SKILLS FRAMEWORK FOR MEDIA
SKILLS MAP - SENIOR SERVER PROGRAMMER

Sector	Media
Sub-sector	Games
Track	Game Technical Development
Sub-track	Game Programming
Occupation	Game Programmer

Job Role	**Senior Server Programmer**

Job Role Description	The Senior Server Programmer leads the design and development of online game server networks to support various game features such as online gameplay, in-game events and purchases, credential verification and online messaging systems. He/She is responsible for translating the vision for online features into a server network design and realising it by configuring appropriate hardware. He oversees the development of programs to enable the game to interact with the servers. He reviews server programs, oversees the testing of online gameplay features and leads the integration of server programs within the overall game code. He also oversees the maintenance of game servers and online operations. The role involves leading a team of programmers with technical guidance as well as liaising with other teams, internal and external stakeholders to ensure project expectations are met. He also spends a significant amount of his time in meetings with other production teams to align expectations and share project progress. He is proficient at project management and a technical expert. He is adept at planning and organizing in order to deliver project outcomes effectively. He should also be effective at collaboration, communication and stakeholder management in order to work effectively in cross-functional project teams.

	Critical Work Functions	**Key Tasks**
Critical Work Functions and Key Tasks	Plan game development	Understand game features and requirements for online services for the game
		Collaborate with the lead programmer to understand the server requirements for the game
		Define overall scope of the technical design for server network based on game components and features
		Create project schedule for server network design and implementation in alignment with the overall project schedule
		Conduct risk management of project milestone goals and schedules
	Design server architecture	Design the high level logical architecture for the game's server requirements
		Present high level server architecture to the lead programmer for review
		Guide the creation of low-level component designs of server network based on project scope from a technical perspective
		Define hardware and bandwidth requirements for hosting game servers
		Review and present low level component design for approval and implementation
	Implement server networks and online game features	Develop code as required for the implementation of game servers
		Review, refine and debug code developed by junior programmers
		Oversee configuration of acquired and/or leased bandwidth hardware for suitability to server deployment, efficiency, security and gameplay resource optimisation
		Implement online features of the game utilising developed code by collaborating with game programmers
		Oversee testing of online gameplay to review server performance, resource management, feature implementation, security and scalability
		Refine the developed code based on the server testing
		Oversee documentation of server assets such as source code, tools and technical know-hows
	Maintain and improve server networks	Review the performance, resource management and security of game servers periodically
		Enhance efficiency in server networks by improving server code
		Supervise maintenance of the game server networks for stability and usability
		Resolve issues such as server breakdowns and scalability problems to maintain smooth game operations

	Technical Skills and Competencies		**Generic Skills and Competencies (Top 5)**	
Skills and Competencies	Database Administration	Level 3	Computational Thinking	Advanced
	Game Analytics	Level 3	Communication	Intermediate
	Game Level Development	Level 3	Problem Solving	Intermediate
	Game Server Programming	Level 3	Creative Thinking	Intermediate
	Gameplay Development	Level 3	Teamwork	Intermediate

	Tools Development	Level 2	
Programme Listing	For a list of Training Programmes available for the Media sector, please visit: www.skillsfuture.sg/skills-framework/Media		

The information contained in this document serves as a guide.