B. K. L. Walawalkar Rural Medical College

I.T. POLICY MANUAL

DEAN
B.K.L.Walawalkar Rural Medical College
At.Kasarwadi, Post.Sawarde
Tal.Chiplun,Dist.Ratnagiri

I.T. POLICY MANUAL

DATE- 08/01/2022

Mission–

To provide round the clock facilities of hardware, software and network. Zero loss of data store on server. Minimize downtime for HMS software.

Vision –

To ensure provide technical support in multiple aspect and multiple department to run their activity to day to day basis.

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1. INTRODUCTION

The institute has a separate IT department with an IT head and IT personal working for the maintenance of IT facilities. The most important use for IT may be to help reduce medical errors. This technology-based strategy has proven effective in reducing the effects of human error in industries such as banking and aviation. Clinical IT systems may make a substantial impact on medical quality and safety by integrating relevant automated decision making and knowledge acquisition tools into the practices of medical providers, thereby reducing errors of omission that result from gaps in provider knowledge or the failure to synthesize and apply that knowledge in clinical practice. These systems, when integrated within larger HIS systems, may improve medical decision making and appropriate use of diagnostic tests and therapeutic agents. Provide support to staff on all institute supported applications. Ensure LAN, WAN &Wi-Fi performance meets institute and user requirements.

Every department has adequate computers. A more than 400 computers are placed in various Departments. Library computers can be used by students for access and document printing purposes .We have approx. 400 computers in premises, excluding approx. The entire campus is intra and internet-connected. The 100 Mbps bandwidth of internet connections is available. Internet connections are provided in all departments, staff rooms, classrooms, seminars, and demonstration room's .Provision to attend Virtual meetings, seminars and guest lectures for students is made. The campus is connected with optic fibre, copper and Wi-Fi intranet and all desktops are having internet facility. The library is digital with a Wi-Fi system and internet connectivity. Students and teachers have access to e-journal affiliated to Maharashtra University of Health Sciences has an e-library (Open-source digital library). All key management members are provided with Wi-Fi facility with dongle backup in case of internet failure. Institute is a member of the clinical key subscription in which currently there are more than 1000 full text articles and 5000 e-books available which students and teaching staff can access. Student's feedback about teachers is regularly done using Goggle forms workshops Medical College is collecting student feedback through Google form IT department supports technically to individual department as and when required.

In the ambulatory healthcare environment, the use of HIS offers a variety of benefits. First, it can improve the efficiency and financial health of the practice. For years, we have used computerized scheduling and financial systems to streamline office processes by tracking practice productivity and automating reimbursement processes. Second, the use of ambulatory electronic health records also offers an opportunity to monitor and improve clinical quality by improving information access and reducing duplicative documentation. And technology-based tools may improve the efficiency and safety of prescribing practices in the outpatient setting just as they have done in the hospital setting. Finally, the widespread adoption of HIS will allow the achievement of system connectivity and information exchange among providers of the same organization, among organizations.

2. SCOPE:

To design the scope of IT department we need to first classify the basic categories of its functionality. Hence the basic functionalities are as given below.

1 Technical Support.
2 Systems Management and Administration.
3 Project Management.
4 Strategic Planning
5 SURVILEANCE
6 Staff training
7 Data entry support
8 Bio- Medical support
9 Others work

1 Technical Support.

Under Technical support there would be various sub categories

1.1 Hardware Technical Support.

Under this category IT department would take support call for the following.

- Any computer peripheral issue.
- Any printer issue.
- Any Networking peripheral issue and Internet Facility. Note: Any repairing job is outsourced.
- Any UPS related issues.
- Any projector and laptop related issues.
- Any CPU related issues (Note: any repairing related job is outsourced)
- Any mouse, keyboard, camera, speaker's related issues.

1.2 Software Technical Support.

Under this category IT department would take support call for the following

- Support to all software's as mentioned in Electronic Information policy. IT department maintains the following listed databases.
- HMS System (Lifeline HIS database)
- Tally Database.
- TDS Database
- Time and Attendance

- HR Pay rolls (Payroll System)

1.3 Network technical support

Under this category IT department would take support call for the following:

- Bio medical technical support to radiology department, pathology lab and medical college lab.

2. Support to databases maintained by IT department, as mentioned in the data base maintained Policy.

The lists of database maintained by IT Department.

- HMS System (Lifeline HIS database)
- Tally Database.
- TDS Database.
- HR Payroll Database
- Time and Attendance
- System Backup of Doman controller.
- Support for any Operating System related issues.
- Support for any antivirus issues.

2 Systems Management and Administration.

Under this category we have following sub categories.

- System management and administration of all Servers.
- System management and administration of Network.
- System management and administration of Databases maintained.
- System management and administration of Antivirus server.
- System management and administration of HMS server.
- System management and administration of TDS, Tally server.
- System management and administration of HR Payroll Server
- System management and administration of Firewall.
- System Management and administration of Preventive Maintenance of Computers.

3 Project Management.

We divide the point in two sectors.

- **Ton key projects**.
  - In Ton key projects IT uses its own resources to work out the project feasibility to the plan.
- **Team projects.**
  - In team projects IT would participate in the some project plan.

4 Strategic Planning.

Under this section IT innovates and finds better solutions to current issues. We become proactive and anticipate and technical issues and inform them to respective authorities. We make yearly budgets and work according on the sanctioned one.

5) **Surveillance.**

In our hospital, medical college and school have more than 250 CCTV camera surveillance. Our CCTV camera record 24/7 in campus. All data save in our server room. If our security department want same CCTV footage or same incidence happen in campus we provide that incidence CCTV footage to security guard in charge. We provide network connection to that CCTV surveillance camera and also technical support. If came same repairing issues regarding camera, we appoint other people for it. IT department take care of its maintence, we clean monthly our all CCTV camera, spo they record properly.

6) **Staff training.**

Our IT Department conduct new joining staff training or if our software getting updated. We conduct training organized for various departments like reception user staff, billing user staff, IPD Assistance and nurse head, lab user staff, RIS department users, OT users, insurance call, MRD users, pharmacy staff, inventory staff and statistical report and enterprise. We conduct our last training sensation17th January 2022 to 22ndJanuary 2022. It's almost take one week time. We gave Training for all HMS modules, for new technologies, Installation of new software and OS, Management level

trainings, Call handling training, Material management and Networking Training

7) **Bio Medical Support.**

Hospital have x-ray department, MRI department, pathology lab, Cath lab extra we provide them bio medical support and also technical support. If lab department want add same new test we add that test with chairperson permission. For radiology department and MRI department we provide network support as well as we send their important photo to any third person for research or diagnosis purpose. We daily take backup data to radiology department and MRI department and save to our server. We gave technical and network support to pathology lab for doing various type of test. Same time if required to do same live operation in rare cases that time we arrange all that equipment and do photography and videography of that operation. For medical student learning purpose we arrange live operation in our hospital that time IT department play key role in it.

8) **Other Work.**

Our IT Department helps organizing seminar, workshops, conference, and various types of camp, school, college, medical college, nursing college event, and hospital event. We cover all type of event and activity. Do videography and photography. When VVIP guest come to visit our hospital and college we organize hospitality for them. When school sports complex organize sports event we gave technical support to them as well as we do online registration. We gave network connection to sport complex. We manage their videography and photography of sport complex event. We arrange speaker mike for hosting events. We also work for various department's making report, documentation, presentation, graphics design, editing photos, videos and audios. After pandemic lots of meeting happen online with Google meet or zoom meet we arrange all departments meeting and gave technical and network support to them.

