

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

Functional Area - DMT Architecture

| | |
|------------|---|
| Title | Develop digital content delivery network strategy |
| Code | 111108L6 |
| Range | Develop the Content Delivery Network (CDN) strategy for the organization based on using CDN service provider rather than in-house built (remark) |
| Level | 6 |
| Credit | 6 (For Reference Only) |
| Competency | <p>Performance Requirements</p> <p>1. Knowledge for developing content delivery network strategy</p> <ul style="list-style-type: none"> • Possess good project management skills and capable of formulating business strategies • Possess in-depth knowledge of the organisation's digital media business • Possess in-depth knowledge of digital media distribution technologies, including: <ul style="list-style-type: none"> ○ IP multicast streaming ○ Unicast streaming ○ Peer-to-Peer (P2P) ○ CDN ○ Podcasting • Possess in-depth knowledge of IP network and CDN technologies • Possess good knowledge of infrastructure network design and network risk management methodologies • Understand CDN delivery requirements for different platforms, such as PC, mobiles, tablets, and Virtual Reality (VR) wearable devices, etc. <p>2. Develop content delivery network strategy for digital media business:</p> <ul style="list-style-type: none"> • Determine performance needs and actors that the CDN needs to satisfy, including but not limited to the following: <ul style="list-style-type: none"> ○ Traffic type (video, online game, music, etc.) ○ File size ○ Customer size and demographic ○ Client devices • Determine the best content delivery mechanism for organisation, such as: Unicast, Cache based, P2P (Peer-to-Peer), or Multicast • Determine the type of CDN services best fit for the organisation, application-layer or network-based, based on the level of proactive control or knowledge of the network the organisation wishes to have • Develop CDN service selection policy with following criteria: <ul style="list-style-type: none"> ○ Performance: deliver all contents to users/customers at expected performance ○ Control: <ul style="list-style-type: none"> ▪ Have visibility of CDN which the organisation can adjust to business needs ▪ Have the option of updating configurations (on-demand) ○ Availability: The CDN needs to demonstrate that it has different levels of resiliency to different network issues, and consequently its availability ○ Coverage: may prefer CDN that delivers world class performance in a thoughtful and responsible manner, with strategic locations and continual technology updates to ensure maximum efficiency ○ Customer support service ○ Good value for money |

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

Functional Area - DMT Architecture

| | |
|---------------------|---|
| | <ul style="list-style-type: none"> ○ Security: strong encryption, transport layer security (TLS)/X.509, SSL, cloaking of original server, etc. ○ Content based optimization and front-end optimization ○ Time to market: how well and how fast CDN can be setup ● Define schedules for implementation, estimate of budget required, monitoring of CDN performance details, etc. ● Document strategy with reason for opting for CDN service providers approach rather than built in-house. For example: <ul style="list-style-type: none"> ○ Complex knowhow on building server nodes world wide ○ High cost of building and maintaining network ○ Specialized layer 3 tools for managing routing and optimizing network functions ● Present to senior management/board for support <p>3. Exhibit professionalism</p> <ul style="list-style-type: none"> ● Be updated with current CDN technologies and committed to ensure contents are delivered to the users/customers at the expected performance |
| Assessment Criteria | <p>The integrated outcome requirements of this UoC are the abilities to:</p> <ul style="list-style-type: none"> ● define what performance needed from a CDN infrastructure ● define a complete CDN service selection policy that can be implemented and provide a clear guidance to implementers ● develop CDN strategy to meet the business need of the organisation and gain approval from management/board |
| Remark | <p>Content Delivery Network (CDN) includes: selecting the right performance, cost, security, bandwidth control, scalability (configurability), reliability, recoverability, etc.</p> |