

## Information and Communications Technology Clustering for Operation and Support (O&S)

Draft

Stream	TSS	FT	CO	HDS
	Lead TSS	Senior Field Technician	Senior CO	Senior HDO
Core Skills	Core Skills for Operation and Support (L3)			
User Support	User Support (L3)			
Network and Security Support	Network Security Support (TSS) (L3)	Network Security Support (FT) (L3)		Network and Security Support (L3)
	Network Support (L3)		Security Support (L3)	
	System Security Support (L3)		Web and Network Support (L3)	
	Web Support (L3)	Procurement Support (L2)		
	Junior/Senior TSS	Field Technician	CO	HD Operator
System Support	System Support (L2)		System Support (CO) (L2)	System Support (HDS) (L2)
Network Support	Network Support (L2)			
Email Support	Email Support (L2)			
Application Support	Application Support (TSS) (L2)			Application Support (HDS) (L2)
Operation Support	Operation Support (TSS) (L2)	Operation Support (FT) (L2)	Operation Support (CO) (L2)	
Procurement Support	Procurement Support (L2)			
Core Skills	Core Skills for Operation and Support (L1)			

**Information and Communications Technology**  
**Specification of Competency Standards (SCS) for Operation and Support (O&S)**  
**Clustering for Technical Support Staff (TSS) Stream**

<b>Clusters for Junior Technical Support Staff</b>				
1. Cluster Name	Core Skills for Operation and Support			
QF Level	1			
Integrated Competency	Possess the essential concepts and knowledge for the job responsibilities in Operation and Support			
Job Mapping	Junior / Senior TSS, Computer Operator, Help Desk Operator and Field Technician			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Perform next level escalation	<a href="#">107860L1</a>	1	1
	Understand the System Development Life Cycle for technical support	<a href="#">107861L1</a>	1	1
	Understand the principle of troubleshooting	<a href="#">107862L1</a>	1	3
	Understand the principle of data security	<a href="#">107863L1</a>	1	1
	Understand the principle of data protection	<a href="#">107864L1</a>	1	1
	Understand professional ethics and conducts	<a href="#">107865L1</a>	1	3
	Keep user/client informed of status of work	<a href="#">107866L2</a>	2	1
	Provide support to users	<a href="#">107867L2</a>	2	3
	Comply with anti-bribery law and adopt a high standard of integrity in the operation and procurement of ICT products and services	<a href="#">107869L2</a>	2	1

2. Cluster Name	Operation Support (Technical Support Staff)			
QF Level	2			
Integrated Competency	Carry out system backup/recovery and server system monitoring			
Job Mapping	Junior / Senior TSS			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Maintain inventories of equipment/software	<a href="#">107892L1</a>	1	3
	Restore system or files from backups	<a href="#">107897L2</a>	2	3
	Monitor server system status	<a href="#">107898L2</a>	2	3
	Provide help desk support	<a href="#">107899L2</a>	2	3
	Perform system backup	<a href="#">107901L2</a>	2	3
	Perform simple web page update	<a href="#">107908L2</a>	2	3



<b>Clusters for Senior Technical Support Staff</b>				
3. Cluster Name	Application Support (Technical Support Staff)			
QF Level	2			
Integrated Competency	Carry out the coordination of application changes, installation, configuration and troubleshooting of application			
Job Mapping	Senior TSS			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Coordinate application change requests with developer	<a href="#">107872L2</a>	2	3
	Install and configure Apps on client devices	<a href="#">107873L2</a>	2	3
	Perform application configuration	<a href="#">107874L2</a>	2	3
	Troubleshoot application problems	<a href="#">107875L3</a>	3	3

4. Cluster Name	Email Support			
QF Level	2			
Integrated Competency	Carry out the installation, configuration, security control and troubleshooting of email system			
Job Mapping	Senior TSS and Field Technician			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Install and configure email clients	<a href="#">107876L2</a>	2	3
	Detect and protect against email spam	<a href="#">107877L2</a>	2	3
	Resolve email problems	<a href="#">107878L3</a>	3	3

