

TECHNICAL SUPPORT SERVICES - REQUIREMENTS AND SPECIFICATION

1. INTRODUCTION

This guideline serves to provide information for tender about the requirements and specifications of providing technical support services (TSS).

2. OBJECTIVES

The objectives of providing the Technical Support Services to schools are:-

- a) to provide a single point of contact to schools for resolving all problems and support issues arising from the usage of the computer facilities;
- b) to offload schools on the day-to-day administration, operation and management of the computer facilities; and
- c) to support schools in setting up and/or configuring hardware and software for specific purposes.

3. SERVICES TO BE PROVIDED BY CONTRACTOR

I. Basic Requirement of Contractor on technical support experience

Continuous Performance evaluation

Contractor should monitor service quality level regularly from time-to-time to maintain a high services quality not limited to the following methods:-

- Quarterly questionnaire on system engineer's performance sent to school, results collected will be used for performance analysis for continuous improvement in quality.
- Regular site visits and performance appraisal performed by senior engineers and managers for the system engineers
- Evaluation meetings with school's representatives

Customized Free Add-on Services

Network Health Check and Consultation

Contractor should provide a network check once per year. We will provide one day network analysis and related data collection. An analysis report will be represented by our engineers.

- School network diagram;
- Switches port activity and utilization;
- Server information & performance;
- Server memory / process statistics;
- Security information on user accounts;

- Anti-virus information;
- Suggestion Summary.

Regular training sections for System Engineer

In order to provide quality of service to the school, our, regular trainings for system engineers should be provided by the contractor for their continuous improvement in performance.

The content of training courses including but not limited to following aspects:-

- Window server environment (DNS, DHCP, Active Directory, User management, etc);
- Linux sever environment (Web server, Mail server, Proxy Server, etc);
- Essential techniques in WebSAMS ;
- Essential Networking for school's environment;
- Data Backup (Tape drive, MS robocopy, etc);
- Emergency System Recovery;
- Effective communication skill in school's environment.

II. On-site Support of System Engineer

Working Schedule

- Basic Servicing Hours: 44 hours per week
- Back-end Supporting Hours: at least 48 hours per year
- Emergency Support Hours: at least 48 hours per year

Qualifications of System Engineer

The minimum qualifications of the System Engineer are listed below:

- i. Completion of **Higher Diploma in IT discipline** or above or equivalent;
- ii. Holder of Microsoft Certified Professional (MCP) on Microsoft or professional certificate in information technology or above or equivalent;
- iii. At least 1-year relevant experience in Windows or Network Support in WAN/LAN implementation is highly preferred;
- iv. Ability on Linux Server (Firewall with DM Zone, Samba, Apache, Web Mail);
- v. Detailed knowledge of network operating systems, network equipment, networking software and other hardware and software;
- vi. Detailed knowledge of communication protocols, e.g. TCP/IP;
- vii. Solid experience in supporting and managing web servers;
- viii. Competent in diagnosing and resolving problems;

- ix. ix. Capable of setting guidelines and procedures for the daily operations of installed WAN/LAN; and
- x. Good command of written and spoken English and Chinese, fluent in spoken Cantonese.

The responsibilities of the System Engineer shall at least include the followings:

- i. As a single point of contact in the Site, liaising with various parties on the operation support of all IT facilities;
- ii. Providing remedial support for resolving all problems and support issues arising from the usage of the computer facilities;
- iii. Carrying out operational support tasks on day-to-day administration, operation and management of the computer facilities;
- iv. Performing the assigned tasks in setting up and/or configuring the computer facilities for specific purposes including assisting users in accepting the newly acquired hardware, software and/or the implementation service;
- v. Compiling the reports when required by the Site including the inventory report for the Software Asset Management;
- vi. Maintain WebSAMS day-to-day operation; and
- vii. Providing technical support to general matters relating the operation of the IT facilities in the Site including the general usage of installed hardware and software.

System Engineer shall NOT commit any of the following acts in the School: -

- behave in a manner likely to endanger himself or any other person;
- cause willful damages to any property;
- consume alcoholic beverage;
- enter any area of the school other than those necessary for the Services;
- fail to wear uniform or company identity card whilst on duty upon requested by school;
- fail to follow the instructions on hair style and dressing style requested by school;
- fight;
- gamble, steal or commit any criminal offence;
- smoking; and
- use foul languages

Terms of Employment of System Engineer

In order to guarantee the quality of the service provided, the system engineer provided by the contractor should be a full time employee of the service provider under direct employment. Tender will not be considered if the system engineer is sub-contracted to other service provider(s) or company within the contract period. School can

terminate the contract without any compensation if the contractor sub-contracts out the technical support services to other service provider I company during the contract period.

