

Specification of Competency Standards
for the Information & Communications Technology Industry
Unit of Competency

Functional Area - DMT Architecture

Title	Monitor performance of digital media infrastructure
Code	108058L3
Description	This unit of competency applies to all Digital Media Technology (DMT) practitioners responsible for supporting and monitoring the organisation's infrastructure. With more and more DMT organisations joining the cloud bandwagon, it also presents supporting challenges, such as how to monitor performance of infrastructure that organisation doesn't own. Detailed knowledge of cloud services is required to develop monitoring plan and procedures that can monitor the provisioned infrastructure to ensure it performs as expected.
Level	3
Credit	3
Competency	<p>Performance Requirements</p> <p>1. Knowledge for monitoring performance of digital media infrastructure</p> <ul style="list-style-type: none"> • Possess in-depth knowledge of various network technologies and protocols • Possess in-depth knowledge of the organisation's infrastructure architecture • Possess in-depth knowledge of cloud technologies/services, such as: <ul style="list-style-type: none"> ○ IAAS – Infrastructure As A Service ○ SAAS – Storage As A Service and Software As A Service ○ PAAS – Platform As A Service • Possess good knowledge of public cloud service platforms (e.g. AWS, GAE, Azure, etc.) • Possess good network problem solving and public cloud configuring management skills • Possess good knowledge of network and cloud performance monitoring tools • Possess good vendor management skills <p>2. Monitor performance of digital media infrastructure</p> <ul style="list-style-type: none"> • Determine and understand the 3Vs (volume, velocity and variety) of the organisation's data for which matrices will be formed for monitoring. For example: <ul style="list-style-type: none"> ○ Volume of data flow during different time (peak, non-peak period, etc.) ○ Velocity of speed it needed for delivery ○ Variety of data type (text, video, interactive media, audio, etc.) • Acquire and be familiar with baseline performance statistics of the cloud services and the contracted Service Level Agreement (SLA) from cloud services vendor • Develop monitoring methodology and procedures including: <ul style="list-style-type: none"> ○ Real time monitoring or periodic monitoring ○ What to monitor, for example : <ul style="list-style-type: none"> ▪ Infrastructure – throughput, average lag time, page fetch time ▪ Server performance – calculation and response time ▪ Data store – read/write time ○ What benchmarks to use and where to acquire the benchmarks: from subscribed cloud service vendor or public or internal experience measuring tools ○ Responsive actions to take when performances are below thresholds. Drills should be planned and tested to ensure these actions are performing as expected, such as, contacting the cloud service providers • Work with cloud service providers to formulate realistic performance measuring matrices taking into account various factors, including: <ul style="list-style-type: none"> ○ client latency ○ server latency ○ node and controller latency ○ end to end performance

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	<ul style="list-style-type: none"> ○ number of service request (number of clients accessing) • Identify suitable monitoring tools (purchased or internal developed) and perform set up and configuration tools to monitor performances. Also, set alerts and reports when performance thresholds fall below the required level • Document the monitoring routines and ensure all stakeholder are aware of the monitoring routines, procedures, etc. <p>3. Exhibit professionalism</p> <ul style="list-style-type: none"> • Apply industry best practices to monitor the organisation's infrastructure performance to ensure contents are delivered at the committed level of service
Assessment Criteria	<p>The integrated outcome requirements of this UoC are the abilities to:</p> <ul style="list-style-type: none"> • Determine all information cloud usage and operating factors that can be used to form monitoring matrices • Develop clear monitoring methodologies and procedures that can effectively monitor the organisation's cloud infrastructure. Additionally, develop procedures to provide very clear and concise instructions for monitoring staff on action to take when performance falls below expected level • Develop effective procedures that provide very clear and concise instructions to monitor staff on actions to take when performance of cloud infrastructure falls below expected level
Remark	