JOB DESCRIPTION

Job Title:	**Information Technology Specialist (Scientific Computing)**
Division/Programme and Section/Project (if any):	Oceanic Fisheries Programme (OFP)
Location:	Noumea
Reporting to:	Principal Fisheries Scientist (Stock Assessment & Modelling)
Number of Direct Reports:	0
Purpose of Role:	Provide specialist scientific computing expertise to support OFP's scientific and modelling activities, ensuring reliable, efficient and fit-for-purpose high-performance and high-throughput computing systems. The position will provide technical advice, support and training to scientific staff, while working closely with SPC ICT to plan and implement evolving computing needs. The role will support software development, reproducible scientific workflows and the effective and secure use of emerging technologies, including cloud computing and AI.
Date:	November 2026

Organizational Context and Organization Chart

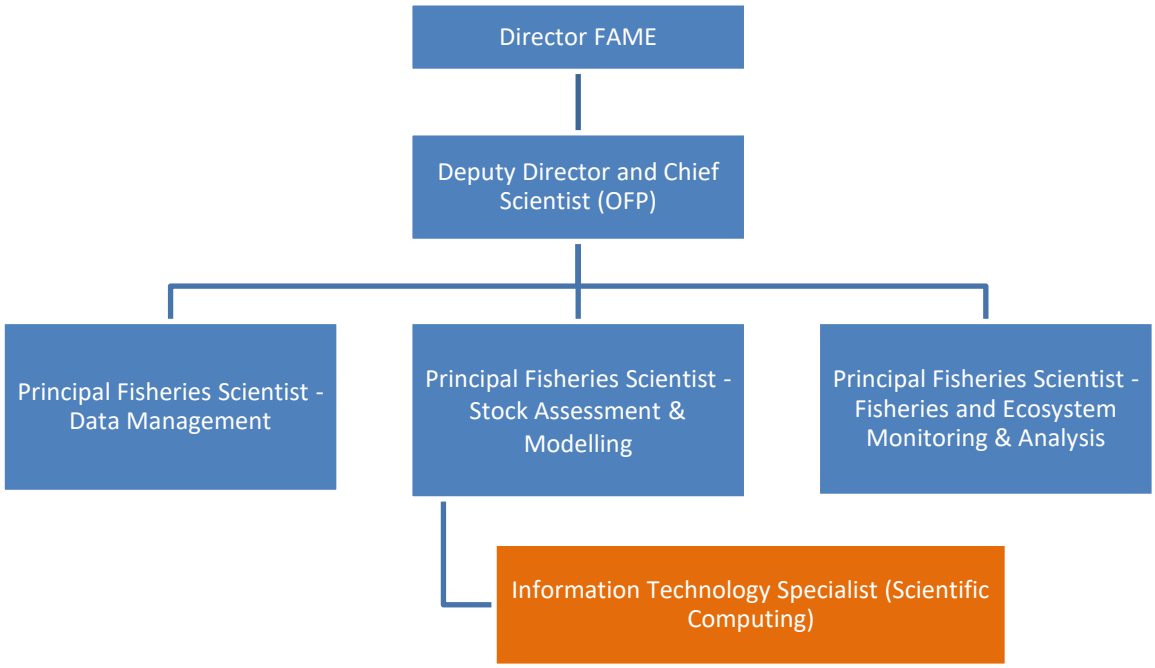
The Pacific Community (SPC) is the principal scientific and technical organization in the Pacific region, supporting impactful development since 1947. We are an international development organization owned and governed by our 27 countries and territory members. In pursuit of sustainable development to benefit Pacific people, our unique organization works across more than 25 sectors. We are known for our knowledge and innovation in fisheries science, public health surveillance, geoscience, human rights and social policy development, and conservation of plant genetic resources for food and agriculture. SPC shares the vision for our region as endorsed in SPC's Strategic Plan 2022-2031. SPC's mission is to work for the well-being of Pacific people through the effective and innovative application of science and knowledge, guided by a deep understanding of the Pacific Islands' contexts and cultures.

