



Role Profile

Role Title **Senior Test Engineer**

Job family group Operational Delivery

Job family/ies Digital Services & Tech Support

Grade B

Status For internal use

Role Purpose
(250 words max)

The **Senior Test Engineer** reports to the Software Engineering Manager and plays a leading role in ensuring that products are of quality and fit for the business needs. Without the input of the Senior Engineering Manager, software can be released with poor quality and potential bugs that can impact HMCTS's reputation, have significant cost implications (in the range of millions) on the business and HMCTS and most importantly people using the service/product.

You will be assigned to a Digital Delivery squad where you will be managing the testing and defects of a major function, or a collection of functions.

Like Test Engineers, Senior Test Engineers are responsible for writing, debugging and refactoring test codes, but at a more complex level and on a greater scale. At this level you will:

- Work closely with software developers to reach a common understanding of the code base and test coverage at unit level
- Collaborate with business analysts to make sure the required business scenarios are covered in the acceptance test scripts
- Work on both functional requirements (FRs) and non-functional requirements (NFRs)
- Coach and mentor testers

Technologies - We rely heavily on:

- JIRA as our bug tracking software
- Python, Java and JavaScript to write automation tests
- JMeter for load tests
- Selenium/Web Driver for end to end testing

- Fiddler, Burp and Developer Tools to analyse packets
- SOAP UI for API inspection
- Jenkins for deployment
- Dynatrace for application monitoring
- Azure for most of our infrastructure
- Postgres and Redis as our databases
- GOV.UK Design System for our web interfaces
- Macs to do all of the above

In addition, we use a range of other technologies and continue to evolve by employing new technologies that help us deliver better services to our users

Key Accountabilities (600 words max)

- Manage full traceability of defects, tests and requirements. Report issues found through the appropriate channels. Contribute to, and as required lead the design of the organisation's process and selection of tools relating to defect management.
- Influence stakeholders at all levels including senior management within Digital Delivery to employ suitable practices, such as test-driven development and shift-left testing. Champion test practices, provide advice and guidance to formal and informal networks across HMCTS on the different types of tests, testing tools and testing environments available.
- Analyse test results, critically evaluate and communicate findings to the relevant stakeholders. Lead on troubleshooting and identifying opportunities to enhance existing functionality of the software that will improve HMCTS's service delivery.
- Constantly seek to learn and further develop your skills as required for your role. Share knowledge with others. Coach and mentor more junior colleagues. Participate in recruitment and procurement activities as required.
- Define, and as required assist in defining the most suitable test environment. Test from / in the most suitable environments, including using different devices and traveling on-site (in accordance with the organisation's travel and accommodation policies).
- Strong knowledge of business processes covering a major function/multiple range of related functions impacted by the test programmes that you will be running. Demonstrate a mastery level of understanding of how these business processes are met by the functionality of the systems you are working on, and integrated systems as required.
- Writing, amending, refactoring and documenting code to build moderately complex technical solutions, to ensure business processes are adequately tested and performant. Adhering to internal process and procedures and advising others which software development standards/processes/procedures apply.
- Use security controls to build secure products and engineer to mitigate security threats. Handle information with confidentiality and integrity, work with SMEs and stakeholders to ensure compliance and information assurance. Contribute to identifying risks and threats.
- Support and maintain software as required, including in the live environment. Use modern tools to effectively and thoroughly identify and troubleshoot faults. Package and deploy software built. Some activities may be outside the core office hours (in-line with the organisation's policy for OOH).
- Enable planning by estimating your own effort, and support others in estimating their effort. Practice the agreed methodology and apply it to your work, identifying

obvious deficiencies and supporting activities to improve the performance in your area.

