

<b>Job Title</b>	<b>Principal Engineer, IT - Kingston</b>	<b>Grade</b>	
<b>Job Number</b>		<b>Department</b>	<b>Travel Republic</b>
<b>Reports To</b>	<b>Development Manager</b>	<b>JD date</b>	<b>March 2018</b>
<b>Job Information</b>			
<b>Type of Role</b>		<b>Safety Sensitive</b>	
		<b>Details/Hazards</b>	
<b>Job Purpose</b>			
<p>To be a technology driven Principal Engineer for dnata Travel in Kingston. Providing technical expertise and guidance for projects and the development teams. You will take full responsibility for promoting technical excellence within the development teams ensuring the highest level of technical quality. As Principal Engineer, you will be an excellent communicator able to clearly understand, solve and educate the teams in all technical issues related to your specialisms. You will have a broad knowledge of development best practices, especially agile delivery and comfortable working as part of and promoting cross functional team structures.</p>			
<b>Accountabilities:</b>			
<b>Execute</b>	<p>The dnata Travel engineering team are responsible for the growth and evolution of an in-house developed travel platform which is being developed and rolled out across multiple brands, departments and teams across the globe within the dnata Travel group.</p> <p>You will be joining a smart, experienced, fast-moving team who continue to explore new technologies, tools &amp; techniques to both grow this global platform and to service the growing needs of the business that the platform supports.</p> <p>As a Principal Engineer, you will have a proven strong software development background providing guidance and mentoring the wider team of software developers and QA staff within the Kingston office, offshore teams, infrastructure and architecture teams, to deliver the product roadmap and allocate skilled team members to support projects and backlogs.</p> <p>You will bring your experience in Agile software delivery to champion best practices within the team and to provide continuous visibility of progress both internally and to external stakeholders.</p> <p>Development Managers will provide the line management function and in turn, motivate and supported the teams through training, mentoring, collaboration &amp; team events. You will complement the Development Manager by promoting technical excellence and mentoring to the teams; ensuring the teams deliver features using the best tools and practices and where required perform line management for up to 6 team members.</p>		
<b>Competencies</b>	<ol style="list-style-type: none"> <li><b>Iteration:</b> Implements quickly and correctly. Demonstrates regular, incremental, and visible progress. Adjusts well to feedback and changing priorities. Note: Iteration means tangible implementations and designs with which others can interact. Avoids coupling and over-architecting.</li> </ol>		

2. **Specifies, organizes and anticipates:** Turns difficult problems and underspecified goals into achievable deliverables. Anticipates dependencies and needs of other team members, users & customers. Defines success and how it will be measured.
3. **Self-motivated learning:** Learns and understands diverse technologies, techniques and topics out of curiosity. Dives deeper to better understand familiar domains and tools to be able to converse knowledgably with the engineering and delivery teams. Uses learning to drive improvements in our software and processes.
4. **Published artefacts:** Creates viewable artefacts intended for the benefit of others within the group. Examples: participates on Yammer and documents in Confluence. Performs demos to team members as well as to other stakeholders within agile ceremonies. Speaks at meetups or conferences, arranges and hosts internal brown-bag sessions to include technology demonstrations to the engineering and product teams
5. **Recruiting, mentoring and teaching:** Gets involved with recruiting process, such as outreach, screening and interviews. Takes an active interest in new hires and onboarding. Participates in mentoring programs, internally or externally.
6. **Ideas:** Consistently coming up with new, useful ideas. Asks questions and fights status quo bias. Thinks independently. Creates new requests for change and constructively participates in others'. Work with the teams to design fully functional features and innovative solutions that are supported by the architecture.
7. **Communication:** Conveys concepts, suggestions, and goals within teams. Encourage peer discussions on the direction and quality of the platform. Is proactive about keeping peers and line managers up to date. Articulates and persuades. Doesn't "fall off the map". Uses tools (Trello, Slack, Jira, Confluence, email, docs...) effectively.
8. **Database:** Familiar with SQL language. Displays expertise in the databases we use. Very strong at SQL language and performance (including indexes and execution plans). Effective use of Redis. Good understanding of the ELK stack and equivalent technologies, as required by the role.
9. **Tooling:** Implements features using the best tools and practices. Consistently looking for ways to increase one's own productivity and feature quality, and those of the team. Highly proficient at Visual Studio and productivity tools (Git, version control, build processes, refactoring & analysis). Strong testing orientation.
10. **UX/UI:** Does what it takes to ensure a good user experience. Articulates use cases. Where applicable, works well with designers, understands the vocabulary, and implements designs faithfully.
11. **Performance and optimization:** Does what it takes to ensure a high-performance application (proactively and reactively). Takes an active and consistent interest in profiling and monitoring. Considers performance tuning part of the shipping process.
12. **Operational awareness:** Ensures that the team's interests are well understood by the Service and Infrastructure teams and vice-versa. Proactively communicates with the Service and Infrastructure teams and works on issues such as availability, backups, monitoring, logging, and documentation.
13. **Security:** Aware of security risks (XSS, SQL injection). Aware of and familiar with OWASP Top 10. Well-versed in security risks, knows how they happen, how to test against them and how to avoid them. Responds to security reports quickly. Understands the security guarantees that frameworks do and don't offer. Avoids unsafe patterns in new code.
14. **Web programming:** Strong web development and integration with back end services. Expert at full-stack programming, including HTTP, MVC, Ajax, JavaScript, HTML, CSS, IIS / self-hosting and other web technologies and frameworks. Understands the code and protocols beneath these abstractions and frameworks. Aware of new technologies/architecture within the web development stack, not necessarily Microsoft and can recommend how/when to use these alternatives.
15. **.NET stack:** 5y+ experience and an expert at C# semantics, type system, and the libraries and frameworks that go with it. Understands the .NET stack, including the

CLR, reflection, optimization, metaprogramming. At least 2 years of applying this knowledge within the travel industry.

