**BCS Digital Industries Apprenticeship**

**Template 5 - Summative Portfolio Checklist**

**Level 4 Cyber Security Technologist -Technologist Specialism Apprenticeship**

**Version 4.0**

**September 2019**

**Change History**

Any changes made to the project shall be clearly documented with a change history log. This shall include the latest version number, date of the amendment and changes made. The purpose is to identify quickly what changes have been made.

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| Version Number and Date | Changes Made |
| V4.0  September 2019 | Change History table added to document. Major changes to document format (no Standard specific content changes). |
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## Overview

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This template is to support the training provider in working with the apprentice and employer to ensure the successful completion of the summative portfolio.

The checklists can be used by training providers to help them manage the process through to completion, although training providers may also substitute their own processes and documentation as they see fit.

The apprentice should gather artefacts and record information that can evidence their activities undertaken in the workplace. The portfolio of evidence should demonstrate that the apprentice can fulfil the full range of competencies which are required by the standard, as shown in this template.

The apprenticeship standards are designed to cover a wide range of different job roles so there may be a small number of areas within these mandatory requirements that are not naturally occurring within the day-to-day duties of the apprentice. If it is not possible for the apprentice to demonstrate competence within their summative portfolio, a synoptic project should be selected that will allow the apprentice to demonstrate that they are competent in criteria that they are not exposed to during their normal working activities.

**Summative Portfolio Declaration**

**Apprentice Declaration**

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| Name |  |
| ULN |  |
| Declaration | I confirm that all the evidence submitted is my own work and it has been completed as specified. |
| Signature |  |
| Date |  |

**Line Manager Declaration (Employer)**

|  |  |
| --- | --- |
| Name |  |
| Company |  |
| Declaration | I confirm that the work contained within this portfolio has, to the best of my knowledge, been completed solely by \_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Signature |  |
| Date |  |

**Training Provider Declaration**

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| --- | --- |
| Name |  |
| Company |  |
| Declaration | I confirm that the work contained within this portfolio has, to the best of my knowledge, been completed solely by \_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Signature |  |
| Date |  |

**Summative Portfolio Acceptable Evidence Format**

BCS’ intention is to allow flexibility in the format that evidence can take in order to reflect the type of records that an apprentice could realistically be expected to have access to. Typical acceptable evidence includes:

* photographic or video evidence of activity;
* witness statement;
* observation reports;
* annotated screenshots;
* signed-off work records;
* printed outputs of pre- and post-configuration settings;
* peer reviews.

It is important to note that when the summative portfolio is submitted to EPA gateway it is locked and will no longer be editable by the apprentice, for this reason links to external content will not be accepted as suitable evidence.

**Technical Competencies Evidence Checklist**

The defined competence areas are listed below. Not all employer businesses are identical so there will be variation in the types of activity that will be carried out in the course of each apprentice’s daily work; however, the apprentice must be able to demonstrate evidence of every competence.

**Competence – Threats, Hazards, Risks and Intelligence**

**React to threats, hazards, risks and intelligence.**

**Minimum expected requirement:**

Discover (through a mix of research and practical exploration) vulnerabilities in a system.

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| **List the evidence in the portfolio that fulfils this requirement:**  NOTE: this box will expand as required |

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| **Reflections on applying knowledge learnt:**  NOTE: this box will expand as required |

**Minimum expected requirement:**

Analyse and evaluate security threats and hazards to a system or service or processes. Be aware of and demonstrate relevant external sources of threat intelligence or advice (e.g. CERT UK) and combine different sources to create an enriched view.

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| **List the evidence in the portfolio that fulfils this requirement:**  NOTE: this box will expand as required |

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| **Reflections on applying knowledge learnt:**  NOTE: this box will expand as required |

**Minimum expected requirement:**

Research and investigate some common attack techniques and recommend how to defend against them. Be aware of and demonstrate use of relevant external sources of vulnerabilities (e.g. OWASP).

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| **List the evidence in the portfolio that fulfils this requirement:**  NOTE: this box will expand as required |

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| **Reflections on applying knowledge learnt:**  NOTE: this box will expand as required |

**Minimum expected requirement:**

Undertake a security risk assessment for a simple system without direct supervision and propose basic remediation advice in the context of the employer.