5. Cluster Name	Network Support			
QF Level	2			
Integrated Competency	Carry out the installation and configuration of LAN, network components and content sharing on server			
Job Mapping	Senior TSS and Field Technician			

Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Build a small wireless LAN	<a href="#">107879L2</a>	2	3
	Install and configure network components/devices	<a href="#">107880L2</a>	2	3
	Setup content sharing on server	<a href="#">107881L2</a>	2	3

6. Cluster Name	Procurement Support			
QF Level	2			
Integrated Competency	Carry out the maintenance of inventory list, liaison with vendors and acquisition of computing hardware			
Job Mapping	Senior TSS, Senior Computer Operator and Senior Field Technician			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Work with service providers/vendors/developers	<a href="#">107868L2</a>	2	3
	Purchase computing hardware/components	<a href="#">107900L2</a>	2	3

7. Cluster Name	System Support			
QF Level	2			
Integrated Competency	Set up system maintenance procedure, carry out installation, configuration, maintenance and troubleshooting of systems			
Job Mapping	Senior TSS and Field Technician			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Implement system maintenance procedures	<a href="#">107893L2</a>	2	3
	Provide support for different operating systems	<a href="#">107894L2</a>	2	3
	Configure desktop client environment	<a href="#">107895L2</a>	2	3
	Perform Operating System installation	<a href="#">107896L2</a>	2	3
	Perform basic system administration	<a href="#">107903L3</a>	3	3
	Troubleshoot Operating System issues	<a href="#">107906L3</a>	3	3



<b>Clusters for Lead Technical Support Staff</b>				
8. Cluster Name	Core Skills for Operation and Support			
QF Level	3			
Integrated Competency	Possess the essential concepts and knowledge for the job responsibilities of senior Operation and Support post			
Job Mapping	Lead TSS, Senior Computer Operator, Senior Helpdesk Operator and Senior Field Technician			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Provide support for handling professional ethics and conducts issues	<a href="#">107870L3</a>	3	3
	Implement "clean" business practices, good controls and integrity management	<a href="#">107871L3</a>	3	3

9. Cluster Name	System Security Support			
QF Level	3			
Integrated Competency	Carry out the administration of user accounts, access control and system security			
Job Mapping	Lead TSS and Senior Field Technician			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Create and maintain user accounts on server	<a href="#">107885L2</a>	2	3
	Configure user access control on server	<a href="#">107886L3</a>	3	3
	Administer system security	<a href="#">107888L3</a>	3	3

10. Cluster Name	Network Support			
QF Level	3			
Integrated Competency	Carry out the installation, configuration and troubleshooting of WAN and client/server application			
Job Mapping	Lead TSS and Senior Field Technician			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Install and configure client/server application	<a href="#">107882L3</a>	3	6
	Configure WAN connection	<a href="#">107883L3</a>	3	3
	Troubleshoot network issues	<a href="#">107884L3</a>	3	3

11. Cluster Name	Network Security Support (Technical Support Staff)			
QF Level	3			
Integrated Competency	Carry out the security administration of workstations, website, network and firewall			
Job Mapping	Lead TSS			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit

	Administer basic network security	<a href="#">107887L3</a>	3	3
	Administer basic website security	<a href="#">107889L3</a>	3	6
	Administer perimeter firewall	<a href="#">107890L3</a>	3	3
	Strengthen workstation protection	<a href="#">107891L3</a>	3	3

12. Cluster Name	User Support			
QF Level	3			
Integrated Competency	Provide support to users and troubleshooting of client device hardware			
Job Mapping	Lead TSS, Senior Computer Operator, Senior Helpdesk Operator and Senior Field Technician			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Provide support to mobile device users	<a href="#">107904L3</a>	3	6
	Troubleshoot client device hardware issues	<a href="#">107905L3</a>	3	3
	Perform remote support	<a href="#">107907L3</a>	3	3

13. Cluster Name	Web Support			
QF Level	3			
Integrated Competency	Carry out the building, update, maintenance and troubleshooting of web site			
Job Mapping	Lead TSS			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Troubleshoot web browser and connection issues	<a href="#">107909L3</a>	3	3
	Maintain website performance	<a href="#">107910L3</a>	3	3
	Build simple web site using content management systems	<a href="#">107911L3</a>	3	3
	Maintain website	<a href="#">107912L3</a>	3	3

