

<b>QUALITY STANDARD SYSTEM MANUAL</b>	 <b>HALCYON MARINE</b> <small>HEALTHCARE SYSTEMS</small>	<b>DOCUMENT NO.</b> <b>QIT 1.0</b>	<b>EFFECTIVITY DATE:</b> <b>March 7, 2019</b>
		<b>PREPARED BY:</b> <b>Marilar F. De Guzman, MD</b> <b>QAM</b>	<b>REVISION NO.: 4</b>
<b>SUBJECT: HMHS QUALITY MANUAL FOR MIS</b>			

## 1.0    OBJECTIVES:

- 1.1. To ensure at least 97% of network and server access of the entire clinic on a monthly basis;

Computation: With connection per month =  $(29\text{days}/30\text{days}) \times 100 = 96\%$   
 Note: 30days-29 days = 1 day (means only 1 day of network/server downtime)

- 1.2. To ensure 100% of the files within target network folders are backed up by the week's end and month-end basis.

Assumption: If Folder X contains 500 files, then each of that folder's 500 files should be replicated across the backup location every week.

- 1.3. To ensure at least 20% total network storage availability on a daily, weekly and monthly basis.

Assumption: At least disk free space of 819.2 gigabytes of the maximum network storage capacity of 4 terabytes.

- 1.4. To ensure that at least 90% of helpdesk requests are given initial response within the day;

Assumption: 20 requests per day, 18 requests to be given initial response

Computation:  $(18/20) \times 100 = 90\%$

- 1.5. To ensure that 67% newly purchased computers/equipment are forwarded to the end user within (2) days from delivery of unit/s to the MIS Dept.

Assumption: 3 computers purchased, 2 computers forwarded to the end user

Computation:  $(2/3) \times 100 = 67\%$

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- 1.6 To ensure 88% of internet connectivity on a daily, weekly and monthly basis.

Assumption: 84 hours internet downtime in a month

Computation: ((26.5 days x 24 hours)/30 days x 24 hours) x 100% = 88.33%

- 1.7 To ensure reporting and/or report escalation (depending on severity) of internet related reports to the internet provider in less than 2 hours of incident detection.

- 1.8 To accomplish 75% computer maintenance per year by performing the following maintenance activities per quarter:

- a. Quarterly defragmentation of computers - this can be automatically set on windows and just inspected once a month if the user did not abort the defragmentation activity;
- b. Quarterly inspection of available disk space and clean-up of temporary files, cache, history, etc.
- c. Annual cleaning of internal parts and cooling system/inspection

Assumption: 1 quarter of zero maintenance done

Computation: ((4-1/4months) x 100 = 75%

- 1.9 To accomplish 90% virus and malware prevention per year by performing the following maintenance activities per month:

- a. Daily deployment of anti-virus signatures <-- this can be automatically set on server or local computer;
- b. Full virus and malware scanning (weekly) <-- can also be automatically set but MIS needs to inspect weekly if the user interrupted or aborted the activity.
- c. Monthly removal of quarantine files/items

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1.10 To ensure 90% attendance and punctuality per month

Assumption: 20 working days in a month / late: 2 days

Computation:  $((20-2)/20) \times 100 = 90\%$

1.11 Not more than 3 complaints per month on server and computer maintenance and other related MIS services;

## **2.0 SCOPE:**

The scope of this quality manual encompasses company's IT systems (i.e. hardware, software, infrastructures, equipment and other IT related matters) and its security.

## **3.0 DEFINITION:**

POLICY - specific requirements or rules that must be met.

GUIDELINES - a collection of system specific or procedural specific "suggestions" for best practice.

STANDARD PRACTICE – a collection of system-specific or procedural-specific requirements that must be met by everyone.

END USERS – refers to Halcyon's employees and selected clients.

## **4.0 RESPONSIBILITY AND AUTHORITY:**

All MIS Personnel are responsible and authorized to exercise all the procedures in this Quality Manual.

The General Manager for Operations is responsible for the proper implementation of all aspects of this Quality Manual.

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## 5.0 REFERENCES:

- 5.1 Computer Hardware Manual and User's Guide Reference:
- 5.1.1. Panasonic Telephone KX-TS500MX Operating Instructions
  - 5.1.2. IBM 2-Button Optical Wheel Mouse – USB Installation Guide
  - 5.1.3. Brother MFC-J6510DW Basic User's Guide
  - 5.1.4. QNAP TS-669L TurboNAS Quick Installation Guide
  - 5.1.5. QNAP TS-669 Pro TurboNAS Quick Installation Guide
  - 5.1.6. D-Link DKVM-4U Quick Installation Guide
  - 5.1.7. D-Link DGE-528T Quick Installation Guide
  - 5.1.8. ZEVOLIS Connectivity Manual
  - 5.1.9. Online UPS 1-3KVA Tower User Manual
  - 5.1.10. Netgear Prosafe M5300 Installation Guide
  - 5.1.11. ASRock H61M-HVGS Quick Installation Guide
  - 5.1.12. Acer Projector Quick Start Guide
  - 5.1.13. Acer Veriton User Guide
  - 5.1.14. Acer LCD Monitor V196HQL Quick Guide
  - 5.1.15. EATON 9130 UPS User's Guide
  - 5.1.16. Brother MFC-J6510DW Quick Setup Guide
  - 5.1.17. Brother HL-3040CN Quick Setup Guide
  - 5.1.18. Fuji Xerox Docuprint CM205 Safety Guide
  - 5.1.19. Sakura AV-325 Operating Manual
  - 5.1.20. Behringer Xenyx 1002B Quick Start Guide
  - 5.1.21. Chigo Aircon Operation and Installation Instruction Manual
  - 5.1.22. LCD TV Operating Manual
  - 5.1.23. Kenz ECG Data Viewer CVS-02 Operation Manual
  - 5.1.24. Kenz ECG Data Viewer CVS-02 Installation Manual
  - 5.1.25. Konica Minolta bizhub C360/C280/C220 Quick Guide
  - 5.1.26. Access Control Unit 7612
  - 5.1.27. Philips M330/M335 Short User Manual
  - 5.1.28. Linksys Quick Installation Guide
  - 5.1.29. D-Link Wireless AC1200 Dual Band Gigabit Quick Installation Guide
  - 5.1.30. D-Link 16/24 Port Gigabit Desktop Switch

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- 5.1.31. D-Link Web Smart Switch Documentation
- 5.1.32. Konica Minolta Bizhub C554e/C454e Quick Start Guide
- 5.1.33. Konica Minolta bizhub C554e/C454e Installation Manual
- 5.1.34. Netgear Prosafe User Guide
- 5.1.35. Lenovo H5s Series User Guide
- 5.1.36. Lenovo Safety and Warranty Guide
- 5.1.37. APC Smart-UPS Installation and Operation Manual
- 5.1.38. VF30/VP30 Door Access Control
- 5.1.39. Sophos Enterprise Console Startup Guide
- 5.1.40. D-Link KVM-440/450 Hardware Quick Installation Guide
- 5.1.41. Cyberoam Pre-Installation Checklist
- 5.1.42. APC Smart UPS Installation Guide
- 5.1.43. Intel Solid State Drive Quick Start Guide

5.2. Software References:

- 5.2.1. Cardico 601 Operation Manual & Physician's Guide
- 5.2.2. Operation Manuals for Audiometers Rev. 2.8013038 Operation Manuals
- 5.2.3. Operation Manuals for Audiometers Rev. 06.2006 Operation Manuals
- 5.2.4. ECG Data Viewer / CVS-02 Manual
- 5.2.5. ABX Micros ES 60 User Manual
- 5.2.6. Astra PRO Ver. 5118FB-3.25 Installer
- 5.2.7. Microtek Ver. 3.01 Calibration Software
- 5.2.8. Microtek ScanMaker Ver. 4.9 Scanner Software Calibrator
- 5.2.9. COSMED Pulmonary Function Equipment CD
- 5.2.10. Cardioline Cube Cardiology Suite 1.1.2 Ed. 1.3
- 5.2.11. Winspiro PRO 4.4 Installer
- 5.2.12. MOXA Software for Laboratory
- 5.2.13. ECG Data Viewer CVS-02 3.20 Viewer
- 5.2.14. Carestream Image Suite For Classic CR 1.0.5.0
- 5.2.15. Carestream Image Suite For Classic CR 1.0.3.0
- 5.2.16. Carestream Image Suite For End User Training
- 5.2.17. Tochlink Time Recorder Installer
- 5.2.18. Biometric HR / Firm Installer
- 5.2.19. TRACC Accounting Solution

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- 5.2.20. Microsoft Windows 8 Pro installer
- 5.2.21. Microsoft Windows XP Pro Installer
- 5.2.22. Microsoft Office Small Business Ed. 2003
- 5.2.23. Microsoft Office Business Contact Manager ver. 2003
- 5.2.24. Microsoft Windows 7 Pro installer
- 5.2.25. Microsoft Windows 7 Starter installer
- 5.2.26. Linux Clear OS 5.1 Operating System Installer
- 5.2.27. Linux Clear OS 5.2 Operating System Installer
- 5.2.28. Linux CentOS 4.3 Operating System Installer
- 5.2.29. Linux CentOS 6.4 Operating System Installer
- 5.2.30. Linux CentOS 7 Operating System Installer
- 5.2.31. Linux Ubuntu 12.10 x86 Operating System Installer
- 5.2.32. Ubuntu 15.04 Operating System Installer
- 5.2.33. FreeNAS 9.1.1 Operating System Installer
- 5.2.34. Trend Micro Worry-Free Solutions Anti-virus
- 5.2.35. Trend Micro Enterprise Solutions Anti-virus
- 5.2.36. P5QPL-AM Series Asus Motherboard Driver
- 5.2.37. AMD-NVIDIA Series AND68-18 Motherboard Driver
- 5.2.38. SIS 661 Series Motherboard Motherboard Driver
- 5.2.39. Intel-Intel Series IIH61-13 Motherboard Driver
- 5.2.40. Intel-Intel Series IIH61-16b Motherboard Driver
- 5.2.41. Intel-Intel Series IIH61-10 Motherboard Driver
- 5.2.42. Intel-Intel Series I331p Motherboard Driver
- 5.2.43. Intel-Intel Series II31V-10c Motherboard Driver
- 5.2.44. P5GC-MX/i333 Motherboard Driver
- 5.2.45. H81M Series ASUS Motherboard Driver
- 5.2.46. Netgear ProSafe (GS716Tv2 / GS724Tv3) Guide
- 5.2.47. NETGEAR ProSafe M5300 Guide
- 5.2.48. CISCO Includes Licence and Warranty
- 5.2.49. CISCO VPN Client
- 5.2.50. Gigabit Ethernet Web Smart Switch
- 5.2.51. Fuji Xerox DocuPrint CM205 fw Software Pack
- 5.2.52. Fuji Xerox DocuWorks 7.3
- 5.2.53. Brother MFC-J6510DW MFC-J6710DW Documentation
- 5.2.54. Brother HL-3040CN HL-3070CW Series Driver

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- 5.2.55. Brother MFC-250C MFL-Pro Suite Driver
- 5.2.56. Brother MFC-J6510DW MFL-Pro Suite Driver
- 5.2.57. Brother DCP-J125 MFL-Pro Suite Driver
- 5.2.58. Canon Pixma iP2700 Series 1.2 Driver
- 5.2.59. Canon Pixma iP2700 Series 1.3 Driver
- 5.2.60. CanoScan LiDE 110 Scanner 1.0 Driver
- 5.2.61. Canon Pixma MP280 Series 1.2 Driver
- 5.2.62. CanoScan LiDE 210 1.0 Driver
- 5.2.63. Canon Pixma MX370 Series 1.1 Driver
- 5.2.64. HP Officejet J4660/J4680 Driver
- 5.2.65. HP Laserjet Pro CM1415fnw Color MFP Driver
- 5.2.66. HP Scanjet 2400 Series 2.1 Driver
- 5.2.67. HP Deskjet D2600 Series 14.1.0 Driver
- 5.2.68. Epson LX-310 1.0 Driver
- 5.2.69. Epson LX-310 + II Driver 1.1E Driver
- 5.2.70. Epson Stylus C59 1.0 Driver
- 5.2.71. Epson Stylus T10 1.0 Driver
- 5.2.72. Konica Minolta bizhub C554/C454 1.0 Driver
- 5.2.73. Acer Projector x1161/x110/x1261 Series Driver
- 5.2.74. Acer V183HL/V193HQL LCD Monitor User Manual
- 5.2.75. Acer V203HL LCD Monitor User Manual
- 5.2.76. Sparkle VGA Card Driver and Utilities
- 5.2.77. DELL Utilities for Vostro nSeries Software and Utilities
- 5.2.78. Acer Veriton PC Driver and Utilities
- 5.2.79. DELL Drivers & Documentation (E1911) Driver and User Guide
- 5.2.80. 6" Flex Design Tablet Pen Tab Driver and Utilities
- 5.2.81. RISO Printer Driver (CV3230/3130/3030/1865/1855)
- 5.2.82. QNAP TS-669L User Manuals and Quick Start Guide
- 5.2.83. D-Link DGS-1210 Series User Guide
- 5.2.84. APC Manuals and Safety Instructions
- 5.2.85. D-Link KVM Switch Quick Installation Guide
- 5.2.86. D-Link DGE-528T ver.7.00 Quick Installation Guide
- 5.2.87. Edge Core ES3510MA User Manual
- 5.2.88. A4Tech Webcam Driver and User's Manual
- 5.2.89. Epson L220 Software Disk

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- 5.2.90. Lenovo Monitor LI2031e User Guide
- 5.2.91. Lenovo Win8.1 Drivers Pack v1.3
- 5.2.92. Linksys Wi-Fi router E1200 Setup CD and Documentation
- 5.2.93. Linksys EA4500 Wireless N900 Router Setup Software and Resources
- 5.2.94. Door Access Anvi2 Intelligent Security
- 5.2.95. TP Link Resource CD
- 5.2.96. IBM Server Firmware Update
- 5.2.97. Cyber Security Reference Documents
- 5.2.98. SHARP MX-3070/3570/4070 Printer Driver
- 5.2.99. Brother MFC-T800W Driver
- 5.2.100. HP DeskJet GT 5280 All-in-One Series Driver
- 5.2.101. EPSON L220/L360 Software Disk
  
- 5.3. MIS Server Logbook
- 5.4. Helpdesk System User Manual

## **6.0 IT PROCEDURES AND GUIDELINES:**

All IT equipment and data being utilized and generated by the end-users are the sole property of the company; thus, the Management through the MIS Department shall regularly check, monitor and secure all equipment, systems and data of the company.

### **6.1 PROCEDURE ON SECURITY OF DATA**

#### **6.1.1 Encrypting or putting passwords on confidential data**

- All end-users to sort/classify their confidential data/files regardless whether the data is stored in their personal pc or any network devices.
- Technical Support Personnel shall assist all end-users how to encrypt or install security passwords on their files.

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- Strong passwords shall be created and installed by MIS with at least 8 characters long while network access passwords shall be changed every quarter of the year. Same passwords will not be accepted.
- The same applies for securing anti-printing protection of PDF files.

#### **6.1.2 Auto-lock screen saver**

- All PCs, laptops and servers shall be secured with password-protected screen savers with the automatic activation feature set at 10 minutes, or by logging off (ctrl+alt+del) when the computer will be unattended for a long period of time.

#### **6.1.3 Centralized Anti-virus system**

- MIS Department shall maintain full protection of all data from virus attacks (from any source such as attachments, internet websites, unsecured data etc.) through the company's deployed centralized anti-virus system which automatically scans and deletes viruses.
- The deployment of latest virus signature and monitoring of PC shall be done thru a centralized PC.

#### **6.1.4 Disabling of USB port and CD drive**

- All USB ports and CD drives of level-staff pc shall be disabled to enhance security against data corruption and introduction of malicious programs into the network or server (ex. viruses, worms, trojan horses, email bombs etc).
- Only USB and CD drives of managerial personnel, selected documentation staff as per client request and MIS work units shall be kept open and active.

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- If the staff is not included in the above mentioned requires a file to be copied and/or reproduced, this may be requested either from the MIS Department, any of the Managers or through the network drive on the server where data can be shared by end users to expedite copying or reproduction of files instead of using USB ports.

#### 6.1.5

#### **Legal files stored in the network and backup drive**

- All MIS personnel shall ensure that only company related files are stored in the network drives. All unnecessary files shall be deleted by the MIS personnel.
- MIS personnel shall regularly back up company files from the server/network drives.

#### 6.1.6

#### **Local administrator's right to end-users and software installation**

- Only the MIS personnel has the right to install any software in the computer to prevent installation or distribution of unlicensed or pirated software.
- MIS personnel shall install and use licensed software from authorized dealers only.

#### 6.1.7

#### **Using of other employee's PC**

- MIS department ensures that the end-users do not use other computer other than their assigned unit unless necessary and with explicit permission by the official user.

#### 6.1.8

#### **Use of email and internet**

- MIS department ensures that the company emails and internet are used for company related purposes only by regularly checking of emails against junk mails and social networking sites browsing and online chatting that may cause network problems.
- Uploading of large files shall be monitored and checked regularly.

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**6.1.9 Unauthorized PC/server access and port scanning**

- MIS department prevents port scanning by preventing unauthorized access to computers or servers.

**6.1.10 Remote control of desktop**

- As necessary, the MIS department shall utilize remote control software of desktops to expedite technical support service using VNC software as the standard software remote control of desktop.

**6.1.11 Back-up and regular cleaning of network drives**

- MIS department shall maintain three network mapped drives:

- a. Team Folders
- b. Manager's Folders
- c. Public Folders

- Inter-department mapped drives are to be cleaned up on a quarterly basis. MIS personnel will send a notification to all end-users about the incoming clean-up.

- Prior to any network storage clean-up activity by the MIS department, the MIS personnel should request the affected users to create a temporary "No Delete" folder within that same folder to avoid deletion. Consequently, any other file left outside the temporary "No Delete" folder will be deleted without prejudice and liability to the MIS personnel performing the clean-up. After clean-up the contents of the "No Delete" folder must be placed back to its root folder and remove the temporary "No Delete" folder.

- Clean-up notification must be done thru email and a reply of consent must be given by the affected user. Consent must be given within 5 working days. In case of no reply after 5 working days, the MIS personnel must personally inform the user and a

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deemed consent may be considered 5 days after the personal notification.

- The company shall use a Open NAS backup hardware for its daily and weekly backup.

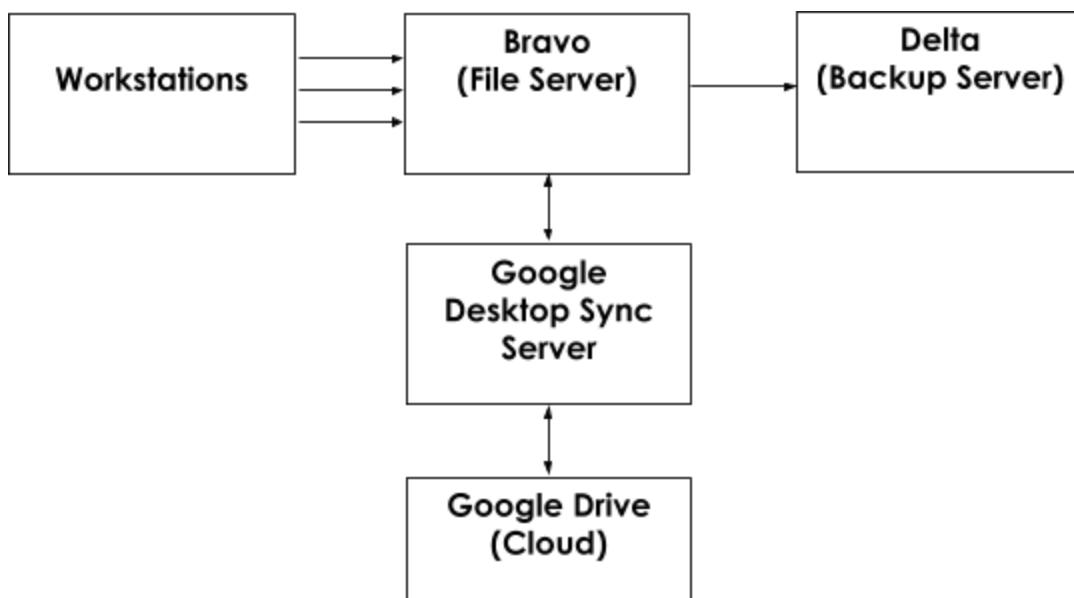
## 6.2. PROCEDURE IN UPLOADING PEME ATTACHMENT

- End-users shall upload all PEME attachments on the Bravo file server.
- MIS department shall ensure that the attachment of patient database folders on Bravo is mapped to all end-user workstations authorized to access the files for uploading and viewing.
- Below naming convention must be followed in creating folders and files:
  - o Folder name must be the PEME number.  
Example: P54697
  - o File name must have the full name of the patient and the name of test/procedure/examination.
- Files to be uploaded on Bravo shall be either JPEG or PDF files only.
- File disk size must be around 300Mb and not more than 1Mb.
- MIS provided 1 week allotted time for the file to be totally synced in Google Drive.
- MIS provided 6 months retention period for files before it is removed from Bravo. After 6 months, searching of files will be done on Google Drive.
- MIS shall ensure no data loss during syncing of files from Bravo to Google drive.
- MIS shall backup all the files on the QNAP backup server.
- MIS shall ensure to have at least 20% free space available on Google Drive.

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- Recommendation for upgrade must be implemented once the data surpassed the amount of free space available.
- MIS shall use 1 dedicated Google account for syncing to ensure single ownership of all documents.
- MIS shall ensure that all uploaded Google documents are shared for the sets of authorized Google account users.
- Average Google drive storage consumption of patient attachment per month is 20GB. 1 Terabyte of Google Storage can handle at least 4 years of consumption.
- Data flow diagram:



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### **6.3. IT POLICY FOR CONTRACTORS**

This policy applies to all contractors at all locations performing any business transaction that are using company systems or accessing Company information, electronic or otherwise.

#### **6.3.1 Security Screening**

MIS to ensure that all contractor and subcontractor employees undergo personnel security screening.

#### **6.3.2 Contract**

- a. A Service Level or Confidentiality Agreement must be part of the contract between the Contractor and the Company.
- b. The contractors must disclose who among its personnel will have the access to the company systems and resources in writing.
- c. The contractors must assign a single point of contact for the resolution of information security related issues and must notify the IT department in writing.
- d. Data Sharing Agreement must be establish between the contractor and the company in the event that the contractor needs to process the data given by the company. Such contract should expressly set out the subject matter and duration of the Processing, the nature and purpose of the Processing, the type of personal data and categories of data subjects, the obligations and rights of the company, and the geographic location of the processing under the contract.

#### **6.3.3 Passwords and user IDs to access the company systems**

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- a. Each contractor has the responsibility to safeguard his/her password, user ID, and badge from others.
- b. Contractors are prohibited from disclosing and/or sharing of passwords and user IDs with others.
- c. Contractors are accountable for any incident arising from improper safeguarding of personal user IDs and passwords. Compromised passwords and/or user IDs must be immediately changed.
- d. Any unauthorized attempt to discover the password of another user or to access the company's information or systems is prohibited.

#### **6.3.4      System Access**

- a. System access for non-employees: Individuals who are not employees, contractors, consultants, or business partners must not be granted a user-ID or otherwise be given privileges to use any computers or information systems unless there is a written approval from the Department Head. Prior to give access to any third party or business partner from using the company's computers or information systems, a chain of trust agreement defining the terms and conditions must be signed by the responsible manager at the third party organization
- b. The assigned MIS personnel is responsible for determining the rights of the contractor to access the information and systems. This includes the limited access of time and physical interaction with the servers.

#### **6.3.5      Viruses and Malicious Code**

- a. Contractors are prohibited from introducing viruses or malicious code into the company systems, software, or devices. This includes peer-to-peer file sharing programs.

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- b. Contractors must not install or use a non-certified/licensed software for any purpose unless specifically granted an exception that is authorized by the General Manager for Operations.
- c. Contractors are prohibited from attempting to bypass the company virus protection software or other system safeguards (e.g. when downloading or transferring information).

#### **6.3.6            Remote Access**

- a. Remote access refers to contractors using telecommunications/remote access to conduct their normal activities from a remote location.
- b. All company-owned desktop, portable or mobile computing devices must employ access control and user authentication devices that have been approved by the General Manager for Operations for access to the company's network.
- c. Authentication and information on wireless medium must be encrypted end-to-end.
- d. For remote access using non-company owned computing devices, access will be controlled through an access account, the granting of which will be coordinated by the Contractor's Project Manager.