III. Support of Web-based School Administration & Management System

Contractor should demonstrate solid experience and qualifications to provide support of Web-based School Administration & Management System.

IV. Mode of Supplementary Support

Contractor should provide:

1. Telephone Hotline

Contractor should provide the dedicated telephone hotline as a single point of contact to school for all support and administration issues related to the TSS.

2. Email Enquires and Support

Contractor should provide the dedicated email address to school for all support and administration issues related to the TSS.

3. Network Security Support

Contractor should provide installation and configuration services of firewall, intrusion detection and proxy services in order to protect school network. Contractor should also provide daily update services for intrusion detection patterns and websites filtering services, as well as provide network-monitoring services on network security.

4. Remote Support

Contractor should provide remote support services for school network e.g. contractor should provide remote support services on firewall when firewall cannot properly function or configuration of firewall is required.

5. Services Monitoring

Contractor should demonstrate the services-monitoring procedures in order to provide the committed service level.

V. Type of Services

Contractor should provide: -

- a) Remedial Support Tasks
- b) Operational Support Tasks
- c) Task-based Support Tasks

Remedial Support Tasks

- i. Trouble-shooting and recovery from network, server or workstation failure with minimum data loss, and in shortest possible period of time so as to minimize disruption of services and inconveniences to users;
- ii. Recommendation and implementation of solutions to failure. The solutions implemented may be of short term nature, in that case, tenderer will indicate clearly to the LAN administrator and propose recommendations on long term solutions;
- iii. Liaison and follow-up, when necessary, with other relevant parties for implementing solutions;
- iv. Initial reporting of the incident and the subsequent progress update of the situation to the users until the case is resolved;
- v. Assisting other contractors to identify the faults regarding issues on technical incompatibility and coordinating contractors to solve the problems;
- vi. Advising LAN administrator(s) to contact various Government departments or equivalent parties for follow up actions if the failure is related to site work and shortage of power supply; and
- vii. Maintaining the details of problem and change logs including the site affected, LAN administrator (name, rank & tel no.), user affected (name, rank & tel no.), category of failure, response time, called/closed date and time, handler (name & title), events, services provided, remedy taken, impact to user, follow-up actions, suggestions for improvements, escalation detail, etc.

Operational Support Tasks

- i. Network Operations
 - Performing preventive investigations, maintenance and monitoring of the overall operations of the network such as checking system logs and fine tuning of software settings;
 - Performing review and reconfigurations on network connections;
 - Providing recommendations for improvement on the performance and reliability on the networks and usage of the system resources;
 - Coordinating various parties such as the Government contractors for network upgrade, restructuring, migration or integration.
- ii. User Accounts and Resources Management
 - Performing user account creation, deletion, properties alternation;
 - Performing necessary hardware and software configurations for resources
 - sharing e.g. file and print;
 - Assigning storage quota for users;
 - Defining necessary system policies and user profile settings;
 - Performing data backup and recovery and provide guideline to user if requested.
- iii. Software Update and Upgrade
 - Updating the system and application software with the necessary service
 - packs, patches, fixes and etc, e.g. updating the signature files of anti-virus

- software;
 - Performing version upgrade for software such as Network Operating System, software driver, anti-virus software and LAN-based application
 - software;
 - Carrying out small-scale software installation, customizations and configurations.
- iv. Server and Workstation Housekeeping
- Monitoring and maintaining the configuration of server and workstation machines;
 - Checking housekeeping job reports, system and error logs;
 - Performing virus checking and assisting user to recover system/data;
 - Helping user to perform the data files backup before upgrade and reload data files after installation and providing guideline and upgrade plan to users if requested.
- v. Peripherals Housekeeping
- Performing driver updates;
 - Replacing printer toner and cartridge.
- vi. Internet Services
- Coordinating various parties such as the Internet Services Provider (ISP) of the Site for the support, maintenance and performance monitoring of the Internet connection of the network;
 - Supporting and maintaining the Internet services servers, e.g. web servers, proxy servers, email servers and etc.
- vii. Security
- Maintaining the security of the network;
 - Implementing necessary security policies to protect the network.
- viii. User Support
- Assisting users to set up the network environment for teaching and learning/school administration;
 - Providing support to users on the general usage of installed hardware and software.
- ix. Software Asset Management (SAM) and Reporting
- Performing initial inventory keeping at the commencement of the Services;
 - Performing regular inventory keeping, especially on the software items, in order to assist the users in ensuring no illegal software is installed on any machines in the Site;
 - Preparing and updating the network diagram and other system documentation to reflect the implemented solution and upgrade of hardware and software;
 - Preparing management report, technical support service report and inventory report for each individual Site.
- x. School Website Update and Maintenance