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3. OBJECTIVE

- To produce and provide high quality technical support and provide high quality internet connection to hospital staff doctor, medical student, professor.
- We provide training to new joining staff of the software and also software's updated version. If required training to related department or staff.
- We focus on we provide accurate and immediate service regarding to technical issues so hospital and college work will get smoother.
- To helps security person for CCTV surveillance.
- We help each and every department for making document, presentation, making graphics design & also maintaining all event photo and video record.
- We help in organizing seminar, conference, workshops and events.

4. INVENTORY FOR MAINTENANCE

We have total more than 400 computers in campus (Hospital, School, Medical College, UHTC, and RHTC). We have 9 Servers that includes Application server, Backup, AV, and AD, CR (PACS) (CT) (CATH LAB) (SPORTS) (PHOTO) (SVJCTEMS) extra. We also have 7 no of Network Rack with Backbone of Optic Fibre Cable. We maintain Firewall Device & Management. Our doctor student, guest lecturer People Link with Video Conferencing, Hardware like projectors & laptop or computer. We have more than 14 Laptop and we used more than 33 Projectors. We used IOMEGA NETWORK Backup Storage Device & Management. We used Laparoscopy Hardware & provide technical support of this software. We provided more than 100 printers and we also provide maintains of those printers. We provided more than 15 scanners and also provided technical support of those Scanners.IT Department provided flatbed and full duplex. We have barcode scanner more than 10 also we have dome scanner more than 7 and regular scanner. We have card printer 2. We have UPS more than 400 of 600VA. 1 UPS is 10KVA, 1UPS is. 6 KVA, 2 UPS is 2KVA, 1 UPS of 3KVA (DAMS) extra.

UPDATES IN IT FROM 2015 TILL 2021

YEAR	2021-22	2020-21	2019-20	2018-19	2017-18
No. of computers	462	400	375	320	300
Internet connectivity available to computers	312	250	212	198	150
Wi-Fi connections/ dongles	46	34	22	20	10
Internet speed available	100 Mbps	100 Mbps	100 Mbps	50 Mbps	50 Mbps
Security available (anti-virus protection available for):	Trend Micro end point security	Trend Micro end point security	Symantec end point protection anti-virus	Symantec end point protection anti-virus	Symantec end point protection anti-virus

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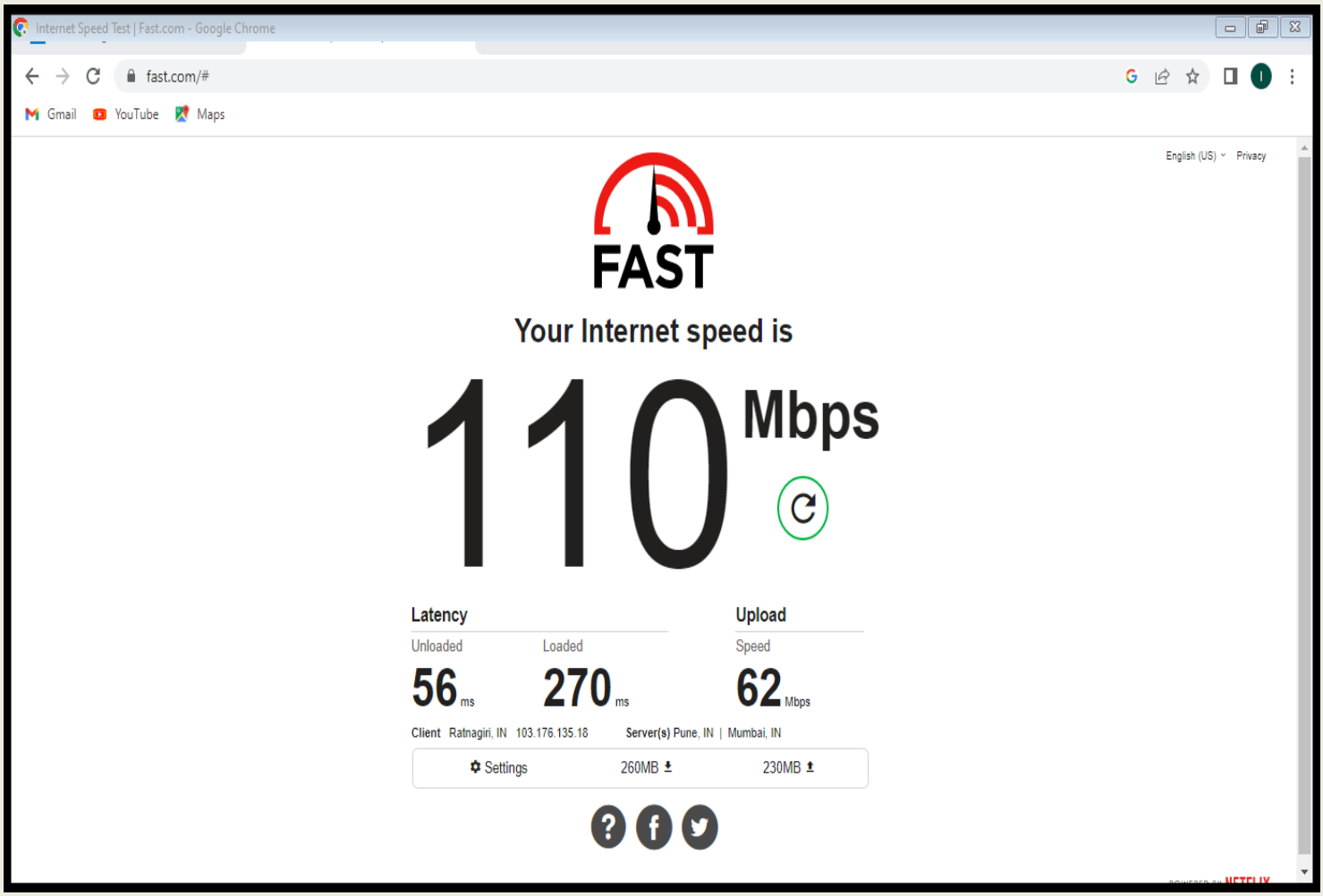
- **Available bandwidth of internet connection in the Institution (Lease line)**

Available bandwidth of internet connection in the Institution (Leased line)				
≥1 GBPS	**500 MBPS - 1 GBPS**	**250 MBPS - 500 MBPS**	**50 MBPS - 250 MBPS**	**50 MBPS**
			Yes	



Internet Speed From Fast.com Website

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5. SERVICES PROVIDED

- ## Software's in Campus
  - **Lifeline HIMS (Hospital) -** this software used by all medical staff. Our IT department gave training to all new join staff of this software and created Id password for staff. We provided day to day updated version of this software. IT department help staff nurses and medical staff same issued regarding to lifeline.
  - **Symantec Antivirus (Network**) - these software we use for protection purpose of our computer data it's called antivirus. We install this software in each and every computer and laptops. When its antivirus get expire IT Department removed and install new antivirus or we renewed this antivirus time to time when it's required.