#### **6.3.7            Information Systems and Storage**

- a. Personal computers, laptops, personal digital assistants (PDAs), and other devices containing company unauthorized use.
- b. Contractors must ensure that all information is removed from devices or storage containers that are moved off-site and are no longer under their direct control. If in electronic format, information must be overwritten, not just deleted. Contractors must provide the Company

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with a documented process for information removal/destruction and written verification process as it relates to the subject contract.

- c. Contractors may not remove equipment from Company facilities without management authorization.
- d. Contractors may not leave unattended any device containing Company information unless a password-engaged screen saver is used.

#### **6.3.8           Information Systems Use**

- a. All company information systems (i.e. email, internet, telephones, fax, etc.) are the property of the company and are primarily for business use. Contractors may use them for business related purposes and must never use it to knowingly access, store, or distribute pornographic or otherwise offensive material.
- b. Contractors are expected to make every effort to ensure that all company information is protected from inadvertent disclosure when being sent over the internet or other open, non-company networks. Encryption or password protection must be used when available to protect company information. If unable to encrypt, contractors should consider alternatives to email for transference.
- c. Any unauthorized attempt to access the information that is outside the Contractor's "need-to-know" for his/her operational purposes is prohibited.

#### **6.3.9           Liability**

- a. Anyone who fails to follow these policies may be immediately denied access to information systems by the MIS Administrators. MIS Administrators are also obliged to inform the HR Manager about any

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violations, for the purpose of initiating possible disciplinary proceedings.

#### **6.4. IT SERVER ROOM POLICY**

This policy applies to all individual both company employees and contractors who enters the MIS server rooms.

- All employee and contractors must log in to the MIS server logbook every time they enter the server room.
- Storing of any equipment, tools and materials not used by the servers to function inside the server room are prohibited.
- MIS must ensure that no food and drink will be taken and store inside the server rooms.
- Entry in MIS server rooms by tailgating the other staff is not permitted.
- MIS ensures that only authorized person can enter the server room.
- MIS ensures that server rooms are always clean and dust free.
- MIS ensures that server rooms maintain the required temperature.

#### **6.5. IT POLICY ON USING OF THE COMPANY EMAIL**

This policy covers the appropriate use of any email sent from HMHS email address and applies to all employees, vendors, and agents operating on behalf of HMHS.

The purpose of this email policy is to ensure the proper use of HMHS email system is maintained and to aware the users of what HMHS deems as acceptable and unacceptable use of email system. This policy outlines the minimum requirements for use of email within the HMHS Network.

- Use of email must be consistent with the company policies and procedures of ethical conduct, safety, compliance with applicable laws and proper business practices.

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- Company email account should be used primarily for business-related purposes; personal communication is permitted on a limited basis, but non-company related commercial uses are prohibited.
- All Company data contained within an email message or attachment must be secured according to the Data Protection Standard.
- Email should be retained only if it qualifies as a company business record. Email is a Company business record if it disclose a legitimate and ongoing business reason to preserve the information contained in the email.
- Email identified as a Company business record shall be retained according to the Company's Record Retention Schedule.
- The Company email system shall not be used for the creation or distribution of any disruptive or offensive messages, including offensive comments about race, gender, hair color, disabilities, age, sexual orientation, pornography, religious beliefs and practice, political beliefs, or national origin. Employees who receives any emails with the above mentioned from any employee should report the matter to their supervisor or department head immediately.
- Users are prohibited from automatically forwarding the company email to a third party email system. Individual messages which are forwarded by the user must not contain any company confidential or above information.
- Except for Google Apps including Gmail and Google drive, users are prohibited from using third-party email systems and storage servers such as Yahoo and MSN Hotmail etc. to conduct a company business, to create or memorialize any binding transactions, or to store or retain email on

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behalf of HMHS. Such communications and transactions should be conducted through proper channels using the company's approved documentation.

- Using a reasonable amount of company resources for personal emails is acceptable, but non-work related email shall be saved in a separate folder from work related email. Sending of chain letters or prank emails using the company's email account is prohibited.
- Employees shall have no expectation of privacy in anything they store, send or receive on the company's email system.
- MIS employees is the authorized personnel to monitor the email messages without prior notice if necessary. MIS is not obliged to monitor email messages.

## **6.6. IT PROCEDURE ON MANAGING GOOGLE ACCOUNTS**

### **6.6.1 Google Account Request**

- Google account must be requested by the End-user through Email Account Request Form provided by MIS personnel. Email Account Request Form must be signed by the department head and General Manager for Operations.
- Once the MIS personnel received the signed Email Account Request Form, MIS personnel will issue the Google account and password to the end-user. End-users are not authorized to change the issued email password.
- MIS personnel shall facilitate the request for Google account upgrade and purchase of new license if necessary.

### **6.6.2 Using of Free Google Account**

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- Using of free Google account is prohibited unless authorized by the Department head. Only MIS department is allowed to create the free Google account to be used by the employee.

#### **6.6.3 Password Reset**

- MIS department ensures that the Google account password used by the employee who is leaving will be change accordingly.
- Managers and supervisors will notify the MIS team whenever there are employees who are leaving or out of contract via email.
- MIS department will email the new password to the managers and supervisors for dissemination.

#### **6.6.4 Google Account Billing**

The MIS department shall ensure that the Google Account subscription is paid on time. Monthly billing send by Google must be forwarded to the Executive office for their record.

### **6.7. IT PROCEDURE ON DATA AND SYSTEM BACKUP**

#### **6.7.1 Backup Scope**

1. Desktop application systems such as user management, HRIS, Helpdesk, CID, HR e-Learning, and Auto File-mover.
2. Web pages and web application such as old iNET System, Helpdesk web based, SMS System, HMHS and SSMA website.
3. iNET System data and system such as Application VM file, Attachments and Database.
4. Quickbooks company backup file.

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5. In-house system databases such as Helpdesk, HR Information System, SMS System, User Management, Utilities, CID, and HR e-Learning.
6. Important software application and installer including the Database installer, Accounting Software such as Quickbooks and Feesable, HR Software such as Portable time keeper, etc.
7. All important files on file server.
8. Server accounts in excel.
9. List of end-user account and system passwords in excel.
10. Hardware list in excel.
11. Software list in excel.

#### **6.7.2 Backup Schedule**

The MIS backup schedule varies for each scope. Desktop and web applications is backed up when there is a system update. Database are backed up daily. Quickbooks, files in the file server, server accounts, list of user password and list of hardware and software is backed up once a month.

#### **6.7.3 Monthly Offsite Backup**

The MIS personnel ensure to have a regular monthly offsite backup. Backup files must store in an internal hard drive and bring it to the chosen bank for safe keeping via vault. The MIS personnel must log in to the MIS offsite backup monitoring form. The MIS offsite backup monitoring form must be signed by the MIS personnel and countersigned by the bank's personnel.

### **6.8. INET SYSTEM DATABASE BACKUP PROCEDURE**

- Backup file is accessible to all authorized personnel including the MIS staff and HMHS managers.
- Manual backup is done every 1 hour starting at 7:00 am up to 6:00pm.
- MIS Personnel must log in to the iNET Database Backup Sheet in Google drive every time the backup is done.
- Backup is done manually using the pgAdmin III database application.
- The staff performing the backup procedure must have access to the database

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server.

- Backup file must be placed in a dedicated external hard drive and in to Google drive.
- The MIS personnel ensures that the external hard drive where the backup files will be saved is a virus and malwares free.
  - Daily counter checking of backup file is done by operations.
  - QA conducts a weekly back up audit on MIS department to ensure that the backup process is done properly and the backup file is up to date. (*Refer to Inet Database Backup and Restoration Procedure Manual*)
    - Backup file naming convention must be followed, halcyon\_v2\_215\_[date]\_[time].  
**Example:** halcyon\_v2\_215\_10122018\_0703AM
    - MIS with QA performs a weekly database restoration done on local PC to ensure that the records on the master database is same in the backup file. (*Refer to Inet database backup and restoration procedure manual*)
    - MIS shall ensure a regular monthly offsite backup of all backup data files saved in the dedicated external hard drive. Authorized MIS personnel will bring the backup external drives to the authorized bank for safe keeping in vault.

## 7.0 IT SERVER DOWNTIME PROCEDURES AND CONTINGENCY PLAN

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## 7.1 Pre-recovery Action Plan

Scope	Lead	Second Lead	Third Man
System and Database (iNET) Problem	System Analyst	System Administrator	IT Sr. Technical Support
Servers (Bravo, SMS App, Paging) Problem	IT Sr. Technical Support	IT Technical Support	System Administrator
Network (Internet Connection, LAN Connection) Problem	IT Sr. Technical Support	IT Technical Support	System Administrator

In the event of failure occurred,

- Lead man will be in-charge in troubleshooting and identifying the problem. He is also responsible to assess the severity of the situation (Alert Code) and estimate the duration of the problem.
- Second lead man responsibility is to alert the management team, 15 minutes from the time that the failure occurred and gives update every 15 minutes for the first 2 hours.

Updates notification to the management will be every 30 minutes for rest hours.

- If the lead man is not around in time of system failure, the second lead man will be lead in the absence of the Lead man and third man will be the second man
- No Skype status update.

## 7.2 Defining Alert Level

**I.T. Critical Resources** is essential business services/servers that are time-sensitive and must be restored first in the event of a disaster or interruption to avoid unacceptable financial or operational impacts to ensure the ability to protect the organization's assets and meet organizational needs.

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**List HMHS of I.T. Critical Resources:**

1. Internet connection
2. Patient information system (iNET)
3. Google Apps (email and drive)
4. Network switches
5. Firewall router (Cyberoam)

**Alert Level Code:**



**Code Description:**

**Normal Level** – below 15 minutes downtime of any critical resources.

**Level 2** – 30 minutes downtime of any critical resources

**Level 3** – 1 hour downtime of any critical resources

**Level 4** – 2 hours downtime of any critical resources

**Level 5** – more than 2 hours downtime of any critical resources

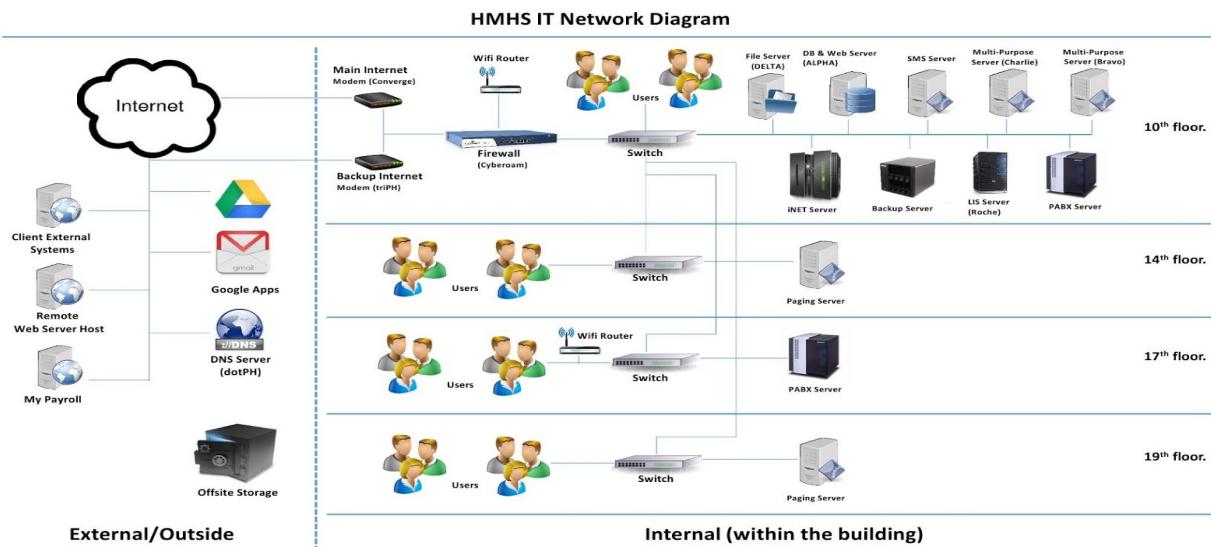
**7.3 Post Recovery Action Plan**

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- MIS team will monitor the situation within 24 hours.
- MIS team will study the cause of failure and come-up with a report to the management.
- Formulate a solution on how to prevent the failure to occur again.

#### 7.4 Network Diagram



#### 6.5 IT Resources Contingency Table

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RESOURCES	FUNCTION	Department/unit process and procedure that are dependent on this resources	CONTINGENCY
Internet Connection	- Provides internet connection to entire clinic	<ul style="list-style-type: none"> <li>- Email service</li> <li>- Online file storage via Google drive <ul style="list-style-type: none"> <li>1. Operations file including: <ul style="list-style-type: none"> <li>a. Uploading and viewing of patient attachment</li> <li>b. Daily monitoring</li> <li>c. Census</li> <li>d. Trial decking</li> <li>e. Patient online survey</li> </ul> </li> <li>2. MIS files including: <ul style="list-style-type: none"> <li>a. IT equipment list</li> <li>b. list of passwords</li> <li>c. list of software</li> <li>d. Procedure manuals</li> <li>e. Forms</li> </ul> </li> <li>f. Budget and Expenses</li> </ul> </li> <li>3. HR files including: <ul style="list-style-type: none"> <li>a. Reports</li> <li>b. Certificates</li> <li>c. Attendance monitoring</li> <li>d. Recruitment monitoring</li> </ul> </li> </ul>	Set backup Internet to automatic failover and load balance.  <b>Restoration time:</b> 0

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	<p>4. Accounting files including:</p> <ul style="list-style-type: none"> <li>a. Billing</li> <li>b. Purchase orders c. Inventory monitoring</li> <li>d. Certificates</li> </ul> <p>5. QA files including:</p> <ul style="list-style-type: none"> <li>a. Equipment calibration monitoring</li> <li>b. QA forms</li> <li>c. Quality manuals d. DCR and CAR</li> <li>e. Masterlist</li> <li>f. Contract reviews g. Clients complaints</li> <li>h. Review of forms and records</li> </ul> <p>- Access to online payroll system</p> <p>- Sending of Feesable</p> <p>- Access to external online system</p> <ul style="list-style-type: none"> <li>1. Magsaysay online system</li> <li>2. Marlow online system</li> <li>3. UMMS System</li> <li>4. DOH iclincalab system</li> </ul> <p>- Internal communication through Skype</p> <p>- Anti-virus updates</p> <p>- Software updates</p>		
<b>Cyberoam Firewall</b>	<ul style="list-style-type: none"> <li>- Manage network and internet connection</li> <li>- Protecting internal network from outside threats</li> </ul>	<b>Dependent Resources:</b> <ul style="list-style-type: none"> <li>• Internet connection</li> </ul>	Backup Cyberoam Firewall

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	- Traffic monitoring - Controls user network and internet access		Restoration time: 15 mins.
<b>3rd floor Router</b>	- Provides wifi access to inet portal	- Used by patient to do online registration inside the clinic.	Deploy backup router  Restoration time: 30 mins.
<b>3rd floor Switches</b>	- Provides network connectivity between servers, internet modem, Ground flr., 3rd flr., workstations and printers	Access by all floors workstation for the ff. resources: <ul style="list-style-type: none"> <li>● Access to internet</li> <li>● Access to patient information system</li> <li>● Access to file server</li> <li>● Access to SMS server</li> <li>● Access to in-house system</li> <li>● Access to LIS system</li> <li>● Network file sharing</li> </ul>	Deploy backup switch  Restoration time: 1 hour
<b>Ground floor Switches</b>	- Connects Ground flr. Work stations to 3rd flr. switch to gain access to internet and Servers	Access by Ground floor workstation for the ff. resources: <ul style="list-style-type: none"> <li>● Access to internet</li> <li>● Access to patient information system</li> <li>● Access to file server</li> <li>● Access to SMS server</li> <li>● Access to in-house system</li> <li>● Access to LIS system</li> <li>● Network file sharing</li> </ul>	Deploy backup switch  Restoration time: 1 hour
<b>Ground floor Switches</b>	- Connects Ground flr. Work stations to 3rd flr. switch to gain access to internet and servers	Access by Ground floor workstation for the ff. resources: <ul style="list-style-type: none"> <li>● Access to internet</li> <li>● Access to patient information system</li> <li>● Access to file server</li> </ul>	Deploy backup switch  Restoration time: 1 hour

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		<ul style="list-style-type: none"> <li>• Access to SMS server           <ul style="list-style-type: none"> <li>• Access to in-house system</li> </ul> </li> <li>• Access to LIS system</li> <li>• Network file sharing</li> </ul>	
<b>File Server (BRAVO)</b>	<ul style="list-style-type: none"> <li>- File storage allocated for all department/unit to store confidential company/business files</li> <li>- Each department/unit has their own shared folders</li> </ul>	<p>File shared storage for each department including:</p> <ul style="list-style-type: none"> <li>• HRMD shared folder</li> <li>• Accounting shared folder</li> <li>• Operations shared folder</li> <li>• Executive shared folder</li> <li>• MIS shared folder</li> <li>• Public shared folder</li> </ul>	<p>When BRAVO (File server) is down, end-users can save their files to their workstation and later upload to File Server. If the end-user urgently needed the files from the File Server. MIS will search and download the specific file to the backup server.</p>
<b>In-House System Database and Web Server (ALPHA)</b>	<ul style="list-style-type: none"> <li>- Database and web server host for in-house systems including the ff:           <ul style="list-style-type: none"> <li>• Helpdesk management system</li> <li>• Computerized paging</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Sending of support ticket through Helpdesk system</li> <li>• Patient paging           <ul style="list-style-type: none"> <li>• Viewing and encoding of employee information</li> <li>• Viewing, encoding and</li> </ul> </li> </ul>	<p>No backup</p> <p>All system files and backup database are stored in BRAVO and File Backup</p>

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	<p>system</p> <ul style="list-style-type: none"> <li>• HR information system           <ul style="list-style-type: none"> <li>• Centralized inventory database</li> </ul> </li> <li>• HR e-Learning system</li> <li>• HR online application</li> <li>• Old inet system           <ul style="list-style-type: none"> <li>• User management and utilities</li> </ul> </li> </ul>	<p>monitoring of fixed assets</p> <ul style="list-style-type: none"> <li>• New staff undergo eLearning process</li> <li>• Sending of Applicant information through online</li> <li>• Access to old inet system for viewing of history</li> <li>• Creation of user accounts for in-house system</li> </ul>	Server
<b>SMS Server</b>	- Database and web server host for SMS web application	<ul style="list-style-type: none"> <li>• Update patients of the status of their PEME thru sms</li> <li>• Inform and update applicants of the status of their application</li> <li>• Suppliers communication</li> </ul>	Virtual image restored in service unit <b>Restoration time:</b> 1 hour
<b>Multi-purpose Server (Charlie)</b>	<ul style="list-style-type: none"> <li>- Host the computerized paging audio and visual display application in 10th floor.</li> <li>- Host kiosk application</li> <li>- Host movie player</li> </ul>	<ul style="list-style-type: none"> <li>• Page patient to the different units</li> <li>• Patient online viewing of results inside the clinic</li> <li>• Movie playing at 10th floor</li> </ul>	Re-install application on service unit <b>Restoration time:</b> 2 hours

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<b>Multi-purpose Server (Bravo)</b>	<ul style="list-style-type: none"> <li>- Host anti-virus admin console</li> <li>- Host Google drive sync application</li> </ul>	<ul style="list-style-type: none"> <li>• Anti-virus server handles anti-virus updates, controls policies and manages workstation.</li> <li>• Google drive sync manages the syncing of patient attachment from BRAVO to Google drive.</li> </ul>	Re-install application on service unit  <b>Restoration time:</b> 2 hours
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<b>File Backup Server</b>	<ul style="list-style-type: none"> <li>- Backup storage of all data from the main file server</li> <li>- Files from main File server is set to sync every night</li> </ul>	Make a copy of all the data from file server.	<ul style="list-style-type: none"> <li>- Internal server hard drives is mirrored and raid configured.</li> <li>- Pulling out of 1 hard drive and placing of another is done every month.</li> <li>- A pulled out hard drive is set to transfer to offsite storage.</li> </ul>
<b>LIS Server (Roche)</b>	<ul style="list-style-type: none"> <li>- Host the laboratory information system database</li> <li>- Laboratory machines are all connected to this server via MOXA</li> </ul>	Transmit orders and results between the laboratory machine and the patient information system	Supplier warranty  <b>Restoration time:</b> not defined

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<b>PABX Server</b>	- Manage the routing of incoming and outgoing phone calls.	<ul style="list-style-type: none"> <li>• Receive client incoming calls</li> <li>• Call clients</li> <li>• Internal communication           <ul style="list-style-type: none"> <li>• Supplier communication via phone call</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Mobile phones</li> <li>• Email</li> <li>• Chat</li> </ul>
<b>iNET Server 1 (Main App)</b>	- Host the patient information system web application	Access to patient information system. <ul style="list-style-type: none"> <li>• Online patient appointment</li> <li>• Receiving of patient (Reception)           <ul style="list-style-type: none"> <li>• Payment and package initialization (Cashier)</li> </ul> </li> <li>• Diagnostics:</li> </ul>	iNET Server 2 (Secondary App)

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		<ul style="list-style-type: none"> <li>○ Laboratory test</li> <li>○ Audiometry test <ul style="list-style-type: none"> <li>○ X-ray &amp; Ultrasound</li> </ul> </li> <li>○ Visual test <ul style="list-style-type: none"> <li>○ ECG</li> </ul> </li> <li>○ Treadmill</li> <li>○ Spirometry <ul style="list-style-type: none"> <li>○ Physical examination</li> <li>○ Psycho examination</li> </ul> </li> <li>○ Dental</li> <li>○ BP monitoring</li> <li>○ Immunization</li> <li>○ Vaccination <ul style="list-style-type: none"> <li>○ History</li> </ul> </li> <li>● Doctor's viewing of results</li> <li>● Transmittal</li> <li>● Processing of PEME <ul style="list-style-type: none"> <li>● Generation of certificates</li> <li>● Patient viewing of results</li> <li>● Generation of SOA for billing</li> <li>● Statistics and Census</li> </ul> </li> </ul>	
<b>iNET Server 3 (Main Db)</b>	- Host the patient information system database	<b>Dependent Resources:</b> <ul style="list-style-type: none"> <li>● <b>iNET Server 1 (Main App)</b></li> </ul>	iNET Server 4 (Slave Db)

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<b>Converge HMHS Remote Server</b>	<ul style="list-style-type: none"> <li>- Host HMHS main website (<a href="http://www.halcyonmarine.com.ph">www.halcyonmarine.com.ph</a>)</li> </ul>	<ul style="list-style-type: none"> <li>• Marketing of clinic services</li> <li>• Posting of news and updates about the clinic</li> <li>• Career opportunities</li> </ul>	<ul style="list-style-type: none"> <li>- Activate HMHS web pages on Alpha server</li> <li>- Update DNS settings on dotPH. Point domain name on clinic public IP address</li> </ul> <p><b>Restoration time:</b> 24 hours</p>
<b>My Payroll System (Internet dependent)</b>	<ul style="list-style-type: none"> <li>- Online based payroll system host outside the clinic</li> </ul>	<ul style="list-style-type: none"> <li>• Automation of payroll process</li> <li>• Online viewing of pay slip and attendance</li> <li>• Online filing of overtime, leave and business trip</li> </ul>	Manual payroll
<b>Google Apps (Internet dependent)</b>	<ul style="list-style-type: none"> <li>- Host clinic email server</li> <li>- Host clinic online/cloud file storage</li> </ul>	<ul style="list-style-type: none"> <li>• Email services</li> <li>• Online file storage <ul style="list-style-type: none"> <li>◦ Patient attachments</li> </ul> </li> <li>◦ Daily census</li> <li>◦ Statistics <ul style="list-style-type: none"> <li>◦ Forms</li> </ul> </li> </ul>	No backup
<b>Queuing System server</b>	<ul style="list-style-type: none"> <li>- Host In-house queuing server</li> </ul>	<ul style="list-style-type: none"> <li>• Generate Ticket</li> <li>• Automatically queue Patients on each unit ground to 3rd floor</li> <li>• Call Patient on TV display</li> </ul>	Manual Process

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#### **6.6. In case of absence**

- In case of scheduled or emergency leave, concerned Technical Support Personnel shall provide available MIS Technical Support with all necessary key access to files, ports and servers to ensure continuity of MIS service delivery.
- All Technical Support Personnel are automatically on on-call service 24/7 in case of network breakdown or any emergency technical problem.