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| **List the evidence in the portfolio that fulfils this requirement:**  NOTE: this box will expand as required |

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| **Reflections on applying knowledge learnt:**  NOTE: this box will expand as required |

**Competence – Developing and Using a Security Case**

**Develop and use a security case.**

**Minimum expected requirement:**

Source and analyse a security case (e.g. a Common Criteria Protection Profile for a security component) and describe what threats, vulnerability or risks are mitigated and identify any residual areas of concern.

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| **List the evidence in the portfolio that fulfils this requirement:**  NOTE: this box will expand as required |

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| **Reflections on applying knowledge learnt:**  NOTE: this box will expand as required |

**Minimum expected requirement:**

Develop a simple security case without supervision. (A security case should describe the security objectives, threats, and for every identified attack technique identify mitigation or security controls that could include technical, implementation, policy or process).

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| **List the evidence in the portfolio that fulfils this requirement:**  NOTE: this box will expand as required |

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| **Reflections on applying knowledge learnt:**  NOTE: this box will expand as required |

**Competence – Organisational context**

**Support the organisation.**

**Minimum expected requirement:**

Identify and follow organisational policies and standards for information and cyber security.

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| **List the evidence in the portfolio that fulfils this requirement:**  NOTE: this box will expand as required |

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| **Reflections on applying knowledge learnt:**  NOTE: this box will expand as required |

**Minimum expected requirement:**

Operate according to service level agreements or employer defined performance targets.

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| **List the evidence in the portfolio that fulfils this requirement:**  NOTE: this box will expand as required |

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| **Reflections on applying knowledge learnt:**  NOTE: this box will expand as required |

**Competence – Future Trends**

**Identify future trends.**

**Minimum expected requirement:**

The apprentice should be able to investigate different views of the future (using more than one external source) and trends in a relevant technology area and describe what this might mean for a business, with supporting reasoning.

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| **List the evidence in the portfolio that fulfils this requirement:**  NOTE: this box will expand as required |

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| **Reflections on applying knowledge learnt:**  NOTE: this box will expand as required |

**Competence – Design, Build and Test a Network**

**Design, build and test a network.**

**Minimum expected requirement:**

Design, build, test and troubleshoot a network incorporating more than one subnet with static and dynamic routes, that includes servers, hubs, switches, routers and user devices to a given design requirement without supervision.

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| **List the evidence in the portfolio that fulfils this requirement:**  NOTE: this box will expand as required |

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| **Reflections on applying knowledge learnt:**  NOTE: this box will expand as required |

**Minimum expected requirement:**

Provide evidence that the system meets the design requirement.

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| **List the evidence in the portfolio that fulfils this requirement:**  NOTE: this box will expand as required |

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| **Reflections on applying knowledge learnt:**  NOTE: this box will expand as required |

**Competence – Analyse a Security Case**

**Analyse a security case.**

**Minimum expected requirement:**

Analyse security requirements (functional and non-functional security requirements that may be presented in a security case) against other design requirements (e.g. usability, cost, size, weight, power, heat, supportability etc.), given for a given system or product.

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| **List the evidence in the portfolio that fulfils this requirement:**  NOTE: this box will expand as required |

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| **Reflections on applying knowledge learnt:**  NOTE: this box will expand as required |

**Minimum expected requirement:**

Identify conflicting requirements and propose, with reasoning, resolution through appropriate trade-offs.

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| **List the evidence in the portfolio that fulfils this requirement:**  NOTE: this box will expand as required |

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| **Reflections on applying knowledge learnt:**  NOTE: this box will expand as required |

**Competence – Implement Security in a Network (Structured and Reasoned)**

**Implement security in a network (structured and reasoned).**

**Minimum expected requirement:**

Design and build a simple system in accordance with a simple security case. Provide evidence that the system has properly implemented the security controls required by the security case. The system could be either at the enterprise, network or application layer.

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| **List the evidence in the portfolio that fulfils this requirement:**  NOTE: this box will expand as required |

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| **Reflections on applying knowledge learnt:**  NOTE: this box will expand as required |

**Minimum expected requirement:**

Select and configure at least 2 types of common security hardware and software components to implement a given security policy.

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| **List the evidence in the portfolio that fulfils this requirement:**  NOTE: this box will expand as required |

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| **Reflections on applying knowledge learnt:**  NOTE: this box will expand as required |

**Minimum expected requirement:**

Design a system employing a crypto to meet defined security objectives. Develop and implement a key management plan for the given scenario/system.

