

Position Description: Senior Developer – C++

Reporting Lines

Reports to:	Development Manager
Works Closely with:	Development Team members
Direct Reports:	None

Overview

The Senior Developer is responsible for the technical guidance of members of the Development Team in the delivery of AusRegistry's development projects. The Senior Developer is expected to play a major role in ensuring that the technical procedures, tools and ultimately the code produced by the Development Team is high calibre and fit for purpose.

Key Areas of Responsibility

The following are areas of responsibility for the Senior Developer. From time to time these responsibilities may vary and additional responsibilities may be added.

Solution Design and Development

The Senior Developer is expected to play a key role in the architectural design of solutions, during both solution design meetings and coding.

Programming Skills

The Senior Developer will be expected to be highly knowledgeable and experienced in:

- C++
 - STL
 - Templates
 - Multi-threaded programming (POSIX threads)
 - Network programming (Linux sockets)
 - Oracle OCCI
 - OpenSSL
 - XML (SAX and DOM), XercesC
- Linux application development
 - RPM packaging
- Development tools
 - Source control (SVN)
 - Continuous integration (CruiseControl)
 - GNU compiler toolchain (gcc, g++, gdb, etc)
 - GNU Make
 - Eclipse

Further to this, they are expected to build expert skills in:

- Boost C++ libraries
- C++ Technical Report 1

Like all Developers within the team, the Senior Developer is required to be competent in the programming languages used within AusRegistry. Therefore, the Senior Developer must have a working knowledge of and be willing to further develop their skills in:

- PL/SQL
- Java 1.5/1.6
- Web programming (Java Servlets, JSP, Struts, JSF)
- Ant
- Maven
- Selenium

Leadership and Mentoring

It is the Senior Developer's responsibility to work with other members of the Development Team to ensure that the initiatives being delivered by are of a high standard in terms of fit for purpose, application design and code quality. In fulfilling this responsibility the Senior Developer will work with the Development Manager to foster the appropriate culture and values within the Development Team.

The Senior Developer will actively partake in the development and training of less experienced team members. This includes mentoring and suggesting training programs for team members and defining development pathways.

Coding Skills, Practices and Standards

The Senior Developer should have a broad understanding of various coding methodologies, testing practices, and tools and know when to apply each method to achieve the desired outcomes.

The Senior Developer is expected to promote Test Driven Development Practices within the team, ensuring that Unit Test and Acceptance Tests are implemented to confirm that acceptance criteria (i.e. system behaviours) are met.

The Senior Developer will work to build the development skills with the Development Team in the areas of:

- Test driven development
- Design patterns
- Testing frameworks (CppUnit, Google Test)
- Refactoring techniques
- Cohesion and Coupling
- Debugging techniques/tools
- Code coverage and profiling
- Readability, extensibility and testability of code
- Mocking (GoogleMock)
- Documentation

- Web application security
- Performance testing and tuning

Process Improvements

The Senior Developer is expected to provide advice to the Development Manager on how processes and procedures may be improved to promote good coding practice amongst the team.

System Knowledge

The Senior Developer is expected to build, share and retain critical in-depth knowledge of the systems developed and maintained by AusRegistry, such as the Domain Name Registry System and Renewable Energy Certificate Registry System.

Development Process & Team Activities

The AusRegistry Development Team utilise an Agile development process based on Extreme Programming. The Senior Developer is expected to be knowledgeable in the implementation of Agile principles and be prepared to work with the Development Manager to adapt the core Agile approaches as required to meet business and quality objectives.

Reporting

As part of their mentoring and coaching role, the Senior Developer will provide regular feedback to the Development Manager and the Human Resources Manager on the performance of Development Team members.

Selection Criteria

- Degree level qualification in Information Technology
- Over 6 years software development experience
- 3 years experience as a lead/senior developer
- Expert knowledge of:
 - C++
 - STL
 - Templates
 - Multi-threaded programming (POSIX threads)
 - Network programming (Linux sockets)
 - Oracle OCCI
 - OpenSSL
 - XML (SAX and DOM), XercesC
 - Linux application development
 - RPM packaging
 - Development tools
 - Source control (SVN)
 - Continuous integration (CruiseControl)
 - GNU compiler toolchain (gcc, g++, gdb, etc)

- GNU Make
- Eclipse
- Knowledge of Agile methodologies
- Good coding practices
- Knowledge of software architecture for critical systems
- Knowledge of system performance optimisation
- Knowledge of software testing practices
- Strong mentoring and coaching skills
- Additional preferable skills
 - PL/SQL
 - Java 1.5/1.6
 - Web programming (Java Servlets, JSP, Struts, JSF)
 - Ant
 - Maven
 - Selenium