**Information and Communications Technology**  
**Specification of Competency Standards (SCS) for Operation and Support (O&S)**  
**Clustering for Help Desk Support (HDS) Stream**

<b>Clusters for Help Desk Operator</b>				
1. Cluster Name	Core Skills for Operation and Support			
QF Level	1			
Integrated Competency	Possess the essential concepts and knowledge for the job responsibilities in Operation and Support			
Job Mapping	Junior / Senior TSS, Computer Operator, Help Desk Operator and Field Technician			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Perform next level escalation	107860L1	1	1
	Understand the System Development Life Cycle for technical support	107861L1	1	1
	Understand the principle of troubleshooting	107862L1	1	3
	Understand the principle of data security	107863L1	1	1
	Understand the principle of data protection	107864L1	1	1
	Understand professional ethics and conducts	107865L1	1	3
	Keep user/client informed of status of work	107866L2	2	1
	Provide support to users	107867L2	2	3
	Comply with anti-bribery law and adopt a high standard of integrity in the operation and procurement of ICT products and services	107869L2	2	1

2. Cluster Name	Application Support (Help Desk Support)			
QF Level	2			
Integrated Competency	Carry out the installation and configuration of apps and email clients			
Job Mapping	Help Desk Operator			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Install and configure apps on client devices	107873L2	2	3
	Install and configure email clients	107876L2	2	3
	Provide help desk support	107899L2	2	3

3. Cluster Name	System Support (Help Desk Support)			
QF Level	2			
Integrated Competency	Carry out installation, configuration and troubleshooting of system			
Job Mapping	Help Desk Operator			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Provide support for different operating systems	107894L2	2	3
	Configure desktop client environment	107895L2	2	3
	Perform Operating System installation	107896L2	2	3
	Provide help desk support	107899L2	2	3
	Troubleshoot Operating System issues	107906L3	3	3

<b>Clusters for Senior Help Desk Operator</b>				
4. Cluster Name	Core Skills for Operation and Support			
QF Level	3			
Integrated Competency	Possess the essential concepts and knowledge for the job responsibilities of senior Operation and Support post			
Job Mapping	Senior Help Desk Operator, Lead TSS, Senior Computer Operator, and Senior Field Technician			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Provide support for handling professional ethics and conducts issues	107870L3	3	3
	Implement "clean" business practices, good controls and integrity management	107871L3	3	3

5. Cluster Name	User Support			
QF Level	3			
Integrated Competency	Provide help desk support to users and troubleshooting of client device hardware			
Job Mapping	Senior Help Desk Operator, Lead TSS, Senior Computer Operator and Senior Field Technician			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit

	Provide support to mobile device users	107904L3	3	6
	Troubleshoot client device hardware issues	107905L3	3	3
	Perform remote support	107907L3	3	3

6. Cluster Name	Network and Security Support			
QF Level	3			
Integrated Competency	Carry out the installation and configuration of LAN, network components, client/server application, workstation security and troubleshooting of web browser			
Job Mapping	Senior Help Desk Operator			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Build a small wireless LAN	107879L2	2	3
	Install and configure network components/devices	107880L2	2	3
	Install and configure client/server application	107882L3	3	6
	Strengthen workstation protection	107891L3	3	3
	Troubleshooting web browser and connection issues	107909L3	3	3

Clusters for Field Technician				
1. Cluster Name	Core Skills for Operation and Support			
QF Level	1			
Integrated Competency	Possess the essential concepts and knowledge for the job responsibilities in Operation and Support			
Job Mapping	Junior / Senior TSS, Computer Operator, Help Desk Operator and Field Technician			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Perform next level escalation	107860L1	1	1
	Understand the System Development Life Cycle for technical support	107861L1	1	1
	Understand the principle of troubleshooting	107862L1	1	3
	Understand the principle of data security	107863L1	1	1
	Understand the principle of data protection	107864L1	1	1
	Understand professional ethics and conducts	107865L1	1	3
	Keep user/client informed of status of work	107866L2	2	1
	Provide support to users	107867L2	2	3
	Comply with anti-bribery law and adopt a high standard of integrity in the operation and procurement of ICT products and services	107869L2	2	1