- **Tally, Tax Base (Accounts**) – this software used by account department. If required any technical support IT department gave that technical support. Also gave updated version of that software.
- **Retail ware (Canteen) –** this software use in hospital canteen for billing. IT department provide for its technical as well as network support.
- **Acme (Grocery, canteen, pharmacy) –** acme software use in grocery shop, canteen and pharmacy for billing. IT department provide technical support for it.
- **Endoclinic (Scopy software) –**technical and network support providing from IT department.
- **Elisa Reader (Microbiology**)- this software using by microbiology department when its required IT department proving technical and network support. And also daily basis IT department takes backup of this.
- **Spandan (Stress Test) –** providing technical and network support from IT department.
- **Web 1000 (AGFA X-Ray viewing) - these** software using by radiology department. For this IT department providing technical and network support as well as IT department gave them bio-medical support also. If they want to send photo IT department send it. IT department daily take backup of this software and save all data to server.
- **Winspiro, Helios (PFT) -** proving technical and network support from IT department.
- **EPI Info (CHD, Dental, MICU, NICU, MRD) –** this software using by dental, all ICU, MRD and CHD for making report. IT department provide all technical and network support as well as bio medical support.
- **AutoCAD (Construction)**– proving technical and network support from IT department.
- **PeopleLink Video Conferencing –** after pandemic all conference and meeting happen online through zoom meet and Google meeting. IT department provide all technical support like projector laptop and desktop for it as well as

network connection for it. Same time we provide webcam for the meeting.

- **Payroll (Accounts) –** this software using by account department. IT department gave technical and network support.
- **E Time Tracklite (Attendance system) –** we have finger print attendance system for working staff in our hospital medical college and school. We provide technical and network support for that software and hardware.
- **Siemens (CT Simulator)**
- **Digital X-Ray Machine Software. –** We provide technical, network and bio-medical support for it. And also if there staff wants to send their photo send foe research or diagnosis IT department provide that service. As well as we take backup on that data on every day basis.
- **Sonography Software (Philips) -**We provide technical, network and bio-medical support for it. And also if there staff wants to send their photo send foe research or diagnosis IT department provide that service. As well as we take backup on that data on every day basis.
- **SPSS (Analysis software)**-proving technical and network support from IT department.

- **CMS (Blood Component)**-proving technical and network support from IT department.
- **Video editing Software –** we using any video convertor software for video editing. In campus lots of event organized by our hospital, medical college, nursing college and school or sport complex, so IT department make videography of it. So we present that video after editing we edit that video through this software.
- **SHREE Lipi (Marathi)**- this software use for official Marathi typing. When professor make same document in Marathi using this IT department install this software/font in the laptop or computer. We provide technical support for this software.
- **PACS (Radiology + Cathlab)**

- **AutoScan (Microbiology)** - this is scanning software, using by microbiology department. IT department provide technical, network and bio-medical support for it.
- **GE CT scan software** -proving technical and network support from IT department. Also IT Department provide bio-medical support for it. We take daily backup of this data and save in server.
- **Paper port** - proving technical and network support from IT department.
- **Canon Xerox Network Scan & Print –** medical college and hospital all department use canon printer for Xerox, scan and print. IT department install that software in all department computers for printing purpose. All technical and network support provide from IT department. If any printer repairing related issue all material send out side for repairing.

- **Surveillance–**

Our college, school and hospital have 277 CCTV cameras. Whole campus is fully secure with CCTV surveillance. IT Department take care of this system. Our all c.c.t.v camera distributing like this, in old hospital have total 14 cameras and new hospital has total 32 cameras. Canteen, medical & grocery shops have 4 cameras each. Our VVIP guest staying in Sharayu building this building located in our hospital campus which has 7 security camerasin school have placed 24 cameras in school campus. In nursing college placed 6 cameras. In medical college have placed 27 cameras.in boys hostel were leave medical college and nursing college boys there placing 14 cameras as well as girls hostel were nursing college, medical college ,advance study and staff girls have to leave there we placed 34 cameras. In campus residence building, new hospital and sports academy we placed total 24 cameras. In central library we have placed 8 cameras. Medical college old hospital and new hospital we placed 64 cameras. In sports complex we placed total 4 cameras in shooting range site. Radiotherapy department we placed 6 cameras. We have total 33 CCTV DVR.

We gave all technical and network support for this all CCTV cameras. If something wrong happen we provided that video clip to security in charge with permission of chairperson.

- **Project Data Entry**

Malnutrition
Dental
Adolescent Girls
Snake bite
Scorpion bite
AUF (Acute Undifferentiated Fever)

Projects and data entered in Epi info software data entry forms and analysis done in SPSS software. It department provide technical and network support for this project. We help in registration and provide video and photography camera. Maintain video and photo record. Provide from format for registration.

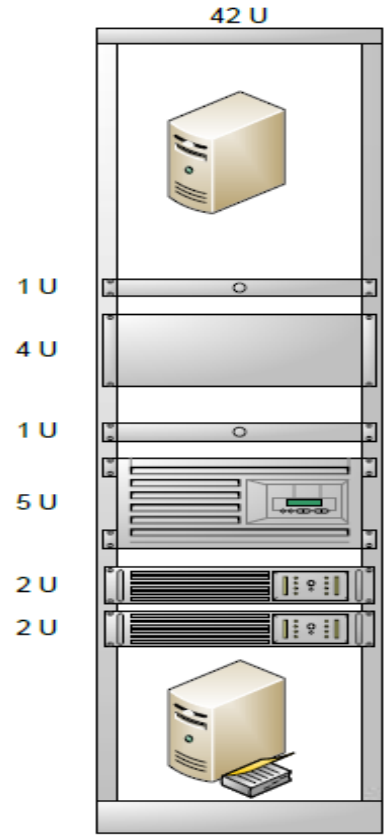
- **Distribution of Computers**

We have more than 450 computers in our campus. We distribute that computer like this; in our medical college we placed more than 100 computers in professor cabin, administration office, different kind of lab and library. In our new and old hospital we placed more than 150 computers and distribute laptop to our senior staff. We placed computer on reception, account office, pathology lab, medical, each and every OPD, x-ray department and so many places where we placed the computer.

Our hospital is located in rural–urban kind of area so same people living in hilly area so they can't reach hospital on proper time. So our hospital established rural health training centre near at same village and same people live in chiplun so they can't came regularly to hospital for treatment or follow up so we established urban health training centre. We placed computer and internet facility both of these training centres. We placed more than 12 computers there.

We have central library there have more than 10 computers plus more than 25 computing devices for digital library. So student and professor access the connection of internet. In our English Medium School have 26 Computers at Secondary school building and have 12 Mini Laptops, and also have 10 IPADs and 3 Computers at Pre-Primary/Primary school Section Computer Lab.Nursing College is having 7 computers. College of Advanced Studies College have more than 10 computers. Sports Academy complex have more than 4 Computers and 1 Laptop.