Knowledge, Skills and Experience (500 words max)

- Ability to make decisions and play a leadership role in selecting the type of tools, techniques and environments used for testing. Using negotiation and influencing skills to assist the business to differentiate between defects and features.
- Ability to lead, coach and train others on Non-functional requirements (NFRs) and Functional requirements (FRs) testing; as well as to identify opportunities to improve existing process.
- Practitioner-level expertise in evaluating test results based on, for example, creative thinking and asking the right questions.
- Experience in managing defects of a live system, alerting the business to them, and you can help prioritise them (for example based on defect severity).
- Practitioner-level expertise in identifying defects and leading investigative work into defects found.
- Work experience and practitioner-level expertise in designing FRs and NFRs testing, creating a testing plan and adapting it to meet changing or emerging operational requirements.
- Work experience and practitioner-level expertise in writing and executing a wide range of automation tests (FRs and NFRs) – ideally in our technology stack, as well as manual tests.
- Practitioner-level working knowledge of different test tools (bug tracking/defect management, IDEs, test libraries, packet analysers, load testing and API inspection), ideally in our technology stack.
- Practitioner-level expertise of web technologies (HTTP, REST etc.).
- Demonstrable knowledge of business domains and business processes of the systems you tested, as well as how these are implemented in the system.
- Work experience and practitioner-level expertise in communicating findings of FRs and NFRs testing to both technical and non-technical stakeholders.
- ISTQB® certification at an Advanced level, or equivalent qualification / knowledge; Wealth of knowledge of testing techniques and frameworks, and broader knowledge of topics relevant to testing across the Software Development Life Cycle (SDLC).

We're happy to help you learn our tech stack once you are part of our team.

This role profile is mapped to the [Senior Test Engineer](#) profession in the DDaT framework. See also the DDaT [Skill Levels](#).

Behaviours

- Communicating and Influencing
- Making Effective Decisions

See the [Success Profile](#) framework for more details on the Behaviours.

Problem Solving and Decision Making (300 words max)

- Specify the defects and test result highlights to be communicated to relevant stakeholders
- Manage and build formal and informal networks across HMCTS relevant to your business function
- Using own judgement to resolve conflicts in order to meet targets and deadlines, for example by applying technical know-how to complex tests
- Prioritise tests, based understanding of associated risks to the business
- Troubleshoot test programs/scripts
- Mitigate risks related to the testing plan / testing software
- Generate new ideas to improve testing in your area
- Decide on the level of detail for analysis and appraisal required to provide options and recommendations on matters which have to be referred to more senior management role holders
- Manage your own effort and decide on a testing plan to meet the required objectives

Management of Resources (250 words max)

- Manage and co-ordinate technical tests for multiple/major function or a range of related functions impacted by the test programmes that you will be running
- Manage testing environments for the products you are working on, typically environments costing up to hundreds of thousands of GBP per annum to run
- Manage and co-ordinate the testing activities in your area
- Manage the defects log for the products your assigned to, as well as corresponding risk and contingencies
- Pro-actively manage links with other teams, encouraging cross-fertilisation, collaboration and working towards shared objectives
- Evaluate and otherwise support procurement activities for technical solutions

Autonomy (250 words max)

- Operate within a set of internal frameworks (such as the Technical Guidance Library) and policies, accepted standards and precedents
- Take independent actions and exercise judgement in managing the testing of the products you are working on throughout the SDLC
- Identify priorities and clarify them with team members, business users and other relevant stakeholders as required
- Adapt the testing programme to the business's changing environment
- Manage performance of the test programme to ensure its quality (e.g. outcomes are delivered on time)

Key Relationships and Contacts (300 words max)

- Daily interaction with DTS stakeholders such as Developers, Business Analysts, Solution Architects, Delivery Managers, Cyber Security
- Initiating contact with Senior Management particularly around high risks identified by testing
- Working and influencing with equivalent roles at peer organisations, as most of our systems rely heavily on integrations
- Working with suppliers where systems or services related are delivered by them
- Users within the business making use of the products you are testing, depending on the products you work on this may include HMCTS staff, Judicial Office Holders, peers across government etc.
- Product Owners and occasionally Service Owner, for example to communicate high risks created from defects found in the software
- Informally engage in coaching other test engineers, and other professions to promote testing practices and shared goals