2. Cluster Name	Operation Support (Field Technician)			
QF Level	2			
Integrated Competency	Carry out system backup/recovery and server system monitoring			
Job Mapping	Field Technician			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Maintain inventories of equipment/software	107892L1	1	3
	Restore system or files from backups	107897L2	2	3
	Monitor server system status	107898L2	2	3
	Perform system backup	107901L2	2	3

3. Cluster Name	Email Support			
QF Level	2			
Integrated Competency	Carry out the installation, configuration, security control and troubleshooting of email system			
Job Mapping	Field Technician and Senior TSS			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Install and configure email clients	107876L2	2	3
	Detect and protect against email spam	107877L2	2	3
	Resolve email problems	107878L3	3	3

4. Cluster Name	Network Support			
QF Level	2			
Integrated Competency	Carry out the installation and configuration of LAN, network components and content sharing on server			
Job Mapping	Field Technician and Senior TSS			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Build a small wireless LAN	107879L2	2	3
	Install and configure network components/devices	107880L2	2	3
	Setup content sharing on server	107881L2	2	3

5. Cluster Name	System Support			
QF Level	2			
Integrated Competency	Set up system maintenance procedure, carry out installation, configuration, maintenance and troubleshooting of system			
Job Mapping	Field Technician and Senior TSS			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Implement system maintenance procedures	107893L2	2	3
	Provide support for different operating systems	107894L2	2	3
	Configure desktop client environment	107895L2	2	3
	Perform Operating System installation	107896L2	2	3

	Perform basic system administration	107903L3	3	3
	Troubleshoot Operating System issues	107906L3	3	3



Clusters for Senior Field Technician				
6. Cluster Name	Core Skills for Operation and Support			
QF Level	3			
Integrated Competency	Possess the essential concepts and knowledge for the job responsibilities of senior Operation and Support post			
Job Mapping	Senior Field Technician			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Provide support for handling professional ethics and conducts issues	107870L3	3	3
	Implement "clean" business practices, good controls and integrity management	107871L3	3	3

7. Cluster Name	Procurement Support			
QF Level	2			
Integrated Competency	Carry out the maintenance of inventory list, liaison with vendors and acquisition of computing hardware			
Job Mapping	Senior Field Technician, Senior TSS and Senior Computer Operator			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Work with service providers/vendors/developers	107868L2	2	3
	Purchase computing hardware/components	107900L2	2	3

8. Cluster Name	System Security Support			
QF Level	3			
Integrated Competency	Carry out the administration of user accounts, access control and system security			
Job Mapping	Senior Field Technician and Lead TSS			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Create and maintain user accounts on server	107885L2	2	3
	Configure user access control on server	107886L3	3	3
	Administer system security	107888L3	3	3

9. Cluster Name	Network Support			
QF Level	3			
Integrated Competency	Carry out the installation, configuration and troubleshooting of WAN and client/server application			
Job Mapping	Senior Field Technician and Lead TSS			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Install and configure client/server application	197882L3	3	6
	Configure WAN connection	107883L3	3	3
	Troubleshoot network issues	107884L3	3	3

10. Cluster Name	Network Security Support (Field Technician)			
QF Level	3			
Integrated Competency	Carry out the security administration of network and web site			
Job Mapping	Senior Field Technician			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Administer basic network security	107887L3	3	3
	Administer basic website security	107889L3	3	6

11. Cluster Name	User Support			
QF Level	3			
Integrated Competency	Provide support to users and troubleshooting of client device hardware			
Job Mapping	Senior Field Technician, Lead TSS, Senior Computer Operator and Senior Helpdesk Operator			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Provide support to mobile device users	107904L3	3	6
	Troubleshoot client device hardware issues	107905L3	3	3
	Perform remote support	107907L3	3	3