CURRENT SERVER DEPLOYMENT



CR Server	**CONFIG:** - This CR Server is used to store images of X-ray and other radiology data.
KVM Switch	
LED Monitor	
Keyboard Slider	
Application Server	**Config**: - XEON 3.0 GHZ processor, 32 Gb RAM, 2-TB hdd with RAID-5 and RPS
AD Server / AV Server	Config: AMD Opteron 2.8 Ghz Dual processor, 4GB RAM, 500 GB x 2No HDD, RAID-1
Old Application Server	Config: AMD Opteron 2.8 Ghz Dual processor, 4GB RAM, 500 GB x 2No HDD
Back-up Server / File Server	Config: XEON Uni-processor 3.0 Ghz Dual processor, 4GB RAM, 500 GB x 2No HDD, RAID-1

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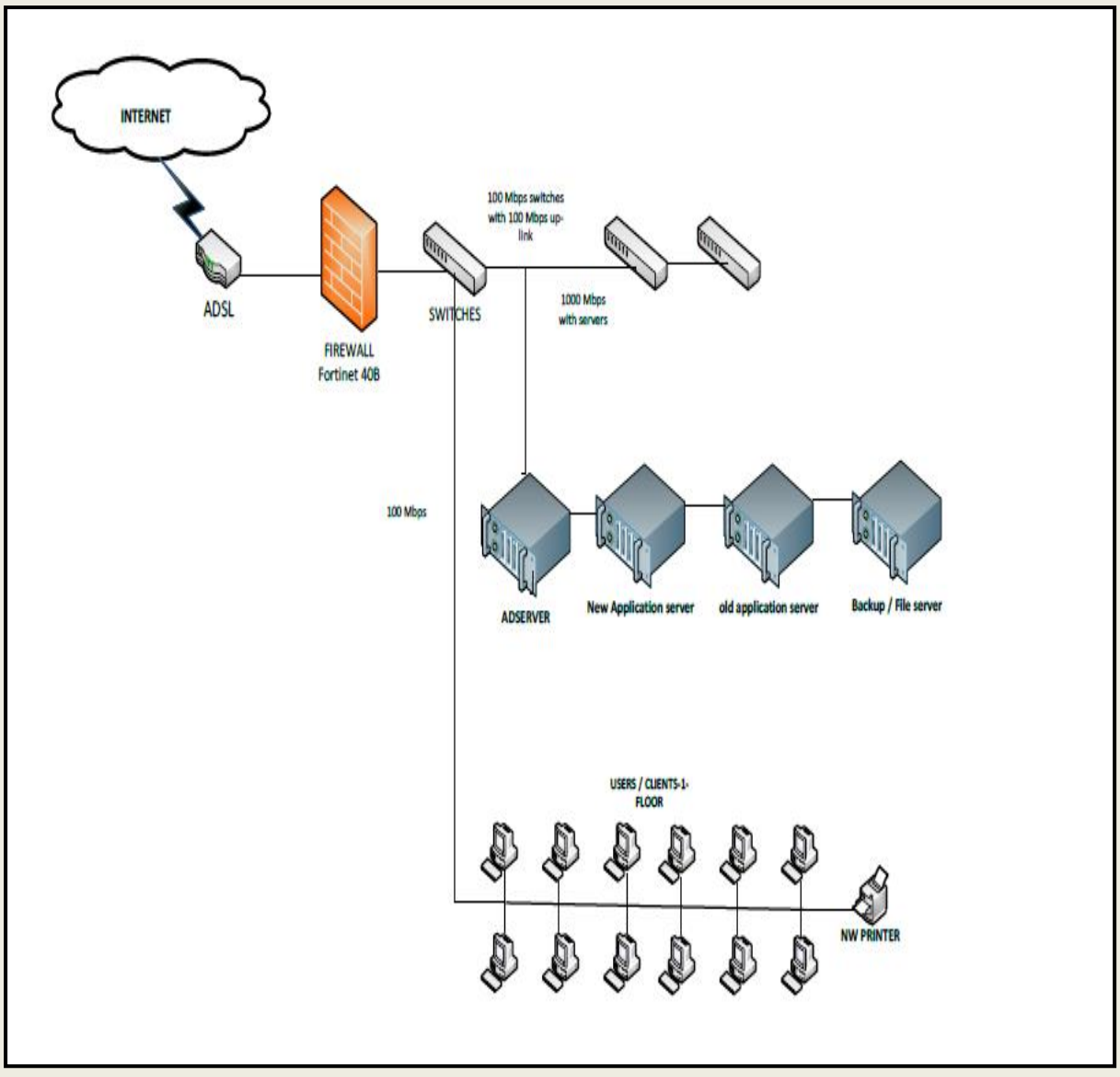
6. PROCESS MAP

Network is having Optic Fibre Backbone throughout a campus



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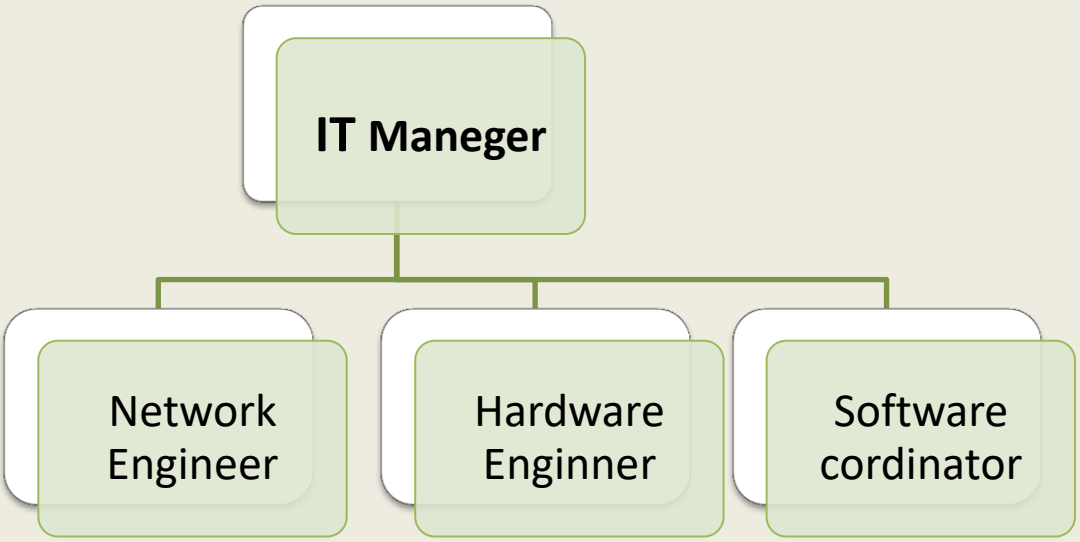
7. ORGANOGRAM



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8. JOB DESCRIPTIONS

1 Designation: IT Engineer (Helpdesk Hardware)

Reporting to: IT Manager

Responsible For: Provide support to staff on all institute supported applications. Ensure LAN performance meets institute and user requirements

Qualification: Graduation from any steam with Hardware and networking Course.

Skills Set Required: Leadership, good communication.

Responsibilities and Accountabilities:

- Answer staff questions in person and via phone on all institute supported applications.
- Troubleshoot computer problems.
- Determine source of computer problems (hardware, software, user access, etc.).
- Advise staff on appropriate action.
- Serve as liaison between staff and the technology department to resolve issues.
- Work one-on-one with staff on application projects.
- Provide recommendations on institute application purchases.
- Investigate user problems, identify their source, determine possible solutions, test and implement solutions.
- Install, configure, and maintain workstations, file servers, Ethernet networks, network cabling, and other related equipment,

devices, and systems; adds or upgrades and configures modems, disk drives, data acquisition boards, CD ROM units, printers, and related equipment.