- Performing school website update and maintenance according to the School’s requirements.
- xi. Photo / Video Shooting and Editing
- Performing photo / video shooting and editing to different formats according to the School’s requirements.
- xii. Teaching Assistance
- Performing teaching assistance to help teachers on lessons when necessary.

Task-based Support Tasks

- Large scale hardware and software installation, customizations and configurations;
- Carrying out acceptance tests on behalf of users for newly acquired hardware and software to be installed into the networks by various Government contractors;
- Equipment relocation and system reconfiguration;
- Hands-on briefing/training to the new LAN administrator(s) upon personnel change;
- Data migration services; and
- Any other activities which are necessary for achieving the service requirements.

Service Level

Items	Minimum Service Level
Response time for phone call	less than 15 seconds
Response time for voice mail via phone call and email enquiries	less than 10 minutes
Response time for user complaints and enquiries	within same day

Remedial Support

Items	Minimum Service Level
Elapsed time to provide solution or workarounds to resume normal operations from critical system/network failure or major system/network failure	no more than 4 hours
Elapsed time to provide solution or workarounds to resume normal operations from general system/network failure	no more than 10 hours

Operational Support

Items	Minimum Service Level	
LAN	Number of outage in a month	no more than 3 times
	Accumulative hours of outage in a month	no more than 10 hours
	Notice in advance for scheduled outage	at least 7 days before outage
Each individual equipment	Number of outage per each equipment in a month	no more than 3 times
	Accumulative hours of outage per each equipment in a	no more than 10 hours

	month	
Backup & Recovery	Number of unsuccessful backup in a month	no more than 1 time
	Redo of unsuccessful backup	within 1 day
	Successful rate of backup and recovery reliability tests	100%

Operational Support Task List

Task/Activity	Minimum Frequency
<i>Network monitoring and tuning</i>	
System operation status (e.g. print queue, equipment power, n/w service)	Daily
Server logs checking (e.g. RAID, UPS, System)	Daily
System logs (e.g. applications access)	Daily
External connections (e.g. Internet, remote access, proxy cache)	Weekly
Network traffic (e.g. switches/hubs performance)	Daily
Resources usage (e.g. disk space usage)	Monthly
Server time synchronization	Weekly
Intruder monitoring	Daily
Server performance (e.g. CPU usage, memory paging rate)	Weekly
Network connections and reconfiguration (e.g. plugging and unplugging the network cables, configuring machine network settings, network equipment and remote connections)	Monthly
<i>User account and resources management</i>	
Small-scale user account creation, deletion and reconfiguration & grouping of user accounts (e.g. reset password, configuring login scripts)	Weekly
Large-scale user account creation, reconfiguration, deletion & grouping	Quarterly
Review user profile and system policy settings	Weekly
Review disk quota allocation	Bi-weekly
Configure file and print sharing	Weekly
<i>Data backup</i>	
Perform data backup	according to the predefined backup schedule
Check backup logs	Daily
Label, replace and store of backup tape	Weekly
Perform backup and recovery reliability tests	Quarterly
<i>Software update</i>	

Technical Support Services - Requirements and Specification

Signature files of anti-virus software	Bi-weekly
Service packs, patch, fixes for software	Monthly
Small scale software installation, configuration and customization	Monthly
<i>Housekeeping</i>	
Check (and replacing if required) laser printer toners, inkjet printer ink boxes	Bi-weekly
Workstation housekeeping (e.g. optimizing hard disk, tune system clock)	Monthly
Monitor and maintain the configuration of student workstations	Weekly
Monitor virus scanning (e.g. examine log)	Weekly
BIOS updates	Quarterly
<i>Reporting</i>	
Review and update Documents as specified in Specification	Monthly
Update of network diagram and other system documentation	Monthly
<i>Inventory taking</i>	
Inventory database update	Monthly
Inventory reports preparation	Monthly