16. **Cross-team awareness:** Communicates with other teams formally and informally. In-the-know about other teams' plans, and vice-versa. Communicates with other teams formally and informally. In-the-know about other teams' plans, and vice-versa. Actively works to inform and be informed.
17. **Coaching:** Team members feel that they are growing in their roles and know what they need to do to succeed. Figures out individual needs. Actively helps team members develop both soft skills and hard skills. Gives hard feedback when necessary.
18. **Accountability and appreciation:** Holds team members (and themselves) accountable for their commitments, develops a culture of shared responsibility, and publicly recognizes people who have done exceptional work.
19. **Process:** Effective application of Agile software practices and active participation in Agile ceremonies. Have experience of the full software engineering lifecycle, including design, architecture, test automation, deployment automation, monitoring and alerting.
20. **Standards and governance:** Aware-of and follows all appropriate software development guidelines and policies to support the SDLC. Implement and promote test automation, TDD, BDD and strive to keep test coverage as high as possible. Ensure all appropriate software development guidelines and policies are in place and adhered to, including PCI Compliance, Data Protection, Application Security, technology appropriate coding standards, tools and techniques to support the SDLC.

#### Qualifications/ skills/ experience / knowledge

Qualification: Degree (or equivalent) in IT or related subject

Experience:

- SOLID code principles
- oWASP Security Principles
- Expert in C# and JavaScript and ideally experience in some other languages such as F#, VB .NET, Java, Scala, Python, Clojure, Golang etc.
- Strong experience of cloud-based software development, ideally Azure or AWS.
- Using 3rd party .Net libraries and NuGet
- Solid analytical skills and appreciation of technical risk
- Experienced in automated testing and CI/CD (Continuous Integration & Deployment e.g. TeamCity, Jenkins, Go-CD & Octopus Deploy)
- Networking fundamentals - TCP/IP, WCF bindings, network security
- Containers as a unit of deployment and scaling
- Expert in IIS, HTTP, Windows & Web Services, Web API, Web sockets, Web farms, Load balancing etc.
- Live and breathe protocols such as SOAP/REST/JSON
- MSBuild & Scripting e.g. PowerShell, CS Script, Ruby, etc
- Architectural patterns such as SOA, GraphQL and Microservices
- Parallel programming e.g. Reactive Extensions
- Event sourcing & Event-Driven Microservices e.g. Rabbit MQ, MSMQ
- Caching strategies & performance tuning e.g. Redis
- Application Performance Monitoring (APM) tools
- NOSQL stores e.g. MongoDB
- SQL Transactions (ACID), Isolation Levels & SQL Hints
- Can design a normalise MS SQL/Mongo database
- Understanding of MS SQL/Mongo Query Plans
- ETL (Extract, Transform and Load) e.g. SSIS
- Source control using GIT

- Able to work without continual guidance
- Able to prioritise work and tracking progress
- Promote an open, friendly and fun environment
- Providing day to day technical leadership for your team, fostering a collaborative approach to design and architecture
- Generate enthusiasm and a sense of pride for both the features you build and the skills you apply to solving problems
- Lead, develop, promote, coach and motivate best practices within the development team to ensure that performance and quality standards are met throughout the software development lifecycle.
- Mentorship of less experienced professionals
- Inducting new members to your team, and instilling our common responsibilities and principles in them
- Deliver 'best of breed' solutions by exploiting recognised industry best practice and ensuring delivery in the most cost-effective way.
- Have great client-facing skills being able to deal well and form good relationships with other technology groups and the business
- Able to foster a strong team spirit and encourage professional development of all team members. Teams will typically include a mix of Product Engineers, Test Automation Engineers, Product Managers and UX Designers
- In-depth experience of working on multi-tier, high volume, transactional systems and a thorough understanding of the related challenges and how to navigate them.
- In-depth knowledge of key technology theories and architectures (e.g. data structures, algorithms, design patterns, application architectures, technologies and solution design).
- In-depth experience of developing and supporting API's and micro services supplying a service to both internal and external customers.

#### Desirable Experience:

- Linux, .NET Core & Kubernetes
- Swift & Java for iOS & Android development
- Worked on large scale enterprise systems.
- Worked on large scale travel websites.
- Experience of software development within the travel industry.

#### Skills and Knowledge:

- Technical management, mentoring and coaching skills.
- Strong analytical and diagnostic skills.
- Software development to an advanced level.
- Microsoft development technologies and systems.
- Good planning skills.
- Wintel operating systems and environment.

#### Desirable Skills and Knowledge:

- Understanding and commercial experience of high demand web systems and techniques such as caching, multi-threading and asynchronous coding.

#### Organisation Structure & Career Path

#### Financial Information