**Information and Communications Technology**  
**Specification of Competency Standards (SCS) for Operation and Support (O&S)**  
**Clustering for Computer Operator (CO) Stream**

<b>Clusters for Computer Operator</b>				
1. Cluster Name	Core Skills for Operation and Support			
QF Level	1			
Integrated Competency	Possess the essential concepts and knowledge for the job responsibilities in Operation and Support			
Job Mapping	Junior / Senior TSS, Computer Operator, Help Desk Operator and Field Technician			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Perform next level escalation	107860L1	1	1
	Understand the System Development Life Cycle for technical support	107861L1	1	1
	Understand the principle of troubleshooting	107862L1	1	3
	Understand the principle of data security	107863L1	1	1
	Understand the principle of data protection	107864L1	1	1
	Understand professional ethics and conducts	107865L1	1	3
	Keep user/client informed of status of work	107866L2	2	1
	Provide support to users	107867L2	2	3
	Comply with anti-bribery law and adopt a high standard of integrity in the operation and procurement of ICT products and services	107869L2	2	1

2. Cluster Name	Operation Support (Computer Operator)			
QF Level	2			
Integrated Competency	Carry out system backup/recovery, server system monitoring and data centre operations			
Job Mapping	Computer Operator			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Maintain inventories of equipment/software	107892L1	1	3
	Restore system or files from backups	107897L2	2	3
	Monitor server system status	107898L2	2	3
	Provide help desk support	107899L2	2	3
	Perform system backup	107901L2	2	3
	Perform fundamental data centre operations	107902L2	2	2
	Perform simple web page update	107908L2	2	3

3. Cluster Name	System Support (Computer Operator)			
QF Level	2			
Integrated Competency	Install email client, set up system maintenance procedure, carry out installation, configuration, maintenance and troubleshooting of system			
Job Mapping	Computer Operator			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Install and configure email clients	107876L2	2	3
	Implement system maintenance procedures	107893L2	2	3
	Provide support for different operating systems	107894L2	2	3
	Configure desktop client environment	107895L2	2	3
	Perform Operating System installation	107896L2	2	3
	Perform basic system administration	107903L3	3	3
	Troubleshoot Operating System issues	107906L3	3	3

<b>Clusters for Senior Computer Operator</b>				
4. Cluster Name	Core Skills for Operation and Support			
QF Level	3			
Integrated Competency	Possess the essential concepts and knowledge for the job responsibilities of senior Operation and Support post			
Job Mapping	Senior Computer Operator, Lead TSS, Senior Helpdesk Operator and Senior Field Technician			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Provide support for handling professional ethics and conducts issues	107870L3	3	3
	Implement "clean" business practices, good controls and integrity management	107871L3	3	3

5. Cluster Name	Procurement Support			
QF Level	2			
Integrated Competency	Carry out the maintenance of inventory list, liaison with vendors and acquisition of computing hardware			
Job Mapping	Senior Computer Operator, Senior TSS and Senior Field Technician			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Work with service providers/vendors/developers	107868L2	2	3
	Purchase computing hardware/components	107900L2	2	3

6. Cluster Name	User Support			
QF Level	3			
Integrated Competency	Provide help desk support to users and troubleshooting of client device hardware			
Job Mapping	Senior Computer Operator, Lead TSS, Senior Helpdesk Operator and Senior Field Technician			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Provide support to mobile device users	107904L3	3	6
	Troubleshoot client device hardware issues	107905L3	3	3
	Perform remote support	107907L3	3	3

7. Cluster Name	Web and Network Support			
QF Level	3			
Integrated Competency	Carry out the update/maintenance of web site and troubleshooting of network			
Job Mapping	Senior Computer Operator			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Troubleshoot network issues	107884L3	3	3
	Maintain website	107912L3	3	3

8. Cluster Name	Security Support			
QF Level	3			
Integrated Competency	Carry out the administration of user accounts, access control and network security			
Job Mapping	Senior Computer Operator			
Units of Competency	UoC Title	UoC Code	QF Level	QF Credit
	Create and maintain user accounts on server	107885L2	2	3
	Configure user access control on server	107886L3	3	3
	Administer basic network security	107887L3	3	3