

<b>Job Title (&amp; code)</b>	<b>Principal Software Engineer</b>
<b>Name of Division</b>	<b>BBC Engineering – Platform and Common Services (PCS)</b>
<b>Level in Organisation</b>	<b>5</b>
<b>Grade</b>	<b>9</b>
<b>Reports to</b>	<b>Head of Engineering</b>
<b>Job Family/Specialism</b>	<b>NA</b>
<b>Support or Output Role</b>	<b>Support</b>
<b>Account/Budget Responsibility (£)</b>	<b>None</b>
<b>People Manager Responsibility (Y/N)</b>	<b>N</b>
<b>Number of Direct Reports</b>	<b>5</b>
<b>Number of Indirect Reports</b>	<b>0</b>
<b>Locations &amp; Usual Base</b>	<b>1 role in London W12 and 1 role in Pacific Quays Glasgow</b>

**About the BBC**

*Our aim is simple* - to enrich people's lives with programmes and services that inform, educate and entertain by being the most creative organisation in the world. But we don't focus simply on what we do – we also care how we do it.

Working here means you'll be part of something genuinely special. We're different from other broadcasters. We're funded by the licence fee and guided by a unique set of principles and values. People know us and are passionate about what we do. You'll also be involved in things that are enjoyed by millions.

**About the Division**

Broadcasting is undergoing a fundamental shift from linear to digital, driven by trends in content consumption, the influence of social media, and new technologies affecting the capture, production and distribution of content. The BBC needs a strong and adaptable engineering function at its heart to succeed and thrive in this environment.

In parallel the BBC continues to strive for improved efficiency and value for money whilst maintaining distinctive, high-quality output, and to become simpler, more agile and responsive.

**Size & Scope of the role**

The PCS team within BBC Engineering are looking for a Principal Software Engineer to help build the next generation of their products. As a Principal Software Engineer, you will be responsible for the detailed design and the day-to-day running of a software development team. This will include advising on and contributing to the implementation and delivery of software and hardware components.

You will also jointly own, with the DevOps teams, the operational stability of the components you build and be in a position to affect change to improve the on-going robustness, resiliency and stability of those components.

PCS will operate a continuous delivery DevOps model with emphasis on deployment automation, TDD, BDD, monitoring and on-going ownership of components in production.

The role requires proven experience in planning, specifying, developing and deploying high performance, robust and resilient media publishing workflow systems. You must be able to demonstrate sound knowledge of audio and media ingest, media movement, storage, encoding, packaging, distribution and playback.

**Purpose of the role**

To ensure PCS systems follow excellent architectural and engineering principles and are fit for purpose.

**Key Accountabilities**

- To lead a software engineering team, reporting to the Head of Engineering
- To deliver software components to enable PCS products
- To design and develop high-volume, high-performance, high-availability Java applications using proven Java frameworks and technologies
- To ensure consistent use of shared platform components and technologies within PCS
- To design and develop reusable libraries and APIs for use across the BBC.
- To contribute to best practice for Java application development at the BBC
- To write unit and integration tests, within automated test environments to ensure code quality
- To assist in defining the team's technical strategy and advising on product roadmaps and migration plans to achieve strategic goals
- To write concise yet comprehensive technical documentation
- To liaise with the product manager and technical architect to explore and suggest appropriate technical solutions to achieve the required product features as well as monitoring technical progress against plans. While safeguarding functionality, scalability and performance
- To automate the entire deployment process on all environments
- To be responsible for work quality, ensuring it meets the technical standards for all BBC online output.
- To monitor work against the production schedule closely and provide progress updates and report any issues or technical difficulties to the senior developers on a regular basis
- To work to the BBC's policy on Health and Safety

**Person Specification**

**Qualifications:**

- *Preferred – Degree qualified in related subject*

**Knowledge, Skills & Competencies:**

- Significant and demonstrable Java development experience.
- Significant and demonstrable experience of using Tomcat, Spring Framework and Maven
- Significant and demonstrable experience of using Unix / Linux based Operating Systems including performing basic administrative tasks.
- Significant and demonstrable experience of implementing Java best practice – especially around scalability, availability and performance.
- Significant and demonstrable experience of test-driven development alongside use of automated test frameworks, mocking/stubbing and JUnit
- Significant and demonstrable experience of scripting languages e.g Ruby or Perl
- Demonstrable experience using Behaviour Driven Development with Cucumber
- Proven experience of project working and commercial development processes - particularly Agile methodologies
- Experience of working in an environment where products have to be delivered to specific time-scales
- An ability to rapidly and effectively understand and translate product and business requirements into technical solutions

**JOB DESCRIPTION – Principal Software Engineer**

- Experience of supporting, modifying and maintaining systems and code developed by teams other than your own
- Experience of working with code repositories (e.g. Git, SVN), bug tracking tools (e.g. Jira, Bugzilla) and Wikis (e.g. Confluence)
- **Analytical thinking** - able to simplify complex problems, processes or projects into component parts explore and evaluate them systematically
- **Strategic thinking** – able to identify a vision along with the plans, which need to be implemented to meet the end goal, evaluating situations, decisions and issues in the short, medium and long term.
- **Influencing and persuading** - able to present sound and well reasoned arguments to convince others. Adapts to the situation and can draw from a range of strategies to persuade people in a way that results in agreement or behaviour change
- **Communication** - able to get one's message understood clearly by adopting a range of styles, tools and techniques appropriate to the audience and the nature of the information
- **Managing relationships and team working** - able to build and maintain effective working relationships with a range of people. Works co-operatively with others to be part of a team, as opposed to working separately or competitively

**Experience:**

- A background in software engineering, software design or database design and architecture
- Demonstrable experience developing software in a SOA or micro-services paradigm
- Experience with chunked HTTP media delivery formats and methods
- Experience designing or implementing public facing REST APIs
- Good understanding of AV metadata and its industry standards (e.g. TV-Anytime)
- Good understanding of DVB and hybrid broadcast and broadband platforms (e.g. YouView, HBB)
- Experience of the following is highly desirable: JAVA, REST, XQuery, XPATH, XSLT, JMS, memcache, Apache HTTPd server, Tomcat, Linux, HTTP, MySQL
- In-depth knowledge of large scale database and nosql design and optimisation
- Experience of supplier management, particularly in procuring agencies or outsource providers to execute software architectures or application designs
- A knowledge of BBC products, output, or infrastructure would be an advantage