#### **6.7**

#### **In the event of any total shutdown due to any man- made or natural calamities**

##### **6.7.1 Backup system:**

- MIS will maintain a regular monthly and weekly backup in the office.
- Data should include the following, but not limited to server accounts, all important inter department and personal data from the file servers and data from various system files like I-net, Quickbook, etc.

##### **6.7.2 Important IT documentations:**

The following IT documentations should be maintained off site:

- IT security policies, guidelines and standards
- Complete hardware and software listings
- Complete password listings (password protected)
- Detailed network cable routing schematics
- Detailed rack plan
- Data backup/restoration procedures and logbook

##### **6.7.3 Restoration:**

After recovering the all the data from the offsite and deploying new server units, MIS shall restore all the data and configured files.

##### **6.7.4 Remote Access of server**

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MIS can externally access the server by remote thru "Webconfig" – an open source server administration and configuration tool that is locally available in Clear OS Linux server.

#### **6.8. List of passwords**

- MIS shall provide the MIS Head with the list of all the passwords. Said list will be in a password protected excel file.
- It must be stored in a secured folder in the file server, where only the MIS Head can access.
- Same password protected copy can be kept by the MIS Head in his/her assigned PC for additional copy.
- No hardcopies will be kept by both parties for security purposes

#### **6.9. Server opening and shutdown procedure**

##### **6.9.1 Opening**

- Ensure all 4 APC UPS are on.
- Check if all cables are connected in the server (mouse, keyboard, monitor, power cords and network cables)
- Press the power "on" button, different hardware and software installed will be seen, wait until the display login appears. Type login name and password (refer to the login name and password), wait until the ClearOS linux server graphical user interface appears.

##### **6.9.2 Restarting**

If the server hangs and needs to be restarted, do the following:

- Inform all end-users that you will be restarting the server
- Go to ClearOS linux graphical user interface and in the upper middle area, click "System"
- Under "Settings", click "Shutdown – Restart"
- Opposite the "System" row, make sure that "Restart" is selected.
- Click "Update"
- Click "Continue" when ask "Are you sure you want to restart your system"?

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- Wait for a few minutes until the display login appears

## 6.10 Basic troubleshooting

### 6.10.1 Basic server troubleshooting

- If the server does not have power – check the UPS connection and if the power cord is connected to the server.
- If the server does not have display – check the video cable if it attached to the server and check if the power cord of the monitor is plug in the electrical socket.
- If the mouse or keyboard is not working – check if their respective cords are connected to the server. If connected and still not working – try other set of mouse and keyboard.
- Internet and system distribution problems. Check the 2 network cables at the back panel of the server, one is connected to the 3 Com Switch hubs which distribute the system and internet connection to the entire user and the other cable connected to the router which receive connection from the DSL modem.

### 6.10.2 Basic network troubleshooting

- If an end-user has no network access – check if pc LAN cable is securely connected to LAN card at the back of the pc and the other end in the LAN port at the wall. If connected and there is light in the LAN card, try to get a new LAN cable.
- Go to the server room, check if all the network switches are on. Network switches are ON if there are lights in its front panel. If not, check the power cords of the network switches.

### 6.10.3 Basic internet connection troubleshooting

- If the DSL and LinkSys internet routers have no power – check their respective power cords. Routers are ON if they have lights. Light indicators as follows: Red is for power, it should be steady. The DSL ACT and 100M ACT should be blinking and the DSL link led light

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should be steady. If blinking, call Eastern Telecom at 300-1000 for assistance. Likewise, a steady link led light means no internet access from DSL.

#### **6.10.4 Basic software troubleshooting**

- Restart your pc if the computer is observed to manifest abnormal activity.
- Restart to refresh or close application if there is an observed slowing down of your computer speed.
- If you are unable to open an application in your computer, right click on your mouse, menu opens, click "open", click "start", then "control panel", click "add and remove programs", check if the application is still there. If it was removed, reinstall the application or repair it.
- If you are unable to close the application, press "ctrl+alt+del", the windows task manager will pop up. Check if the status of the application is running or not responding.
- If you encounter a serious error in the system, windows task manager will pop up and command you to send or don't send. Select "don't send".

#### **6.10.5 Basic printer trouble shooting**

- If the printer is not working – check the printer LED if it is blinking. Three possible reasons are low ink, paper jam and internal problem with printer.
- Else, click start then go to "printer and faxes". Check if the printer is online or offline. If offline, right click on your mouse then select online. The word "read" will appear under the selected printer.
- Else, if it is not blinking but is online, double click the printer icon on the right bottom corner, select "cancel all documents" and then restart the computer.

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#### **6.10.6 Basic PABX and telephone troubleshooting**

- If there is no dial tone – check both cable ends connected to the telephone handset and the cable connected to the main telephone and port in the wall.
- Else, call PLDT 171 Customer service and if needed, they will ask you to contact the building administrator.

### **7.0 IT Procurement and Accountability Procedures**

- In coordination with the Accounting Department, the MIS staff shall provide specifications of new unit, configuration, deployment and maintenance of equipment (including safekeeping of idle units), encoding of IT equipment specification on CID (Centralized Inventory Database), and checking of IT equipment to ensure that it is in good condition before clearing the employee accountability form.

#### **7.1 Inventory Tag Numbers**

- Purchasing unit is responsible for tagging and encoding of IT equipment which includes tag code, serial number, supplier, requesting department, unit price, date of purchase, delivery date, date of request and remarks on CID.
- Once purchasing has encoded item descriptions on CID, IT equipment must be forwarded to MIS for checking and encoding of IT equipment specifications.
- MIS to encode IT equipment specification on CID including CPU, Memory and Hard drive capacity for desktop unit.

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#### **7.2. Accountability form**

- The Accounting Department shall issue an Accountability Form to end-user indicating the clear specifications of the assigned IT equipment.

The end-user shall be responsible for the good working condition of the equipment.

- Upon separation from the company, the end-user shall turnover to MIS the assigned equipment based on the issued Accountability form/s such as but not limited to servers, switches, back-up devices etc prior to issuance of employment clearance.

#### **7.3. Idle equipment (safekeeping and transferring)**

- All IT related idle equipment shall be turned over to the MIS department in case of transfer, re-assignment or promotion of the end-user. As such, the MIS shall update its record and re-assign IT equipment to the new end-user through the issuance of a new Accountability form.

#### **7.4. Procedure for requisition of an IT related equipment**

Once the request is finalized and with MIS recommendation, the Accounting personnel shall forward the request to the MIS personnel who will check if there is an available unit or idle equipment ready for transfer.

7.4.1 If there is an available unit, the Accounting Department shall process the transfer of accountability. Otherwise, if none, the MIS staff shall issue an IT Equipment Assessment Report.

7.4.2 IT Equipment Assessment Report is issued under conditions wherein:

- (i) An IT equipment is defective
  - It shall include the assessment on the existing equipment and recommendation.
- (ii) An IT equipment is needed to be replaced

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- It shall stipulate the assessment on the existing equipment, recommendation, and comparison to the old equipment against the new equipment.
- (iii) To request for a new IT equipment
  - It shall specify the purpose and recommended specifications

7.4.3 After the MIS staff completes the IT Equipment Assessment Report, it shall be forwarded to the General Manager for Operations.

7.4.4 Once approved, it shall be given to the end user to be attached in the Non-Regular Requisition Form.

- Accounting department proceeds with the canvassing for IT equipment.
- If recommended IT specs are unavailable, purchasing personnel discusses the concern with the MIS personnel for other alternative IT brand/equipment.
- Purchasing personnel to inform the end-user about the alternative brand/IT equipment and proceeds with the purchase upon approval of the end-user. Otherwise, the end-user will discuss with the Unit Head/Manager other options.
- MIS checks the specification of the new unit, its functionality and reports damages if any.
- If in order, Purchasing signs the delivery form.
- MIS to receive the unit from Purchasing with the accomplished delivery form.
- MIS to configure the unit, and deploy the requested/purchased unit to the end-user not later than (2) days upon receipt from Accounting unit.
- Purchasing to keep track of the delivery status of the purchased unit.
- The end user shall be given (3) days to observe and report the unit installed for any damages/problems that may arise within the period covered in order for purchasing to report and possibly return damaged unit within the usual (7) day delivery return policy.

## 8.0 MIS Helpdesk Procedure

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- MIS shall receive service request of end-users for technical support through Helpdesk system and notification through email. All requests will be issued a unique service ticket number for easy tracking of request status.
- End-user must fill up and sign system access form upon requesting for Helpdesk system access. The form must be signed by their respective heads and the MIS head.
- All computer and technical related requests by the end-user must be entered on the Helpdesk system before MIS responds.
- MIS task breakdown: all IT staff will be designated according to their field of expertise and technical discipline.
  - Hardware
  - Network
  - Software
- MIS shall monitor from time to time the Helpdesk system for incoming requests.
- All completed request must be acknowledge by the end-user within 3 days upon closing time otherwise MIS will close the ticket.
- Helpdesk report must be generated every month through Helpdesk system desktop, statistics and assessment.
- MIS request daily tally report must be generated by the end of the month and submitted to the MIS head for review and assessment.

#### **8.1. Classification of Request**

- |                   |                                                                                                                                                                                       |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Priority 1</b> | - disruption of the whole clinic operations (e.g. a down company server, no internet or telephone connection, email system not working etc.)                                          |
| <b>Priority 2</b> | - disruption of departmental operations e.g. Department server or printer is down, a medical equipment or a copier machine has a problem, a manager with any pc related problems etc. |

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- Priority 3** - single user problems or any staff related problem (e.g. configuration of newly purchased CPU unit, monitor problem, internet access request, email set-up request etc.)
- Priority 4** - single user or staff related concerns (e.g. miscellaneous, coordination or inquiries)

#### **8.2. Response time**

- Short term request average response time will be 4 hours.
- Configuration of newly purchased unit will be delivered with 2 days upon receipt from the purchasing.
- Configuration of old units from a resigned (or end of contract) employee to a newly assigned employee will be 2 days
- Long term repair of pc, monitor, printer etc. will be 2 weeks.

#### **9.0 Procedure for Equipment Disposal**

- MIS shall ensure proper disposal of IT equipment in compliance with both environmental and government mandated regulations.
- Hard drives, USB, memory cards and other multiple write media must be securely erased to prevent data recovery tools to from recovering data. Use hard disk software/tools to erase data using multiple write and erase routines to securely destroy data.
- All technology equipment that reached the end of their useful life (at least 5 years based on standard average useful life) must be sent to MIS for proper disposal.
- For CPU, MIS must securely erase all data in accordance with the current industry best practices.
- Aside from detailing the full specifications, MIS to check each unit for status (i.e. working, not working with identified defective parts).
- Based on MIS examination, accounting department will assess the current depreciation value of every equipment.
- All equipment in good working condition shall be made available to the company employees thru close bidding. The lowest bid shall be specified by the Accounting Dept.

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- All unsold equipment will be made available to any non-employees or agency hired staff, suppliers etc. or may be donated to any charitable institution as per Management's discretion.
- All disposed equipment will be deleted from the MIS inventory data file

#### **10.0 Procedure for request and deployment of service unit**

- Managers and department heads shall email to MIS when they need to request for a service unit.
- MIS head approval is required before proceeding to deployment.
- MIS personnel shall register the request on the MIS service unit request log on Google Drive. It should include the date of request, date of deployment and date of return.
- MIS personnel shall issue an accountability form to the end-user.
- All service units must be returned within 1 month except for the ff. circumstances:
  - Original unit is on repair or maintenance
  - The user is waiting for the delivery of the new unit.
- MIS must maintain the following number of service units for the following items:

<b>Item</b>	<b>Quantity</b>
Computer desktop	5
Computer monitor	5
Computer keyboard	10
Computer mouse	10
Webcam	2
Printer	2
Telephone	3
AVR	3

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UPS	2
Power extension	3
8 Port Switch	3
24 Port Switch	2

## 11.0 Preventive Maintenance Policy

- MIS shall maintain a centralized anti-virus system to deploy updated anti-virus signatures. Likewise, this is to prevent spywares/malwares and removal of any malicious programs. A regular full virus scanning of each pc will be scheduled. Full virus scanning of each pc will be done weekly, every Saturday at 12 noon.
- USB and CD drives shall be disabled in order to minimize the risks associated with receiving infected files.
- Regular hard disk defragmentation (the reorganization of data stored on hard drives) shall be implemented quarterly to allow the pc to run at its peak performance.
- Operating system security updates and patches installation shall be scheduled on a weekly basis (Friday 12:00 noon) this is to keep the operating system up-to-date and thereby will provide solution to security vulnerabilities and holes as well as resolutions to well-known and identified software bugs.
- Temporary and unnecessary files (including old and un-used programs) shall be regularly checked on a quarterly basis (last Friday of the quarter). Likewise, regular registry scanning and start-up cleaning programs shall be implemented. The over-all purpose of these actions is to free up disk space, over-all system performance improvement and faster system boot-ups.

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- Regular pc fan cooling system and heat sink inspections and clean-up once a year (December) shall be implemented. This is to increase the longevity of CPU and other components to avoid over-heating.
- Regular hardware review and inventory shall be implemented and shall recommend upgrades and replacements if needed for uninterrupted system functionality and to prevent last minute costly purchases.

## 12.0 HMHS Intranet System

- Access within the intranet system by the following department is limited to:

<b>Department/ Unit</b>	<b>Limit of Module Access/ Modify</b>
Laboratory	Diagnostics – can edit but not delete
Testing Units	Diagnostics – can edit but not delete
PE and Follow-up MDs	Processing and Diagnostics – can edit only but not delete
Processing MDs	Reception, Processing, CSO and Diagnostics – can edit but not delete
PEME Accounts Specialist	Reception, Processing, and Diagnostics, Admin – can create, edit but not delete.  CSR – can create, edit but not delete
Reception Unit	Reception and Processing – can create, edit but not delete
Processing Unit Accounting Department	View only view only

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HRM Department	view only
Executive Department	All modules – can access/modify
MIS	All modules – can access/modify

- For security purposes, Departments/Units that can access/edit/modify the I-net can be traced through the assigned End-User's ID and password.

### 13.0 PROCEDURE FOR DEACTIVATION OF USER ACCOUNTS

- A Human Resource Department representative must notify the MIS department immediately when an employee's employment contract is about to end or has ended. Notification is sent via email, letter or helpdesk.
- MIS personnel should ensure that all user accounts of resigned employee or an employee whose contract has ended including email, systems account, pc, internet portal, remote access and messenger is deactivated on the day of departure to discontinue the employee's access to company information after separation from employment.
- MIS personnel to clear resigned or an employee whose contract has ended only after all his/her system accounts and access has been disabled and deactivated.
- MIS personnel should maintain the inventory of all equipment and devices that have been distributed to employees contracted to HMHS. This includes laptops, phones, tablets, navigation systems, cameras, etc. In addition, All accounted backup devices of resigned or an employee whose contract has ended like flash drives, CDs, external hard drives, etc must be surrendered on or before his/her end of contract.

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- If the resigned employee has any access codes to computer-based building security systems, MIS shall ensure that those are changed upon their departure and new codes are distributed to necessary staff.

#### **14.0 PROCEDURE FOR SERVER ROOM AIR CONDITIONING MONITORING AND MAINTENANCE**

- MIS staff shall maintain and keep the server temperature based on the Industry Standard Temperature of 20-21°C (68-71°F). Temperatures should not fall below 10°C (50°F), and should not exceed 28°C (82°F).
- MIS staff shall monitor the server room temperatures on a daily basis. At least one (1) temperature monitoring in the morning and one (1) in the afternoon.
- MIS staff shall assign an OJT to monitor the server temperature as part of their daily task. If the OJT is unavailable, assigned MIS technical support will do the task.
- MIS staff shall provide a daily checklist as a proof that the checking of the server temperature is done on all floors and will be approved and noted by MIS Personnel.
- MIS staff shall assign a contingency if the assigned personnel are unavailable or on leave.
- MIS Staff or OJT will scan and upload the Monthly Server Temperature Monitoring Forms to Google Drive folder shared to QA.
- QA Staff randomly checks the Server Temperature Monitoring to ensure that temperature meets the Industry Standard Temperature.
- Backup air conditioning is provided in case the main air conditioning malfunctioned. If this happens, back up air conditioning will automatically switch on.
- MIS staff should report all air conditioning issues to the Administrative Department via the Admin Ticketing system.

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## 15. Off site Contingency Procedure

- The MIS head is in-charge of the monthly offsite backup process when the assigned IT Personnel is on leave for a long period of time.

## 16.0 SYSTEM MANUALS

### 17.1 Generating Report

- User can create Daily Accomplishment Report by clicking the **Report Button**.

Note: Only archived records will be put on report.

Print Preview

14 | < | > | 100% | | |

**Accomplishment Report**

Testing Unit: MIS department Date: 03/27/14

PEME	Patient name	Date In	Time In	Date OUT	Time OUT
1122334	Juan Dela Cruz	03/26/14	20:11	03/27/14	10:17
124563213	romeo aglas	03/27/14	10:17	03/27/14	10:18

Total No. of patient(s) : 2

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## 16.2 SMS System End-user Manual

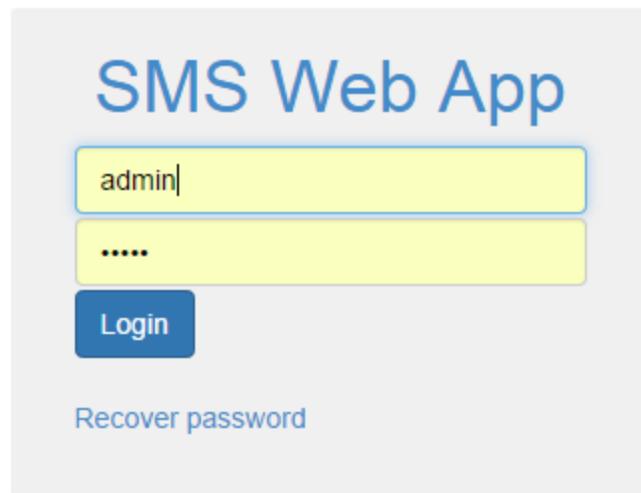
### 16.2.0 System Access

Using any browser type on the URL address bar **192.168.10.148/playsms**.



### 16.2.1 User Login

Enter your username and password and Click **Login** button.

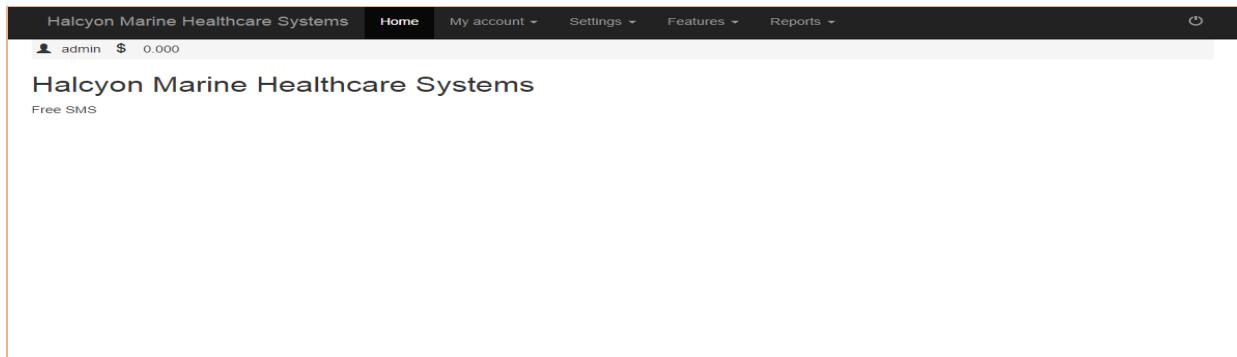


The screenshot shows the 'SMS Web App' login interface. It features a light gray background with a blue header. Two input fields are present: the top one contains the text 'admin' and the bottom one contains the placeholder '.....'. Below these fields is a blue 'Login' button. At the bottom left of the form, there is a link labeled 'Recover password'.

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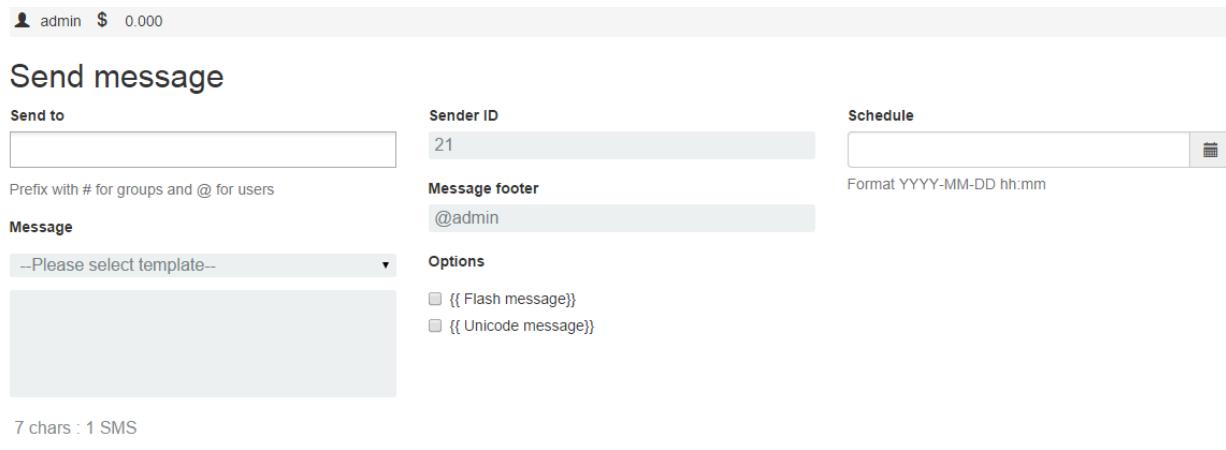
## 16.2.2 Homepage



## 16.2.3 Sending Basic SMS

To send a simple text messages please follow the ff. steps:

1. Go to **My account** -> click **Send message**.
2. You will be directed to Send SMS page. See image below.



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3. Enter recipient/s number on **Send to** box and press ENTER or TAB.

**Send to**

x 09153624562 |

Prefix with # for groups and @ for users

You can enter group contacts by simply typing hashtag (#) and the name of the group. See image below.

**Send to**

#m

#m

Group: Medical Coordinator (MEDCOOR)

You can add as many contacts as you want.

**Send to**

x Gemma Ortiz (09289913585)

x Casey Teruel (09054232307)

x Group: Medical Coordinator (MEDCOOR) |

Prefix with # for groups and @ for users

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4. Enter your message on **Message** box.

#### Message

--Please select template-- ▾

Hello World!

5. Click **Send** button.
6. Message will be deliver to queue. Please note that the queued must be equal to 1 and failed must be equal to zero else your message will not be sent.

Halcyon Marine Healthcare Systems    Home    My account ▾    Settings ▾    Features ▾    Reports ▾    Power icon

admin    \$ 0.000

Your message has been delivered to queue (queued:1 failed:0)

**Send message**

<b>Send to</b> <input type="text"/> Prefix with # for groups and @ for users	<b>Sender ID</b> 21	<b>Schedule</b> <input type="text"/> <span style="font-size: small;">Format YYYY-MM-DD hh:mm</span>
<b>Message</b> --Please select template-- ▾ Hello World!	<b>Message footer</b> @admin	<b>Options</b> <input type="checkbox"/> {{ Flash message}} <input type="checkbox"/> {{ Unicode message}}

19 chars : 1 SMS

**Send**

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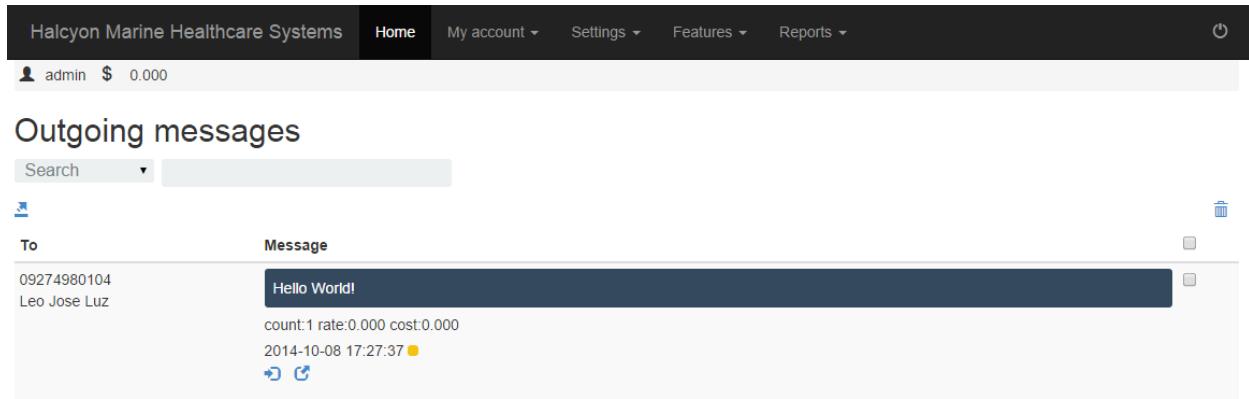
<b>QUALITY STANDARD SYSTEM MANUAL</b>	 <b>HALCYON MARINE</b> <small>HEALTHCARE SYSTEMS</small>	<b>DOCUMENT NO.</b> <b>QIT 1.0</b>	<b>EFFECTIVITY DATE:</b> <b>March 7, 2019</b>
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**Note:** You can only send 600 characters equivalent to 5 SMS at a time.

