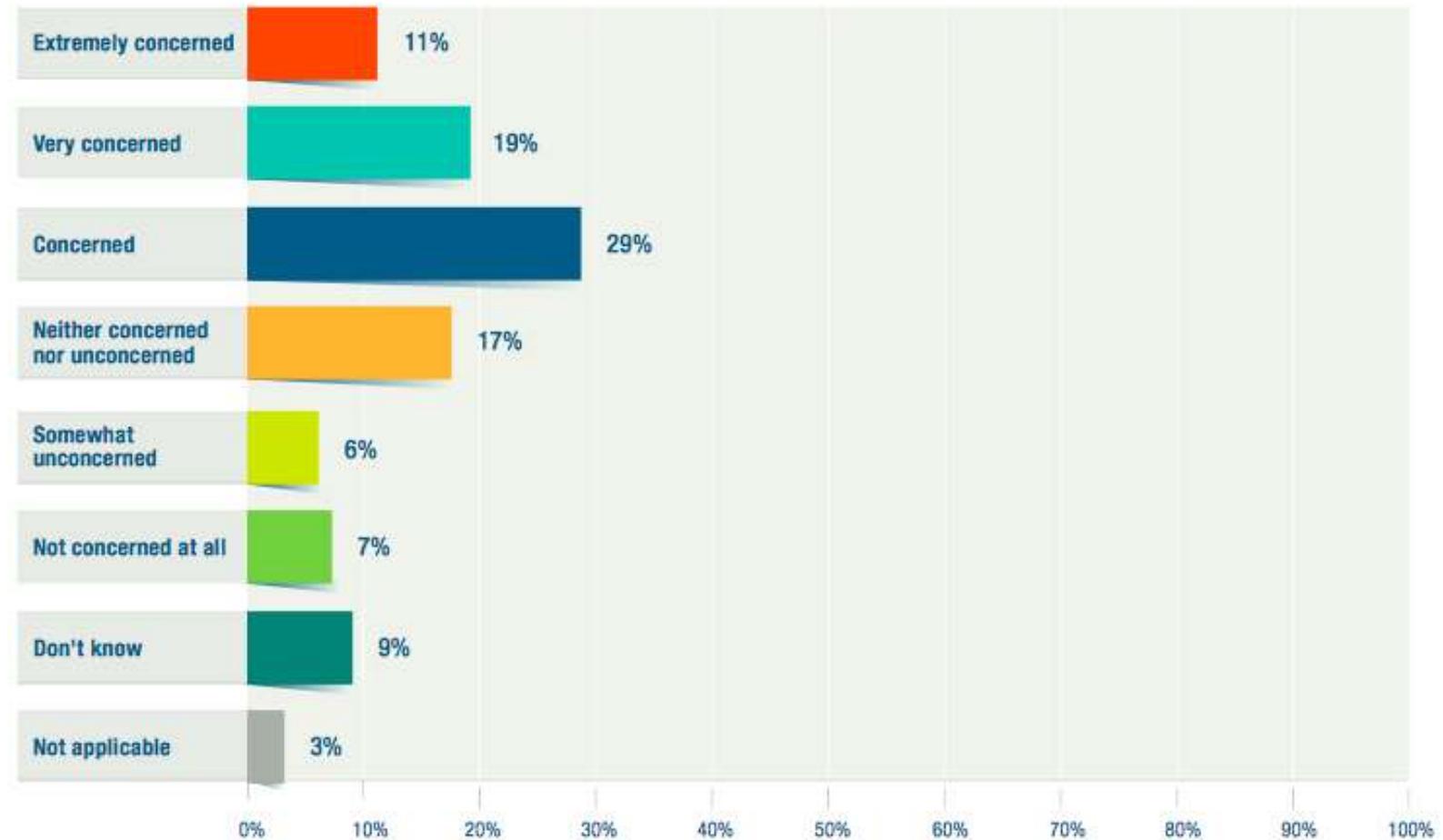
US \$2,500 OR MORE per person

Comparison of current attack types



IoT and Mobile Threats

How concerned is your enterprise with Internet of Things (IoT) in the workplace?



this is a challenge area
it represents an attack
surface



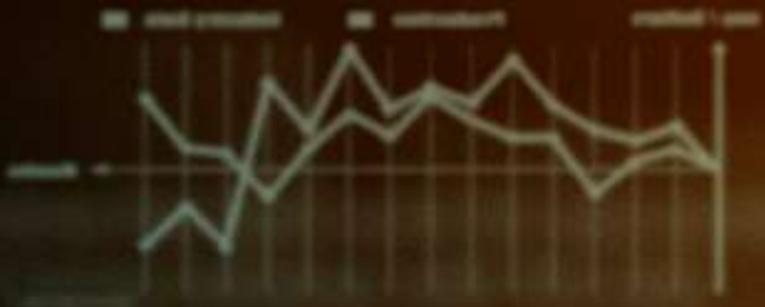
New...