- Maintain confidentiality with regard to the information being processed, stored or accessed by the network.
- Document resolutions for future reference. Administer network workstations, utilizing one or more TCP/IP or non-TCP/IP networking protocols.
- Evaluate and/or recommend purchases of computers, network hardware, peripheral equipment, and software.
- Investigate user problems, identify their source, determine possible solutions, test and implement solutions.
- Install, configure, and maintain workstations, file servers, Ethernet networks, network cabling, and other related equipment, devices, and systems; adds or upgrades and configures modems, disk drives, data acquisition boards, CD ROM units, printers, and related equipment.
- Perform and oversee software and application development, installation, and upgrades.
- Plan and implement network security, including building firewalls, applying cryptography to network applications, managing host security, file permissions, backup and disaster recovery plans, file system integrity, and adding and deleting users.
- Troubleshoot networks, systems, and applications to identify and correct malfunctions and other operational difficulties.
- Develop and conduct various training and instruction for system users on operating systems, relational databases, and other applications; assist users in maximizing use of networks and computing systems.
- Identify utilization patterns and their effect on operation/system availability and performance expectations.
- Anticipate communication and networking problems and implement preventive measures.
- Establish and perform maintenance programs following institute and vendor standards.

- Ensure timely user notification of maintenance requirements and effects on system availability.
- Investigate, recommend and install enhancements and operating procedures that optimize network availability.
- Maintain confidentiality with regard to the information being processed, stored or accessed by the network.
- Document network problems and resolutions for future reference.
- Other duties as assigned.

Additional Responsibilities

- Perform hardware and software installations.
- Provide on-the-job training to new department staff members.

2Assist personnel of other departments as a computer resource.
Designation: Jr. Executive (Hardware Engineer)
Reporting To: IT Manager
Responsible For: To act as support for System administration, network engineer, as trainer, etc. Qualification: Any Graduation Stream with m with computer hardware and networking course completion, with 1 Yr. Exp.
Skills Set Required: Should be all-rounder as to handle and carry out work as and when required, good communication.
Responsibilities and Accountabilities:

- Answer staff questions in person and via phone on all institute supported applications.
- Troubleshoot computer problems.
- Determine source of computer problems (hardware, software, user access, etc.).
- Advise staff on appropriate action.
- Serve as liaison between staff and the technology department to resolve issues.
- Work one-on-one with staff on application projects.
- Provide recommendations on institute application purchases.
- Investigate user problems, identify their source, determine possible solutions, test and implement solutions.

- Install, configure, and maintain workstations, file servers, Ethernet networks, network cabling, and other related equipment, devices, and systems; adds or upgrades and configures modems, disk drives, data acquisition boards, CD ROM units, printers, and related equipment.
- Maintain confidentiality with regard to the information being processed, stored or accessed by the network**.**
- Document resolutions for future reference. Administer network workstations, uti1izing one or more TCP/IP or non-TCP/IP networking protocols.
- Evaluate and/or recommend purchases of computers, network hardware, peripheral equipment, and software.
- Investigate user problems, identify their source, determine possible solutions, test and implement solutions.
- Install, configure, and maintain workstations, file servers, Ethernet networks, network cabling, and other related equipment, devices, and systems; adds or upgrades and configures modems, disk drives, data acquisition boards, CD ROM units, printers, and related equipment.
- Perform and/or oversee software and application development, installation, and upgrades.
- Plan and implement network security, including building firewalls, applying cryptography to network applications, managing host security, file permissions, backup and disaster recovery plans, file system integrity, and adding and deleting users.
- Troubleshoot networks, systems, and applications to identify and correct malfunctions and other operational difficulties.
- Develop and conduct various training and instruction for system users on operating systems, relational databases, and other applications; assist users in maximizing use of networks and computing systems.
- Identify utilization patterns and their effect on operation/system availability and performance expectations.
- Anticipate communication and networking problems and implement preventive measures.

- Establish and perform maintenance programs following institute and vendor standards.
- Ensure timely user notification of maintenance requirements and effects on system availability.
- Investigate, recommend and install enhancements and operating procedures that optimize network availability.
- Maintain confidentiality with regard to the information being processed, stored or accessed by the network.
- Document network problems and resolutions for future reference.
- Other duties as assigned.

Additional Responsibilities

- Perform hardware and software installations.
- Provide on-the-job training to new department staff members.
- Assist personnel of other departments as a computer resource.

3 Designations: Jr. Executive (Software)

Reporting To: IT Manager

Responsible For: Develop, install, maintain, and modify application programs, business application programs, or integrated programs. Identify and analyse user requirements and recommend appropriate applications or modifications. Perform a variety of programming assignments requiring knowledge of established programming procedures and data processing requirements. Maintain and modify programs.

Qualification: BCS with at least 1 year experience.
Skills Set Required: Leadership, good communication.
Responsibilities and Accountabilities:

1. Investigate user problems and needs, identify their source, and determine possible solutions.

- Analyse user project proposals to include identifying potential problem areas and recommend optimum approaches for project path.
- Participate in the development, implementation, installation, and testing of applications software.

- Contribute through code/algorithm development and other means, for the development of tools and interfaces between application programs and for the development of debugging programs.
- Provide system level support for computer software and classroom computer equipment used to conduct workshops.
- Participate in the development of training materials and assist in conducting training and workshops in parallel processing and use of large computer systems.Investigate, recommend and install new applications.Maintain confidentiality with regard to the information being processed, stored or accessed by the network.
- Document programming problems and resolutions for future reference.
- Assist personnel of other departments as a computer resource**.**
- Code, test and troubleshoot programs utilizing the appropriate hardware, database, and programming technology,
- Refine data and format final product.
- Maintain and modify programs; make approved changes by amending flow charts, develop detailed programming logic, and coding changes.
- Test and develop programming modifications,
- Write new program code using prescribed specifications.

2. Evaluate simple interrelationships between programs such as whether a contemplated change in one part of a program would cause unwanted results in a related part.
3. Analyse performance of programs and take action to correct deficiencies based on consultation with users and approval of supervisor.
4. Confer with users to gain understanding of needed changes or modifications of existing programs. Resolve questions of program intent, data input, output requirements, and inclusion of internal checks and controls.
5. Analyse NT client/server and micro-computer based software solutions compatibility with institute requirements.
6. Maintain confidentiality with regard to the information being processed, stored or accessed.
7. Document programming problems and resolutions for future reference.

8. Assist personnel of other departments as a computer resource.
9. Other duties as assigned.

Additional Responsibilities

- Provide technical support and representation at trade shows, conferences, and similar events.
- Provide on-the-job training to new department staff members.
- Data entry as needed.

4**Designations:** IT Assistant Manager

Reporting To: IT Manager

Responsible For: Responsible for the installation, layout, and maintenance of all network components. Plan, design, analyse, and provide technical support for data communications network or group of networks. Conduct research and evaluation of network technology and recommend purchases of network equipment. Responsible for the installation, layout and maintenance of all Database components. Plan, design, analyse, and provide technical support for database. Conduct research and evaluation of Database technology and recommend purchases of software's. Direct and manage computing and information technology strategic plans, policies, programs and schedules for business and finance data processing, computer services, network communications, and management information services to accomplish corporate goals and objectives.

Qualification: Graduate or Post Graduate with 1 years' experience.

Skills Set Required: Should be all-rounder as to handle and carry out work as and when required, good communication.

Responsibilities and Accountabilities:

1. Direct and manage computing and information technology strategic plans, policies, programs, and schedules for business and finance data processing, computer services, network communications, and management information services to accomplish corporate goals and objectives.
2. Direct the information and data integrity of the institute and its business units.