#### 16.2.4 Outgoing Messages

To verify if your text message was sent, please follow the ff. steps:

1. Go to **My account** -> click **Outgoing messages**.
2. You will be directed to Outgoing SMS page. See image below.



To	Message
09274980104 Leo Jose Luz	Hello World! count:1 rate:0.000 cost:0.000 2014-10-08 17:27:37

3. On the **To** column, it displayed the recipient number. Full name also displayed below the number if it is already added on the phonebook.
4. On the **Message** column, it displayed the actual message including date and time.

#### Outgoing Message Delivery Status:

- Red dot represent status "Failed" for failed attempt
- Yellow dot represent status "Pending" for queued SMS (on server)
- Green dot represent status "Sent" for SMS sent (SMS sent to gateway)

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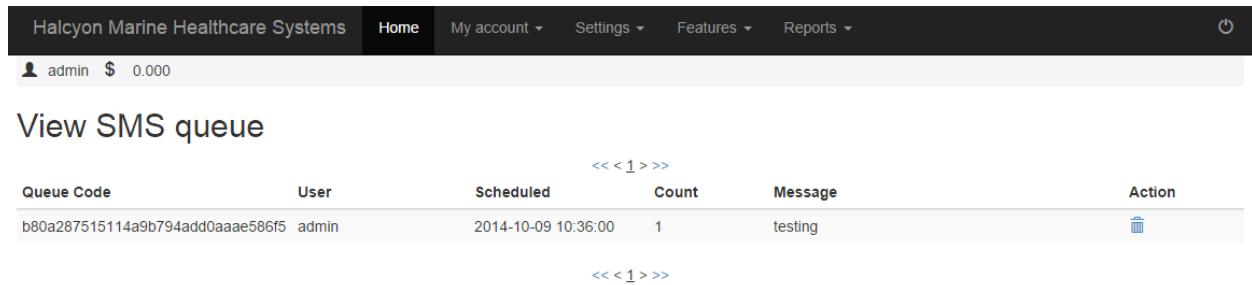
- Blue dot represent status "Delivered" for SMS delivered to phone

#### 16.2.5 SMS Queue

All sent messages that are not yet delivered to the Modem are placed on SMS queue. It happens when the message was scheduled for a specific time to send or if the user sends it on bulk recipient. Basically the modem can handle 1 message at a time.

To view the SMS Queue, please follow the ff. steps:

1. Go to **My account** -> click **View SMS queue**.
2. You will be directed to View SMS queue page. See image below.



The screenshot shows a software interface with a dark header bar. The header contains the text "Halcyon Marine Healthcare Systems" and navigation links: "Home", "My account", "Settings", "Features", and "Reports". Below the header, there is a user profile section with a "admin" icon and "\$ 0.000". The main content area is titled "View SMS queue". At the top of this section, there are navigation links: "<< < 1 > >>". Below these links is a table with the following data:

Queue Code	User	Scheduled	Count	Message	Action
b80a287515114a9b794add0aaae586f5	admin	2014-10-09 10:36:00	1	testing	

Below the table, there are more navigation links: "<< < 1 > >>".

3. On the "View SMS queue" page you will see all of your pending or scheduled text messages. It also displays the date and time the text message will be sent.

#### 16.2.6 Incoming Messages

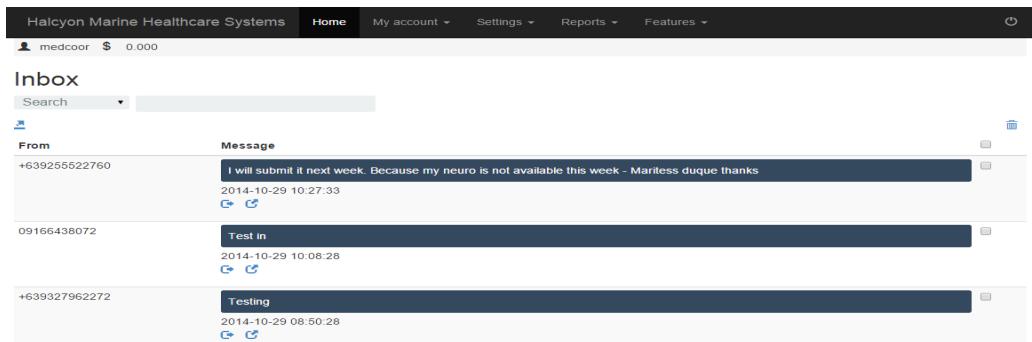
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All incoming Messages without keyword are stored on the **Inbox**.

To access Inbox, please follow the ff. steps:

1. Go to **My Account**-> click **Inbox**.
2. You will be directed to Inbox page. See image below.



3. On the **From** column, it displays the contact number. The contact name is displayed below the number if it is already added on the phonebook.
4. On the **Message** column, it displays the actual message including date and time.

**Note:** Messages are sorted by date and time. Recent messages are displayed on the top most part of the window.

#### 16.2.7 SMS Threading

SMS threading allows you to view messages as conversation between sender and recipient.

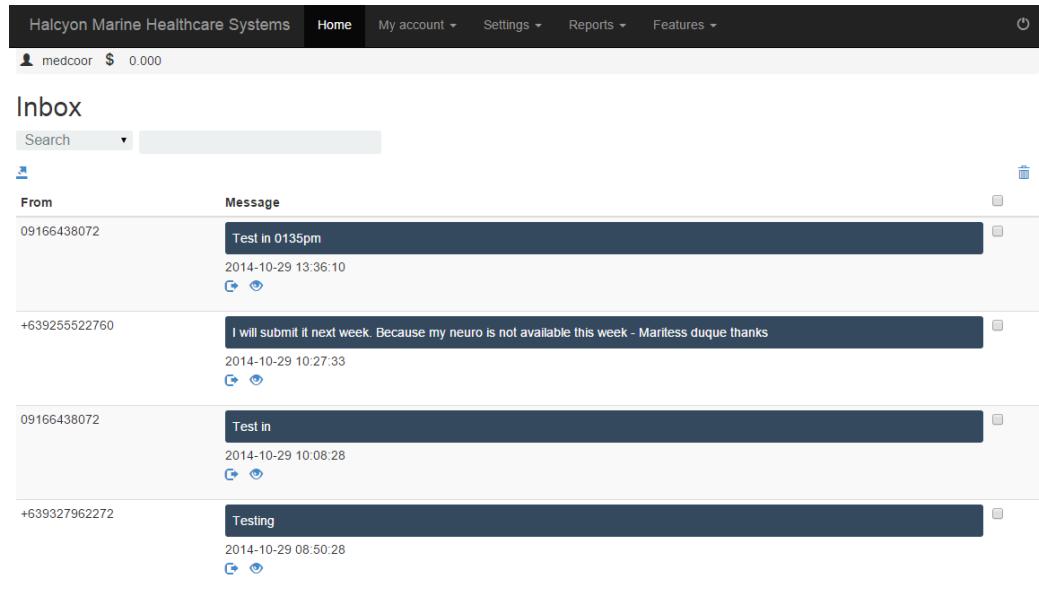
To access SMS Threading, please follow the ff. steps:

1. Go to **My Account**-> click **Thread**.

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2. You will be directed to Inbox Thread page. See image below.



From	Message
09166438072	Test in 0135pm 2014-10-29 13:36:10 View
+639255522760	I will submit it next week. Because my neuro is not available this week - Marilas duque thanks 2014-10-29 10:27:33 View
09166438072	Test in 2014-10-29 10:08:28 View
+639327962272	Testing 2014-10-29 08:50:28 View

3. Click the view button to see the message thread.

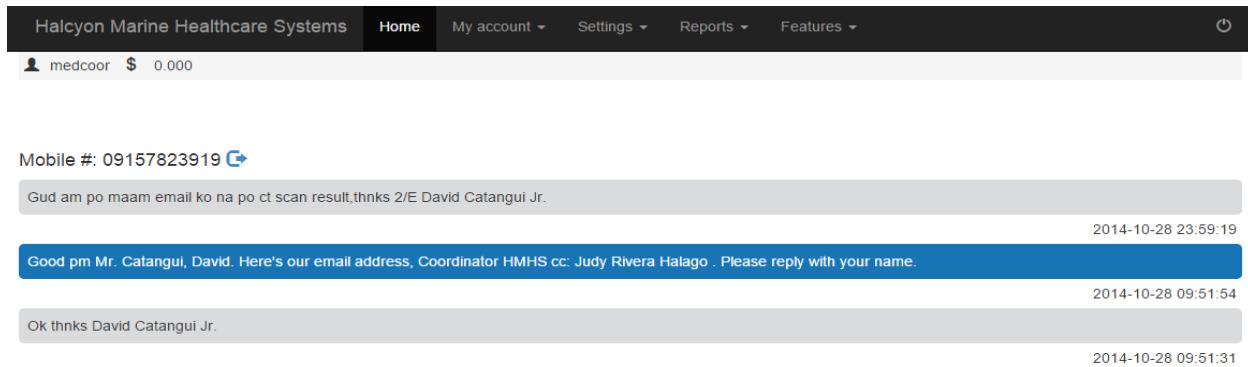


From	Message
09166438072	Test in 0135pm 2014-10-29 13:36:10 View

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4. You will be directed to Message Thread page. See image below.



The screenshot shows a messaging interface with the following details:

- Header:** Halcyon Marine Healthcare Systems, Home, My account, Settings, Reports, Features, Power button.
- User Information:** medcoor, \$ 0.000
- Message Thread:**
  - Mobile #: 09157823919 
  - Gud am po maam email ko na po ct scan result,thnks 2/E David Catangui Jr. (2014-10-28 23:59:19)
  - Good pm Mr. Catangui, David. Here's our email address, Coordinator HMHS cc: Judy Rivera Halago . Please reply with your name. (2014-10-28 09:51:54)
  - Ok thnks David Catangui Jr. (2014-10-28 09:51:31)

5. All messages that has a blue background color indicates outgoing message (message that you sent). Messages with light-gray background color indicates incoming messages (message from recipient).
6. To immediately reply from recipient. Click reply button located beside the Mobile nu

Mobile #: 09157823919  

Gud am po maam email ko na po ct scan result,thnks 2/E David Cata

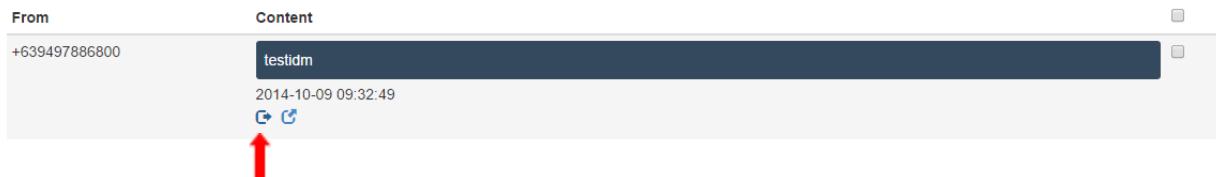
**Note:** Messages are sorted by date and time. Recent messages are displayed on the top most part of the window.

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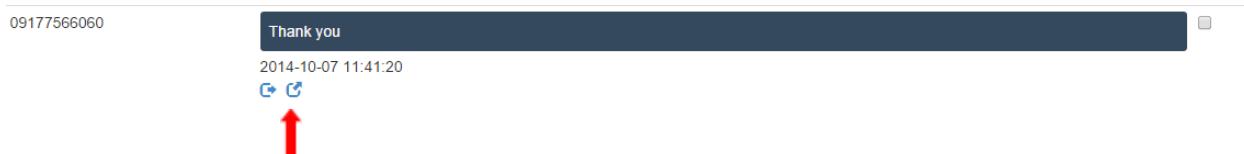
#### 16.2.8 Reply on Text Message

You can immediately reply to any text messages by clicking the **Reply** button. See image below.



#### 16.2.9 Forwarding a Message

You can forward any text messages by clicking the **Forward** button. See image below.



#### 16.2.10 Message Template

Message template is useful for text messages that are frequently used.

To create a template, please follow the ff. steps:

1. Go to **My account**-> click **Message template**.

2. You will be directed to Message template page. See image below.



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Halcyon Marine Healthcare Systems    Home    My account ▾    Settings ▾    Features ▾    Reports ▾    

admin \$ 0.00

## Message template



### Name

### Content



Good morning

Hi u there, good morning!!



Good night have a sweet dream

Hi sweetheart, good night and have a sweet dream :\*



Meeting Now

Hello #NAME#, please hurry up, boss summons us !



### Notes

- #NAME# will be replaced with the name listed in phonebook
- #NUM# will be replaced with the phone number listed in phonebook

3. TO ADD NEW TEMPLATE, CLICK (+) SIGN.

## Message template



### Name

### Content

Good morning

Hi u there, god

Good night have a sweet dream

Hi sweetheart,

Meeting Now

Hello #NAME#

**CONTROLLED**

<b>QUALITY STANDARD SYSTEM MANUAL</b>	 <b>HALCYON MARINE</b> <small>HEALTHCARE SYSTEMS</small>	<b>DOCUMENT NO.</b> <b>QIT 1.0</b>	<b>EFFECTIVITY DATE:</b> <b>March 7, 2019</b>
		<b>PREPARED BY:</b> <b>Marilar F. De Guzman, MD</b> <b>QAM</b>	<b>REVISION NO.: 4</b>
<b>SUBJECT: HMHS QUALITY MANUAL FOR MIS</b>			

4. You will direct to Add Message Template page. See image below.

Halcyon Marine Healthcare Systems      Home      My account ▾      Settings ▾      Features ▾      Reports ▾

admin \$ 0.000

## Message template

### Add message template

Message template name

Message template content

**Save**      **Back**

5. Enter the template name and content. Click **Save** button.

6. Your template will be added on the list of templates.

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#### 16.2.11 Using saved template

You can access saved templates on Send message page. See image below.

**Send message**

**Send to**

Prefix with # for groups and @ for users

**Message**

--Please select template--

--Please select template--

Good morning

Good night have a sweet dream

Meeting Now

Hi u the

14 chars : 1 SMS

**Send**

You can a  
Content for the se

I double click.  
age box.

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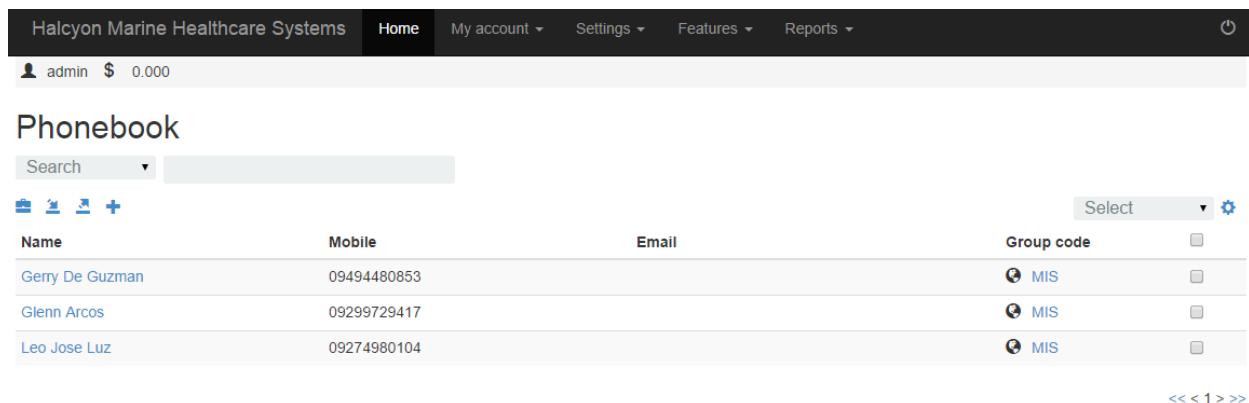
#### 16.2.12 Phonebook

Phonebook module lets you to create list and group of contacts.

##### Add Contact

To add contact, please follow the ff. steps:

1. Go to **My account->** click **Phone book**.
2. You will be directed to Phone book page. See image below.

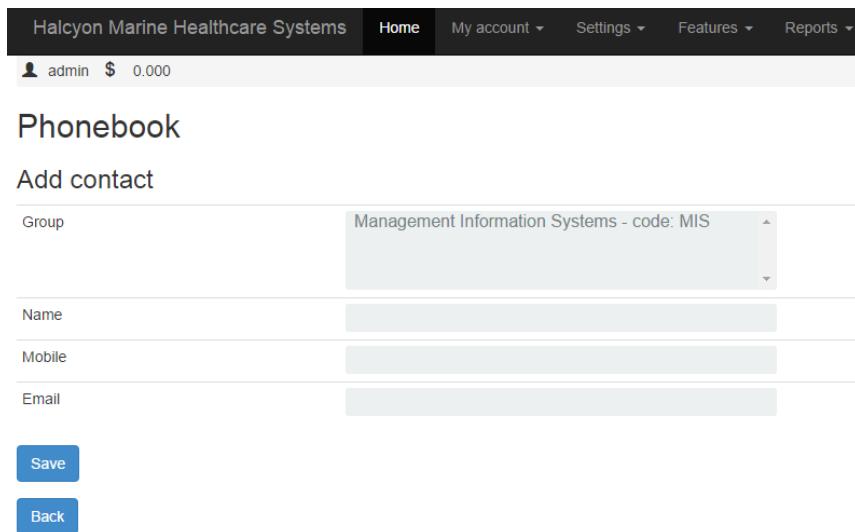


Name	Mobile	Email	Group code
Gerry De Guzman	09494480853		MIS
Glenn Arcos	09299729417		MIS
Leo Jose Luz	09274980104		MIS

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3. Click (+) sign. You will be directed to **Add contact** page. See image below.



Halcyon Marine Healthcare Systems    Home    My account ▾    Settings ▾    Features ▾    Reports ▾

admin \$ 0.000

## Phonebook

### Add contact

Group	Management Information Systems - code: MIS
Name	
Mobile	
Email	

**Save**    **Back**

4. Select Group. Enter the name, mobile and email of the person you want to add. All fields are required and needed to fill-up.
5. Click **Save** button.

**Note:** Contact needed to be tag in a group. Therefore you must first create group before adding contacts.

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		<b>PREPARED BY:</b> <b>Marilar F. De Guzman, MD</b> <b>QAM</b>	<b>REVISION NO.:</b> 4  <b>APPROVED BY:</b> <b>Glennda E. Canlas, MD</b> <b>Medical Director</b>
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#### Add Group

To add group, please follow the ff. steps:

1. Click **Add group** button. See image below.

**Phonebook**

Search
+ 

Name	Mobile
Gerry De Guzman	09494480
Glenn Arcos	09299729

2. You will be directed to Group page. See image below.

Halcyon Marine Healthcare Systems    Home    My account    Settings    Features    Reports    Power icon

admin \$ 0.000

**Phonebook**

**Group**

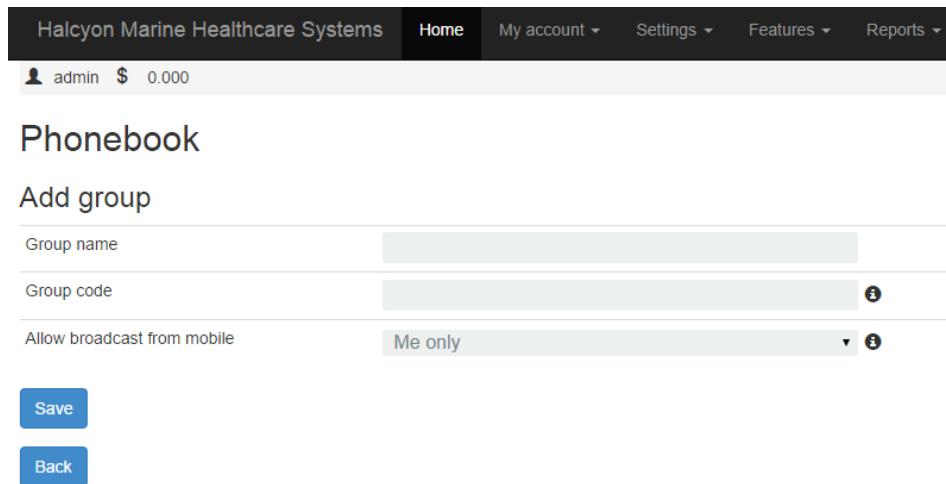
Name	Group code	Action
Management Information Systems	MIS	

**Back**

CONTROLLED

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3. Click (+) sign. You will be directed to **Add group** page. See image below.



The screenshot shows a software interface for 'Halcyon Marine Healthcare Systems'. At the top, there's a navigation bar with links for Home, My account, Settings, Features, and Reports. Below the navigation bar, a user profile shows 'admin' and '\$ 0.000'. The main content area is titled 'Phonebook' and contains a form for adding a new group. The form fields are: 'Group name' (input field), 'Group code' (input field), and 'Allow broadcast from mobile' (dropdown menu set to 'Me only'). At the bottom of the form are two buttons: 'Save' (in blue) and 'Back' (in blue).

4. Enter Group name and code.  
 5. Select broadcast option. You can choose between **Me only**, **Members** or **Anyone**.  
 6. Click **Save** button.

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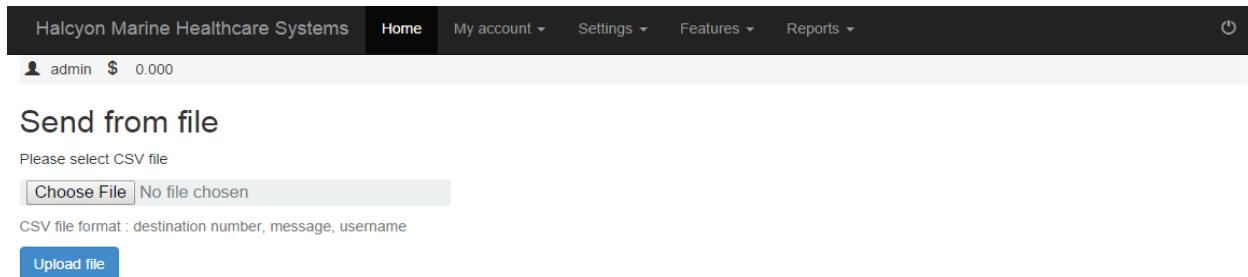
<b>QUALITY STANDARD SYSTEM MANUAL</b>	 <b>HALCYON MARINE</b> <small>HEALTHCARE SYSTEMS</small>	<b>DOCUMENT NO.</b> <b>QIT 1.0</b>	<b>EFFECTIVITY DATE:</b> <b>March 7, 2019</b>
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#### 16.2.13 Send from file

Send from file option allows you to send multiple SMS to different recipients with different message content.

To use send from file option, please follow the ff. steps:

1. Go to **My account**-> click **Send from file**.
2. You will be directed to **Send from file** page. See image below.

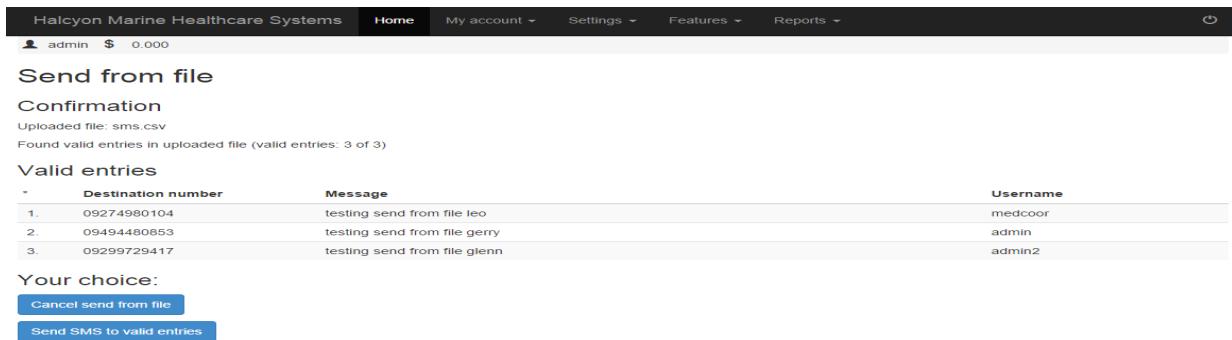


Please select CSV file

No file chosen

CSV file format : destination number, message, username

3. Click **Choose file**. And browse the CSV file you want to upload. Take note that only CSV file format will accepted by the system.
4. Click **Upload file** button.
5. You will be directed to the **Confirmation** page. See image below.