SPC's Fisheries, Aquaculture and Marine Ecosystems (FAME) capability has been providing scientific and technical expertise to support fisheries management and sustainable development in the Pacific for over 65 years. The goal of SPC FAME is that the fisheries resources of the Pacific region are sustainably managed for economic growth, food security and environmental conservation. In pursuit of this goal, SPC FAME provides scientific and management advice to Pacific Island Countries and Territories (PICTs) and regional agencies to support the management of sustainable oceanic fisheries, coastal fisheries, marine ecosystems and aquaculture development. Along with addressing the challenges in the management of the region's marine resources, there are also significant opportunities to derive greater economic and social benefits from them. Deriving greater benefits from the tuna fisheries, the development of aquaculture in the region, along with alternative livelihoods in coastal fisheries, hold significant potential. SPC FAME provides technical assistance

to support PICTs to maximise these sustainable development opportunities in the marine sector and in some parts of the freshwater sector.

SPC FAME is composed of three programmes: the Coastal Fisheries and Aquaculture Programme (CFAP); the Oceanic Fisheries Programme (OFP); and the Marine Ecology and Ecosystems Programme (MEEP). The Director's Office provides implementation support and strategic direction across the three programmes and cross-cutting projects. Working with all 27 PICTs, SPC FAME has strong partnerships with regional, sub-regional and national entities working in the marine sector. SPC FAME staff are based in New Caledonia, Fiji, Federated States of Micronesia, Solomon Islands, and Tonga, with most of the staff being based in New Caledonia.

This position is within the Oceanic Fisheries Programme (OFP) which is a section within the Fisheries Aquaculture and Marine Ecosystems (FAME) division. The OFP's primary focus is on the oceanic fisheries resources of the western and central Pacific Ocean. The OFP has three sections; Stock Assessment and Modelling (SAM), Data Management (DM) and Fisheries Monitoring (FM). The position of Information Technology Specialist (Scientific Computing) sits within the OFP in the SAM section. While the role will predominantly support the work of the OPF in fisheries modelling, it may also be called on to provide scientific computing support and advice for FAME's new Marine Ecology and Ecosystems Programme (MEEP), and the Coastal Fisheries and Aquaculture Programme (CFAP).



Key Result Areas (KRAs):

The position of Information Technology Specialist (Scientific Computing) encompasses the following major functions or Key Result Areas:

1. Development, maintenance and support of scientific computing tools and systems
2. Provide technical support, advice and training to OFP scientists in the area of scientific computing and use of available systems
3. Work with the SPC ICT team and OFP scientists on strategic planning of scientific computing needs and solutions, including implementation
4. Software development, management, repeatable workflows and use of AI

Acronyms: FFA – Forum Fisheries Agency, PNA – Parties to the Nauru Agreement, SPG – South Pacific Group, PICTs – Pacific Island Countries and Territories, WCPFC – Western and Central Pacific Fisheries Commission