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| **List the evidence in the portfolio that fulfils this requirement:**  NOTE: this box will expand as required |

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| **Reflections on applying knowledge learnt:**  NOTE: this box will expand as required |

**Generic Levels of Responsibility Evidence Checklist**

Areas of responsibility and associated typical evidence are shown below.

**Proficiency – Business Skills**

* **Demonstrates an analytical and systematic approach to issue resolution.**
* **Takes the initiative in identifying and negotiating appropriate personal development opportunities.**
* **Demonstrates effective communication skills.**
* **Contributes fully to the work of teams.**
* **Plans, schedules and monitors own work (and that of others where applicable) competently within limited deadlines and according to relevant legislation, standards and procedures.**
* **Appreciates the wider business context, and how their role relates to other roles and to the business of the employer of client.**

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| **List the evidence in the portfolio that fulfils these requirements:**  **Demonstrates an analytical and systematic approach to issue resolution:**  **Takes the initiative in identifying and negotiating appropriate personal development opportunities:**  **Demonstrates effective communication skills:**  **Contributes fully to the work of teams:**  **Plans, schedules and monitors own work (and that of others where applicable) competently within limited deadlines and according to relevant legislation, standards and procedures:**  **Appreciates the wider business context, and how their role relates to other roles and to the business of the employer of client:**  NOTE: this box will expand as required |

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| **Reflections on applying knowledge learnt:**  **Demonstrates an analytical and systematic approach to issue resolution:**  **Takes the initiative in identifying and negotiating appropriate personal development opportunities:**  **Demonstrates effective communication skills:**  **Contributes fully to the work of teams:**  **Plans, schedules and monitors own work (and that of others where applicable) competently within limited deadlines and according to relevant legislation, standards and procedures:**  **Appreciates the wider business context, and how their role relates to other roles and to the business of the employer of client:**  NOTE: this box will expand as required |

**Proficiency – Complexity**

* **Performs a range of work, sometimes complex and non-routine, in a variety of environments.**
* **Applies a methodical approach to issue definition and resolution.**
* **Undertakes all work in accordance with agreed safety, technical and quality standards, using appropriate methods and tools.**

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| **List the evidence in the portfolio that fulfils these requirements:**  **Performs a range of work, sometimes complex and non-routine, in a variety of environments.**  **Applies a methodical approach to issue definition and resolution.**  **Undertakes all work in accordance with agreed safety, technical and quality standards, using appropriate methods and tools.**  NOTE: this box will expand as required |

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| **Reflections on applying knowledge learnt:**  **Performs a range of work, sometimes complex and non-routine, in a variety of environments.**  **Applies a methodical approach to issue definition and resolution.**  **Undertakes all work in accordance with agreed safety, technical and quality standards, using appropriate methods and tools.**  NOTE: this box will expand as required |

**Proficiency – Autonomy**

* **Works under general direction.**
* **Uses discretion in identifying and responding to complex issues and assignments.**
* **Usually receives specific instructions and has work reviewed at frequent milestones.**
* **Determines when issues should be escalated to a higher level.**

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| **List the evidence in the portfolio that fulfils these requirements:**  **Works under general direction:**  **Uses discretion in identifying and responding to complex issues and assignments:**  **Usually receives specific instructions and has work reviewed at frequent milestones:**  **Determines when issues should be escalated to a higher level:**  NOTE: this box will expand as required |

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| **Reflections on applying knowledge learnt:**  **Works under general direction:**  **Uses discretion in identifying and responding to complex issues and assignments:**  **Usually receives specific instructions and has work reviewed at frequent milestones:**  **Determines when issues should be escalated to a higher level:**  NOTE: this box will expand as required |

**Proficiency – Influence**

* **Interacts with and influences colleagues.**
* **Has working level contact with customers, suppliers and partners.**
* **May supervise others or make decisions which impact the work assigned to individuals or phases of projects.**
* **Makes decisions which influence the success of projects and team objectives.**

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| **List the evidence in the portfolio that fulfils this requirement:**  **Interacts with and influences colleagues:**  **Has working level contact with customers, suppliers and partners:**  **May supervise others or make decisions which impact the work assigned to individuals or phases of projects:**  **Makes decisions which influence the success of projects and team objectives:**  NOTE: this box will expand as required |

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| **Reflections on applying knowledge learnt:**  **Interacts with and influences colleagues:**  **Has working level contact with customers, suppliers and partners:**  **May supervise others or make decisions which impact the work assigned to individuals or phases of projects:**  **Makes decisions which influence the success of projects and team objectives:**  NOTE: this box will expand as required |