Confirmation

Uploaded file: sms.csv

Found valid entries in uploaded file (valid entries: 3 of 3)

Valid entries			
*	Destination number	Message	Username
1.	09274980104	testing send from file leo	medcoor
2.	09494480853	testing send from file gerry	admin
3.	09299729417	testing send from file glenn	admin2

Your choice:

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6. System will validate all entries on the CSV file. The system will display all valid and invalid entries it detected.
7. From there you can either Cancel the sending or continue to send SMS to valid Entries.

**Note:** Upon sending only valid entries will be accepted for delivery.  
Below is the sample of valid CSV file format.

B10	:	X ✓ fx	
A	B	C	D
1 09274980104	testing send from file leo	medcoor	
2 09494480853	testing send from file gerry	admin	
3 09299729417	testing send from file glenn	admin2	
4			
5			
6			
7			
8			

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		<b>PREPARED BY:</b> <b>Marilar F. De Guzman, MD</b> <b>QAM</b>	<b>REVISION NO.:</b> 4  <b>APPROVED BY:</b> <b>Glennda E. Canlas, MD</b> <b>Medical Director</b>
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#### 16.2.14 SMS Scheduling

SMS Scheduling option allows you to schedule SMS for specific date and time.

To schedule SMS please follow the ff. steps:

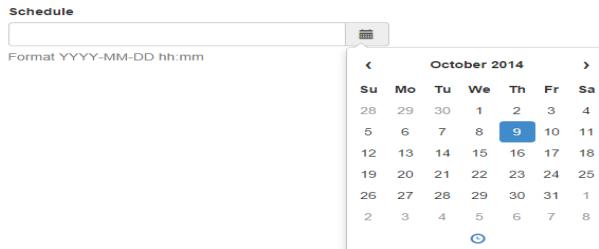
1. Go to **My account** -> click **Send message**.
2. You will be directed to Send SMS page. See image below.

admin \$ 0.000

**Send message**

<b>Send to</b> <input type="text"/>	<b>Sender ID</b> 21	<b>Schedule</b> <input type="text"/> 
Prefix with # for groups and @ for users	<b>Message footer</b> @admin	Format YYYY-MM-DD hh:mm
<b>Message</b> --Please select template-- <input type="text"/>	<b>Options</b> <input type="checkbox"/> {{ Flash message}} <input type="checkbox"/> {{ Unicode message}}	
7 chars : 1 SMS		
<b>Send</b>		

3. Click **Schedule** Date picker. Select date.



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4. Select time.

Schedule

Format YYYY-MM-DD hh:mm



5. Enter recipient/s number on **Send to** box and press ENTER or TAB.

**Send to**

09153624562 |

Prefix with # for groups and @ for users

6. Enter your message on **Message** box

**Message**

--Please select template-- ▾

Hello World!

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7. Click **Send** button.
8. Message will be deliver to queue. Please note that the queued must be equal to 1 and failed must be equal to zero or else your message will not be sent.

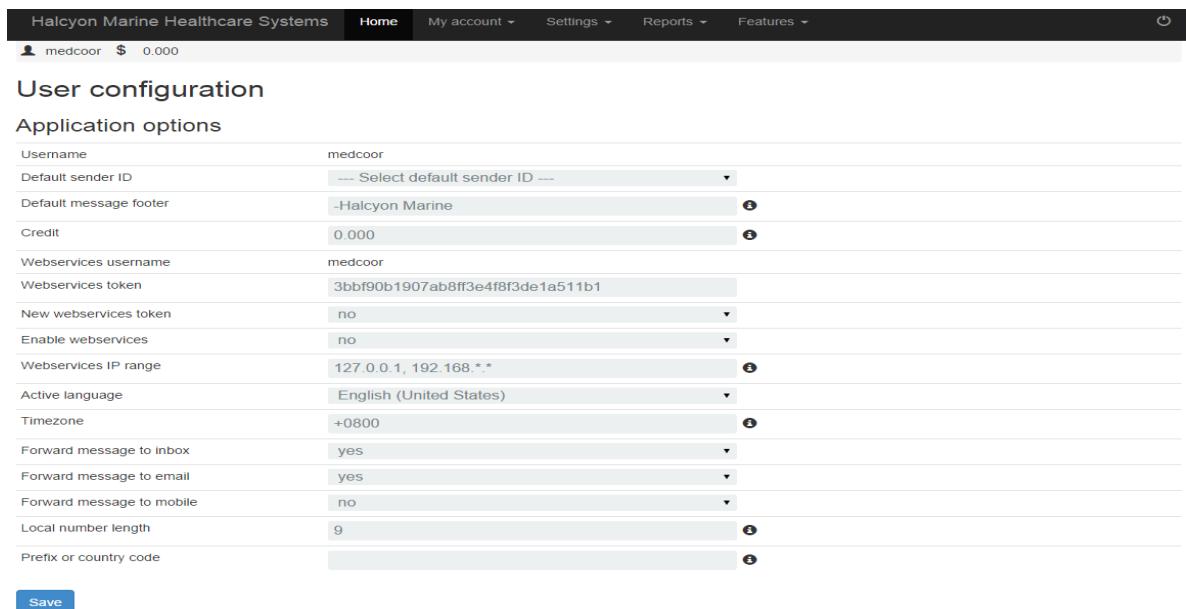
#### 16.2.15 Message Footer

Message footer can be used same as the signature in email. Every user may create his or her own footer.

Footer will be automatically added to the end of your text message once you send it.

To edit footer please follow the ff. steps:

1. Go to **My account** -> click **User configuration**.
2. You will be directed to User Configuration page.



Application options	
Username	medcoor
Default sender ID	--- Select default sender ID ---
Default message footer	Halcyon Marine
Credit	0.000
Webservices username	medcoor
Webservices token	3bbf90b1907ab8ff3e4ff3de1a511b1
New webservices token	no
Enable webservices	no
Webservices IP range	127.0.0.1, 192.168.*.*
Active language	English (United States)
Timezone	+0800
Forward message to inbox	yes
Forward message to email	yes
Forward message to mobile	no
Local number length	9
Prefix or country code	

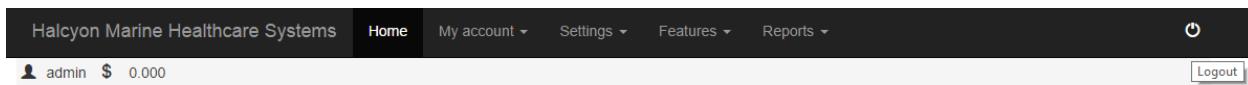
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3. Locate Default message footer and enter your desired footer.
4. Click **Save** button to apply the changes.

#### **16.2.16 Logging Out**

To safely logout from the system click the **Logout** button located at the top right of the web interface.



The screenshot shows a dark-themed web application header. On the left, it says "Halcyon Marine Healthcare Systems". To its right are navigation links: "Home", "My account", "Settings", "Features", and "Reports". On the far right is a power icon. Below the header, there's a user status bar with "admin" and "\$ 0.000". At the bottom right of the header is a "Logout" button. The main content area below the header displays the text "Halcyon Marine Healthcare Systems" and "Free SMS".

#### **16.3 iNET System Server Downtime and Recovery Procedure**

##### **1. Recovery Instructions**

**Note: Recovery should only be done during non-working hours. When no one is using the system/db**

##### **Database failover on MASTER (10.10.10.1):**

1. Log into both database servers as postgres and check current master being used by system with ifconfig. Current master should be indicated as the one using **10.10.10.5** as a virtual network interface.
2. If dbserver2(10.10.10.2) is the master determine reason of failure of master by browsing the logs for heartbeat(/var/log/ha-log) and postgres (/var/lib/pgsql/9.2/data/pg\_log/)

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3. Logged in as the postgres user on **10.10.10.2**, run the recovery\_1st\_stage.sh script from the terminal. This would copy all the data from the current master to the main master.
4. Run the following command as postgres on **10.10.10.1**: touch /var/lib/pgsql/9.2/data/trigger  
This would mark the current db as a master
5. Shutdown both database servers and turn on the **10.10.10.1 first as the intended master**. Followed by 10.10.10.2.
6. When both servers are running check if 10.10.10.1 is the master by running ifconfig and is using the 10.10.10.5 interface.
7. Logged in as the postgres user on **10.10.10.1**, run the recovery\_1st\_stage.sh script from the terminal. This would designate dbserver2(10.10.10.2) as a slave for failover.
8. Double check the following services are running on both servers by running these commands on both:
  - a. Postgresql : service postgresql-9.2 status
  - b. Heartbeat : service heartbeat status
9. Check if the system is accessible on 192.168.10.209, 192.168.10.210, 192.168.10.205

#### **Database SLAVE reinitialization(10.10.10.2):**

1. Repeat steps 6-9 on Master recovery

#### **Appserver Recovery: 192.168.10.208, 192.168.10.230**

Since both servers can be accessed at the same time and syncs automatically between themselves as Master-Master. Reboot the server with the following command as the halcyon user:

sudo reboot

Please note that the initial sync of files from unison would take at least 30 mins. After first sync it would normalize to about 1 min between sync

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## 2. Physical Server Legend

<b>Server ID/Tag</b>	<b>Description</b>	<b>Host Address</b>
iNET Server A	Application Server 1	192.168.10.210 / Portal (205)
iNET Server B	Application Server 2	192.168.10.209
iNET Server C	Database Server 1 (Main Master)	10.10.10.1
iNET Server D	Database Server 2 (Main Slave)	10.10.10.2

## 3. Downtime Scenarios

<b>Scenario</b>	<b>iNET Server A</b>	<b>iNET Server B</b>	<b>iNET Server C</b>	<b>iNET Server D</b>
1	DOWN	UP	UP	UP
2	UP	DOWN	UP	UP
3	UP	UP	DOWN	UP
4	UP	UP	UP	DOWN
5	UP	DOWN	UP	DOWN
6	DOWN	UP	UP	DOWN
7	DOWN	UP	DOWN	UP
8	UP	DOWN	DOWN	UP
9	DOWN	DOWN	UP	UP
10	UP	UP	DOWN	DOWN

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#### 4. System State and Recovery Procedure

##### Scenario 1: iNET Server A Down (192.168.10.230)

iNET Systems State	
App Server 1 (192.168.10.210)	DOWN
App Server 2 (192.168.10.209)	UP
Portal (192.168.10.205)	DOWN

Recovery Procedure	
Procedure	Duration
Turn on iNET Server A. All scripts will automatically run to start all needed application.	5 minutes
<b>Total Recovery Time</b>	<b>5 minutes</b>

**Note:** Initial sync of files from Unison would take at least 30 minutes. After first sync currently it would normalize to about 3 min between sync.

##### Scenario 2: iNET Server B down (192.168.10.208)

iNET Systems State	
App Server 1 (192.168.10.210)	UP
App Server 2 (192.168.10.209)	DOWN
Portal (192.168.10.205)	UP

Recovery Procedure	
Procedure	Duration

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Turn on iNET Server B. All scripts will automatically run to start all needed application.	5 minutes
<b>Total Recovery Time</b>	<b>5 minutes</b>

**Note:** Initial sync of files from Unison would take at least 30 minutes. After first sync currently it would normalize to about 3 min between sync.

### Scenario 3: iNET Server C down

**Description:** DB Main Master Server down and DB Slave Server became the Master Database Server.

iNET Systems State	
App Server 1 (192.168.10.210)	UP
App Server 2 (192.168.10.209)	UP
Portal (192.168.10.205)	UP

Recovery Procedure	
Procedure	Duration
Run the recovery_1 <sup>st</sup> _stage.sh script from the terminal. This would copy all the data from the current master to the main master.	15 minutes
<b>Note:</b> Considering 9.4 GB of database capacity to be sync. Time duration is vary depends on the database capacity to be sync.	
Run touch /var/lib/pgsql/9.2/data/trigger. This would mark the current db as a master	1 minute
Reboot Db server 1	6 minutes
Reboot Db server 2	3 minutes
Run the recovery_1 <sup>st</sup> _stage.sh script from the terminal. This would designate Db server 2 as a slave for failover.	15 minutes

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		<b>PREPARED BY:</b> <b>Marilar F. De Guzman, MD</b> <b>QAM</b>	<b>APPROVED BY:</b> <b>Glennda E. Canlas, MD</b> <b>Medical Director</b>
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<b>Note:</b> Considering 9.4 GB vary depends on the database capacity to be sync.	
Checking/Testing: Run <b>service postgresql-9.2 status &amp; service heartbeat status</b>	5 minutes
<b>Total Recovery Time</b>	<b>45 minutes</b>

**Note:** Recovery should only be done during non-working hours when no one is using the system and database.

#### Scenario 4: iNET Server D down

**Description:** Db Slave Server 2 down and need to re-sync.

iNET Systems State	
App Server 1 (192.168.10.210)	UP
App Server 2 (192.168.10.209)	UP
Portal (192.168.10.205)	UP

Recovery Procedure	
Procedure	Duration
Run the recovery_1 <sup>st</sup> _stage.sh script from the terminal. This would designate Db server 2 as a slave for failover.	15 minutes
<b>Note:</b> Considering 9.4 GB vary depends on the database capacity to be sync.	
Checking/Testing: Run <b>service postgresql-9.2 status &amp; service heartbeat status</b>	5 minutes
<b>Total Recovery Time</b>	<b>20 minutes</b>

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		<b>PREPARED BY:</b> <b>Marilar F. De Guzman, MD</b> <b>QAM</b>	<b>APPROVED BY:</b> <b>Glennda E. Canlas, MD</b> <b>Medical Director</b>
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#### Scenario 5: iNET Server B and D Down

iNET Systems State	
App Server 1 (192.168.10.210)	UP
App Server 2 (192.168.10.209)	DOWN
Portal (192.168.10.205)	UP

Recovery Procedure	
Procedure	Duration
Run the recovery_1 <sup>st</sup> _stage.sh script from the terminal. This would designate Db server 2 as a slave for failover.	15 minutes
<b>Note:</b> Considering 9.4 vary depends on the database capacity to be sync.	
Checking/Testing: Run <b>service postgresql-9.2 status &amp; service heartbeat status</b>	5 minutes
Turn on iNET Server B. All scripts will automatically run to start all needed application.	5 minutes
<b>Total Recovery Time</b>	<b>25 minutes</b>

#### Scenario 6: iNET Server A and D Down

iNET Systems State	
App Server 1 (192.168.10.210)	DOWN
App Server 2 (192.168.10.209)	UP

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Portal (192.168.10.205)	DOWN
-------------------------	------

<b>Recovery Procedure</b>	
<b>Procedure</b>	<b>Duration</b>
Run the recovery_1 <sup>st</sup> _stage.sh script from the terminal. This would designate Db server 2 as a slave for failover.	15 minutes
<b>Note:</b> Considering 9.4 GB vary depends on the database capacity to be sync.	
Checking/Testing: Run <b>service postgresql-9.2 status &amp; service heartbeat status</b>	5 minutes
Turn on iNET Server A. All scripts will automatically run to start all needed application.	5 minutes
<b>Total Recovery Time</b>	<b>25 minutes</b>

#### Scenario 7: iNET Server A and C down

**Description:** DB Main Master Server down and DB Slave Server became the Master Database Server.

<b>iNET Systems State</b>	
App Server 1 (192.168.10.210)	DOWN
App Server 2 (192.168.10.209)	UP
Portal (192.168.10.205)	DOWN

<b>Recovery Procedure</b>	
<b>Procedure</b>	<b>Duration</b>



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Run the recovery_1 <sup>st</sup> _stage.sh script from the terminal. This would copy all the data from the current master to the main master.	15 minutes
<b>Note:</b> Considering 9.4 GB of database capacity to be sync. Time duration will vary depending on the database capacity to be synced.	
Run touch /var/lib/pgsql/9.2/data/trigger. This would mark the current db as a master	1 minute
Reboot Db server 1	6 minutes
Reboot Db server 2	3 minutes
Run the recovery_1 <sup>st</sup> _stage.sh script from the terminal. This would designate Db server 2 as a slave for failover.	15 minutes
<b>Note:</b> Considering 9.4 GB vary depends on the database capacity to be sync.	
Checking/Testing: Run <b>service postgresql-9.2 status &amp; service heartbeat status</b>	5 minutes
Turn on iNET Server A. All scripts will automatically run to start all needed application.	5 minutes
<b>Total Recovery Time</b>	<b>50 minutes</b>

**Note:** Recovery should only be done during non-working hours when no one is using the system and database.

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#### **Scenario 8: iNET Server B and C down**

**Description:** DB Main Master Server down and DB Slave Server became the Master Database Server.

iNET Systems State	
App Server 1 (192.168.10.210)	UP
App Server 2 (192.168.10.209)	DOWN
Portal (192.168.10.205)	UP

Recovery Procedure	
Procedure	Duration
Run the recovery_1 <sup>st</sup> _stage.sh script from the terminal. This would copy all the data from the current master to the main master.	15 minutes
Run touch /var/lib/pgsql/9.2/data/trigger. This would mark the current db as a master	1 minute

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<b>Note:</b> Considering 9.4 GB of database capacity to be sync. Time duration will vary depends on the database capacity to be sync.	
Reboot Db server 1	6 minutes
Reboot Db server 2	3 minutes
Run the recovery_1 <sup>st</sup> _stage.sh script from the terminal. This would designate Db server 2 as a slave for failover.	15 minutes
<b>Note:</b> Considering 9.4 GB vary depends on the database capacity to be sync.	
Checking/Testing: Run <b>service postgresql-9.2 status</b> & <b>service heartbeat status</b>	5 minutes
Turn on iNET Server B. All scripts will automatically run to start all needed application.	5 minutes
<b>Total Recovery Time</b>	<b>50 minutes</b>

**Note:** Recovery should only be done during non-working hours when no one is using the system and database.

#### Scenario 9: iNET Server A and B down (192.168.10.230/192.168.10.208)

iNET Systems State	
App Server 1 (192.168.10.210)	DOWN
App Server 2 (192.168.10.209)	DOWN
Portal (192.168.10.205)	DOWN

Recovery Procedure	
Procedure	Duration
Turn on both iNET Server A and B. All scripts will automatically run to start all needed application.	5 minutes

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<b>Total Recovery Time</b>	<b>5 minutes</b>
----------------------------	------------------

**Note:** Initial sync of files from Unison would take at least 30 minutes. After first sync currently it would normalize to about 3 min between sync.

#### **Scenario 10: iNET Server C and D down**

**Description:** App Servers cannot run when all database servers is down.

<b>iNET Systems State</b>	
App Server 1 (192.168.10.210)	DOWN
App Server 2 (192.168.10.209)	DOWN
Portal (192.168.10.205)	DOWN

<b>Recovery Procedure</b>	
<b>Procedure</b>	<b>Duration</b>
Reboot Db server 1.	6 minutes
After at least 5 minutes, reboot Db server 2. This will ensure that Db server 1 will read by the system as a master database server.	3 minutes
Checking/Testing: Run <b>service postgresql-9.2 status &amp; service heartbeat status</b>	5 minutes
<b>Total Recovery Time</b>	<b>14 minutes</b>

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Please take note total system loss on Scenario 9 and 10.

#### 16.4 iNET System Redundancy Server Installation Manual

##### A. Server Guide

###### *Physical Servers*

###### **Appserver1**

IP:        eth0 – 192.168.10.230  
           Eth2 – 10.10.10.9  
           Eth3 – 10.10.2.1

Specs:  
       Xeon  
       16GB Ram  
       Raid1 – 2x120GB  
       Raid10 - 4x2TB

Applications  
       Halcyon-main Virtualized Server  
       Internal NFS  
       Unison file sync  
       Webmin port 10000

###### **Appserver2**

IP:        eth0 – 10.10.10.10  
           Eth1 – 192.168.10.208  
           Eth2 – 10.10.2.2

Specs:  
       Xeon  
       16GB Ram  
       Raid1 – 2x120GB  
       Raid1 - 2x1TB

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Applications  
 Halcyon-main2 Virtualized Server  
 Halcyon-portal Virtualized Server  
 Internal NFS  
 Unison file sync  
 Webmin port 10000

#### **Dserver1**

IP:  
Eth1 – 10.10.10.1

Specs:  
 Xeon  
 16GB Ram  
 Raid1 – 2x120GB  
 Raid10 - 4x500GB  
 Applications  
 Postgresql-9.2  
 Heartbeat < Master gets virtualized 10.10.10.5 IP  
 Webmin

#### **Dserver2**

IP:  
Eth1 – 10.10.10.2

Specs:  
 Xeon  
 16GB Ram  
 Raid1 – 2x120GB  
 Raid1 - 2x500GB  
 Applications  
 Postgresql-9.2  
 Heartbeat < Slave  
 Webmin

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Cron backup

#### ***Virtual Servers***

##### **Halcyon-main**

IP:        eth6 – 192.168.10.210  
             Eth7 – 10.10.10.4  
  Specs  
         4 Cores  
         12GB Ram

##### **Halcyon-main2**

IP:        eth2 – 192.168.10.209  
             Eth3 – 10.10.10.3  
  Specs  
         4 Cores  
         8GB Ram

##### **Halcyon-portal**

IP:        eth0 – 192.168.10.205  
             Eth1 – 10.10.10.6  
  Specs  
         2 Cores  
         4GB Ram

#### **B. Configuration Files**

##### **I. Unison config (192.168.10.208:/home/halcyon/.unison/halcyon.prf)**

```
# Roots of the synchronization
root = /mnt/raid1/
root = ssh://halcyon@10.10.2.1//media/Storage/files/
```

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# (... other preferences ...)

```
# If any new preferences are added by Unison (e.g. 'ignore'
# preferences added via the graphical UI), then store them in the
# file 'common' rather than in the top-level preference file
#addprefsto = common
```

# Names and paths to ignore:

```
#ignore = Name temp.*
#ignore = Name *~
#ignore = Name.*~
#ignore = Path attachments/thumb
#ignore = Name *.o
#ignore = Name *.tmp
```

## II. **Unison Crontab (192.168.10.208)**

```
* * * * * if !(( $(ps -A -o pid,command | grep unison | egrep -v grep | wc -l) > 0 )); then unison
-batch halcyon > /dev/null;touch /home/halcyon/sync-lastrun; fi
```

## III. **NFS Exports (192.168.10.208:/etc/exports 192.168.10.230:/etc/exports)**

/mnt/raid1/attachments

```
192.168.10.161(rw,sync,no_root_squash,all_squash,anonuid=500,anongid=500)
192.168.10.209(rw,sync,no_root_squash,all_squash,anonuid=500,anongid=500)
192.168.10.205(rw,sync,no_root_squash,all_squash,anonuid=500,anongid=500)
```

```
/mnt/raid1/photo 192.168.10.161(rw,sync,no_root_squash,all_squash,anonuid=500,anongid=500)
192.168.10.209(rw,sync,no_root_squash,all_squash,anonuid=500,anongid=500)
192.168.10.205(rw,sync,no_root_squash,all_squash,anonuid=500,anongid=500)
```

## IV. **Recovery\_1<sup>st</sup>\_stage.sh (both db servers)**

```
#!/bin/bash -x
HOSTNAME=10.10.10.1 #Change to targets
```

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PGDATA=/var/lib/pgsql/9.2/data  
 REMOTE\_HOST=10.10.10.2 **#Change to targets**  
 REMOTE\_PGDATA=/var/lib/pgsql/9.2/data

PORT=5432  
 PGHOME=/usr/pgsql-9.2  
 ARCH=/var/lib/pgsql/9.2/archive

rm -rf \$ARCH/\*

```

ssh -T postgres@$REMOTE_HOST "
LD_LIBRARY_PATH=$PGHOME/lib:LD_LIBRARH_PATH;
rm -rf $REMOTE_PGDATA
$PGHOME/bin/pg_basebackup -h $HOSTNAME -U replicator -D $REMOTE_PGDATA -x -c fast
rm $REMOTE_PGDATA/trigger"
  