The performance requirements of the Key Result Areas are broadly described below

Jobholder is accountable for	*Jobholder is successful when*
KRA1 (30 %) **Development, maintenance and support of scientific computing tools and systems** • Manage the internal HTC Condor and HPC systems and software, including virtual machines (VMs) and related operating systems, • Optimize system performance, • Manage and monitor usage of compute resources, including planning for and scheduling critical work with scientists, and advanced communication of necessary downtimes for maintenance work, • Administer the OFP Linux-based computer network in collaboration with the SPC ICT section, • Identification and liaison with external cloud system providers where these are deemed suitable options for certain tasks, • Keep tools, dependencies, and computing environments current, secure, and reliable, • Focus on user-centred design, so tools and systems fit how scientists work.	• Scientific computing environments run efficiently and effectively ensuring critical work such as stock assessment and modelling jobs can be completed in a timely fashion, • Works with users across OFP and potentially across other groups in FAME to optimize usage and scheduling, • Works with ICT to ensure system works and downtime is managed and communicated with users.
KRA2 (30%) **Provide technical support, advice and training to OFP scientists and contractors in the area of scientific computing and use of available systems** • Respond to and troubleshoot issues raised by OFP scientists and contractors relating to computing systems, and work with ICT to solve complex and wider system problems where necessary. • Provide constructive advice on appropriate tools, approaches, and computing resources for specific analytical work, • Design and deliver training on scientific computing, reproducible workflows, workflow orchestration, version control and efficient use of computing resources, • Maintain accessible documentation and examples to help scientists use and adapt these tools independently, • Provide focussed induction training to new staff, • Communicate with users on system changes, new capabilities, and common issues,	• Timely responses to attend to and solve issues and troubleshooting, • Scientific computing environments and software are being used efficiently and effectively, • User support information is easily available, • Induction training is delivered in a timely fashion for new staff, • Scientific staff are updated on new developments and opportunities.

• Translating computing concepts, methods and technical language between scientists, managers and ICT staff.	
KRA3 (20%) **Work with the SPC ICT team and OFP scientists on strategic planning of scientific computing needs and solutions, including implementation** • Ensure fit-for-purpose scientific computing systems and resources by working with the SPC ICT team and FAME scientists to identify current and future scientific computing needs, contribute to short (annual) and longer-term (5 year) strategic planning, priorities, and costing for computing infrastructure, tools, and capability. • Explore alternative approaches and systems for continuous improvements that align with FAME research needs and SPC ICT standards, policies, data, and security requirements, • Collaborate with SPC ICT to cost, purchase and implement computing hardware and software.	• Scientific computing systems and hardware remain fit for purpose, consider user-centred design for how scientists work, • Strategic planning sessions are conducted annually with relevant scientific and ICT staff, • Forward planning needs are documented annually and reports provided to the Deputy Director of OFP, including any budget requests/implications (prior to November each year), • Works with ICT to ensure new hardware and software is purchased ahead of time and implemented efficiently, with minimum impact on scientific workflow.
KRA4 (20%) **Software development, management, repeatable workflows, use of AI and public repositories** • Support OFP's Multifan-CL maintenance and development contractor, maintain the public GitHub repository for the open source Multifan-CL project, with best practices, version and new version release control, • Support internal and external collaborators on software development or joint project work requiring access to OFP computing resources and GitHub repositories, • Maintain compilation tools for Multifan-CL for Linux, Mac and Windows OS, • Contribute to and support scientists with development and maintenance of dashboards and web tools (internal and public accessible), including R Shiny Apps and cloud hosting with Posit, and Azure, • Work with scientists to design, implement, integrate and maintain shared scientific workflow orchestration systems that support reproducible and efficient analyses, • Provide information and training to scientific staff on programming good practices for optimization and efficient memory use, particularly in R, • Liaise with SPC ICT to ensure an organizational level understanding of AI	• Contractors for Multifan-CL or other collaborative projects receive the support required to work effectively, • Dashboards and related cloud hosting are effectively managed/administered or supported, • AI usage is consistent with SPC policy and security requirements, • Scientific staff applying good programing practices to optimize code efficiency and memory use, • Shared, reproducible scientific workflows are implemented, documented, maintained and actively used by scientific staff, • Scientists receive practical support and training to use workflow orchestration and AI tools effectively and independently.

use policies and advise staff on their AI use and risks, • Ensure provision of relevant documents and files are available on relevant websites or public repositories as required by contractual agreements with donors.	

The above performance requirements are provided as a guide only. The precise performance measures and priority work areas for this job will be discussed between the jobholder and supervisor as part of the performance development process.

Most Challenging Duties Typically Undertaken (Complexity):

- Working closely and proactively with end-users to ensure needs are properly understood and advice, training and solutions communicated and implemented,
- Developing systems and ensuring scientific computing environments are fully functional during peak work periods,
- Working efficiently with SPC ICT to implement new systems and hardware in a resource constrained team,
- Optimizing the use of the available resources and managing how resources are allocated and used by multiple science staff.

