

SA Cybersecurity Skills Matrix and the NICE Workforce Framework

The AustCyber SA Innovation Node undertook a survey of industry partners to understand the current position of the cybersecurity roles and skills, and take a view over the future state our partners are forecasting. This focused on work roles, current and forecast, what certifications and qualifications are expected for those roles, and how these align to the NICE Framework as a benchmark.

The aim of this is to support the creation a Skills Matrix and promote further use and understanding of the NICE Framework by students, professionals, industry and the education sector.

Why NICE?

The National Initiative for Cybersecurity Education (NICE) have established a workforce framework that establishes a taxonomy and common lexicon that describes cyber security work and workers irrespective of where or for whom the work is performed. The NICE Framework is intended to be applied in the public, private, and academic sectors.

Estimated 18,000 additional cybersecurity workers in Australia by 2026

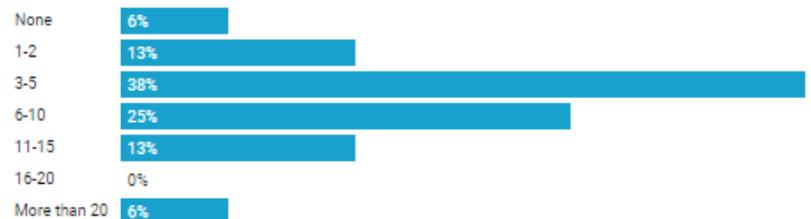


Where are we now?



Average number of cybersecurity roles in respondents' organisations

How many cybersecurity role do you have in your organisation currently?



Within the SA Cyber Security Professional Community, the current qualifications held are wide ranging across higher education qualifications and industry-leading certifications. The current held top qualifications and certifications currently include:

Bachelor of IT (Networking and Cybersecurity)

77

Certified Information Systems Manager

76

Certified Information Systems Auditor

65

When mapped to the NICE Framework, our strengths are in the *Protect and Defend* category with all work roles covered by at least one qualification or certification held within SA, however there are large weaknesses in the *Analyse* category with **four out of the five** work roles not appearing as matched to the current qualification and certification skills held.

Top three providers in SA

ISACA
54%

UniSA
26%

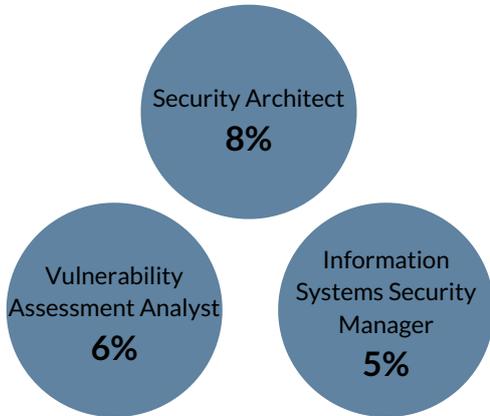
Adelaide Uni
13%

Where do we want to be?



Average increase in the number of cybersecurity roles required

The most in demand roles are:

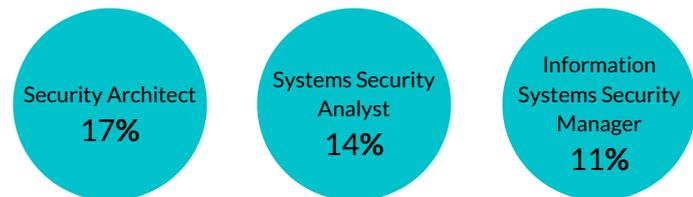


The 52 work roles in the NICE Framework were provided to respondents to consider what roles are in demand for the organisation.

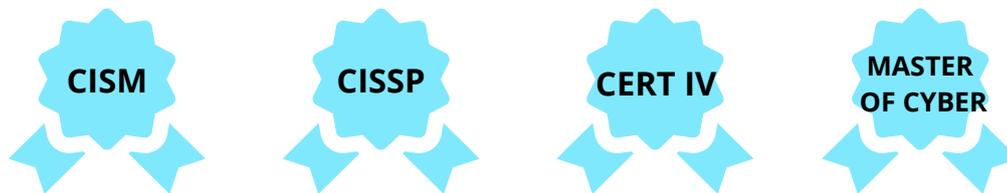
The most in demand roles are heavily weighted towards technical roles and expertise, spread over all categories of the NICE Framework. The top three roles were *Security Architect*, *Vulnerability Assessment Analyst* and *Information Systems Security Manager*.

All roles gained at least one response with the exception of *IT Investment/Portfolio Manager* and *Product Support Manager*.

75% of industry respondents reported difficulties in recruiting for cybersecurity roles in the last 12 months*



For both in demand and hard to recruit work roles, the qualifications and certification expected of those roles overlap with the following 4 as desired:



Using the Skills Matrix, the KSAs for **all four** of the in demand and hard to recruit roles are found in:

- CISSP
- Master of Cybersecurity (UniSA)
- Certificate IV in Cybersecurity (TAFE SA)

On the other hand, CISM aligns to *Information Systems Security Manager* but neither of the other top in demand work roles. It is a qualification that is more aligned to risk management roles, cybersecurity management roles, strategic planning and policy roles, acquisition and program/project management.

We can see that there is a "over-expectation" for work roles that are not consistently applied when hiring or looking to hire. A process to match qualifications and certifications against a single list of work roles would enable industry and professionals to speak the same language.

To this end, we invited you to see how the Cybersecurity Skills Dashboard could help you at:

<https://www.austcyber.com/educate/career-paths-and-opportunities>