```

```

ssh -T postgres@$REMOTE_HOST "rm -rf $ARCH/*"
ssh -T postgres@$REMOTE_HOST "mkdir -p $REMOTE_PGDATA/pg_xlog/archive_status"
  
```

```

ssh -T postgres@$REMOTE_HOST "
cd $REMOTE_PGDATA;
cp postgresql.conf postgresql.conf.bak;
sed -e 's/#[*]hot_standby = off/hot_standby = on/' postgresql.conf.bak > postgresql.conf;
rm -f postgresql.conf.bak;
cat > recovery.conf << EOT
standby_mode = 'on'
primary_conninfo = 'host=\"$HOSTNAME\" port=$PORT user=replicator'
restore_command = 'scp $HOSTNAME:$ARCH/%f %p'
trigger_file = '$PGDATA/trigger'
EOT
"
  
```

ssh -T root@\$REMOTE\_HOST "/etc/init.d/postgresql-9.2 start"

#### V. Trigger file location – Create this file to promote current DB server into master

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/var/lib/pgsql/9.2/data/trigger

#### VI. **Heartbeat Config (Both Servers:/etc/ha.d/ha.cf)**

```

# There are a lot of options in this file. The MIS personnel should have a set
# of nodes listed {"node ...} one of {serial, bcast, mcast, or ucast},
# and a value for "auto_failback".
#
# ATTENTION: As the configuration file is read line by line,
#           THE ORDER OF DIRECTIVE MATTERS!
#
# In particular, make sure that the udpport, serial baud rate
# etc. are set before the heartbeat media are defined!
# debug and log file directives go into effect when they
# are encountered.

# All will be fine if you keep them in order as in this example.
#
#
# Note on logging:
# If all of debugfile, logfile and logfacility are not defined,
# logging is the same as use_logd yes. In other case, they are
# respectively effective. If deterring the logging to syslog,
# logfacility must be "none".
#
# File to write debug messages to
debugfile /var/log/ha-debug
#
#
# File to write other messages to
#
logfile /var/log/ha-log
#

```

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```

#
# Facility to use for syslog()/logger
#
logfacility    local0
#
#
# A note on specifying "how long" times below...
#
# The default time unit is in seconds
#      10 means ten seconds
#
# The MIS personnel can also specify them in milliseconds
#      1500ms means 1.5 seconds
#
#
# keepalive: how long between heartbeats?
#
keepalive 2
#
# deadtime: how long-to-declare-host-dead?
#
#      If you set this too low you will get the problematic
#      split-brain (or cluster partition) problem.
#      See the FAQ for how to use warntime to tune deadtime.
#
deadtime 30
#
# warntime: how long before issuing "late heartbeat" warning?
# See the FAQ for how to use warntime to tune deadtime.
#
warntime 10
#
#
# Very first dead time (initdead)
#

```

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```

# On some machines/OSes, etc. the network takes a while to come up
# and start working right after you've been rebooted. As a result
# we have a separate dead time for when things first come up.
# It should be at least twice the normal dead time.
#
initdead 120
#
#
# What UDP port to use for bcast/ucast communication?
#
udpport      694
#
# Baud rate for serial ports...
#
#baud 19200
#
# serial    serialportname ...
#serial /dev/ttyS0      # Linux
#serial /dev/cuaa0      # FreeBSD
#serial /dev/cuad0      # FreeBSD 6.x
#serial /dev/cua/a      # Solaris
#
#
# What interfaces to broadcast heartbeats over?
#
#bcast eth0            # Linux
bcast  eth1      # Linux
#bcast le0              # Solaris
#bcast le1 le2          # Solaris
#
# Set up a multicast heartbeat medium
# mcast [dev] [mcast group] [port] [ttl] [loop]
#
# [dev]                device to send/recv heartbeats on
# [mcast group]        multicast group to join (class D multicast address

```

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```

# 224.0.0.0 - 239.255.255.255)
# [port]      udp port to sendto/recvfrom (set this value to the
#             same value as "udpport" above)
# [ttl]       the ttl value for outbound heartbeats. this effects
#             how far the multicast packet will propagate. (0-255)
#             Must be greater than zero.
# [loop]      toggles loopback for outbound multicast heartbeats.
#             if enabled, an outbound packet will be looped back and
#             received by the interface it was sent on. (0 or 1)
#             Set this value to zero.
#
#
#mcast eth0 225.0.0.1 694 1 0
#
#   Set up a unicast / udp heartbeat medium
#   ucast [dev] [peer-ip-addr]
#
#   [dev]          device to send/recv heartbeats on
#   [peer-ip-addr] IP address of peer to send packets to
#
#ucast eth0 192.168.1.2
#
#
#   About boolean values...
#
#   Any of the following case-insensitive values will work for true:
#   true, on, yes, y, 1
#   Any of the following case-insensitive values will work for false:
#   false, off, no, n, 0
#
#
#
#   auto_failback: determines whether a resource will
#   automatically fail back to its "primary" node, or remain
#   on whatever node is serving it until that node fails, or

```

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```

# an administrator intervenes.

#
# The possible values for auto_failback are:
#   on    - enable automatic failbacks
#   off   - disable automatic failbacks
#   legacy - enable automatic failbacks in systems
#           where all nodes do not yet support
#           the auto_failback option.
#
# auto_failback "on" and "off" are backwards compatible with the old
#   "nice_failback on" setting.
#
# See the FAQ for information on how to convert
#   from "legacy" to "on" without a flash cut.
#   (i.e., using a "rolling upgrade" process)
#
# The default value for auto_failback is "legacy", which
# will issue a warning at startup. So, make sure you put
# an auto_failback directive in your ha.cf file.
# (note: auto_failback can be any boolean or "legacy")
#
auto_failback off
#
#
# Basic STONITH support
# Using this directive assumes that there is one stonith
# device in the cluster. Parameters to this device are
# read from a configuration file. The format of this line is:
#
#   stonith <stonith_type> <configfile>
#
# NOTE: it is up to you to maintain this file on each node in the
# cluster!
#
#stonith baytech /etc/ha.d/conf/stonith.baytech

```

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```

#
# STONITH support
# You can configure multiple stonith devices using this directive.
# The format of the line is:
#   stonith_host <hostfrom> <stonith_type> <params...
#   <hostfrom> is the machine the stonith device is attached
#   to or * to mean it is accessible from any host.
#   <stonith_type> is the type of stonith device (a list of
#   supported drives is in /usr/lib/stonith.)
#   <params...> are driver specific parameters. To see the
#   format for a particular device, run:
#   stonith -l -t <stonith_type>
#
#
#
# Note that if you put your stonith device access information in
# here, and you make this file publically readable, you're asking
# for a denial of service attack ;-)
#
# To get a list of supported stonith devices, run
#   stonith -L
# For detailed information on which stonith devices are supported
# and their detailed configuration options, run this command:
#   stonith -h
#
#stonith_host *    baytech 10.0.0.3 mylogin mysecretpassword
#stonith_host ken3 rps10 /dev/ttys1 kathy 0
#stonith_host kathy rps10 /dev/ttys1 ken3 0
#
# Watchdog is the watchdog timer. If our own heart doesn't beat for
# a minute, then our machine will reboot.
# NOTE: If you are using the software watchdog, you very likely
# wish to load the module with the parameter "nowayout=0" or
# compile it without CONFIG_WATCHDOG_NOWAYOUT set. Otherwise even
# an orderly shutdown of heartbeat will trigger a reboot, which is
# very likely NOT what you want.

```

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		<b>PREPARED BY:</b> <b>Marilar F. De Guzman, MD</b> <b>QAM</b>	<b>REVISION NO.:</b> 4  <b>APPROVED BY:</b> <b>Glennda E. Canlas, MD</b> <b>Medical Director</b>
<b>SUBJECT: HMHS QUALITY MANUAL FOR MIS</b>			

```

#
#watchdog /dev/watchdog
#
# Tell what machines are in the cluster
# node nodename ... -- must match uname -n
node dbserver1.halcyon
node dbserver2.halcyon
#
# Less common options...
#
# Treats 10.10.10.254 as a psuedo-cluster-member
# Used together with ipfail below...
# note: don't use a cluster node as ping node
#
#ping 10.10.10.254
#
# Treats 10.10.10.254 and 10.10.10.253 as a psuedo-cluster-member
# called group1. If either 10.10.10.254 or 10.10.10.253 are up
# then group1 is up
# Used together with ipfail below...
#
#ping_group group1 10.10.10.254 10.10.10.253
#
# HBA ping directive for Fiber Channel
# Treats fc-card-name as psudo-cluster-member
# used with ipfail below ...
#
# You can obtain HBAPI from http://hbaapi.sourceforge.net. You need
# to get the library specific to your HBA directly from the vendor
# To install HBAAPI stuff, all You need to do is to compile the common
# part you obtained from the sourceforge. This will produce libHBAPI.so
# which you need to copy to /usr/lib. You need also copy hbaapi.h to
# /usr/include.
#
# The fc-card-name is the name obtained from the hbaapitest program

```

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```

#      that is part of the hbaapi package. Running hbaapitest will produce
#      a verbose output. One of the first line is similar to:
#          Apapter number 0 is named: qlogic-qla2200-0
#      Here fc-card-name is qlogic-qla2200-0.
#
#hbaping fc-card-name
#
#
#      Processes started and stopped with heartbeat. Restarted unless
#          they exit with rc=100
#
#      respawn root /usr/local/bin/checkservice

#respawn userid /path/name/to/run
#respawn hacluster /usr/lib/heartbeat/ipfail
#
#      Access control for client api
#          default is no access
#
#apiauth client-name gid=gidlist uid=uidlist
#apiauth ipfail gid=haclient uid=hacluster

#####
#
#      Unusual options.
#
#####
#
#      hopfudge maximum hop count minus number of nodes in config
#hopfudge 1
#
#      deadping - dead time for ping nodes
#deadping 30
#

```

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```

#      hbgenmethod - Heartbeat generation number creation method
#      Normally these are stored on disk and incremented as needed.
#hbgenmethod time
#
#      realtime - enable/disable realtime execution (high priority, etc.)
#      defaults to on
#realtime off
#
#      debug - set debug level
#      defaults to zero
#debug 1
#
#      API Authentication - replaces the fifo-permissions-based system of the past
#      You can put a uid list and/or a gid list.
#      If you put both, then a process is authorized if it qualifies under either
#      the uid list, or under the gid list.
#
#      The groupname "default" has special meaning. If it is specified, then
#      this will be used for authorizing groupless clients, and any client groups
#      not otherwise specified.
#
#      There is a subtle exception to this. "default" will never be used in the
#      following cases (actual default auth directives noted in brackets)
#          ipfail (uid=HA_CCMUSER)
#          ccm          (uid=HA_CCMUSER)
#          ping         (gid=HA_APIGROUP)
#          cl_status    (gid=HA_APIGROUP)
#
#      This is done to avoid creating a gaping security hole and matches the most
#      likely desired configuration.
#
#      apiauth ipfail uid=hacluster
#      apiauth ccm uid=hacluster
#      apiauth cms uid=hacluster
#      apiauth ping gid=haclient uid=alanr,root

```

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```

# apiauth default gid=haclient

# message format in the wire, it can be classic or netstring,
# default: classic
# msgfmt classic/netstring

# Do we use logging daemon?
# If logging daemon is used, logfile/debugfile/logfacility in this file
# are not meaningful any longer. You should check the config file for logging
# daemon (the default is /etc/logd.cf)
# more infomartion can be found in the man page.
# Setting use_logd to "yes" is recommended
#
# use_logd yes/no
#
# the interval we reconnect to logging daemon if the previous connection
# failed
# default: 60 seconds
# conn_logd_time 60
#
#
# Configure compression module
# It could be zlib or bz2, depending on whether you have the corresponding
# library in the system.
# compression bz2
#
# Configure compression threshold
# This value determines the threshold to compress a message,
# e.g. if the threshold is 1, then any message with size greater than 1 KB
# will be compressed, the default is 2 (KB)
# compression_threshold 2

```

VII. **Heartbeat (both servers:/etc/ha.d/haresources)**

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		<b>PREPARED BY:</b> Marilar F. De Guzman, MD QAM	<b>APPROVED BY:</b> Glenda E. Canlas, MD Medical Director

dbserver1.halcyon IPaddr::10.10.10.5/24/eth1

## VIII. Heartbeat resources.d symlink (both servers:/etc/ha.d/resources.d)

postgresql-9.2 -> /etc/init.d/postgresql-9.2

#### IX. Heartbeat checkservice custom postgresql check script and failover (bothservers:/usr/local/bin/checkservice)

```
#!/bin/bash -x
```

```
INTERVAL=10  
IP=10.10.10.5  
IFNAME="eth1"  
#GATEWAY = 192.168.11.1 # gateway
```

```
PG_ADMIN=postgres  
PSQL="/usr/bin/psql"  
PGDB=template1  
#
```

```
while :  
    do  
        sleep $INTERVAL  
  
#  
# Check the presence or absence of a virtual IP address  
#  
/etc/ha.d/resource.d/IPAddr $IP status > /dev/null 2>&1  
if [ $? -ne 0 ]  
then
```

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```

        continue
fi

        touch /var/lib/pgsql/9.2/data/trigger
#
# Check the Link interface
#
LINK=`/sbin/ethtool $IFNAME | awk '/Link detected: / {print $3}'` 
if [ "$LINK" != "yes" ]
then
        /usr/lib64/heartbeat/heartbeat -k
        exit
fi

#
# Check communication with the gateway
#
# ping -c 1 -w 1 $GATEWAY > /dev/null 2>&1
# if [ $? -ne 0 ]
# then
#         heartbeat -k
#         exit
# fi

#
# Service confirmation of PostgreSQL
#
SQL="SELECT username FROM pg_user where username = '$PG_ADMIN'"
CHK_COM="$PSQL -l -q -t -c \" $SQL \" \"$PGDB\""
su - $PG_ADMIN -c "$CHK_COM" > /dev/null 2>&1
if [ $? -ne 0 ]
then
        /usr/lib64/heartbeat/heartbeat -k
        exit
fi

```

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done

X. **HourlyBackup Crontab (10.10.10.2)**