3. Develop strategic plans and implement the objectives of the information technology needs of the institute to ensure the computer capabilities are responsive to the needs of the institute's growth and objectives.
4. Develop and establish operating policies and approaches for computing and information technology.
5. Evaluate overall operations of computing and information technology functions and recommend enhancements.
6. Advise senior management on strategic systems conversions and integrations in support of business goals and objectives.
7. Prepare enterprise objectives and budgets to facilitate the orderly and efficient capture, storage, processing, and dissemination of information.
8. Interact with institute managers on internal and external operations that are impacted by the capture, storage, processing and dissemination of information.
9. Review and approve major contracts for computing and information technology services and equipment.
10. Ensure the security of the information systems, communication lines, and equipment.
11. Oversee the development, design, and implementation of new applications and changes to Existing computer systems and software packages.
12. Responsible for the development, review, and certification of all back-up and disaster recovery procedures and plans.
13. Identify emerging information technologies to be assimilated, integrated, and introduced within the institute.
14. Assess new computing technologies to determine potential value for the institute.
15. Oversee ongoing improvements and the feasibility of system enhancements.
16. Establish institute infrastructure to support and guide individual divisions/departments/sites in computing and information technology efforts.
17. Establish and implement short- and long-range departmental goals, objectives, policies, and operating procedures.
18. Serve on planning and policy-making committees.

Additional Responsibilities

- Recruit, train, supervise, and evaluate department staff.

5 **Designation:** IT Manager

Reporting To: Vice President Finance and IT

Responsible For Direct and manage computing and information technology strategic plans, policies, programs and schedules for business and finance data processing, computer services, network communications, and management information services to accomplish corporate goals and objectives.

Qualification: M.C.M

Skills Set Required: Proper knowledge of handling computers.

Responsibilities and Accountabilities:

1. Direct and manage computing and information technology strategic plans, policies, programs, and schedules for business and finance data processing, computer services, network communications, and management information services to accomplish corporate goals and objectives.
2. Direct the information and data integrity of the institute and its business units.
3. Develop strategic plans and implement the objectives of the information technology needs of the institute to ensure the computer capabilities are responsive to the needs of the institute's growth and objectives.
4. Develop and establish operating policies and approaches for computing and information technology.
5. Evaluate overall operations of computing and information technology functions and recommend enhancements.
6. Advise senior management on strategic systems conversions and integrations in support of business goals and objectives.
7. Prepare enterprise objectives and budgets to facilitate the orderly and efficient capture, storage, processing, and dissemination of information.
8. Interact with institute managers on internal and external operations that are impacted by the capture, storage, processing and dissemination of information.

9. Review and approve major contracts for computing and information technology services and equipment.
10. Ensure the security of the information systems, communication lines, and equipment.
11. Oversee the development, design, and implementation of new applications and changes to existing computer systems and software packages.
12. Responsible for the development, review, and certification of all back-up and disaster recovery procedures and plans.
13. Identify emerging information technologies to be assimilated, integrated, and introduced within the institute.
14. Assess new computing technologies to determine potential value for the institute.
15. Oversee on going improvements and the feasibility of system enhancements.
16. Establish institute infrastructure to support and guide individual divisions/departments/sites in computing and information technology efforts.
17. Establish and implement short- and long-range departmental goals, objectives, policies, and operating procedures.
18. Serve on planning and policy-making committees.

Additional Responsibilities

- Recruit, train, supervise, and evaluate department staff.

09. WORK INSTRUCTIONS

1 Work Instructions for Software call management

- Receive the call politely.
- Take down the username, department, and extension number
- Probe well to find out the problem and log the call in call sheet
- Analysed the problem and start solving it
- If it is bug log in bug list and forward it to Akhil Eng.

2 Work instructions for Hardware call management

- Receive the call politely
- Take down the username, department, and extension number
- Probe well to find out the problem and log the call in call sheet
- Analysed the problem and start solving it onsite
- If can't solve bring PC or printer to IT and solve it
- Mark the call in call sheet as onsite or offsite call 12.2.7

3 Work instruction for backup

- The data is backed up in two different ways.

A) Automated backup using software (DPM).

B) Manual backup on the portable HDD.

- We do maintain two different hard disks for the backup. The disks are used alternately each day, just to make sure that the data is not lost completely in worst case of the disk failure.
- After backup the hard disk is submitted to authorize person.

4 Work instruction for adding master data in HIMS

- We give the template to the user
- User has to fill that template and get authorized person signature on that
- Once we receive the template from user we take the action

5 Work instruction for file server

- We give the folder sharing template to the user

- User has to fill that template and get authorized person signature on that
- Once we receive the template from user we take the action

6 Work instruction for internet

- We give the internet facility template to the user
- User has to fil1 that template and get authorized person signature on that
- Once we receive the template from user we take the action

7 Work instruction for mail

- We give the new mail facility template to the user
- User has to fil1 that template and get authorized person signature on that
- Once we receive the template from user we take the action

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10. TYPES OF RECORD MAINTAINED

