Job description

INTERNAL AFFAIRS
Te Tari Taiwhenua

Job Title	Digital Preservation Technical Specialist
Branch	National Library of New Zealand
Business Group	Information, Knowledge and Systems (IKS)
Reporting to	Manager Digital Preservation
Location	Wellington
Duration	Permanent
Salary Range	$81,862-$110,755

Purpose

Digital preservation is the ongoing suite of management and maintenance processes that ensure digital objects remain authentic, accessible, re-usable and understandable in the future, with minimal loss over time.

The Digital Preservation Technical Specialist provides high level technical services and specialist advice related to digital preservation. The role works very closely with Government Technology Services (GTS) in ensuring the integrity of the overall digital preservation environment and with the Government Digital Archive Programme (GDAP) at Archives New Zealand.

The position supports the resolution and recording of technical issues relating to all aspects of the NDHA programme of ingest and preservation as well as undertaking the operational maintenance of digital objects in the system in conjunction with GTS and vendors.

Key Tasks

Management of Digital Preservation system processes and settings

§ Provide redundancy in all aspects of configuration, business support and system fault identification and resolution for the digital preservation programme systems.
§ Provide in-depth technical analysis for resolution of issues with digital preservation systems (applications, hardware and software).
§ Contribute to the implementation of Rosetta version releases with especial responsibility for application system fault resolution and enhancements.
§ Work with all relevant parties on preparation of requirements and implementation of enhancements to deposit mechanisms, applications and work processes.
§ Work with content owners / producers and National Library staff to create deposit procedures appropriate to the content including the migration framework programme of ingest into Rosetta.
§ Perform validation checks during ingest processes, aadminister technical tools at an application level (eg virus and fixity checking, format identification and extraction of technical metadata)
§ Develop appropriate documentation and work plans.
§ Work with Digital Preservation Analysts to analyse risks arising from changed requirements, eg new formats.
§ Support identification of hardware and software requirements for digital preservation activities in collaboration with digital preservation analysts and Government Technology Services.
§ Liaise with Archives New Zealand staff on supporting the long-term preservation of the public record.

§ Liaise with GTS on AOG programmes such as Infrastructure as a Service to ensure integrity of digital collections over time.
§ Liaise with 3rd parties in developing solutions for Digital Preservation as a Service.

Problem resolution
§ Manage, prioritise and resolve complex technical issues relating to all aspects of the preservation repository including applications and related infrastructure in conjunction with GTS and vendors where appropriate.
§ Prioritise issues and provide effective solutions within agreed service levels, following best practice and adhering to international standards.
§ Use agreed Change Management procedures to document, gain approval for, schedule and track changes in order to minimise risk and impact.
§ Update internal and external clients and colleagues on the status of all issues on a timely basis.

Continuous Improvement
§ Ensure that a process of continuous review and improvement is inherent throughout all elements of digital preservation, in particular technical analysis and digital preservation practice.
§ Draw on knowledge of best practice, advances in technology, and relevant research to develop an informed view of technical trends, opportunities and challenges in digital preservation.

Liaison and Collaboration
§ Work with other digital preservation staff and related roles in the Library and Archives New Zealand to identify and resolve technical challenges in the digital preservation domain and to ensure the organisation is maximising use of the systems and tools available.
§ Advise on standards for technical management of the digital preservation programme.
§ Liaise with GTS staff, vendors and suppliers (for example on virus software, software support and licences, SOLR implementation, topology).
§ Contribute to a collaborative environment (including national and international fora/projects) which enables effective engagement in shared investigations, pilots, trials and research projects in digital preservation.
§ Further the understanding of the digital collections, and the ethical, legal and cultural considerations related to digital preservation.
§ Collaborate with and participate in national and global digital preservation forums on technical matters, including other Rosetta users (eg system capabilities, performance, indexing etc).
§ Further the organisation's understanding of the digital collections and their technical considerations.
§ Proactively share knowledge, experience and ideas.
§ Model behaviours that encourage collaboration and learning for the purpose of increasing awareness and practice of digital preservation and maximising effectiveness.

Health & Safety (for self)
- Takes personal responsibility for keeping self free from harm
- Follows safe working procedures
- Reports incidents promptly
- Reports hazards promptly and suggests appropriate remedies
- Knows what to do in the event of an emergency
- Co-operates in implementing rehabilitation plans

Key Relationships

Key Relationships and Nature of Interaction	Advise	Collaborate with	Influence	Inform	Manage/ lead	Deliver to	
Internal							
• Managers, staff and specialists involved in digital preservation	Ü	Ü	Ü	Ü		Ü	
• Managers and staff involved in digital ingest and deposit, content management and description, access restriction, access provision	Ü	Ü	Ü	Ü		Ü	
• GDAP staff	Ü	Ü	Ü	Ü		Ü	
• Government Technology Services staff	Ü	Ü	Ü	Ü			
External							
• System and software vendors (Ex Libris, Oracle)	Ü	Ü		Ü			
• External technical advisors		Ü		Ü			
• Publishers, donors, depositors	Ü	Ü		Ü		Ü	

Staff Management

Number of direct reports	None
Total number of staff reporting	None

Delegations

Human Resource Delegations	None
Financial Delegations	None

Security Level   X

Person Specification

Experience
- Relevant experience in digital preservation (especially in an archive or library) is desirable.
- Experience with tools and processes for maintaining and administering a digital preservation system or digital asset management system or data repository.
- Understanding of the OAIS reference model, file formats, format registries (eg DROID, JHOVE) and related tools would be an advantage.
- Understanding of the strategies for encoding, storing, and managing preservation metadata in digital preservation systems (eg PREMIS) would be an advantage.
- An understanding of the ways in which data is structured for transmission, deposited into a data repository and exported.
- Demonstrated experience with creation, management and rendering of digital objects across multiple formats, eg text, image, sound, software, multimedia, database, geographical information system video.
- Understanding of XML and XML schemas.
- Experience with issues of performance and scalability.

- Some experience in project planning and project management would be an advantage.

Knowledge

Government Technology Services is the primary technology support for the National Library's digital preservation service. This is a key relationship for this role and also for engaging with the international digital preservation community. Consequently a working knowledge of the following would be advantageous:

- database structures and the ability to use report writing tools to create ad hoc reports
- Java programming including knowledge of servlet and web services
- Java process monitoring / debugging in Unix environment
- Unix systems and shell scripting
- JBoss, Tomcat, Apache and SQL
- network components (firewalls, load balancers etc), network zones
- storage technologies
- Oracle database management
- MS Windows and Apple Mac OS X.

Skills
- Demonstrated ability to research and resolve problems using a variety of resources and tools particularly in relation to technical issues regarding digital preservation
- Ability to communicate complex technical ideas in simple language
- Ability to work across multiple teams and disciplines.
- Excellent electronic, written and oral communication skills

Education and Professional Memberships
- Tertiary qualification in information technology / computer science / information science or equivalent including at least 3 years relevant work experience.

Competencies*

The Competencies** required for this role consist of both core Departmental and job specific competencies. The core competencies are shown below in italics. Each competency falls within a competency cluster, which are broad themes of skills, behaviours and abilities.

Competency Cluster	Competency
Integrity	Integrity and Trust
	Ethics and Values
Intelligence	Learning on the Fly
Emotional Maturity	Self Knowledge
	Composure
Managing Complexity	Problem solving
Talent to Execute	Drive for Results.
	Time Management
	Written Communications
Positive Energy	Perseverance
Managing Diverse Relationships	Interpersonal Savvy