```
1 5-21 * * 1-5 /var/lib/pgsql/halcyon_backup.sh
```

XI. **Halcyon\_backup.sh (10.10.10.2:/var/lib/pgsql/halcyon\_backup.sh)**

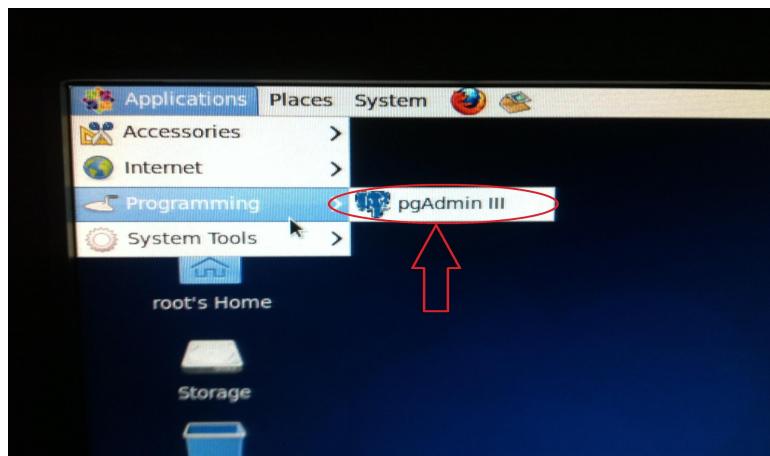
```
#!/bin/bash
pg_dump -w halcyon-demo-don | gzip > "/mnt/raid1/db_backup/halcyon_don_`date
+%F-%T`.bak.gz"
```

## 16.5 INET DATABASE MANUAL BACKUP PROCEDURE

**Note:** IT staff that performs the backup must have access to the server room.

Steps on how to manually backup inet main database server:

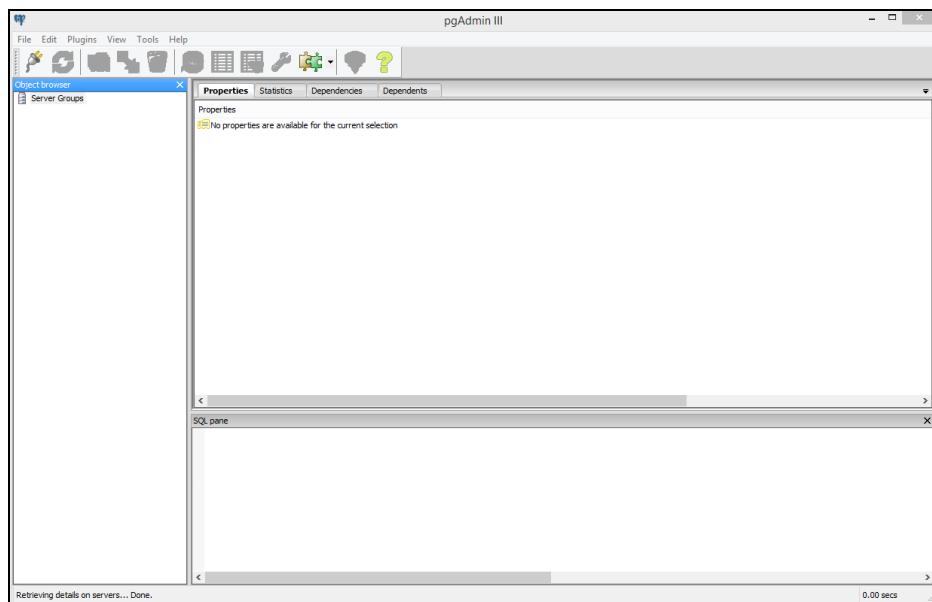
1. IT staff must access the main database server and login as root user. Main database root password is listed on MIS list of passwords.
2. Once successfully login, go to Applications -> Programming and click pgAdmin III.



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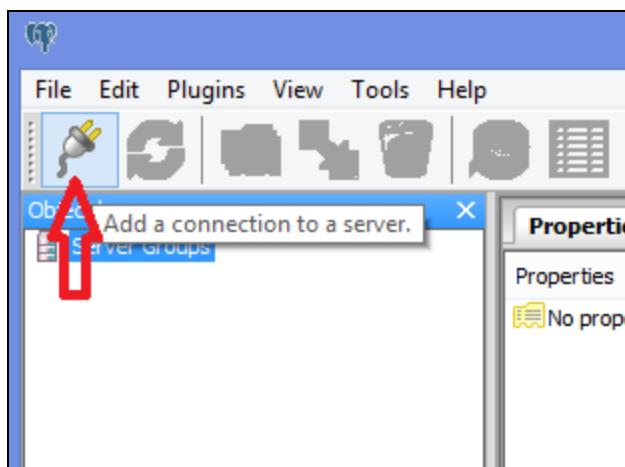
3. pgAdmin III application will launch. See image below.



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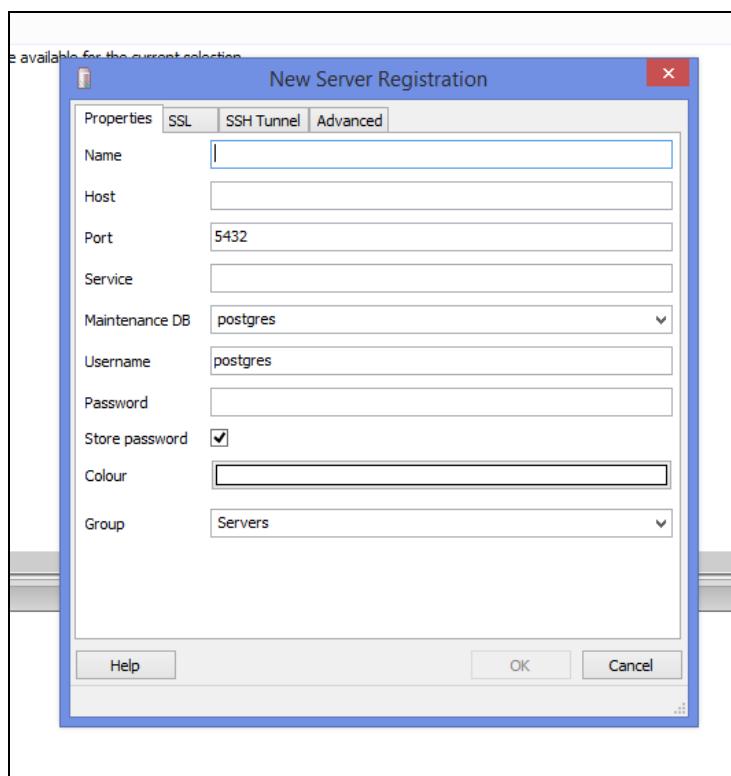
4. Click **Add connection to a server** button.



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5. **New Server Registration** window will appear. See image below.

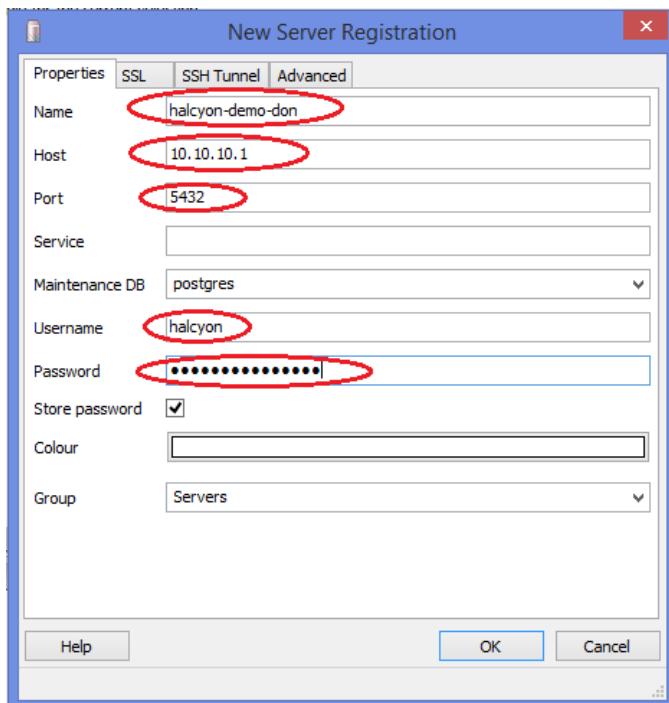


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6. Enter below value on each required field.

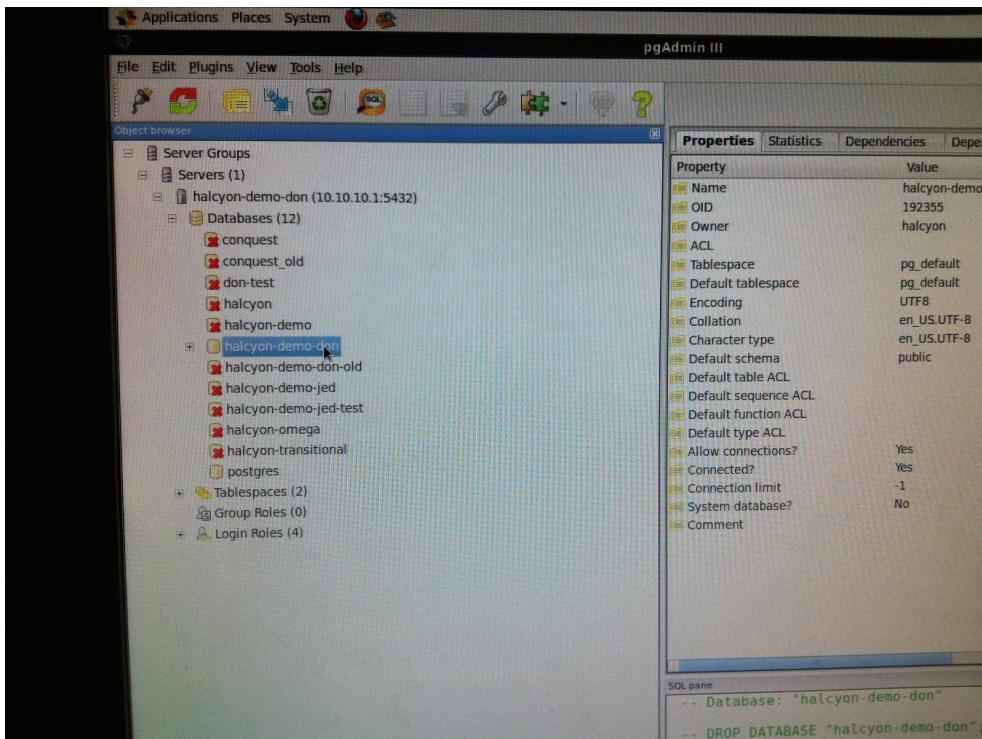
**Name:** halcyon-db  
**Host:** 10.10.10.1  
**Port:** 5432  
**Username:** halcyon  
**Password:** (password is listed on MIS list of passwords)  
**Note:** Leave other fields on default.



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		<b>PREPARED BY:</b> <b>Marilar F. De Guzman, MD</b> <b>QAM</b>	<b>REVISION NO.: 4</b>
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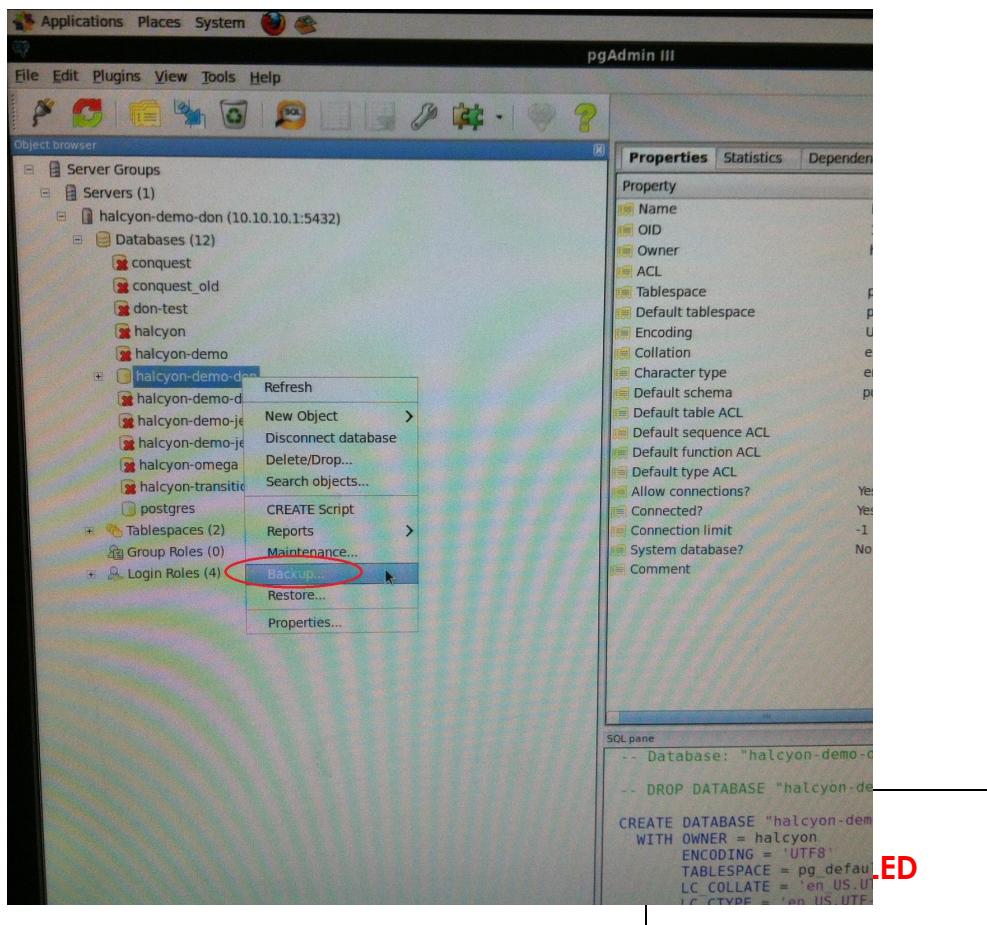
7. Once done, click **OK** button. List of databases will appear under Server Group -> Servers.



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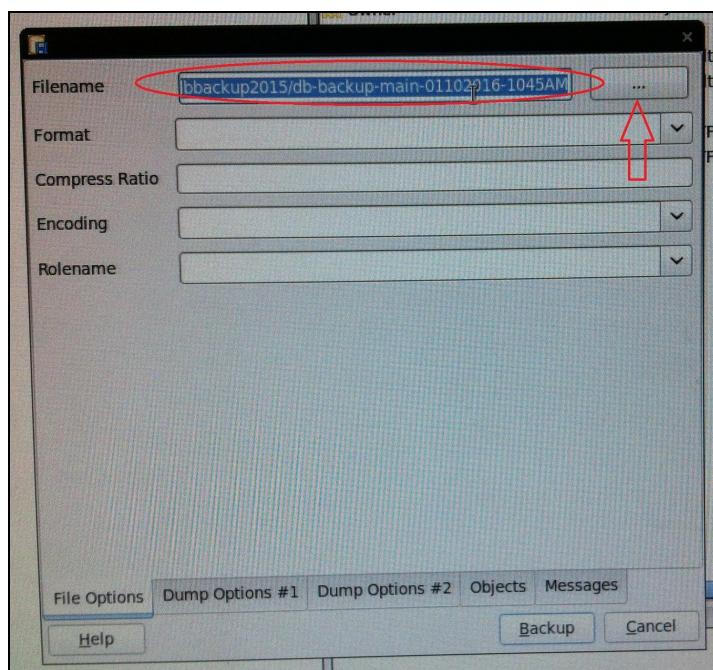
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8. Find **halcyon-demo-don** database and issue right-click. Click **Backup** option.



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9. Dialogue box will appear. Browse the folder to where the backup files save and enter the file name.



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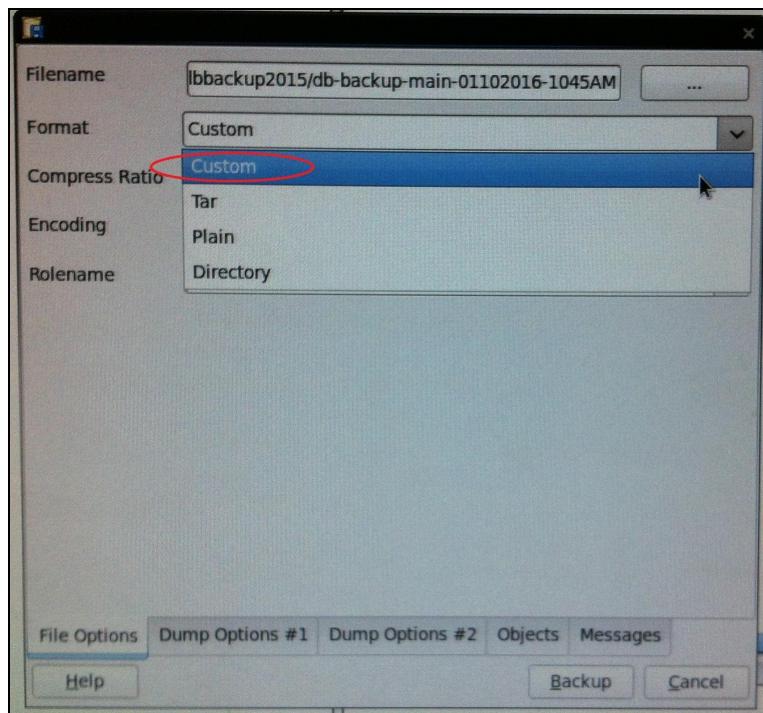
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#### **File Naming Convention**

Database backup file must name as follows, db-backup-main-[date]-[time].

For example: db-backup-main-01112016-0758AM

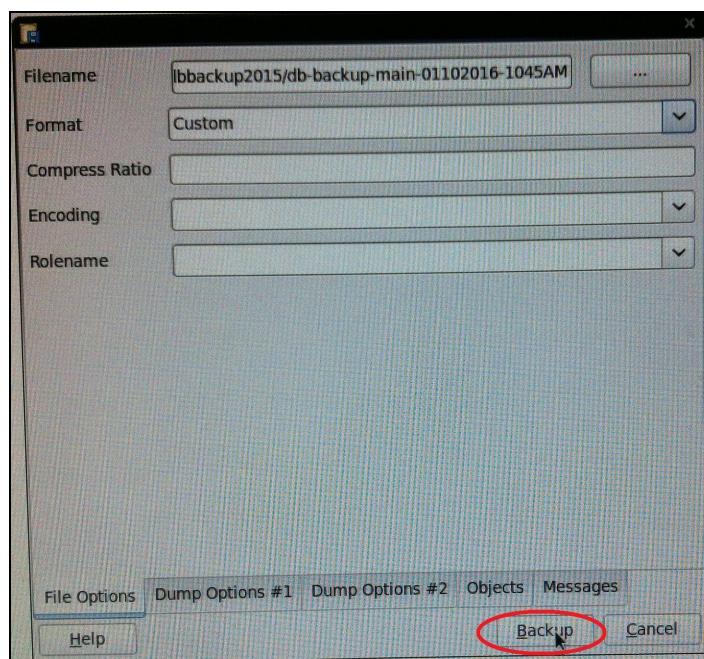
10. On the format field, choose Custom.



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		<b>PREPARED BY:</b> <b>Marilar F. De Guzman, MD</b> <b>QAM</b>	<b>REVISION NO.:</b> 4  <b>APPROVED BY:</b> <b>Glennda E. Canlas, MD</b> <b>Medical Director</b>
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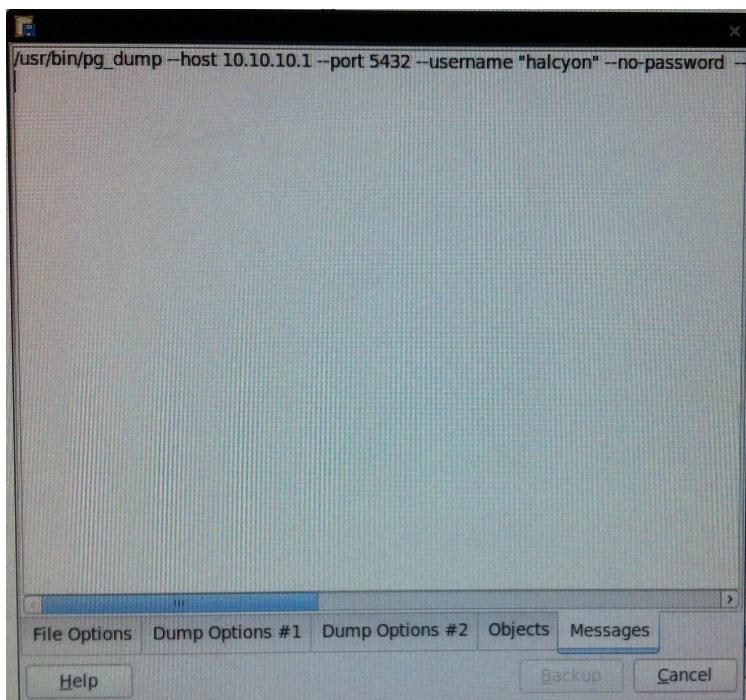
11. When done, click **Backup** button.



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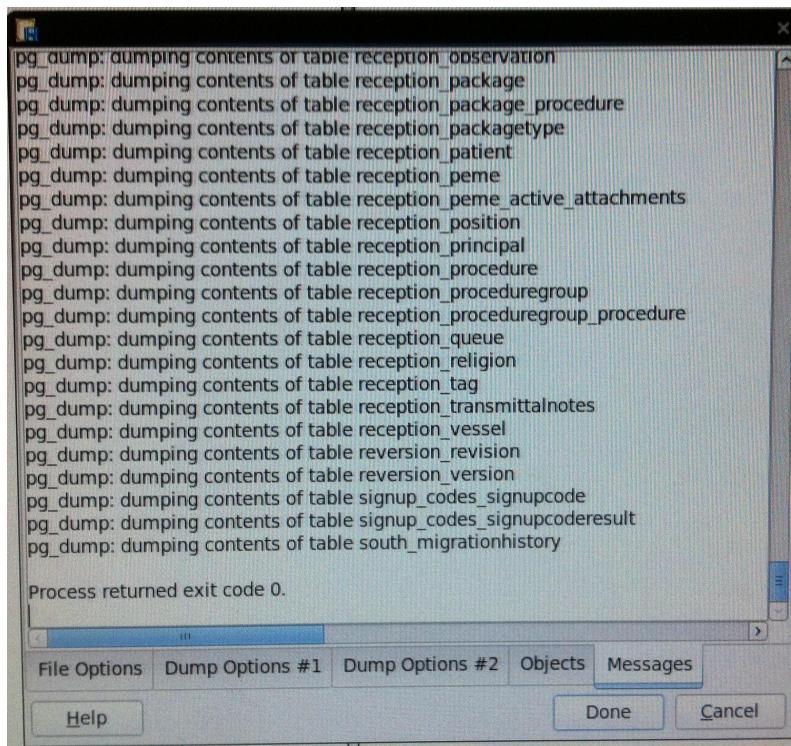
12. System will start the backup operation. Wait for the system to completely finish the backup operation.



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13. Once done, you will see same text as below image.



```

pg_dump: dumping contents of table reception_observation
pg_dump: dumping contents of table reception_package
pg_dump: dumping contents of table reception_packageprocedure
pg_dump: dumping contents of table reception_packagetype
pg_dump: dumping contents of table reception_patient
pg_dump: dumping contents of table reception_peme
pg_dump: dumping contents of table reception_peme_active_attachments
pg_dump: dumping contents of table reception_position
pg_dump: dumping contents of table reception_principal
pg_dump: dumping contents of table reception_procedure
pg_dump: dumping contents of table reception_proceduregroup
pg_dump: dumping contents of table reception_proceduregroup_procedure
pg_dump: dumping contents of table reception_queue
pg_dump: dumping contents of table reception_religion
pg_dump: dumping contents of table reception_tag
pg_dump: dumping contents of table reception_transmittalnotes
pg_dump: dumping contents of table reception_vessel
pg_dump: dumping contents of table reversion_revision
pg_dump: dumping contents of table reversion_version
pg_dump: dumping contents of table signup_codes_signupcode
pg_dump: dumping contents of table signup_codes_signupcoderesult
pg_dump: dumping contents of table south_migrationhistory