Functional Relationships & Relationship Skills:

Key internal and/or external contacts	Nature of the contact most typical
External Key external contacts are: • Potential service providers for scientific computing • International experts • Contractors & Consultants	• Research and investigation, providing authoritative advice, ensuring access to systems • Systems support • Cloud computing
Internal Key internal contacts are: • ICT services • OFP scientific staff • Other FAME programme staff • Other SPC divisions with scientific computing needs and expertise	• Collaborating, providing authoritative advice, training • Troubleshooting and responding to support requests • Strategic planning and learning • Workflow tools and systems • Systems upgrades and maintenance scheduling

Level of Delegation:

Routine Expenditure Budget: *EUR 0*

Budget Sign off Authority without requiring approval from direct supervisor: *EUR 50*

Personal Specification:

This section is designed to capture the expertise required for the role at the 100% fully effective level. (This does not necessarily reflect what the current position holder has.) This may be a combination of knowledge / experience, qualifications or equivalent level of learning through experience or key skills, attributes or job specific competencies.

Qualifications

Essential:	Desirable:
• Postgraduate degree in Computer or Computational Science, Information Technology, or related subject or an equivalent body of knowledge and experience	• Demonstrated experience in supporting technical science teams in computationally demanding work.

Knowledge/Experience

Essential:	Desirable:
• At least eight years' experience in computational or computer science, • At least three years' experience developing and maintaining high-performance and/or high-throughput scientific computing environments (e.g., HTCondor, supercomputers, cloud computing, virtual computing environments), • Client-side and server-side Java, C and C++ programming and compilations, • Version / revision control experience, GitHub, Docker, • Demonstrated practical experience in using AI-assisted tools for software development, code review, testing and scientific workflow automation, including the ability to critically evaluate and validate AI-generated outputs, • Programming in R, Python, C++ other languages, • Knowledge and experience of Linux and Microsoft Windows-based operating systems, • Parallel computing (multiprocessing, GPU computing), • Good written and spoken English skills, • Ability to work as part of an interdisciplinary and multi-cultural team, • Expertise in designing, implementing and maintaining reproducible scientific workflows and workflow orchestration systems.	• Working knowledge of French an advantage, • Familiarity with computer-based analysis of fishery, biological and ecological data or related work area, • Cybersecurity, access control, and compliance with data-sharing agreements, • Cloud platforms (AWS, Azure, GCP) and cost control.

Key Skills/Attributes/Job Specific Competencies

The following levels would typically be expected for the 100% fully effective level:

Expert level	• Development and support of high-performance and/or high-throughput computing environments • Distributed computing (e.g. HTCondor and cloud computing) • Linux and Windows OS
Advanced level	• Programming skill bash, Java, C++, Python, R, HTMLs • Software engineering using appropriate development methodologies • Communication of technical computing concepts to scientists, ICT staff and managers • Use of AI coding assistants (reviewing, testing and correcting generated code) • Development, integration and maintenance of collaborative scientific workflow orchestration systems • Developing and managing dashboards with cloud hosting
Working knowledge	• Statistical modelling and its use in fisheries science • Compilation across various platforms and compilers
Awareness	• Pacific way • SPC Regulations and Policies

Key Behaviours

*All employees are measured against the following **Key Behaviours** as part of Performance Development:*

- Change and innovation
- Pro-active and shows initiative
- Interpersonal skills
- Teamwork
- Promotion of equity and equality
- Judgement

Personal Attributes

- High level of professional integrity and ethics
- Friendly and approachable demeanor
- Demonstrated high level commitment to customer service

Change to Job Description:

From time to time it may be necessary to consider changes in the job description in response to the changing nature of the work environment – including technological requirements or statutory changes. Such change may be initiated as necessary by SPC. This Job Description may also be reviewed as part of the preparation for performance planning for the annual performance cycle.