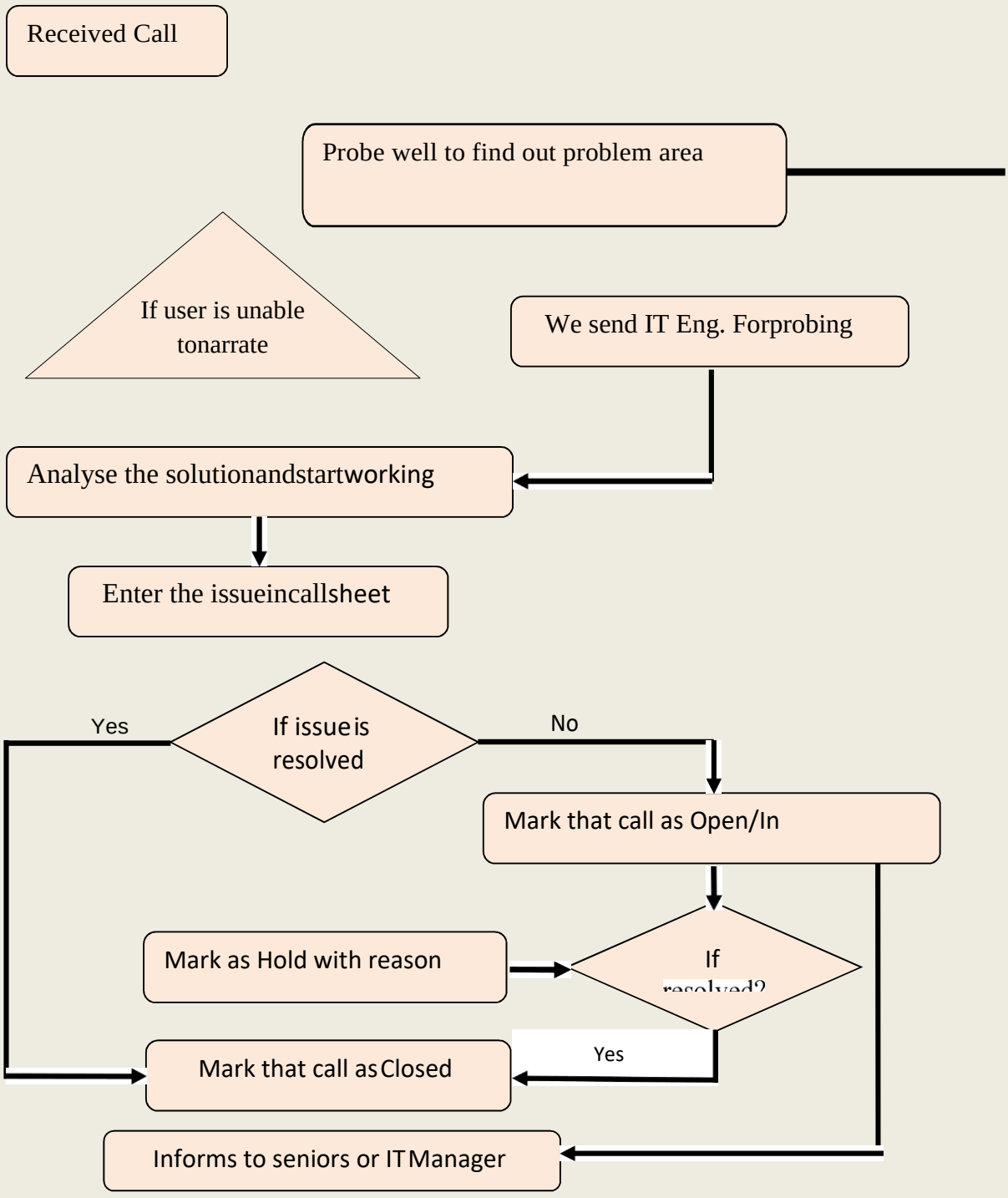
1) **Staff login-** all hospital staff use lifeline for maintained patient record. Each and every staff nurse have login on that lifeline software. That account created by IT department. That all staff nurse and other medical persons login record keeping and maintaining by IT department. We generated new id and password for new joining staff as well as we delete id and password that left his job.
2) **User name** - we maintain all staff user name and id password of HIMS user staff. /medical staff. We created new joining staff user name. We make every department various folder for their work convenience. We maintain that data also. We deleted user name of that person who left their job. But we maintain their data.
3) **Material invert and overt-** we purchase in material like UPS and UPS battery, laptop, printer, CPU, keyboard, mouse, speakers, computers. We maintain all that record on computers as well as on paper. We send our repairing material at pune for repairing, we maintain that record how many thing we send for repairing and how many thing we received back from repairing. Every weekend or as par availability of transport we send our material pune as well as we received that material, we maintain that data.
4) **Work order Delete –**our staff nurse when attend there patient they make their work order on lifeline. They added charges or test extra. When patient get discharge or death, they send one latter for deleting work order with permission of their staff nurse signature. That time we collected that latter and delete that work order and maintain that record.
5) **New Service Addition –** our IT department work on total 7 servers. We add that new server. And keep maintain that record. We daily take backup of the bio-medical data and keep that data secure.
6) **Change Request –** same time in billing department had same problem in adding charges or staff facing problem in modifying charges or patient test, so IT department make that changes with permission of head of staff

nurse or hospital chairperson. Anything changing request accept with senior staff and chairperson of hospital. If same department like pathology lab or radiology department want to add same new test we add that test and maintain that data. We add that new test with permission of chairperson.

7) **Institute Addition-** we maintain nursing college, medical college, special study department and school student data. There admission, result, free structure, hostel extra. Details we maintain. We updated our student and institute information on our website. Student event, seminar, workshops and conference we help them for online registration and also maintain that information. We updated new admission information on our website.
8) **Bed Addition–**we added new bed in every ward and expand capacity of every ward. We added that bed in our record. After pandemic our hospital adds more than 500 bed and expand capacity of every bed. We maintain and add that record to our HIMS and lifeline.

We maintain above record in our IT department.

11. CALL ATTENDED



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12. FUNCTIONS

- Attending the issues for hardware (e.g. Computers, Printers, UPS, Scanner, CPU, mouse, projector's, laptop, speakers)
- Attending the issues regarding the software.
- Conducting the rounds for the inspection of network switches.
- Inspecting the servers for the issues and fixing them if found any.
- Inspecting the UPS for servers for the issues and taking the action as required.
- Adding and updating of HIMS masters as per the request given by authorized personals.
- Managing and assigning the rights of users for HMS, file servers and internet as per the request by the authorized personals.
- Inspecting the safety of all computers from viruses and malwares with the help of central administration of the anti-virus.
- Complete the various IT documentation as per decided by the policies, Backup data from all servers.
- Updating time to time all software used in campus.

13.STANDARD OPERATING PROCEDURES

SOP for Server Backup
SOP for Complaint Management
SOP for Network Point Requisition
SOP for Preventive Maintenance
SOP for Data Theft and Security

1. **Aim**: To take the daily backup of Server data.
2. **Definition:** Nil
3. **Applicable areas:** All servers
4. **Authority & Responsibility:**
4.1 IT. Manager
4.2 All IT. Staff
5. **Procedure:**

IT engineers are supposed to take daily backup of the server data for the disaster recovery. The data to be backed up can be found in the disaster recovery policy. The procedure to take the backup is as follows. The data is backed up in this way

• Automated backup using software.

Automated Backup using software

- We have Microsoft Data Protection Management software. This software is installed on the server connected to tape library.
- This is a Disk - Disk - Tape backup method used for the backup.
- IT administrator needs to deploy to DPM agent on the server or the desktops for which the backup needs to be taken. The list for the same is decided by the IT Manager.

- Administrator decides the strategy for the backup in terms of space needed for the backup, retention time and type of the backup (full, incremental, etc.).
- Alter the decision the protection groups are prepared on the server. These groups involve the space for the backup, retention time, destination for backup (disk, tape).
- Once done the backup interval is decided and the DPM starts to take backup automatically.

Manual Backup on the portable HDD

- This step is to make sure that we do have backup in case of the failure of the automated backup.

6. Monitoring & analysis/ indicators: Nil

- **Aim**: The purpose of the policy is to lay a procedure for complaint management.
- **Definition:** Nil
- **Applicable areas:** To lay a procedure for complaint management for Hardware and Software
- **Authority & Responsibility:**

1 IT. Manager
2 All IT. Staff
3 Users using the data

After receiving a call from respective departments, we probe well to find out the problem area. If the user is unable to narrate the problem we send personnel from IT for the probing. Once we analyse the solution for the problem we start working on it and get the issue resolved.

These sheets have 4 statuses.

a) Closed
b) Open,
c) In process.
d) On hold.

If for any reason the call goes on hold we mention the On-hold reason.

At the end on the month we make the similar entries in the Quality indicators worksheet which automatically calculates the indicator lapse or maintained status.

Escalation levels:

If the issue remains unresolved within the quality indicator time slot it should be raised to the next senior functional head. If the issue remains

undiagnosed after then it should be raised to the IT manager. The senior functional head and the IT manager are responsible for its closure. If the closure require any support from Management should be immediately conveyed.

Vendor Escalation:

If the issue is about any repairing, AMC or anything we IT does not maintain in house should be immediately raised to respective vendor. The senior functional head remains responsible for the follow up. If the vendor is not supportive enough it should be immediately escalated to the IT manager. The senior functional head and the IT manager are responsible for its closure. If the closure require any support from Management should be immediately conveyed.