- new threats are emerging
- new mechanisms for conducting cybercrime are prevalent
- new devices in the enterprise, such as IoT systems, are gaining prevalence and reflect an area of concern for practitioners

= cybersecurity staff members need to polish their skills over time!

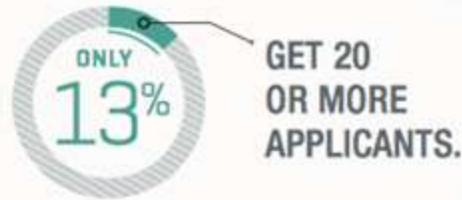


CYBERSECURITY NEXUS



Hiring challenges

Hiring Challenges Persist



HIRING STATUS

Many are **UNABLE TO FILL** open cyber security positions in their enterprises:

IN THE US:



Skills and Certifications in Demand



DEMAND INCREASING FOR SKILLED PROFESSIONALS

59% The number of security professionals who say that fewer than half of job candidates were considered "qualified upon hire" has risen from 50% to 59% in a year.²

27% need six months to fill a cybersecurity position, up three points from 2014.

SOCIAL MEDIA CYBERSECURITY JOB TRENDS

 **33,000+**

Tweets in the U.S. referenced cybersecurity jobs or careers from January through August 2016 alone.⁴

83% INCREASE

Social media activity strongest in U.S. tech hubs: San Francisco/Silicon Valley area, Washington, D.C., Houston.



KEY VOICES AMONG THE CONVERSATION INCLUDED:

 **Levy Cooper** (@lewycooper) - 200 retweets
#Cybersecurity unemployment rate at zero. 1 million #cyber jobs open worldwide in 2016

 **Christie D'Amico** (@ChristieD18) - 18 retweets
1 in 3 orgs plan to up investment in #cybersecurity staff in 2017, per new @ISACANews survey. Skilled cyber pros are needed more than ever.

CURRENT STATE OF THE CYBERSECURITY JOBS MARKET



18% Employment of information security analysts is projected to grow 18% from 2014 to 2024, a full 7 percentage points higher than the average growth rate of all occupations.⁵



#5

U.S. News & World Report ranked information security analyst fifth among Best Technology Jobs in 2016.⁶

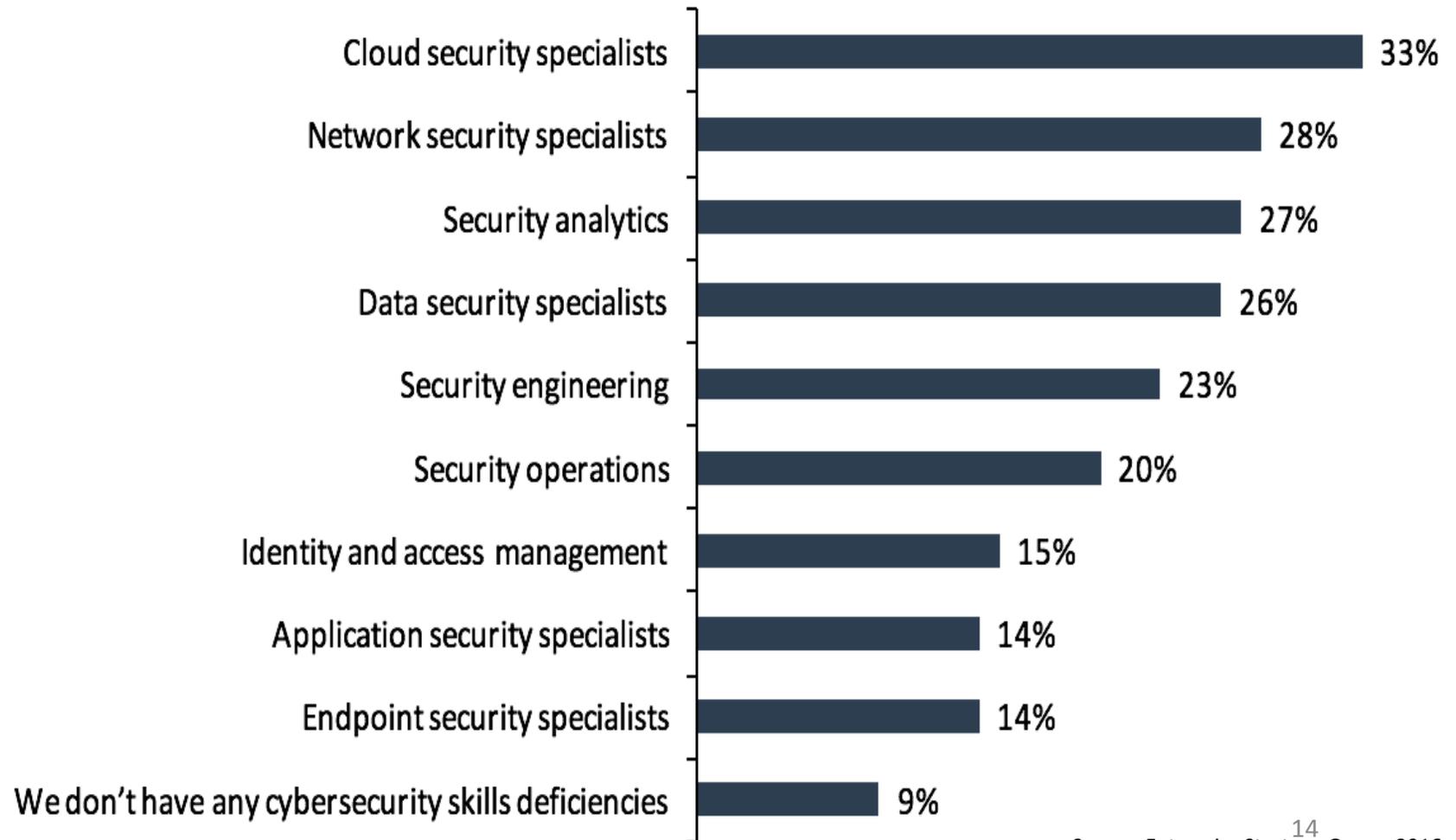
For more information, please visit www.isaca.org/cybersecurity-news