Process returned exit code 0.
  
```

The screenshot shows a terminal window with the following text output:

- pg\_dump: dumping contents of table reception\_observation
- pg\_dump: dumping contents of table reception\_package
- pg\_dump: dumping contents of table reception\_packageprocedure
- pg\_dump: dumping contents of table reception\_packagetype
- pg\_dump: dumping contents of table reception\_patient
- pg\_dump: dumping contents of table reception\_peme
- pg\_dump: dumping contents of table reception\_peme\_active\_attachments
- pg\_dump: dumping contents of table reception\_position
- pg\_dump: dumping contents of table reception\_principal
- pg\_dump: dumping contents of table reception\_procedure
- pg\_dump: dumping contents of table reception\_proceduregroup
- pg\_dump: dumping contents of table reception\_proceduregroup\_procedure
- pg\_dump: dumping contents of table reception\_queue
- pg\_dump: dumping contents of table reception\_religion
- pg\_dump: dumping contents of table reception\_tag
- pg\_dump: dumping contents of table reception\_transmittalnotes
- pg\_dump: dumping contents of table reception\_vessel
- pg\_dump: dumping contents of table reversion\_revision
- pg\_dump: dumping contents of table reversion\_version
- pg\_dump: dumping contents of table signup\_codes\_signupcode
- pg\_dump: dumping contents of table signup\_codes\_signupcoderesult
- pg\_dump: dumping contents of table south\_migrationhistory

At the bottom of the window, it says "Process returned exit code 0."

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If you encountered any error, please do the backup process again to make sure that you copied the database completely.

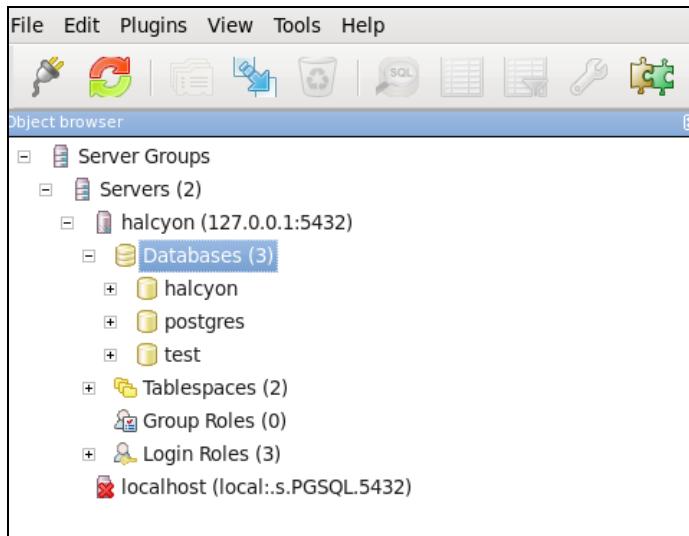
Click **Done** button to close the window.

14. Last step is check the backup file if it is saved on the location you selected and check the file size on the **Properties** window. As of 14 January 2016, database backup file is approximately around 800Mb to 900Mb.

#### 16.6 iNET DATABASE RESTORATION PROCEDURE

Steps on how to restore inet database backup file:

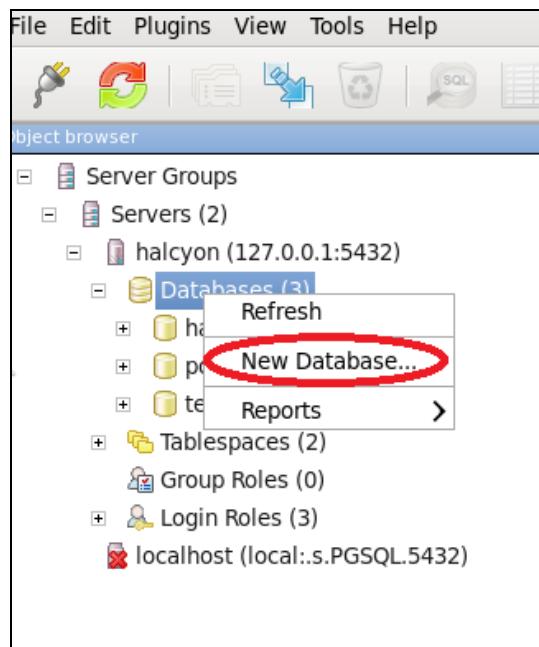
1. From external hard drive or Google drive, copy the backup file on the local computer you will use for restoration process.
2. Run pgAdmin III application and on the object browser tab, collapse **Server Groups** -> **Servers** -> **halcyon** -> **Databases**.



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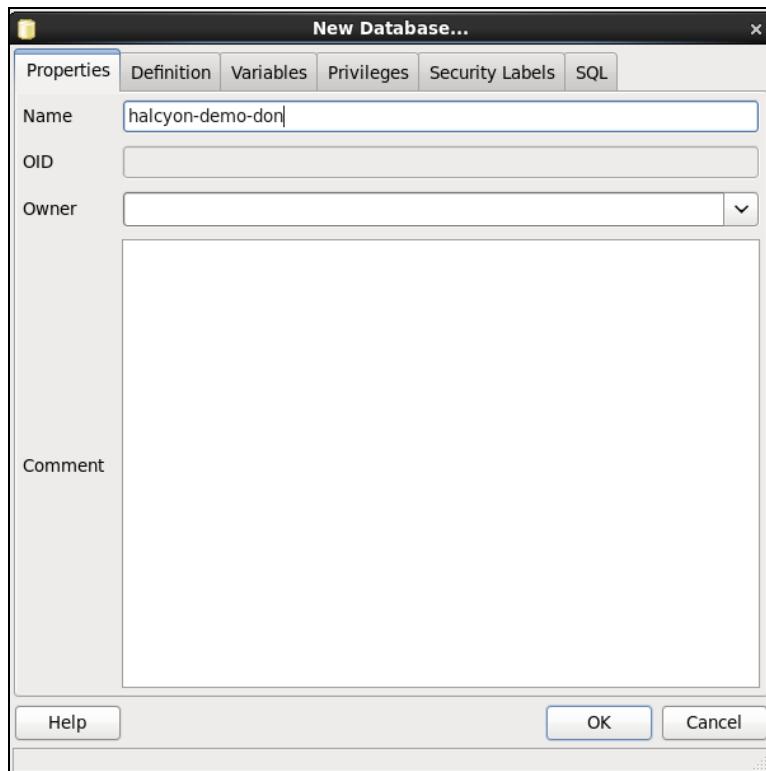
3. Right click on the Databases and click **New Database**.



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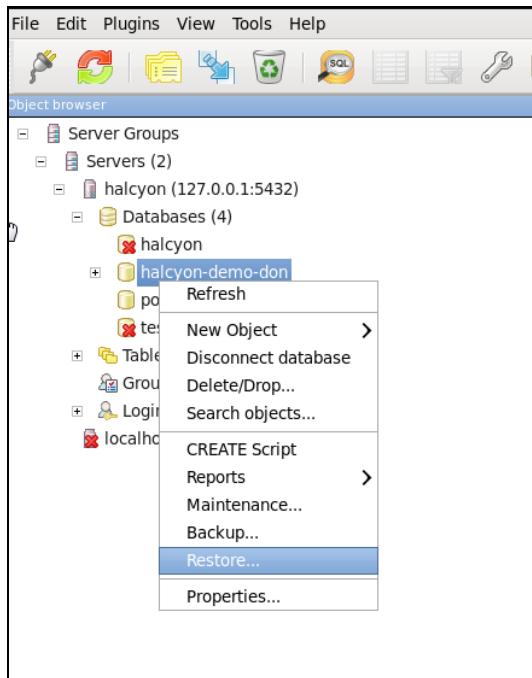
4. New Database window will appear. Enter database name and click OK.



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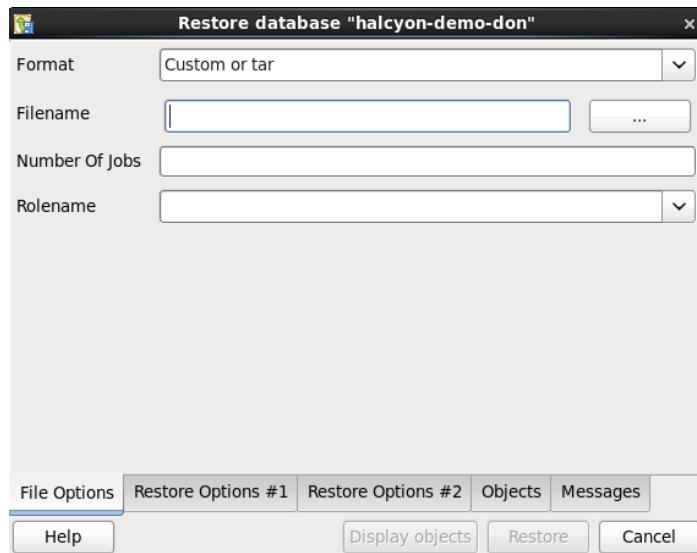
5. The newly database created will now appear on the list of Databases. Point the mouse on the database that you created and issue right-click then click **Restore**.



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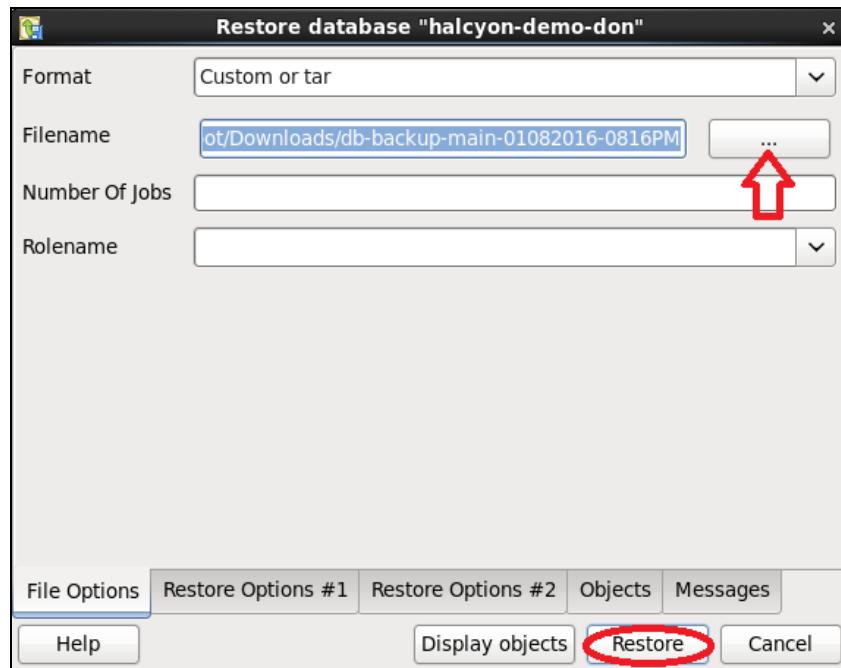
6. Restore Database window will appear. On the format field, choose **custom or tar** format.



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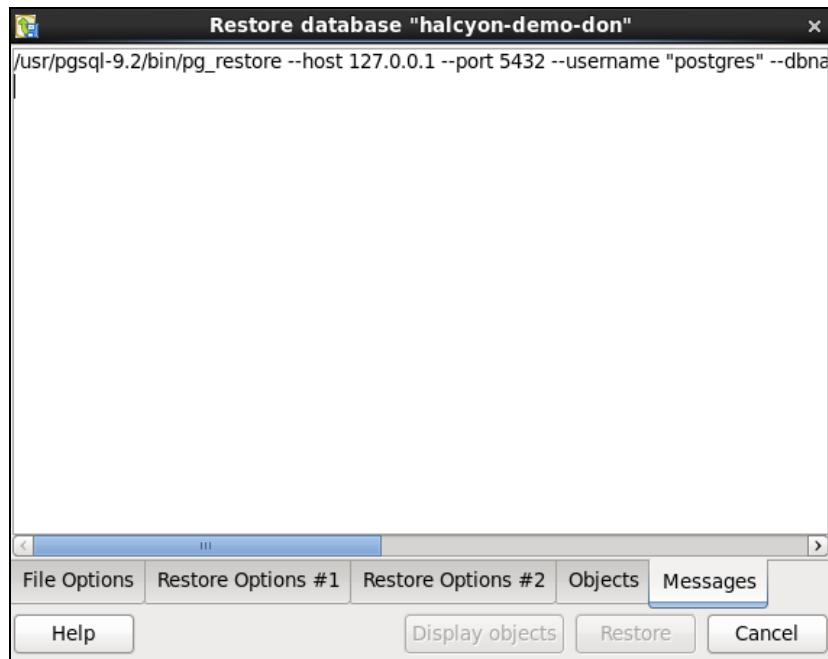
7. Also select the database backup file you want to restore then click **Restore** button.



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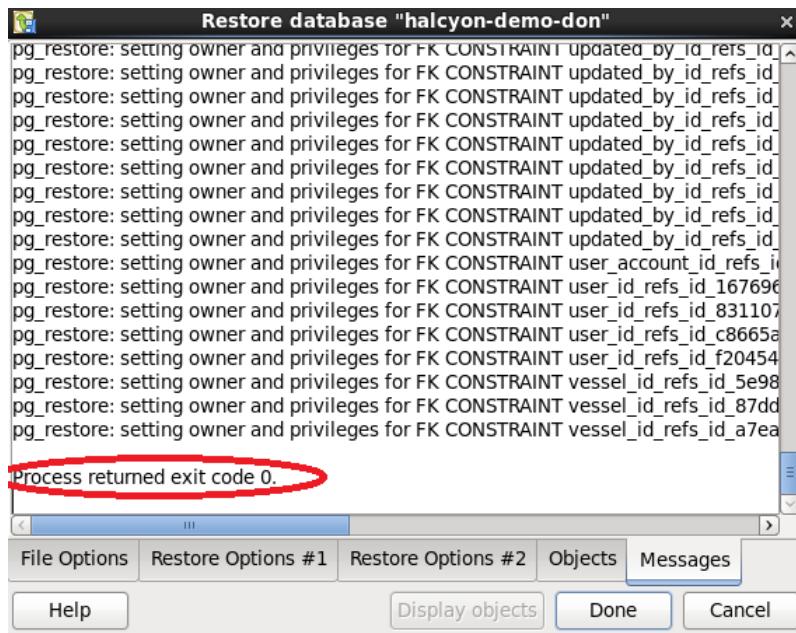
8. System will start the restoration. Wait until the system finish to restore all the database table and records.



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9. Once done, you will see on the bottom of the message window: **Process returned exit code 0**. It means that the restoration was successful without errors.



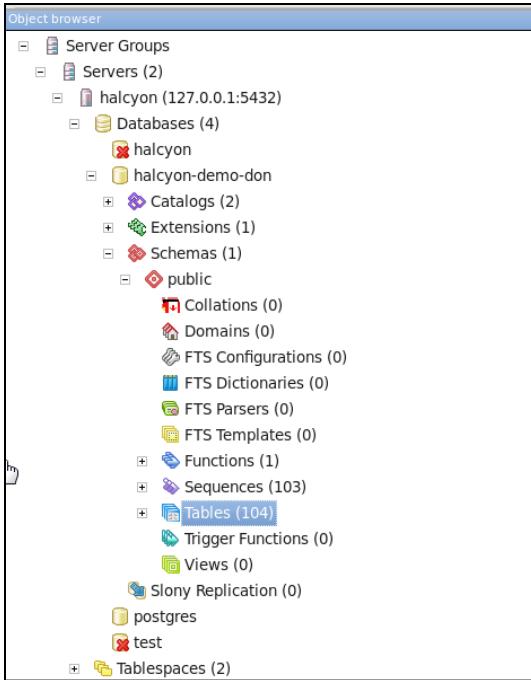
10. Click **Done** button to close the window.

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11. Check the database if it has the tables you restored by going to the **Object Browser** -> **Server Groups** -> **Servers** -> **halcyon** -> **Databases** -> **halcyon-demo-don** -> **Schemas** -> **Public** -> **Tables**.

It must have 104 tables restored. See image below.



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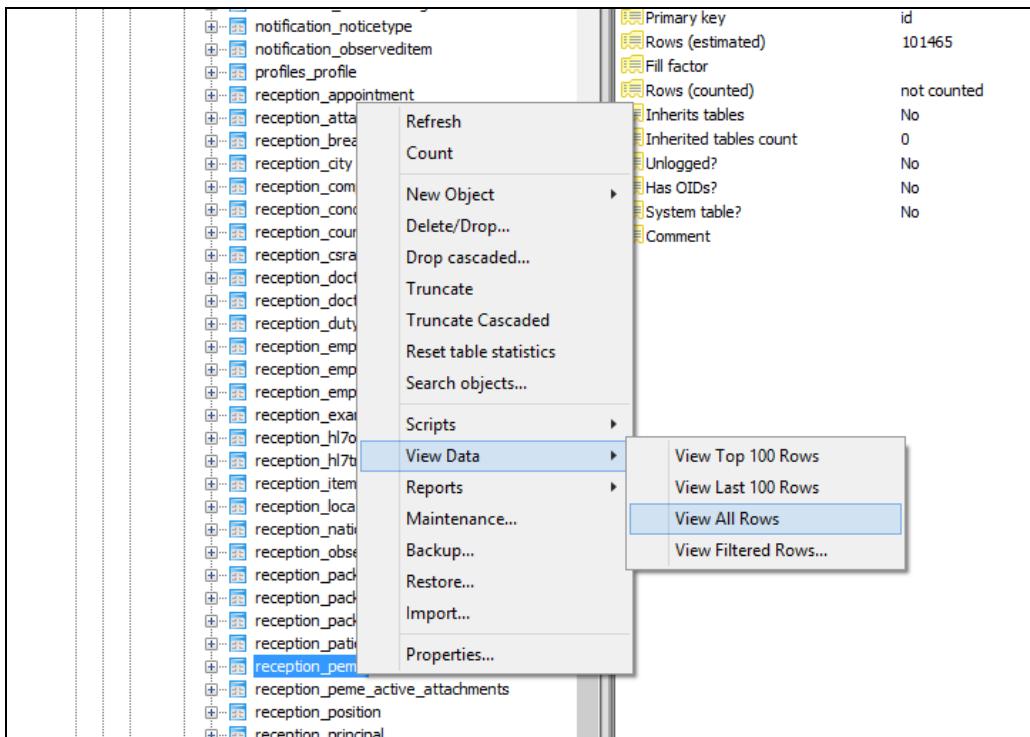
12. You can check on the **reception\_peme** table to verify if the record is updated.

				<ul style="list-style-type: none"> <li>+  <a href="#">reception_nationality</a></li> <li>+  <a href="#">reception_observation</a></li> <li>+  <a href="#">reception_package</a></li> <li>+  <a href="#">reception_package_procedure</a></li> <li>+  <a href="#">reception_packagetype</a></li> <li>+  <a href="#">reception_patient</a></li> <li>+  <a href="#"><b>reception_peme</b></a></li> <li>+  <a href="#">reception_peme_active_attachments</a></li> <li>+  <a href="#">reception_position</a></li> <li>+  <a href="#">reception_principal</a></li> <li>+  <a href="#">reception_procedure</a></li> <li>+  <a href="#">reception_proceduregroup</a></li> <li>+  <a href="#">reception_proceduregroup_procedure</a></li> <li>+  <a href="#">reception_queue</a></li> </ul>
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13. To verify if the record is updated go to **reception\_peme** table right-click **View Data** -> **View All Rows**.



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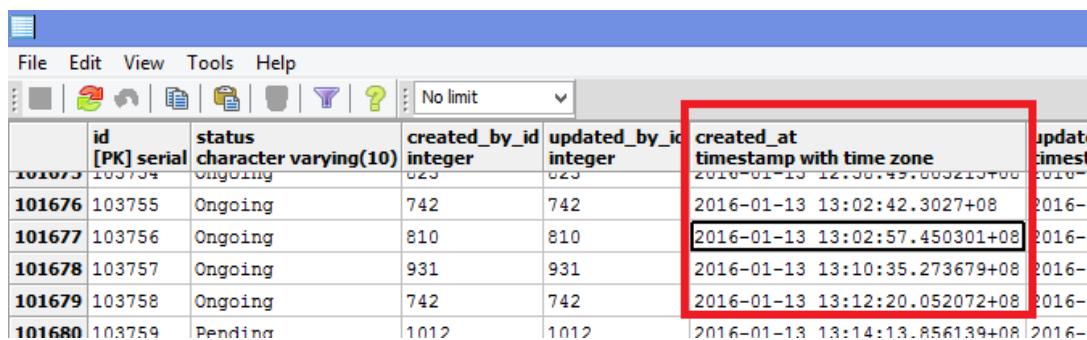
14. To edit data, just go to **reception\_peme** table right-click **View Data** and click **View All Rows**. Edit Data window will appear.

	<b>[PK] serial</b>	<b>status</b> <b>character varying(10)</b>	<b>created_by_id</b> <b>integer</b>	<b>updated_by_id</b> <b>integer</b>	<b>created_at</b> <b>timestamp with time zone</b>	<b>updated_at</b> <b>timestamp with time zone</b>
1	15	Done	1	1	2012-08-22 10:09:00.399569+08	2012-09-04 15:52:43.331805+08
2	17	Done	1	1	2012-08-22 13:18:09.574899+08	2012-12-05 15:49:31.346192+08
3	18	Done	1	1	2012-08-24 10:39:27.930916+08	2012-12-05 15:49:38.700694+08
4	19	Done	1	1	2012-08-24 18:55:21.894542+08	2012-12-05 15:49:43.271324+08
5	21	Done	1	1	2012-08-24 19:36:54.136344+08	2012-12-05 15:49:48.247823+08
6	22	Done	1	1	2012-08-24 19:46:39.675104+08	2012-12-05 15:49:53.774564+08
7	23	Done	1	1	2012-08-24 19:55:18.048303+08	2012-08-31 12:46:23.06974+08
8	24	Done	1	1	2012-09-04 17:56:00.172918+08	2013-06-04 09:39:50.50301+08
9	25	Pending	1	1	2012-09-04 17:56:03.720421+08	2012-09-04 17:56:03.720465+08
10	26	Pending	1	1	2012-09-04 17:56:04.313438+08	2012-09-04 17:56:04.313472+08
11	27	Done	1	47	2012-09-04 17:56:05.207164+08	2013-10-29 08:53:54.286939+08
12	28	Cancelled	1	9	2012-09-04 17:57:28.944935+08	2013-09-09 14:20:02.14308+08
13	29	Done	1	1	2012-09-05 07:25:32.850912+08	2012-12-05 15:51:38.685595+08
14	30	Done	1	1	2012-09-05 07:29:17.995243+08	2012-12-05 15:49:59.424478+08
15	31	Done	1	1	2012-09-05 07:47:06.038749+08	2012-09-05 15:08:21.869365+08
16	32	Done	1	1	2012-09-05 08:02:41.789456+08	2012-09-05 12:36:48.053687+08
17	34	Done	1	1	2012-09-05 08:13:09.750262+08	2012-12-05 15:50:15.139974+08
18	35	Done	1	1	2012-09-05 08:15:24.007249+08	2012-12-05 15:50:20.578488+08
19	36	Done	1	1	2012-09-05 08:37:58.984117+08	2012-12-05 15:50:26.266838+08
20	37	Done	1	1	2012-09-05 08:46:30.78602+08	2012-12-05 15:50:31.246999+08
21	39	Done	1	1	2012-09-05 09:28:07.18807+08	2012-12-05 15:50:36.133559+08
22	41	Done	1	1	2012-09-05 09:38:23.740834+08	2012-12-05 15:51:44.666964+08
23	44	Done	1	1	2012-09-05 10:05:28.889906+08	2012-12-05 15:50:53.610426+08
24	48	Done	1	1	2012-09-05 10:29:05.437901+08	2012-12-05 15:50:59.656878+08
25	49	Done	1	1	2012-09-05 10:34:56.382203+08	2012-12-05 15:51:08.400984+08

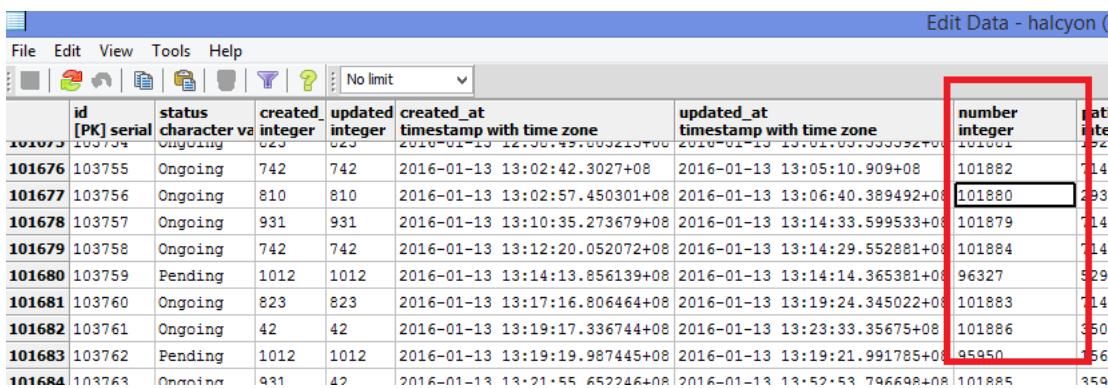
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15. To check if PEMEs are updated view **created\_at** and **number** column.



	<b>id</b> [PK] serial	<b>status</b> character varying(10)	<b>created_by_id</b> integer	<b>updated_by_id</b> integer	<b>created_at</b> timestamp with time zone	<b>updated_at</b> timestamp with time zone
101675	103754	Ongoing	823	823	2016-01-13 12:30:49.003213+00	2016-
101676	103755	Ongoing	742	742	2016-01-13 13:02:42.3027+08	2016-
101677	103756	Ongoing	810	810	2016-01-13 13:02:57.450301+08	2016-
101678	103757	Ongoing	931	931	2016-01-13 13:10:35.273679+08	2016-
101679	103758	Ongoing	742	742	2016-01-13 13:12:20.052072+08	2016-
101680	103759	Pending	1012	1012	2016-01-13 13:14:13.856139+08	2016-



	<b>id</b> [PK] serial	<b>status</b> character varying(10)	<b>created</b> integer	<b>updated</b> integer	<b>created_at</b> timestamp with time zone	<b>updated_at</b> timestamp with time zone	<b>number</b> integer	<b>date</b> date
101675	103754	Ongoing	823	823	2016-01-13 12:30:49.003213+00	2016-01-13 13:02:42.3027+08	101881	2016-01-13 13:02:42.3027+08
101676	103755	Ongoing	742	742	2016-01-13 13:02:42.3027+08	2016-01-13 13:05:10.309+08	101882	2016-01-13 13:05:10.309+08
101677	103756	Ongoing	810	810	2016-01-13 13:02:57.450301+08	2016-01-13 13:06:40.389492+08	101880	2016-01-13 13:06:40.389492+08
101678	103757	Ongoing	931	931	2016-01-13 13:10:35.273679+08	2016-01-13 13:14:33.599533+08	101879	2016-01-13 13:14:33.599533+08
101679	103758	Ongoing	742	742	2016-01-13 13:12:20.052072+08	2016-01-13 13:14:29.552881+08	101884	2016-01-13 13:14:29.552881+08
101680	103759	Pending	1012	1012	2016-01-13 13:14:13.856139+08	2016-01-13 13:14:14.365381+08	96327	2016-01-13 13:14:14.365381+08
101681	103760	Ongoing	823	823	2016-01-13 13:17:16.806464+08	2016-01-13 13:19:24.345022+08	101883	2016-01-13 13:19:24.345022+08
101682	103761	Ongoing	42	42	2016-01-13 13:19:17.336744+08	2016-01-13 13:23:33.35675+08	101886	2016-01-13 13:23:33.35675+08
101683	103762	Pending	1012	1012	2016-01-13 13:19:19.987445+08	2016-01-13 13:19:21.991785+08	95950	2016-01-13 13:19:21.991785+08
101684	103763	Ongoing	931	42	2016-01-13 13:21:55.652246+08	2016-01-13 13:52:53.796698+08	101885	2016-01-13 13:52:53.796698+08

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### **17.0 CCTV Procedure on IT Security Policy**

- These procedures are applicable to all Halcyon Marine Healthcare Systems staff. HMHS installed closed-circuit television (CCTV) cameras in selected areas to promote and maintain safety at all times. The system is operational and images are capable of being monitored twenty-four hours a day.

**Purpose:**

The purpose is to ensure that the HMHS Closed Circuit Television (CCTV) system is used to create a safer environment for staff, customers and visitors. Halcyon Marine Healthcare Systems installed a comprehensive CCTV surveillance system for the principal purposes of preventing and detecting crime and promoting a public safety.

**Control and Management of CCTV Recordings:**

- All media recording used for the monitoring and capture of images in the HMHS' CCTV system is property of HMHS.
- To maintain the integrity of the recording/s, Managers and MIS personnel are the authorized individual to view the recording and responsible in managing the CCTV.
- In case an employee wants to view the CCTV recordings, the employee must have a valid reason and must seek permission from the manager.
- To ensure that the CCTV system is working optimally, timely maintenance is done by the MIS personnel by checking that the coaxial cable is transmitting an adequate video signal and camera lens is free from any disturbance.
- It is important to restrict the access and disclosure of CCTV recordings and carefully controlled to ensure that the rights of individuals are preserved.
- The system can store the recordings for fifteen days or when it reached the storage capacity, the recordings are then automatically erased.

**Procedure:**

- The primary use of surveillance cameras is to record the images for future identification of individuals in the event of illegal or policy violation.

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- Using of CCTV cameras will be limited to situations that do not violate the reasonable expectation of privacy.
- Monitoring of CCTV for security purposes will be conducted in an ethical and legal manner.
- The location and technical specifications will take account the field of vision of the camera and its light levels. It also minimizes the capture of images that are not relevant to HMHS.
- Any person who tamper or destroys the video security equipment will be subject to judicial action.

#### **18.0 Procedure on Security door access**

An essential element of security is to maintain the adequate access control so that HMHS can only be accessed by the authorized personnel. This policy will help to provide a safe and secure environment through the diligent control of security door access.

- Ensure that all personnel are granted access only to the extent of their authorizations
- The principal access to the back office for visitors/suppliers is the hallway near the Physical Examination room
- No visitors is allowed to access through other hallways unless it is advised by the management
- All visitors who are going beyond the testing area must be accompanied by a HMHS staff
- All security doors should be kept secure so that access is only via a security swipe card or biometrics
- No security door should be left unbolted, unlocked, or propped open
- The use of unauthorized security swipe cards in HMHS is strictly prohibited

#### **19.1 Door Access Registration Procedure**

The control of access within HMHS premises is a key element in providing a comprehensive security and a safer work environment. Also, to restrict the public from gaining access to areas and departments of the trust without obtaining permission. Entry into controlled areas is achieved by swiping a security swipe card or through biometrics.

##### **Procedure:**

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- The end-user must fill up and sign the System Access Form upon requesting for security door access. The form must be signed by their respective heads and MIS head.
- Upon filling up the form, under the category Permissions, MIS personnel will put where specifically the user can have an access
- Only the MIS personnel and managers are allowed to register a biometrics and security card in the door access
- Only the executive, managers, supervisors and unit heads have a security swipe card
- In the event that an employee resigned, MIS personnel must get the ID number in the Security Door Access device and delete it to remove their access. This is applicable to both biometrics and security swipe card. The security swipe card should be returned to the manager.
- Broken, lost or damaged security swipe card must be immediately reported to the manager or MIS personnel.



#### System Access/User Account Request Form

Name: \_\_\_\_\_ Job Title: \_\_\_\_\_  
 Department/Unit: \_\_\_\_\_ Date: \_\_\_\_\_

System Application (NET, SQL, C/C++, Java, VB, VB.NET, ASP.NET, Oracle, MySQL, PostgreSQL, DB2, Sybase, Informix, DB2, Oracle, MySQL, PostgreSQL, DB2, Sybase, Informix)	Module Name	Permissions (View, Add, Edit, Delete)	User Account/ Password	Reason
Door Access		Access near hallway (PE room)		

Requested by:

(Signature over printed name) \_\_\_\_\_

Noted by:

Department Head: \_\_\_\_\_

Issued by:

(Signature over printed name / Date) \_\_\_\_\_

Approved by:

MIS Dept. Head: \_\_\_\_\_

HMHS Form No.: MIS-005 - 02 (12/28/17)

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<b>QUALITY STANDARD SYSTEM MANUAL</b>	 <b>HALCYON MARINE</b> HEALTHCARE SYSTEMS	<b>DOCUMENT NO.</b> <b>QIT 1.0</b>	<b>EFFECTIVITY DATE:</b> <b>March 7, 2019</b>
		<b>PREPARED BY:</b> <b>Marilar F. De Guzman, MD</b> <b>QAM</b>	<b>REVISION NO.: 4</b>
<b>SUBJECT: HMHS QUALITY MANUAL FOR MIS</b>		<b>APPROVED BY:</b> <b>Glennda E. Canlas, MD</b> <b>Medical Director</b>	

Door Access User List													
Name	Unit	Access to MIS Server Room - Ground flr.	Access to Laboratory - Ground flr.	Access to MIS Workstation - 3rd flr.	Access to MIS Server Room - 3rd flr.	Access to Ship to Shore - 3rd flr.	Access to Executive Room - 3rd flr.	Access to Hallway near HR Recruitment - 3rd flr.	Access to Hallway near PE room 7 - 3rd flr.	Access to Hallway near Treadmill - 3rd flr.	Access to Accounting room - 3rd flr.	Access to Stock room - 3rd flr.	
CANLAS, Glennda E MD	Executive	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
CANLAS, Gino	NBD	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
CANLAS, Raffy	NBD	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
HALAGO, Judy MD	Operations	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
DE GUZMAN, Marilar MD	QA	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
GUEVARRA, Grace	HRMD	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
DE JESUS, Aurora	Executive	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
<i>Access Card</i>													
LUZ, Leo		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
ARCOS, Glenn		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Guevarra, Grace	C/o All HR Staff	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Reyes, Jonathan	C/o All Follow up Unit	No	No	No	No	No	No	Yes	Yes	No	No	No	No
Calimag, Joyce	C/o All Processing Unit	No	No	No	No	No	No	Yes	Yes	No	No	No	No
De Jesus, Aurora	C/o Security Guards and Maintenance Personnel	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	No	No
Bacoli, Durcas	C/o All Accounting Staff	No	No	No	No	No	Yes	Yes	No	No	No	Yes	No
Luna, Kristine	C/o All Records Unit	No	No	No	No	No	Yes	Yes	No	No	No	No	No

## 19.0 LIST OF FORMS

- System Access/User Account Request Form
- Internet/Website Access Request Form
- Software Installation Request Form
- Email Account Request Form
- MIS Offsite Backup Monitoring Form
- Server Temperature Monitoring Form
- Door Access Request Form
- IT Equipment Assessment Form

**CONTROLLED**