With each new piece of technology comes new potential for data security breach. The dangers inherent in using a smartphone or tablet are quite different from those associated with a laptop. Even the convenience of wireless internet has more opportunities for attack than traditional hard-wired systems. While most security measures focus on external threats from hackers and malicious downloads, internal threats account for twice as much monetary loss as external threats. An internal threat could be the deletion or dissemination of computer files related to a client's case. One employee could also share their password with another, granting someone access beyond the scope of their position. To prevent the intentional or unintentional problems created by employee use of software and equipment, developing a thorough data securities policy is more important than ever. This policy should provide employees with information regarding the acceptable use of mobile technology as well as password security and wireless access policies to protect confidential data.

Office Computers and Server

There are some truths that should be self-evident but need to be spelled out in a written policy, because inevitably an employee will otherwise do the unthinkable. Some may ignore the Not Safe for Work (NSFW) tag and view pornography if they are 'off the clock' during a break or lunch hour, while others may decide to run a personal business or game server using the firm's servers. Both of these activities expose the office

to security risks. Some less obvious but equally risky behaviour is the desire to download software from the internet onto institute computers and/or servers. An employee could simply be looking for a tool to make them more efficient in their job. However, looking in the wrong place and downloading the wrong file could install malicious software onto your system. Perhaps the scariest danger is the easiest one to complete: deleting files. Deleting a file can sometimes be as simple as hitting the wrong key combination, resulting in a mad dash to the IT specialist with the order to "retrieve!" said file from the trash bin. On those occasions that the deletion wasn't noticed right away, IT can spend a significant amount of time with the backup locating the document to hopefully restore it.

To prevent these and other related computer and server nightmares, create an acceptable use policy as part of your data security package. Restrict who has the right to download executable files (programs) and who can modify items in certain folders. Firewalls, virus scans and anti-spam software should be installed, updated and the system regularly scanned.

User Level Access Control

Access control is a method of guaranteeing that users are who they say they are and that they have the appropriate access to institute data. At a high level, access control is a selective restriction of access to data. Without authentication and authorization, there is no data security. Many Institutes have documents or data that should not be accessible to everyone in the institute. An access control system allows a business to limit the access to certain areas that hold hardware or software that this information is saved on.

Secure Backups:

Data is losing a day's worth of work acceptable, let alone a week? Backing up the office servers every night and storing that data off-site can save a law firm. Disasters don't wait for you to be prepared before they strike. Servers, like other computers, can die without warning. Having a full backup available allows you to upload your data onto a new server (after a new server is acquired and built) and continue working without having to reinvent lost work. It's even better when you have a redundant system, and you can simply switch to your backup server and continue on as if nothing has happened. There are different

varieties of backup systems available. Nash backups remove the need for equipment but require extra vigilance regarding security when selecting ainstitute. USB backups give the convenience of a portable backup, but proper security must be maintained since they are small and easily lost.

Data Security Tool Kit:

When planning your backup system, budget may be a factor in deciding which route you take. However, you have to pick a system you will use. Saving money isn't a value if it's tedious work that never actually gets done and you don't have a current backup when you need it. Your backup policy should include determination for how long backup copies will be kept. Additional USB drives can be purchased to maintain offsite backups. If using the tape system, have a series of tapes that you rotate. Because tapes Deteriorate, replace them on a regular basis to prevent problems. Keeping end of month or end of year backup's offsite may be helpful as well.

Password Security:

Recent headlines highlight the continued problem of creating simple passwords that are quickly hacked because they are easier to remember. If a site requires a complicated password, some people will write it down and attach the post-it note to their computer so they have easy access to it when they need it. Others save a document in the system with their list of passwords to various sites. Any of these methods are hazards that can provide unauthorized access to your system.

Internet Use Preventing employees from ever surfing to a network-related website can be cost prohibitive for small and medium sized firms. However, having a clear internet use policy can help limit the types of sites they visit. Streaming music and video use a lot of bandwidth, and downloaded files from file sharing sites can contain malware or expose the firm to liability if material was copyrighted. Some employees may be tempted to spend too much time on activities such as online shopping, social media or travel planning.

E-mail Misuse of institute email is one of the most common problems:

Faced, and covers a large variety of actions. Sending a free "Happy Birthday!" card from a free website can introduce massive spamming into your system and bog down your server. Employees may use

institute e-mail for running a personal business with less thought than storing hard files on the computers or servers. A Good Samaritan employee may send out emails to everyone in the firm regarding a fundraising event for a local charity, and follow up with four or five reminders. Personal use of the firm email system should be addressed to reduce the amount of server space such items consume. E-mail policies should also include limits on the size of attachments as appropriate. Consider this: an e-mail with a 20MB attachment is received and then forwarded to ten other employees.

Remote Access:

Employees may need to access the firm's system when they are out of the office occasionally. Prohibiting employees from using public computers or using wireless access in public places removes the exposure of client data from hackers because security settings in these circumstances are often lower than those created for the office.

Smartphones, Tablets and Remote Storage Devices: The trickiest part of data security is protecting the mobile data that leaves the building. Smartphones and tablets all contain internet connections but often do not have all of their security measures activated as a firm laptop would provide. A USB drive often contains pure, unencrypted files available for anyone who plugs the drive into their computer; worse yet, it is small enough to easily lose.

When an Employee Leaves:

Often the biggest threat to your data is within your institute. A disgruntled or exiting employee can easily delete files from your system or take files out of the office without notice. Locking down data from employees can be the hardest part of data security. When an employee leaves, immediately lock their computer, e-mail, remote access and any other access privilege to prevent them from accessing information.

Create protocols within the firm for who may need to access an employee's files. If the employee has any equipment, such as a laptop or USB drive, at home, verify that it is returned before they exit the premises on their final day.

Visitors and Contractors From time to time:

Office visitors may need to use office computers or email. Any temporary account established should have a notice regarding expectation of privacy. Passcodes for these accounts should also expire

immediately after use. This ensures someone temporarily allowed into your system won't be able to access your confidential data later, when you're not looking.

Security Audit:

To ensure all facets of your system are properly secure, consider a third party security audit. A trained professional will see any holes in your protection that could leak confidential information. The auditor will be able to provide you with suggestions to improve your security to prevent data security breaches in the future. This may include the purchase of additional security software, or simply changing internet usage habits. The end result will be a safer practice.

Monitoring & analysis/ indicators:

Safety devices like smoke detectors, Fire extensions, fire alarms and CCTV surveillance Implementation of Email Server on Cloud.

14.LIST OF FORMS AND PERFORMA'S

- Bed Addition or Edition
- Change Request
- Institute Addition or Edition
- Computer Requisition (Replacement)
- Computer Requisition (New)
- Department Addition or Edition
- Doctor Addition
- Doctor Appointment Scheduling
- Doctor Signature
- Document Sharing
- Firewall Services
- HIMS User Login
- Incident Report
- Internet Facility
- Mail Facility
- Network Point Requisition
- Package Addition
- Printer or Scanner Requisition
- Printer or Scanner Requisition (Replacement)
- Service Addition or Edition
- SMS Requisition
- Surgery Addition
- Video Conferencing Request

15.PERFORMANCE INDICATORS

- HIMS Uptime
- HIMS Bug Resolution
- On-site Hardware Issue Resolution
- Off-site Hardware Issue Resolution
- Technical Feasibility
- Installation of New Computers
- Training Details

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