

OPENCHS

A system for Violence Against Children and Gender Based
Violence

Annual Maintenance Plan



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I. Introduction

A. Purpose of the Annual Maintenance Plan:

The purpose of the annual maintenance plan for the child helpline system is to ensure the system operates efficiently and effectively, providing the highest level of service to the users. The plan outlines the maintenance tasks, schedule, resources, emergency response plan, and evaluation and reporting procedures. It covers the 4 countries Kenya, Uganda Tanzania and Lesotho for a period of 1 Year **starting January, 01, 2023**.

B. Background of the Child Helpline System:

The child helpline system is an essential service that provides support, information, and assistance to children in need. The system is accessible 24/7 and operates through various communication channels, such as phone, email, and live chat.

C. Overview of the Maintenance Plan:

The annual maintenance plan outlines the procedures and steps required to maintain the child helpline system in optimal condition. The plan includes regular maintenance tasks, scheduling, resources, emergency response plan, and evaluation and reporting procedures.

II. Maintenance Schedule

A. Regular Maintenance Tasks Plan:

Database Backup:

In order to ensure the reliability and security of the OPENCHS system, the local IT team will develop and execute a comprehensive backup strategy that incorporates both full and incremental backups for all servers used in the system. This strategy will be thoroughly documented to ensure its proper implementation and maintenance, ensuring that the system's data and information are protected against any potential risks or data loss incidents. The backup strategy will also be aligned with the disaster recovery plan (DRP) to ensure the continuity of operations even in the event of a disaster or system failure.

System Updates Plan:

The Agile Project Methodology will be utilized to streamline the system updates installation process, this will take place on a monthly basis. The iterations will be based on the backlog items from the prior month and the following dummy time table outlines the typical process of each iteration:

Meeting	Attendees	Purpose
Kick-off Meeting	Product Owner & Business Users { BITZ & Helpline}	Review of requirements and goals
Sprint Planning	All Team Members {BITZ}	Prioritize the backlog and assign tasks
Development	All Team Members {BITZ}	Work on the tasks and identify any challenges
Sprint Review	Product Owner & Business Users { BITZ & Helpline}	Review the completed tasks and provide feedback
Sprint Retrospective	All Team Members {BITZ}	Evaluate the previous sprint and plan for the next iteration

By implementing the Agile Project Methodology and conducting monthly iterations, the system is ensured to be running the latest version, including necessary security patches and bug fixes. This approach enhances the efficiency and effectiveness of the system updates installation process.

System Performance Monitoring Plan:

This task is crucial for ensuring the software operates efficiently and effectively. By monitoring the system's performance, the maintenance team can detect any bottlenecks, slowdowns, or errors that may arise during the normal course of operation. They can then work to resolve these issues before they cause significant harm to the system or its users.

The performance monitoring process typically involves tracking key metrics such as memory usage, disk space, network traffic, and processor utilization. This information is collected over time and analyzed to determine if any patterns emerge that indicate a problem with the system. If any issues are detected, the maintenance team can take appropriate action to resolve them, such as updating software, increasing system resources, or troubleshooting hardware components.

In addition to detecting problems, system performance monitoring will also be used to identify areas for optimization. The maintenance team will use the data collected to identify any processes or functions that are consuming excessive system resources, and make changes to improve overall performance.

Overall, system performance monitoring is an essential task in and the following table assigns some responsibilities

No.	Task	Responsible Team
1	Monitor software logs for errors and performance issues	Bitz IT Development Teams
2	Set up automated alerting for critical performance thresholds	Bitz IT Development Teams
3	Regularly review system resource utilization (e.g. memory, CPU usage)	Bitz IT Development Teams & Local IT
4	Monitor network performance and connectivity	Bitz IT Development Teams & Local IT
5	Use performance testing tools to simulate load and stress on the system	Bitz IT Development Teams & Local IT
6	Conduct regular software and system updates to ensure optimal performance	Bitz IT Development Teams & Local IT

B. Scheduling of Other Maintenance Tasks:

Monthly Tasks Plan:

Monthly tasks include database backup, operating system updates, and system performance monitoring.