SOURCES: 1. 2015 Identity Theft Resource Center (ITRC) Breach Report 2. 2016 Ponemon/IBM Cost of Data Breach Global Analysis 3. 2016 Annual ISACA/ISA State of Cybersecurity Study 4. Brandwatch database search of US content from January 1st to August 31st 2016 5. Bureau of Labor Statistics - <http://www.bls.gov/ooh/computer-and-information-technology/information-security-analysts.htm>



Cybersecurity Areas with Biggest Skills Deficiency

Which areas of cybersecurity would you say that your organization has the biggest skills deficiency? (Percent of respondents, N=299, three responses accepted)



Cyber Crime Analyst / Investigator

AVERAGE SALARY ⓘ

\$94,188



COMMON JOB TITLES ⓘ

- Information Security Specialist - IT Forensics
- IT Forensic Investigator
- Computer Forensics Analyst
- Cyber Forensics Specialist
- Cyber Incident Respondent

REQUESTED EDUCATION (%) ⓘ

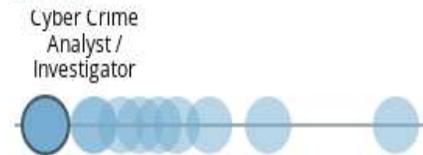


TOP SKILLS REQUESTED ⓘ

- 1 Information Security
- 2 Computer Forensics
- 3 LINUX
- 4 UNIX
- 5 Transmission Control Protocol / Internet Protocol (TCP / IP)
- 6 Malware Analysis
- 7 Python
- 8 Network Security
- 9 Cryptography

TOTAL JOB OPENINGS ⓘ

640



COMMON NICE CYBERSECURITY WORKFORCE FRAMEWORK CATEGORIES ⓘ

- Investigate
- Cyber Investigation
- Digital Forensics

TOP CERTIFICATIONS REQUESTED ⓘ

- CISSP
- CISA
- SECURITY+
- CISM



Vidzeme University of Applied Sciences

Vidzeme University of Applied Sciences is an **internationally** recognisable regional **platform**

- for higher education
- science
- knowledge transfer and ideas leadership

offering an **ecosystem** of the digital era for versatile options in acquiring professional higher education and carrying out interdisciplinary research, giving a **proactive** response to the challenges of the society.



Vidzeme University of Applied Sciences

- Science is our 2nd skin
- Virtual reality
- Strat-com
- Cybersecurity



Multidisciplinary approach to the bachelor and masters degree studies!



Our success formula

People

Nature

Plus secret ingredient



Knowledge and Technology center

- Challenges
- Future vision



Look inside

