

**SKILLS FRAMEWORK FOR MEDIA
TECHNICAL SKILLS AND COMPETENCIES (TSC) REFERENCE DOCUMENT**

TSC Category	Media Technology and Operations					
TSC Title	Content Delivery Network Operations					
TSC Description	Manage content delivery over digital platforms by designing, deploying, operating and maintaining Content Delivery Networks (CDNs)					
TSC Proficiency Description	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
			MED-MPN-3014-1.1	MED-MPN-4014-1.1	MED-MPN-5014-1.1	
			Execute the design, development, deployment and maintenance of Content Delivery Networks (CDNs)	Develop the design and operational requirements of the organisation's Content Delivery Networks (CDNs)	Drive the conceptualisation, design and development of systems and platforms for the delivery of the organisation's content to the viewers	
Knowledge			<ul style="list-style-type: none"> Principles and concepts of networking and network security Principles and concepts of a CDN Process of content delivery over a CDN Principles of virtualised infrastructure Software tools used to configure and operate CDNs Application Programming Interfaces (APIs) for third-party CDN services High-level programming and scripting languages 	<ul style="list-style-type: none"> Principles, capabilities and limitations of CDNs CDN services offered by third-party service providers Organisation's content delivery requirements Capacity planning for digital content delivery operations Technical specifications and parameters for CDNs Performance targets on key metrics for digital content delivery 	<ul style="list-style-type: none"> Capabilities and limitations of the organisation's internal infrastructure for digital content delivery Industry standards in digital content delivery infrastructure Industry standards and upcoming technologies in digital content delivery Capacity planning for digital content delivery operations Key metrics to track digital content delivery performance 	
Abilities			<ul style="list-style-type: none"> Implement network architecture designs for in-house data centre to deploy CDN Identify the data centre hardware requirements to support the CDN Configure hardware and/or virtualised infrastructure to 	<ul style="list-style-type: none"> Define the capacity and technical specifications to guide the design of network architecture for in-house CDN Plan CDN capacity requirements for special events or content Review design of network architecture for 	<ul style="list-style-type: none"> Formulate the organisation's digital content delivery strategy in collaboration with the content and platform teams Make suitable trade-offs between creating in-house data storage infrastructure versus 	

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			<p>operationalise CDN nodes or Points of Presence (PoPs)</p> <ul style="list-style-type: none"> • Perform load and reliability testing of CDN infrastructure • Deploy CDNs to support the organisation's digital video delivery • Write programs or scripts to operate CDN functionalities • Execute the placement, version control and caching of content on CDNs • Monitor key metrics and health of CDNs to ensure smooth CDN operations • Perform routine and contingent maintenance of CDNs to ensure continuity in content delivery 	<p>in-house data-centres to deploy CDN</p> <ul style="list-style-type: none"> • Identify vendors for managing CDN infrastructure and network management tools • Manage external vendors to deploy adequate infrastructure to support the organisation's CDN operations • Oversee the configuration, testing and deployment of CDN infrastructure • Review CDN performance to take appropriate action for scaling CDN capacity, automation and/or process improvements 	<p>third-party virtualised infrastructure services</p> <ul style="list-style-type: none"> • Devise the deployment of CDNs to meet the organisation's requirements • Evaluate vendors for third-party cloud and/or CDN services • Review content delivery performance based on key metrics • Drive the scaling of the organisation's CDN infrastructure based on content demand and content delivery performance 	
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