Task	Description	Responsible Team	How to Achieve
Database Backup	Back up the database to ensure data preservation	Maintenance Team	Regularly run backup scripts to save a copy of the database, store backups in a secure offsite location.
Operating System Updates	Keep the operating system up to date with the latest security patches and performance improvements	Maintenance Team	Use an automated update process to ensure timely updates, or manually check for updates and install them.
System Performance Monitoring	Continuously monitor the performance of the system to identify and address potential issues	Maintenance Team	Use monitoring tools and scripts to collect system metrics, set up alerts for performance thresholds, and conduct regular performance audits.

III. Maintenance Resources

A. Equipment and Tools:

The equipment and tools required to maintain the child helpline system include:

Servers: Servers are used to host the system and store data. The client will provide a server in a properly cooled environment. The server room should have concrete walls preferably without windows.

The list below gives that ideal requirement of a server room that will make it possible for this Maintenance Plan to work.

Equipment	Purpose
Uninterruptible Power Supply (UPS)	To provide backup power to the servers in the event of power outages or surges, ensuring that the system continues to function without interruption.

Equipment	Purpose
Environmental Monitoring System	To continuously monitor temperature, humidity and other environmental factors to maintain optimal operating conditions for the servers, thus protecting them from damage and prolonging their lifespan.
Fire Suppression System	To automatically detect and suppress fire outbreaks in the server room, minimizing damage to the servers and ensuring that data is protected.
Access Control System	To regulate who has access to the server room and track who enters and exits, enhancing the security of the equipment and preventing unauthorized access.
Rack Mount Cabinets	To store the servers and other equipment in a secure and organized manner, maximizing the available space and facilitating maintenance and upgrades.
Network Switches and Routers	To manage and control the flow of data within the network, improving network performance and ensuring reliable communication between the servers and other devices.

B. Technical Staff:

For this Plan to succeed the following groups of technical staff will be required.

Staff Group	Role
System Administrator	This staff member will be responsible for managing the daily IT activities of the helpline.
Product Owner	This staff member will act as a liaison between the client and the development team, while overseeing the OPENCHS roadmap.
Development Team	This team will consist of Front End Engineer, Backend Engineer, and QA testing Engineers. They will be responsible for enhancing the system, conducting maintenance, and implementing updates.

C. Budget:

A budget is allocated for the annual maintenance plan to cover the cost of system updates, equipment, tools, technical staff, and any other resources required to maintain the system.

IV. Emergency Response Plan

A. Definition of Emergency:

An emergency can refer to any unforeseen event or situation that threatens the normal functioning of the child helpline system. This can include technical failures, power outages, natural disasters, or any other issue that can disrupt the system's performance or availability. Such emergencies can cause significant harm to the helpline and its users, and it is critical to have contingency measures in place to respond to such events and minimize their impact

The following steps will be used to help mitigate emergencies

Steps	Responsible Party	Timelines	Organization
Develop a comprehensive emergency response plan	System Administrator	Within the first quarter of the maintenance plan	Child Helpline
Implement redundancy measures	System Administrator, Development Team	Within the first half of the maintenance plan	Child Helpline
Regularly test and update emergency response procedures	System Administrator, Development Team	Ongoing throughout the maintenance plan	Child Helpline
Provide training to staff	System Administrator	Regularly throughout the maintenance plan	Child Helpline
Regularly monitor the system	System Administrator, Development Team	Ongoing throughout the maintenance plan	Child Helpline
Establish communication protocols	System Administrator, Development Team	Within the first quarter of the maintenance plan	Child Helpline

B. Roles and Responsibilities of Technical Staff:

Role	Responsibilities
Emergency Response Team Leader	Oversee the response to the emergency, communicate with relevant stakeholders, ensure the emergency response plan is being followed
System Administrator	Lead the technical response to the emergency, resolve system issues, communicate with Emergency Response Team Leader and other staff
Development Team	Provide technical support and assistance to the System Administrator, troubleshoot system issues, implement necessary updates or patches
Communications Officer	Manage all external and internal communications related to the emergency, update stakeholders and the public on the status of the emergency
Operations Manager	Ensure the helpline continues to operate effectively during the emergency, coordinate with

C. Communication Plan:

A communication plan has been put in place to ensure that the technical staff is informed of any emergencies and can respond promptly.

Step	Description	Responsible Party	Timeline
1	Establish a chain of command	Emergency Response Team Leader	Prior to emergency
2	Establish communication protocols	Emergency Response Team Leader	Prior to emergency
3	Identify stakeholders	Communications Officer	Prior to emergency
4	Develop a communication template	Communications Officer	Prior to emergency
5	Test the plan	Emergency Response Team	Regularly

6	Update the plan as needed	Emergency Response Team	Regularly
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Steps to implement:

- Assemble the Emergency Response Team and review the Communication Plan for Emergency Response.
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- Review and update the chain of command and communication protocols, as needed.
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- Identify the stakeholders that need to be informed during an emergency and add them to the list.
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- Develop a clear and concise communication template that can be used during an emergency.
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- Test the plan regularly to ensure that it is effective and that everyone involved in the response is familiar with the procedures.
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- Review the plan regularly and make updates as needed to ensure that it continues to meet the needs of the organization.
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- Train all relevant staff on the Communication Plan for Emergency Response and ensure that everyone understands their role and responsibilities in the event of an emergency.

Software Support Plan

BITZ IT Consulting Ltd will provide technical support services for the software from Level 2 . The support Levels are defined as seen below.

Level 1 Support: { LOCAL IT }

- Available 24/7 via email or chat support
- Handles basic inquiries and troubleshooting
- Responds to requests within 1 hour of receipt
- Documents and tracks all issues and resolutions in a support ticketing system
- Escalates more complex issues to Level 2 Support

Level 2 Support: { BITZ ITC }

- Available during business hours via phone, email, or chat support
- Handles more complex technical issues that cannot be resolved at Level 1
- Responds to requests within 2 hours of receipt
- Documents and tracks all issues and resolutions in a support ticketing system
- Escalates unresolved issues to Level 3 Support

Level 3 Support: { BITZ ITC }

- Available during business hours via phone, email, or chat support

- Handles the most complex technical issues that cannot be resolved at Levels 1 or 2
- Responds to requests within 4 hours of receipt
- Works with development teams to resolve software defects or other technical issues
- Documents and tracks all issues and resolutions in a support ticketing system
- Provides regular updates to the customer on the progress of their issue until it is resolved

V. Evaluation and Reporting Plans

A. Performance Evaluation:

The performance of the child helpline system is evaluated regularly using the following metrics:

System Availability:

Uptime Percentage: A calculation of the percentage of time the system was available during a given period, ensuring that the system is functioning optimally and meeting the needs of users.

Downtime: The amount of time the system was unavailable during a given period, providing insight into any potential system outages and the impact they have on users.

Support Team Response Time:

Mean Time to Respond (MTTR): The average time it takes for the support team to respond to a support incident, providing insight into the efficiency of the support process.

Median Time to Respond: The median time it takes for the support team to respond to a support incident, providing a more comprehensive view of the support process performance.

VI. Conclusion

In conclusion, the annual maintenance plan for the child helpline system has been designed to provide a comprehensive and structured approach to ensuring the system's continued operation and performance for a period of one year. The plan details the necessary maintenance tasks, schedule, resources, emergency response plan, and evaluation and reporting procedures, providing a clear roadmap for ensuring the system operates efficiently and effectively. The implementation of this plan will help ensure that the child helpline system is able to provide the highest level of service to its users and maintain its reliability and availability